International Conference
SUSTAINABLE DEVELOPMENT GOALS 2030
Challenges and Solutions

August 11-12, 2017

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Rector ,

Prof. Dr. Anwar Sanusi, SE., MSi

Director of Graduate School,

Prof. Dr. Grahita Chandrarin, MSi. Ak., CA.

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Proceeding of

International Conference

SUSTAINABLE DEVELOPMENT GOALS 2030: CHALLENGES AND ITS SOLUTIONS

Editor:

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Dina Poerwoningsih

Pindo Tutuko

Sari Yuniarti

Graduate School of University of Merdeka Malang, Indonesia

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Prof. Peter Newman (Curtin University)
Prof. Normah Omar (UiTM Malaysia)
Prof. Susumo Ueno (APMAA)
Prof. Zhenjiang Shen (Kanazawa University)
Prof. Milind Sathye (University of Canberra)

GREETINGS

Assalamualaikum Wr.Wr

Good greetings for all of us

First of all I would like to thank and welcome to the University of Merdeka Malang especially to Ibu Tri Risma Harini (City Mayor of Surabaya Indonesia); Prof. Millind Sathye from University of Canberra, Australia; Prof. Susumu Ueno from Konan University, Jepang; Prof. Normah Omar from UiTM Malaysia; Prof. Zhenjiang Shen from Kanazawa University, Japan; Prof. Grahita Chandrarin, Dr. Suriptono and Dr. Diana Zuhroh from University of Merdeka Malang who have been willing to be the keynote speakers and moderator in today's conference on **"Sustainable Development GOLs 2030"**

The theme of the conference is related to Sustainable Development Goals (SDGs), and it is the continuation of the Millennium Development Goals (MDGs). In fact, numerous important global issues have not been completely resolved. *First*, the world population in the mid-21st century will reach 9 billion people. The current world population has been estimated to reach about 7.5 billion people. *Second*, the world's urban population are expected to jump 66% by 2050. Meanwhile, the current capacities of urban resources have been increasingly limited. *Third*, the inequality of incomes, poverty and unemployment problems have not been adequately addressed in many parts of the world, including Indonesia. *Fourth,* inequality issues are still obviously seen in many aspects of humans' life such as education, gender, ethnic and racial groups. *Fifth,* other important issues are also worth noting such as environmental destruction, climate changes and pollutions, biodiversity extinctions and declining resources including energy and water, and so on.

We need to put these issues into our consideration while at the same time challenging us to find good solutions during the implementation of the SDGs. This condition asks for active participation from numerous stakeholders. In Indonesia the implementation of SDGs has referred to the principles of universal development, integration, and no one left behind. Indonesia has classified 169 targets and 241 indicators of SDGs into four pillars referring to three dimensions of sustainable development, that is, social economic, environment, legal and governance development to promote peace, justice and good governance.

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The greatest challenge for the implementation of SDGs in Indonesia is done by ensuring the inclusion of inclusive and no-one left behind principles, integrating all stakeholder programs in the SDGs action plan, synergizing priority programs between government and non-governmental institutions and facilitating comprehensive and inclusive data base. We hope these few important notes can remind us, inspire us, and challenge us/ to share great ideas during the conference.

Thank you.
Rector

Prof.Dr. Anwar Sanusi, SE., M,Si.

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FOREWORD

Following the end of Millennium Development Goals (MDGs) in 2015 with 8 goals, United Nation (UN) develops the sustainability of the world's goals through Sustainable Development Goals (SDGs) with 17 goals. As well as other countries in the world, the Indonesian government is also working towards achieving these objectives in the government, business and civil society sectors to co-operate with the UN and the Indonesian government started mobilizing to achieve the Sustainable Development Agenda by 2030. Universal, inclusive and indivisible, the Agenda calls for action by all countries to improve the lives of people everywhere.

Graduate School of University of Merdeka Malang as an educational institution takes a role in a small part in the academic field by conducting scientific discussions from scholars and practitioners in a conference forum. This activity adopted Agenda 2030 for Sustainable Development and 17 Goals for Sustainable Development. The ultimate goal of this conference is to answer the needs and thinking of the people in Indonesia and international people to achieve sustainable living and also to know more about the efforts of the UN and its partners to build a better world without being left behind.

The conference, entitled "SUSTAINABLE DEVELOPMENT GOALS 2030: CHALLENGES AND ITS SOLUTIONS" is expected to be gathered by field ideas and practices on the implementation of SDGs in the world. A collection of articles will greatly assist the Indonesian government in particular and other countries in the world in providing alternative solutions and challenges for sustainability in the future.

Malang, 11th of August 2017

Mohammad Ghufron AZ

Chairman

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EDITORIAL INTRODUCTION

Sustainable Development Goals 2030: Challenges and Its Solutions

Diana Zuhroh, Dina Poerwoningsih, Pindo Tutuko, Sari Yuniarti

According to United Nations Development Programme, the Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. The goals listed in Sustainable Development Goals 2030 (SDGs) are an action plan for people, the planet and prosperity. It also seeks to strengthen universal peace in greater freedom. We are all aware that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and the indispensable requirement for sustainable development (Transforming our world: the 2030 Agenda for Sustainable Development). Under the agenda, all countries and all stakeholders, acting in collaborative partnerships, will implement the plan. On the agenda it was decided to free humanity from the tyranny of poverty and desire and to heal and secure our planet. Furthermore, 17 Goals of SDGs seek to build the Millennium Development Goals and resolve what is not achieved, which is to achieve all human rights and to achieve gender equality and empowerment of all women and girls. It should be integrated and inseparable and balancing the three dimensions of sustainable development: economic, social and environmental.

The challenges ahead need a solution that will help governments, academics and practitioners move toward sustainable development in the world. As we know, after the end of Millennium Development Goals (MDGs) in 2015 with 8 goals, United Nation (UN) develops the sustainability of world goals through Sustainable Development Goals (SDGs) with 17 targets. We are on this scientific forum as well as other countries in the government, business and civil society sectors to work together universally, inclusive and indivisible.

The theme entitled "SUSTAINABLE DEVELOPMENT GOAL 2030: CHALLENGES AND ITS SOLUTIONS" is expected to be useful for collecting through field ideas and practices on the implementation of the world's ultrasound. The collection of articles will greatly assist the Indonesian government in particular and other countries of the world in providing alternative solutions and challenges for sustainability in the future. Some of the study topics that are phenomena in this SDGs are human and social studies that discussed about development of quality education to promote lifelong learning; communication and new media management; policy for no poverty , zero hunger, and reducing inequalities. Based on that substance, several studies describe about the study the development of quality education to promote lifelong learning such as study permit of civil servants; the implementation of sustainable livelihood approach, problem solving of poverty, hunger, low quality of education and health; particular Islamic education; multiplatform visual novel for culture education for a lifelong learning; and behavior of traditional market; creative industries community-based.

Moreover, Economics is the part of sustainability, in this section discussed about decent work and economic growth for economic sustainability at global competition from development of tourism, entrepreneurship, creative industry, Small and Medium Enterprises (SME), industry, innovation and infrastructure supported by development of Accounting, Banking, Capital market, human resources management, marketing management, and financial management. In this section of several studies that describe its sustainability discuss about empowerment to the community; competitiveness; sustainability on Human Resource Management (HRM); transactions using e-commerce for sustainability, Corporate Social Responsibility (CSR); and Villages Budgeting.

In terms of natural science, the conditions that exist on our planet need to be maintained and enhanced by doing some studies about clean water and sanitation, sustainable cities and communities; and resilient infrastructure and sustainable industrialization. Some studies already conducted on electricity, water drinking public services on municipal waterworks services, sustainability in architecture of traditional, and appropriate constructed for treating grey water.

For the future, efforts that have been done academically, practically, by government, and by society need to be intensified in various forums and discussions. This will add strength respond to the challenges of SDGs and answer the solutions. Achieving the SDGs requires the partnership of governments, private sector, civil society and citizens to make sure a better planet for future generations.

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International Conference on SDG 2030

Key Note Speech

SDG 17

Finance and Technology: Challenges and Solutions

(Milind Sathye, Professor of Banking and Finance, University of Canberra, Australia Milind.Sathye@canberra.edu.au)

G'Day, Salamat Pagi, Salamat Siang to every one! Many thanks to Prof Grahita Chandrarin and her colleagues for inviting me to deliver a key note speech and for your participation at this International Conference on Sustainable Development Goals 2030.

1. Opening remarks

The theme of the conference is the challenges to achieving the sustainable development goals and the possible solutions thereto. The Asian Development Bank[1] lists the 17 sustainable development goals and progress there under in their report titled the *Asia Pacific Sustainable Development Goals Outlook* released recently. The last of these goals, SDG 17 refers to finance, technology and trade. I will focus on the challenges in achieving this goal and possible solutions thereto based on my experience as a development banker for nearly two decades. Before becoming a banking and finance academic in Australia, I worked for nearly 20 years in the Reserve Bank of India and its outfit the National Bank for Agriculture and Rural Development (NABARD). As an academic, the focus of my research is micro finance and the use of financial technology. I will draw up on the studies conducted by me.

According to the World Bank (2016)[2], 10.7 percent of the world's population or 767 million people lived on less than US$1.90 a day in 2013 as compared to 1.85 billion in 1990. Despite these achievements, the ADB (2017) report found that 400 million people in our region are living with incomes less that USD 1.90 per day. These people need to be pulled out of poverty before 2030. By any standard, this is an enormous task and to achieve the goal would require strengthened cooperation, shared understanding, development of coherent policies and finding innovative solutions to address the issues at hand. Access to finance is

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[1] https://doc-04-c8-apps-viewer.googleusercontent.com/viewer/secure/pdf/8q5c4je0k6vljckul700o5v9urcncjhh/c1ooqh0hnd9cmk4se8g1k6tga7gp2i4t/1501977975000/gmail/08043099523186638504/ACFrOgCBkMIMSFwGmI63lSfKY2LW0V3yBrc4iMoTYdL6Mwl7Ma_ypwtQi1GPdlJFUF95ud6iYo7BjSq8EtbG9lBs5Gz6Er7CNc4raMWy5oSRbUeVVq9DTThFlN4ywMw=?print=true&nonce=clu9jia4ih7ps&user=08043099523186638504&hash=ma9gcqqt4m3luu7bt085rr5643t9mi30

[2] http://www.worldbank.org/en/topic/poverty/overview

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considered as a catalyst that could help pull people out of poverty. Accordingly, government and financial institutions, in many countries have devised programs to provide access to finance to those who have remained out of the net of the formal financial institutions. No doubt they have contributed significantly over the years towards the achievement of the SDG 17, yet a lot needs to be done.

It is well recognised that financial inclusion is the key to lift people out of poverty. But banks face several challenges in reaching out to the poor. What are these challenges and how can these be overcome? Many studies have been conducted across the world to answer these questions.

I propose to answer these questions with insights from the three relevant studies that were conducted under my leadership in recent years. The setting of these studies was unique. They were conducted in hilly and remote regions and a remote Island. The study in India[3] focussed on the tribal women residing in the remote Himalayan region of Arunachal Pradesh and West Bengal while the study in Australia focussed on Indigenous Australian[4] women located in the Northern Territory including the remote Tiwi Island. Both these studies were funded by the Australian government and carried under my leadership. The study funded by a competitive research grant from the University of California/ Bill Melinda Gates Foundation focussed on Mobile Value Added Services (MVAS)[5] as a possible technology solution to overcome the barriers faced by Fijian women micro-entrepreneurs. The challenges to financial inclusion and solutions thereto identified in these studies fit well in the goals and challenges of SDG 17 and are enumerated below:

2. The challenges faced in finance and technology

The challenges that banks face could be divided in three categories: (a) challenges faced by the poor (b) institutional challenges and (c) environmental challenges.

Challenges faced by the poor

Lack of education and financial literacy was found to be a major barrier. The majority of the target group respondents did not have a bank account or a credit or debit card, consequently cash was the only method used. Similarly, the lack of institutional network nearby meant considerable transaction cost involved in going to the nearest bank branch even if the poor had a bank account (the nearest

[3] The report is available in digital form up on request.
[4] The report is submitted to the Australian government and not available.
[5] M Sathye, B Prasad, D Sharma, P Sharma, S Sathye (2017) Mobile Value Added Services in Fiji: Institutional Drivers, Industry Challenges, and Adoption by Women Micro Entrepreneurs, *Journal of Global Information Management*, 25 (2), 1-14.

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branch was more than 20 km away from their home in most cases in Arunachal Pradesh of India). None of the tribal respondents in the hilly and remote region had access to credit and substantial unmet demand existed. Most of the target group respondents did not have life insurance. The target group had no access to financial advice. Lack of employment opportunities meant the poor had to fend for themselves on casual labour work which too was uncertain. Legal barriers included lack of ownership documentation to property, lack of identity documentation, lack of age proof and lack of a permanent home address –many casual labourers don't have a permanent home address as they move from place to place in search of work.

Challenges faced by financial institutions

From the banks perspective, lack of infrastructure to open branches, lack of critical mass of business required to open and run a bank branch cost effectively, and reluctance of employees to get posting in such remote branches. Physical safety and security of bank staff was another issue especially when they were carrying cash or holding it on the premises.

Barriers to provision of credit services included lack of credit information and permanent residential address, illiteracy and absence of income and expense records, inalienability of tribal land, non-availability of borrower's margin, lack of contractual flexibility and a large gap in the demand and supply of credit. Barriers to providing insurance services were lack of awareness about the need for insurance and non-availability of suitable insurance products. Barriers to providing financial advice included lack of provision of such advice by mainstream financial institutions and lack of appropriate training to self-help-group leaders to whom members turned for financial advice. The inability of the bank staff to understand the credit needs of the poor due to lack of training is a major issue in human resources management.

Environmental challenges

The regulatory framework that required compliance with the Know Your Customer rules also came as a hindrance given the lack of proper documentation with the poor. Similarly, financing women posed particular problems as they rarely had ownership of property in their name. Furthermore, they have little say, if any, in money matters within the household. There are no social security benefits available for the poor. Lack of ICT facilities and non-availability of banking correspondents are additional barriers.

Several ICT infrastructure related issues came up during our study of Mobile Value Added Services (MVAS) in Fiji. These were mainly: lack of enabling policy framework, lack of cohesive ecosystem, and lack of supporting infrastructure. MVAS is yet to be recognised as an industry in Fiji. Consequently, there is no

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policy framework defining its growth. If there is a dispute, no redressal mechanism exists. To build cohesive policies an inter-ministerial panel as found in India, for example, is required. Network coverage and penetration of mobile phones in rural areas is critical for MVAS/M-PESA development. The setting up of mobile towers in rural and remote islands is another big issue given that critical mass required to cover costs is lacking. The revenue sharing arrangements between MVAS providers are not transparent leading to disputes. We found that women micro entrepreneurs were willing to adopt MVAS and pay for it if application that address their needs and provide data privacy could be developed. It is also important to make MVAS affordable if large scale uptake thereof is to happen.

The problems of Indigenous Australian women resonated those of the Indian tribal and Fijian women micro entrepreneurs in many ways. The Tiwi Island, for example, doesn't have a single bank branch. While the Indigenous Australians get a Basics Card from the Australian government as a part of social security, it enables them just to survive. Supplies are often sold to them at exorbitant prices. The problems related to ICT infrastructure, critical mass, and cohesive eco-system were present in remote and hilly regions in all study countries.

3. Addressing the challenges

While some of the challenges such as providing infrastructure may take some time, those on which work can be readily started need to be exploited. We made several suggestion in our study report on India released in 2012 to address the challenges.

Solutions to the challenges faced by the poor

Opening bank accounts
We suggested to the Indian authorities to exploit the potential of the vast post office network (over 150,000 outlets) in addition to about 54,000 bank branches and 150,000 ATMs to improve outreach to remote areas, in particular. The network already provides four of the five services (deposit, remittance, insurance and transactions) that comprise microfinance. Only the access to credit service is missing and with appropriate training, the post office personnel could also provide that. There was strong support for the use of the post office as a conduit for providing a full range of financial services including credit services in the state of Arunachal Pradesh. In 2015, the Reserve Bank of India licenced India Post to function as a payments bank6. Prime Minister Narendra Modi's massive drive to open bank accounts saw 260 million new accounts including with zero balance opened in just two years 2014-2016. 'According to the [Government of

[6] http://www.livemint.com/Opinion/lRCRPlqpFh2RAQlR1BhwvJ/Restructuring-the-department-of-post-for-financial-inclusion.html

India] under the Prime Minister's Jan Dhan Yojana, in 19 of 28 states all households have a bank account and in the remaining nine states over 99 percent of households have a bank account'7. Of the Jan Dhan accounts 76 percent have a balance greater than zero.

Cash payments
After the surprise announcement of demonetisation on 8 November 2016, the deposits in Jan Dhan accounts which totalled $6.74 billion in mid-October 2016 surged to over $11 billion. Everyone was issued a bank card to transact on the deposit account. Digital payments soared by 300%8.
Remittances
A major issue faced by the poor was sending remittances from a place where the earning member resided to the family residing in a village. The immediate payment system (IMPS) system introduced by banks enabled transfer of smaller payments instantly between bank account and other digital valets. The volumes through IMPS, reached $1.3 billion per month in February 2015 (13 times the volume sent in September 2013)9. The government also encouraged private innovations by promoting payments banks. The Reserve Bank of India licenced 11 payment banks to provide services. These were started, among others, by corporate houses and mobile operators in India. The latter have millions of distribution points for prepaid credit throughout the country and these can be used to load cash on to mobile wallets. A major breakthrough was the launching of a new digital payments app named BHIM — Bharat Interface for Money, where transactions will be possible with just a fingerprint impression10. It works without the Internet connection and is based on the Unified Payments Interface (UPI) from the National Payments Corporation of India (NPCI), the umbrella organisation for all retail payments systems in India. The BHIM also overcomes the problem of lack of education to some extent in the sense that even an illiterate person can use it for transfer of money.
Transaction cost
The problem of high transaction cost in hilly regions (that our study brought out), was to some extent addressed by the Govt. of India by authorising post offices to provide banking services. In addition, the banking correspondent (BC) scheme, enabled availability of banking services at remote villages. The BC's are generally retired bank personnel. There are more than 200,000 BCs in India11. In addition,

[7] http://www.cgap.org/publications/india%E2%80%99s-push-financial-inclusion
[8] http://timesofindia.indiatimes.com/business/india-business/Digital-payments-soar-by-up-to-300-after-demonetisation/articleshow/55902284.cms
[9] http://www.cgap.org/blog/digital-financial-inclusion-india-taking-2015
[10] http://indianexpress.com/article/explained/bhim-app-payments-cashless-online-transaction-narendra-modi-how-it-works-shortcomings-4456264/
[11] http://www.cgap.org/blog/financial-inclusion-20-india%E2%80%99s-business-correspondents

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there are about 30 P2P lending platforms12 though their operations are limited and not regulated at present by the Reserve Bank of India.

Life Insurance/Accident insurance

The Govt. of India launched in 201513 the Prime Ministers Security Insurance Scheme (Suraksha Bima Yojana) to provide accidental death cover of Rs. 2 lakh (A$4,000) for a premium of just Rs. 12 (four cents Australian) per year.

Financial advice

There continues to be a near absence of personal financial advice to the poor except what they may receive by talking to the microfinance institution personnel who may not be trained in provision of such an advice.

Solutions to the challenges faced by financial institutions

Infrastructure

The infrastructure related problems of banks are genuine. Consequently, without waiting for the issues such as all-weather roads, or electricity or general law and order to get sorted out, banks have embarked on innovative ways such as the banking correspondent scheme as described above. This low cost option overcomes some of the infrastructure related issues.

Lack of credit information

The information asymmetry problem is more acute in the case of rural poor for a variety of reasons such as illiteracy, lack of proper records, identity-related issues and property ownership records. Banks are overcoming this by financing the self-help-groups operating in the areas where these are available. The self-help-group members know each other well as they live in the same villages. Bank lend to the self-help-groups many times by joint liability group loans.

Insurance products

The Narendra Modi government's accident insurance to all Jan Dhan account holders at a premium of four cents Australian, addresses the insurance issue to some extent. The private insurance players have also come up with some products suited to rural areas which they are pushing through banks. The Life Insurance Corporation of India has covered nearly 20% of below poverty line families so far14. But this is an area where a lot more work is required. NGOs are currently not approved as insurance agents and this policy needs to undergo change.

Returns from rural lending

Financial institutions shun rural lending as far as possible due to the low returns, and high risk of default. Administrative decisions such as that of the UCO bank

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[12] http://www.livemint.com/Money/6KEmfQvVnCkUAeNCfGB9AM/Are-the-P2P-lending-platforms-for-you.html

[13] http://timesofindia.indiatimes.com/budget-2015/common-man/A-rupees-premium-a-month-and-insurance-for-a-lifetime/articleshow/46416723.cms

[14] http://www.publishingindia.com/GetBrochure.aspx?query=UERGQnJvY2h1cmVzfC8yNDM4LnBkZnwvMjQzOC5wZGY=

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that loan application of a rural woman borrower can't be rejected at the branch level but must be referred to regional headquarter could help ensure lending to women borrowers to some extent. However, the real dent can be made by the use of technology such as the mobile value added services (MVAS) to provide easy and cost effective access to the rural poor. A study under my leadership in Fiji about the use of MVAS to reach out to micro-entrepreneurs showed a promise. We surveyed 74 women micro entrepreneurs and social influence was the principle driver of adopting MVAS. It impacted perceived usefulness and perceived ease of use and through these the intention to adopt. Accordingly, policy makers and industry need to engage social organizations/networks for advancement of technology adoption in collectivist societies such as Fiji.

Solutions to environmental challenges

Two major environmental challenges are regulation and ICT infrastructure.

KYC

For Jan Dhan accounts, the Reserve Bank of India watered down the KYC requirements. The unbanked poor could open account by self-attesting their photograph in the presence of bank officials and submit other documents within six months15. Such accounts could be continued for 24 months if the account holder can demonstrate within this period that s/he has applied for relevant documentation. There are also restrictions on the maximum balances the account holder can keep and on borrowing.

ICT infrastructure

With the rising penetration of mobile phones and tablets, the Indian MVAS market is expected to grow at a CAGR of 18.5% during the period 2015-202016. As per the statistics released by Telecom Regulation Authority of India in July 2017, there were over 1.2 billion telephone subscribers (of which 1.18 billion were wireless subscribers), achieving a tele-density of 94%17. The mobile smart phone penetration is 24% and India is the largest market in the world in terms of volume18. These devices are becoming the preferred devices for banking transactions. Such transactions have seen a CAGR of 306% in recent years19. Several measures taken by the Modi Government under its Digital India program have helped a rapid expansion of mobile phones even to remote areas facilitating financial inclusion. A basic smart phone is available in India for Rs 2.999 (or A$60

[15] http://timesofindia.indiatimes.com/business/india-business/RBI-simplifies-KYC-norms-ahead-of-Jan-Dhan-Yojana-launch/articleshow/41005593.cms

[16] http://www.businesswire.com/news/home/20150708005542/en/Research-Markets-India-Mobile-Added-Services-MVAS

[17] http://www.trai.gov.in/sites/default/files/Press_Release_No50_Eng_13072017.pdf

[18] http://telecom.economictimes.indiatimes.com/tele-talk/an-overview-of-indian-telecom-industry-in-2016-and-outlook-for-2017/2035

[19] http://telecom.economictimes.indiatimes.com/tele-talk/an-overview-of-indian-telecom-industry-in-2016-and-outlook-for-2017/2035

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approx.). The issues of critical mass faced in say Fiji or in Tiwi Islands are not as acute in India given its population of nearly 1.30 billion, 70% of which lives in rural India.

4. Concluding remarks

As a financial intermediary a bank can and does play a key role in the achievement of sustainable development goals. Using technology such as the MVAS and through the self-help-groups, banks can increase their outreach to the poor so that access to finance and other services such as insurance is available.

It seems the challenges faced across the region are more or less identical. Consequently, increased cooperation and exchange of outcomes produced by various policies could provide valuable learning. Towards this end, I suggest that a network of academics and practitioners is established to examine issues and the barriers to the achievement of SDG goals in the Asia Pacific region. Organisation of conferences such as this is very valuable as it provides opportunities for academics and practitioners in different countries of the region to network, exchange information about successful stories and learn from each other's experience to inform policy.

I thank the organisers once again for inviting me and to you all for participating in this conference so well organised by the Department of Accounting of the University.

Teri Ma Kasi!

Acknowledgement

Inputs were received in preparation of this document from my friend and former colleague Dr Benugopal Mukhopadhyay who recently retired as Chief General Manager, NABARD, India and Mr Sharad Ranade from Sydney- an electrical engineer on technology part.

CONTENT

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Quadruple Helix Model in Inspiring the Development of Telematics Creative Industries Community-Based (The Study of Phenomenology on Industrial Startup in Malang)

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ABSTRACT

The results of research on the model of the quadruple helix in creative industry development inspire the telematics on 2016-2017 in Malang, development is the study sponsored by the Department of Industry and Trade of the East Java province, focused over the planning evaluation of Supporting Facilities Planning Unit of Information Technology Technical Services (2016). This research is based on the phenomenon of the movement on creative industries telematics in Malang. The initial debate carried by the Ministry of Commerce of Republic Indonesia on 2008, by applying the synergi of triple helix involving Government-Academia-Business. After their processes towards in decade, change the paradigm become quadruple helix, by positioning the creative industries community telematics as the main agent. The community has a strong social capital, since it has a free position of structural dependence of any party. Problems of social change becomes their urgency, by revealing the existence of the creative community telematics, based on their ability to contribute to prevent social insecurity due to the increasingly competitive job opportunities as well as trying. This research using interpretive phenomenology based on subjective approach. Main activities conducting in-depth interviews and observations at 13 main informant. All of them are in 5 (five) a network of community-based industries, and serves as the foundation of the Agency the Creative Information Technology, East Java (JITC) Malang. As for the focus of the research on the view of the world, the efforts of the Association, the pattern of relationship and communication. Qualitative analysis of interactive used achieve efficiency through discussion in focused, while applying the validity through triangulation. The result of this research described as follows: (1) telematics creative community has strong commitment to control the sustainability of industrial telematics; (2) community was proved to be able to improve the innovation performance; and (3) established a new community through relationships and the intensity of the communication is done by involving financial institutions, distributors, employers' association, marketing and recruiting the new entrepreneur through internship programs.

Keywords: community, telematics creative industries, quadruple helix

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1. INTRODUCTION

Culture shock is always marked every phenomenon of social changes that occurred in postmodern society. This condition is strengthened along with the rise of the creative economy of movement issues that are able to contribute has reached 5.76% per year of the national income. Even in some big cities in Indonesia, local economic development activities will gain a guarantee of sustainability, when able to utilize extended the existence of the creative industries telematics based on information and communication technology. Telematics creative industries take an important role, as its existence become very competitive political issues of *Nawa Cita Kabinet Kerja* of 2014-2019. The movement of the creative industries is in the clumps of economic telematics creative that was initiated by the Indonesia Department of Trade since June 8, 2008, managed to formulate Creative Economy Development Plan 2025. Even the whole state-owned enterprises (*BUMN*) are obligated to grow and develop the Business Incubator Center (IBC), in which one of the focuses gave the facilitation for the novice entrepreneur (startup entrepreneur) on the small micro industries (*IKM*) as a pillar of the national economy. Similarly, the importance of extending that occurs in Malang city, as a representation of Malang Raya region in the development of telematics creative industries. Apparently, still not revealed publicly about the process of growth and development, regarding the commitments on the norms reflected in social networking between the agents of telematics creative industries in particular.

Studies on the succession of the development of creative industries, has released five major problems that become the main attention, include: (1) the quantity and quality of human resources that require increased capacity; (2) the conducive climate to starting and running an industry; (3) a lack of Government's appreciation of the response in resulting creative work; (4) no synergy existence of between the agents of creative industries with the agents who have been owned the business; and (5) weak financial support towards the agents of the creative industry. However, from the side opposite of Government offered information, that the creative industry can contribute to the Gross Domestic Product, ranging up to 5.76 15% on constant basis up to the year of 2025. Creative industries also engrossed 11.8 million people to be the main agent in the sub sectors of advertising, crafts, design, fashion, a video-film-photography, interactive games, digital music, showbiz, publishing-printing, software, radio broadcasting, research and development, as well as culinary. Based on studies conducted by Unesco and UNDP revealed, the culinary and fashion gives the largest contribution, each 209 trillion rupiah (32.5%) and 182 trillion rupiah (28.3%) by the year of 2013. This shows the development significance of creative industries, through strengthening the agents that directly give the impacts on national income, job creation, an increasing of exports value, and a crucial role in sustainable development (Cahyadiputra, 2015).

In the study conducted by Supanto and Adi (2012) revealed, that the importance of strengthening the relations of local creative industries, then it formulated a role between-institute patterns called triple helics. An attempt to synergizing the institutions of Business, Intellectual, and Government (BIG), still need to bring altogether the three elements of the creative industry agents, as formulated by the Government through Economic Development Creative Convention of 2009-2015, and continued in a succession of presidential instruction implementation number: 6 Year 2009 about the 2009-2015 Creative Economic Development aimed at creating employment and alleviating poverty. By remain understood and still can be tolerated if constraints occurred at the time of implementation. The actual business institution does not the constraints of the means, because it is already integrated in the program of corporate social responsibility (CSR). On some of the reputable national company, internship programs that give open opportunity for the community to become a partner are always available. Similarly on the intellectual environment in fact also been programmed on constant basis that integrated in the main activity of *tri dharma* universities which the source of their funding could be sustained through sponsors. However, the government agencies that are supposed to be able to take a more dominant role, still experiencing a variety of bureaucratic obstacles in establishing an institutional form.

Pay attention to the development of the creative industries community telematics, becoming increasingly open when the provincial Government of East Java on 11 March 2013 declared a Pioneer Program Growth and Development High-Tech-Based Creative Industry named Creative Information Technology, East Java (JITC) in the city of Malang. The primary mission of the establishment of the institution, is to nurture and develop the creative industry's first telematics East Java area based on the community, in order to support the implementation of the Grand Strategy of East Java toward the attainment of an area as: "creative industry development Center of electronics and telematics, powerless, and sustainable competitiveness leading to an increasingly prosperous East Java". It is indispensable, in order to be prepared in organize that really focus on the development of creative industries telematics. This condition is supported by the fact that the potential growth of the telematics creative industries is still very high, even is expected to continue to grow their communities in the long period of time (Supanto etc.al., 2013). The importance of positioning the base communities in the institutional development of the economy is also emphasized through study of Wiyani and Prihantono (2015) which reveals, that the need for institutional transformation in the community that have a significant impact against programs that can guarantee the sustainability of its dynamics of growth and development. Organizational management will always direct benefits can be felt, if embodied the independence of each group a small industry with grounded continuity relationship.

The socialization program that has been implemented by JITC Malang, in order of growth and development of telematics creative industry in particular in the city of Malang, is working on an ongoing basis through the form of capacity building training for industry peers, and also workshops with various elements in order to formulate the most appropriate model. Activities that have been carried out throughout the year intensive 2013-2016, involving elements of Community-Business-Government-Intelectual (CoBIG), thus the synergy already intertwined with strengthened target multiply similar institutions for exciting travel industry creative community telematics. Understanding between the communities are increasingly flourishing, especially from state-owned enterprises PT. Telekomunikasi Indonesia Malang on February 1 2016, i.e. with open space facilitation similar set up Digital Innovation Lounge (DILo), its activities centered on the way the unfortunate 7-9 Basuki Rahmad. Similarly, on April 1, 2016, as well as declaring the Foundation of Indonesia following the Creative City Conference (ICCC), meant as a creative city embodies the efforts of insightful global through varieties of local potential, and one of these industry events telematics based on the way the Library Building Semeru Malang. The ICCC title was held on April 2016 in Malang is the starting point of the movement's creative community, academia, business and Government circles of Malang, to work and develop them in realizing the achievement of Malang as a Creative City. Intensification through activities organized and facilitated by the government, is expected to be the initial step in developing creative industries in the city of Malang in order to strengthen the competitiveness of the vulnerable, besides the collaboration patterns of triple helix towards the quadruple helix to a sustainable creative ecosystem (malangkota.go.id).

Telematics creative industries community already has its own activity in accordance with the character of its products, but always have time for interconnected in various occasions, either formal or informal in order to develop the industry. Braided formal relationships are more often carried out for social events, whereas a more business-oriented was done informally. The situation is supported the results of studies on the development of creative industries by Utami (2014) that formulate, socio-cultural aspects that can contribute significantly to the development of cluster-based industry. This condition is corroborated by the existence of a multicultural society, thereby encouraging the creation of a conducive climate to pour creative ideas. Climate conducive of accelerating the growth of the creative community that later evolved into a networks, and may empower members of the community as a competitive human resources. Considering to the deeper social networking community conditions, then to understand, it can adopt the fishing community results of studies conducted by Harini (2013) that stated, social network that involves the active role actors in the process of social dynamics. It is this network which then formed the pattern of connection in the relationship of individuals, groups or various forms of collective rest. The actor plays the role of the functional form social relationships, i.e. by way of sharing information as well as the interplay between one another.

Based on the explanation about the development phenomenon of the telematics creative industries, that the process of changing from a triple helix approach to positioning the community as the object of development, towards an approach that provides helix quadruple participatory role more freely to the community. This means that social relationship-oriented business (achievement) that is in fact not allowed to interfere with the orientation of existing kinship (ascription), and thereafter the paterrened habits in the community network. For that reasons this research is focused on the phenomenon: (1) the dynamics of the act the agents based on their world view in environment industry; (2) potential exploited to overcome any obstacles faced in its industrial sphere; and (3) strengthening the partnership model based on the intensity between agents as well as continuous communication.

2. RESEARCH METHODS

This research method is based on the paradigm of post-positivism paradigm, by positioning researchers itself as a part of reality, in order to position the subject blends in everyday life. Given the nature of the research activities of multi years, then the research process becomes important for researchers to acquire objectivity over its results with the following stages: (1) getting in, the first step of entering the target environment research correctly and appropriately, so that occurred good communication, not cause erroneous, using everyday language. Next the researchers conducting the environmental adaptation with the informant, is based etiquette centric community without a background, in order to build a partnership with the informant; (2) getting along, further steps become part of the community as the target of research. At this stage the researcher doing research with the subject interaction, observing carefully, looking for complete information according to your needs, as well as capture the meaning of the information, and observations are obtained. From these two phases, researchers can build a shared activity, determine the method of thinking to solve or find answers to a problem (Guba and Lincoln in the Pujileksono, 2015:26-28).

The method of Phenomenology of approach used in this study, according to the mindset of the interpretive processes in subjective inductively. For that these methods are very helpful in describing each researcher dynamics going on, neither of which are special or common within the creative industries telematics. From this activity have been obtained regarding various conditions that lead to the formation of patterns of relationships, developed jointly among the perpetrators, expression and appearance respectively in group work, and reveal the various reasons based on personal and group consciousness. The process seemed to always appear as defined by Smith (2009:35), that aims to clarify the method of fenomelogi of everyday life, in harmony with the social symptoms including breakfast buffet as a situation of actual events in life. Under the directive, the application of the principles of sampling purpossive be very important, so that researchers can know, dive, discuss various ideas in depth with the informant to accomplish research objectives in a comprehensive manner.

In obtaining the data and accomplish data analysis, the researchers make use of all interactive qualitative analysis procedure. The most decisive step was the search for key person of agents, because the researcher need to know more deeply with each informant as the subject of research. As often studying about the community, then the whole procedure as it follows: (1) activities of observation, i.e. researchers assign informants can serve as the entrance, which issenior advisor of JITC as well as a part of the community, in order to obtain preliminary information activity of the telematics creative industries community; (2) the activities of basic interviews with 4senior agents from community industry and already has a business entity that serves as a driving strength of the community in the field of their respective flagship, and later to the budding industry group 8 people who obtain mentoring from the senior principals; (3) the documentation activities, by studying the archives, records or documents relating to the dynamics of the telematics creative industries community in JITC Malang; (4) the triangulation, i.e. with the variety collection data from of social elements which connects with the Industry and Trade Office of East Java Province, the business agents community relations, academics who ever participated, other related community of researchers received sensible informations.

3. RESULTS OF THE RESEARCH AND THE DISCUSSION

Quadruple helix model capable of inspiring creative industry development of telematics in Malang, was inseparable from the role of the JITC Malang as an agent that keep the records of historical, because since the 2013-2017 had already been implemented a system of medium-term management in the development of telematics creative industries program. This institution was a great alternative to bridge industry practitioners in order to fulfill their needs. The pattern was applied by placing each element as part of a social imperative to always have an in-sync synergy. This could improve acceleration, accessibility as well as affordability diffusion process of innovation through transfer and adaptation of technology. Telematics creative industries community that were facilitated by the management of JITC Malang, directed to form social networks that have an impact on the consummation of its performance. Social networking is the higher benefits when supported by banking institutions, distributors, the business world, and the Government.

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The situation illustrates the existence of similarities characters at each Community industry overshadowing the informal sector, as found from the results of studies that have been done by Wiyani and Prihandoko (2015), that type of social networking were emotional (solidarity), interest (interest), and the power (power) which will be exposed simultaneously, making it very vulnerable to cause tension among the actors of the industry. Meanwhile at the industry level in which in the form of incorporated businesses tend to be based on economic interests (power oriented), whereas at level of starting or startup industry was based on emotional attachment (solidarity movement). One condition found is that the network on the basis of economic interests will end up whenever both parties have no interest with the other actor.

Based on the results of the evaluation and development of activities in the JITC Malang in which conducted periodically, it could be described that the creative community who joined it certainly obtain facilitation to solve problems such as: (1) improvement of the capacity of human resources through education and training that will benefit in any attempt to expand the opportunity of attempting, while perfecting the personality (personality building); (2) strengthening of the industry, namely the construction of the incubation that includes the opportunity of attempting, the provision of technology and production process, facilitation of financial and capital markets, and marketing up to quality control production; (3) the institutional development of the industry, namely through the self efforts as well as managerial capability to conduct association with other industry, in order to ties strong bond between the interwoven perpetrators in the form of an informal nature of social networking; and (4) the granting of initial capital, namely facilitation of the provision of sufficient infrastructure that is used to make the industry better, by acquiring the facility up to mentoring at free of charge, so as to determine its business projections. Based on the description, become an increasingly open up regarding all the activities of the community which is based on community awareness, movement within community, and the attempt to expand social networks, up to the strengthening of institutional industry.

3.1Community Dynamics

Application of quadruple helix model had been part on the movement up to the very day, it could provide information about the developments with measurable telematics creative industries. Through some intense interview on any discussion, both with the community in internal and external JITC Malang had discovered the key growth and development of the telematics industry lies in entrepreneurship, and this is the starting point of the awakened of creative action. The developed principles, that the lower the barriers faced by industries to take advantage of opportunities, then the higher the willpower runs the industry and increase the ability to manage. 91% of industrial perpetrators stated that their business run well, and up to the very days the business can be

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developed, i.e., to diversify its product quality by involving new industries practitioners that have the ability to respond to new opportunities.

Industrial development and the emergence of new entrepreneurs are in need of financial support, due to the presence of 82% for new perpetrator into the community that faced capital problems. For startup perpetrators that have ability in marketing then will be directed to join the expanded market, by building or strengthening social networking. Some of them use an intermediary media and promotion, in which usually done by following the exhibition as well as through the form of a conventional relation. The depiction obtained from the result was approaching 70% marketing activities goes well. It still required the ability to utilize information technology, as a structured attempt to explore opportunities of expanding marketing products that could guarantee the entrepreneur conducted.

All informants understand that entrepreneurship required technical mastery (product knowledge) to start the industry. Technical ability was mastery the material of the product, while the business abilities was the knowledge and skills in variety of functional aspects of business, such as business planning, product development, marketing, personnel management, general management, accounting, finance and others. Therefore it takes competent human resources to do all that. From the human resources aspects showed that 50% had reliable human resources to run the industry, but 30% required efforts to enhance capabilities.

The condition refers to two issues, one side more concern about the durability of the social economy, and the other side more in put forward social identity. The study by Berek (2014) on community life with uncovering cultural orientation gave an overview that community interaction first concern was on internal benefit. Maintained single community of identity became important for its members, as each of the action-oriented collective interests. The relation with another community, associated with the acquisition of comfort in every interaction. Although sometimes mistaken perception did occurs from outside of the community, but in fact the community was still exists and even able to demonstrate its social role.

3.2 Enhancement of Community Role

Quadruple helix model development aimed to grant the independence of the perpetrators of the telematics creative industries, therefore it takes an established economic stability, in order to be able to meet their own needs. Independence also characterized the existence of good cooperation and did not dependent on Government assistance, and provided an opportunity to reach out to industry perpetrator in which acted as the subject changes. Build the independence and society well-being that could only be achieved through the enhancement of the human resources quality. It used to be the Government's efforts in improving the self-sufficiency of industry perpetrator that left "top

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down" impression, meaning that the implementation of programs and activities, starting from the preparation, planning, implementation, budgeting, and evaluation were carried out by the authorities themselves, without involving other elements.

The numbers of new industries that were experiencing failures in operation as it did not get certainty towards the provision of raw inputs and marketing for output. Similarly, the financial institution was expected to play a role and yet limited to only considering a capital loan that could be returned. The diversity of these problems obviously required serious responses. Therefore the program development and reinforcement of industry need to involve the whole element of development, through the community synergy, business, Government, and intellectual called as quadruple helix.

To ease the space motion of community acts broadly, therefore the program strengthening the telematics creative industries that could be done on an ongoing basis, namely through the entrepreneurial incubator model simulation of information and communication technology-based community that the roles could be formulated by: (1) Group of the IKM by providing motivation and facilitation in the form of opportunities tailored to the ability or the potential that exists; (2) the association profession, i.e. one of the institutions that can strengthen the community's economic resilience that is as Telematics Industry Profession (PAPIT); (3) the external support, i.e. support in all variation that was in accordance to the problems' need in which not to weighted it further by reinforcement the industry that could be managed independently.

The study of the community role concept in the development of creative industries, the telematics from the side of social and culture also became the study of many parties one of it was the study by Utami (2014), that the Government was also drafting a model of five main pillars that were focused on who was involved in the production of creative industries, the technology that supports the creativity of individuals, making use of material resources, institutional industry association, the protection of its results, and financial intermediation. From the social and cultural aspects the development of creative industries contributed positively, even sustained by very creative human resources to innovate. It was even supported by creative human resources to form a communications network that could publicly transmit ideas, especially with regard to efforts to advance the industry.

3.3 Strengthening Community Network

Implementation of model quadruple helix became the basis of the refinement of the previous program, by consciously placing the position of community as the deciding factor as a ongoing program evaluation of the entire programme in strengthening micro-industry in which summarized in 4 major indicators, namely the synergy-synchronization-coordination-organizing program assessed had yet to support the accelerated growth of a new entrepreneur that would enter the community. Programs that have been conducted so far showed that there was sector ego, therefore brought an impact on overlapped program run by each agency of Government. This was where the actual community had unlimited opportunities to be active. On micro telematics creative industries community in the informal sector relatively experienced few ups and downs, as uninterrupted rapid development of technologies that had an impact on the needs of the technical equipment production.

The latest telematics technology development was considered no longer surprise, since most of the principals had technical equipment product information that sustained and achieved its industrial efficiency. This was where industry perpetrator concentrated the investment was to equip technical equipment as perfect as possible. Whenever the investment barriers fund, then they would do collaboration with other industries that were more competent. During the last two years in the process of adoption and innovation telematics technology, all the existing constraints apparently could be solved, by gaining the support of a group of intellectual and educational institutions. Almost all small scale industries and micro thus feel its benefits, because the community at more established industries capable of providing technical production facilities. This situation showed the adoption process of technology, encouraged communities to get to know the new technology of supporting production processes.

Knowing and mastering technologies in the creative community for developing the industry, required an ecosystem that ensures this innovation especially for growing content industry and applications games or animations. This was emphasized by the Anandhita (2015) through the study of Information and Communication Technology base, expected to be one of opportunities opened up for beginner technopreuner incubation activities for the enhancement of capacity building. The role of the incubator itself was very important in fostering creative industries, to be able to prepare the perpetrators obtained seed capital, mentoring to produce a competitive product. Strengthened role of the mastery of technology, then the involvement of elements of the private companies could act as distributors as well as users. While government agencies acted as supporting financing facilitation.

4. CONCLUSION

The process of change in the development of telematics creative industries from triple helix approach towards a quadruple helix, gave a very strong impact on the acceleration process of its program, because the community gain more space to strengthen its existence. This was getting real look at strengthening kinship between members of the community, therefore it becomes a pattern reflected on the world view of each member of the community. Joint measurable effort was seen to improve the performance of the industry, as well as its effects on the intensity of the continuous communication through synergy-synchronization-coordination-organizing work programs.

Model quadruple helix managed to increase acceleration, accessibility as well as affordability the process of diffusion of innovation through technology transfer and adaptation of technology creative industries within the scope of telematics. Next is a directional step to utilize technology wisely, by established industry positioned as levers for the industry in small and micro levels. This showed that the process of adopting technology had encouraged the community to improve its uperformance.

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Study Permit of Civil Servants

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ABSTRACT

This study discusses the implementation of learning permit after the adoption of the Circular of the Minister of Administrative Reform and Bureaucratic Reform No. 4 of 2013 in the city government of Malang. This study aims to determine Implementation MENPAN & RB Circular No. 4 of 2013 on Environment Malang government and supporting factors and obstacles in the implementation of the licensing study Civil Servants in the Government of Malang. this study uses qualitative research approach with descriptive method with data collection techniques used were observation, interviews and documentation. As the informant in obtaining the data is Secretary Regional Employment Board, Head of Education and Training, Head of Sub Technical Functional, Head of sub division Works Agency staffing area of Malang, Staff Education and Training as well as the applicant who filed Study Permit, researchers conducted observations in the Field of Education and training Malang.based on the results of research and discussion, it can be viewed as a whole, that the implementation of the Civil Servants Study Permit based on the Circular of the Minister of Administrative Reform and Bureaucratic Reform No. 4 of 2013 on permit studying in the Civil Service in Malang City Environmental has done well. Can be seen from the procedure of granting license to learn, Communication Policy Study Permit, Apparatus Resources, Disposition and Bureaucratic Structure is good, but it should be an increase in clarity in the terms and conditions of learning permit. factors supporting the granting of study include: Support of Power Available both human resources and equipment resources, support agencies in the Environment Malang becouse Malang as the city of education, while the inhibiting factor of a policy of granting study is the absence of regulations specifically owned by the City Malang related study permit.

Keywords: mechanism and procedure, permit civil servants, policy implementation, supporting and inhibiting factors

1. INTRODUCTION

The existence of universities plays an important role in the development of government apparatus resources. Law no. 20 of 2003 on the national education system confirms that "higher education is the level of education after secondary education which includes diploma, bachelor, master, specialist and doctoral programs organized by universities". In the implementation of civil servant education to continue the education in travel must obtain a study permit from the appointed institution, in this case the regional personnel board that gives the study permit for civil servants, in the minister of home affairs regulation No.34 of 2012 on giving study permit and increase of adjustment of certificate of civil servant certificate in ministry of home affairs environment, "permit is permit granted to civil servants within the ministry of home affairs to attend education in an educational institution", while in the ministry of home affairs regulation No.1 of 2008 mentions "the meaning of a learning permit is a permit granted to civil servants to attend education at a formal educational institution outside working hours".

Quality or professionalism of the implementation of the learning permit is a demand that must be immediately responded. professionalism of the implementation of the learning permit can significantly affect the quality of an agency's apparatus resources. Therefore, constructive efforts in developing apparatus resources must be done in a planned, consistent, and sustainable manner thus, the expectation of the availability of professional government apparatus can be achieved. Implementation of SE SEPAN & RB policy No.4 of 2013 on the provision of learning permits and learning tasks implemented in the government of Malang is not going well but there are still problems in the granting of learning permit, in the circular letter No.4 year 2013 point 3 letter j that the study program in the country that followed has obtained approval/accreditation of B at least from the authorized institution with the policy resulted in some public health officials such as midwives, nurses, pharmacists many who want to improve their competence by following the education of midwifery / nursing program, while the accreditation of study program midwifery/nursing university/high school health in malang accreditation of her average c in addition, many civil servants who want to improve their competence by following the education of computer study program, while accreditation program of study computer University in Malang accreditation of mayority.

Based on these problems, the authors are interested to conduct research with title, permit for civil servant learning (study implementation circular letter minister of administrative reform and state minister of bureaucracy No.4 of 2013 in Malang city government environment as the title of this paper, feels important to do research on the basis of the consideration that the more complex issues that must be handled by the regional personnel agency related to the granting of a learning permit to civil servants in the environment government of Malang.

2. LITERATURE REVIEW

2.1. Policy Implementation

An implementation of the policy is a matter to be implemented if the policy already has provisions or rules to run. According to Anderson in

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Purwanto (2012: 22) states that: Implementation seen as "administrastion of the law in whichvarious actors, organizations, procedures, and techniques worktogether to put adopted policies into effect in an effort to attain polices or program goals" in this understanding, Implementation is interpreted as legal management (because the policy has been legalized) by mobilizing all available resources so that the policy can achieve or realize its objectives. The focus of policy implementation is to understand what actually happens after a program is declared effective in order to impact and reach the target in mind, the stage of policy implementation can be characterized and differentiated from the policy-making stage. Policy making on the one hand is a process that has a logical buttom up in the sense of the process begins with the exploitation of aspirations, request support from the community. While the implementation of policy on the other side diadalamnya have top down logic, in the sense of decreasing the alternative policy yag abstract or macro into concrete or micro action.

Regarding the implementation of Nugroho's policy (2014: 657), "interpreted as a way for a policy to achieve its goals". While Edward III in Panji Santoso (2012: 41) states that "the implementation of the policy is:" is the stage of policing making the establishment of police ". As for the understanding of the implementation of public policy Winarno cites the opinion of van Meter and van Horn in Kridawati (2013: 175) defines "Implementation of public policy as actions undertaken by public organizations directed to achieve the goals set in previous decisions. This action involves attempting to change the decision of the decision into a specific operational action (time) action or in order to continue the business effort to achieve change change. "From this understanding, it can be understood that the implementation of public policy can be interpreted as an activity of completion or execution of a public policy Which has been established / agreed with the use of means (tools) to achieve the policy objectives. Thus, in the process of public policy, policy implementation is a practical and distinguished step from a policy formulation that can be viewed as a theoretical stage. Kridawati, (2013: 174) argues that "Public policy implementation is the process of executing the concept into operational technical rules and programs of activities undertaken after the policy is set / approved. Policy implementation activities lie between policy formulation and policy evaluation ". Edwards III Model. Kridawati (2011: 217) states that variables that greatly affect the success of the Implementation of the Policy are (1) Communication (communication); (2) Resources (resources or resources); (3) Dispotition or Attitude (attitude) (4) Bereaucratic structure (executing bureaucratic structure).

2.2. Permission to Study Civil Servants

Definition of study permit according to east java governor's regulation No. 71 of 2011 on learning permits and adjustments exam appellate for civil servants in East Java provincial government environment, the meaning of study permit is "permission given by authorized officials to civil servants who meet requirement to attend academic education, vocation and profession to an accredited educational institution on the initiative of the civil servant concerned ". In the circular letter of quota & RB number 4 year 2013 the provision of the following learning permits (i) civil servants who have had a working period of at least 1 (one) year from the date of appointment as civil servant; (ii) obtain written permission from authorized officers; (iii) not abandoning the duties of his position, excluded the nature of the education being followed, the civil servant may abandon the position of part of the working time by permission of the agency's chairman; (iv) the element of assessment of the implementation of work in the past 1 (one) year is at least of good value; (v) not being disciplined in moderate or severe discipline; (vi) never violates the code of ethics of middle or heavy civil servants; (vii) not currently undergoing a temporary termination as a civil servant; (viii) the education that will be pursued can support the implementation of office duties on organizational units; (ix) the cost of education is borne by the civil servant concerned; (x) the study program in the country to be followed has obtained minimum approval/accreditation b from the authorized institution; (xi) civil servants are not entitled to demand the adjustment of a diploma to a higher rank unless there is a formation.

In the implementation of the process of provision of civil servant license permits there are conditions that must be completed and this requirement contained in article 5 of the minister of home affairs regulation No.34 of 2012 include: (i) civil servant who is not a civil service candidate. (ii) Every element of the assessment of the implementation of work within the past 1 (one) year is good. (iii) Education conducted by public or private education institutions accredited by the ministry of national education. (iv) The field of education followed should support the implementation of the task. (v) Education costs borne by the civil servant concerned. (vi) Education is followed outside working hours and does not interfere with daily work/duties. (vii) Not being serving a disciplinary punishment of civil servants.

The learning permit process given to civil servants can be reached through the following mechanisms and procedures: (i) the employee asks for advice or input in writing to the regional personnel board regarding the department to be pursued by including the program curriculum (the education program brochure). (ii) Regional personnel board informed about study program/department of university/ university accredited by national accreditation board of higher education. (iii) Apply to the intended school/university/educational institution. (iv) Applying for a learning permit to the mayor of malang through the regional personnel board. (v) Applications for a learning permit are considered by baperjakat through the regional board of personnel. (vi) Receipt of letter of study permit through the relevant regional government work unit. (vii) Once completed the education must prepare a

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report and attached a photocopy of certificate of passed/certificate 2 (two) copies to the mayor through the regional personnel board.

3. RESEARCH METHODS

In accordance with the formulation of problems and research objectives in the set is to draw a description and explanation of the granting of licenses for civil servants in the government of Malang, the classification of this study according to the level of explanation pertained descriptive-qualitative research

Descriptive research is intended to explore and clarify about a social phenomenon or reality (Singarimbun & Efendy, 1989). Other opinions by Hyman in noble counseling (1989: 29): ".... descriptive research objectives to describe precisely certain individu traits, circumstances, symptoms, or groups." Another view of the purpose of descriptive research by J. Rahmat 2005: 25): "descriptive descriptions aimed at (1) gathering actual information in detail describing existing symptoms, (2) identifying problems or checking the prevailing conditions and practices (3) making comparisons or evaluations".

Qualitative research approach is the choice of our research because qualitative research is more emphasis on giving meaning and quality depth to a phenomenon.

3.1. Research Focus

The authors set the focus of the research is the implementation policy granting permit for civil servants based on letter's of MENPAN & RB number 4 year 2013 about provision of learning tasks and permits learning. Where implementation policy related to the license to study civil servants in Malang city government environment with research focus (i) mechanism and procedure in giving permit to study in malang city government environment. (ii) Supporting and inhibiting factors in the permit process.

Learning civil servants in malang city government and carried out by approach based on policy implentation criteria using several indicators such as: procedures, communication resources, attitude of the implementor, and the bureaucratic structure of the implementer.

3.2. Data Analysis Technique

According Sugiyono (2012: 245), "data analysis is an activity after data from all respondents or other sources collected". So through this data analysis technique, the data obtained in the study is collected, then categorized and sorted out in accordance with the purposes of research, then the data is analyzed by connecting with theories and concepts as well as the situation in the field to then drawn conclusions as research.

According to Miles and Huberman (Silalahi, 2012: 339) states the analysis activity consists of three activities that occur simultaneously, namely data reduction, data presentation, and conclusion. The steps taken by observers in analyzing the data in this study are as follows (i) data reduction, It is a selection process, focusing attention on rudimentary, abstracting, and transforming coarse data arising from written records in the field. The data in the field is written in the form of a description and then summarized, in the selected matters relating to the focus of research and given a more systematic arrangement that is more easily controlled. (ii) Presentation of data, that is a set of organized information that gives the possibility of drawing conclusions and taking action. Presenting the data in a table, map, chart, structure to the data obtained in the field to facilitate in understanding it. (iii) Drawing conclusions, that is the final stage in data analysis. This stage is done when data collection activities are performed, a qualitative analyzer begins to search for the meaning of objects taking note of regularities, patterns, explanations, possible configurations, causal paths, and proportions. At first the conclusions were not yet clear, but later increased in detail.

4. DISCUSSION

4.1 Analysis of Research Results

Implementation of granting of permit for learning civil servants in Malang City government environment based on circular letter of Menpan & RB Number 4 year 2013 about permission learning

Implementation of the learning permit is implemented based on the Minister of Manpower & RB Letter Number 4 of 2013 on the study permit has been implemented by the regional personnel board of Malang since the convention has been set, since the regulation has been established, the regional personnel board of Malang form the operational standards and procedures to respond to the change of policy so far, in the provision of study permit has been good and has been implemented by the apparatus who process the learning permit, in the mechanism of the process of granting permission to learn the apparatus already apply services in accordance with the service standards: (i) Understanding of procedure of learning permit also can be understood by civil servant in Malang City environment which will propose permit to study as well as in every SKPD already know the requirement in submission of study permit so that from the applicant have been explained by Head of General Sub Division of each SKPD Before the applicant submits the file to the Regional Personnel Board, but in the procedure of learning permit there are some obstacles from the applicant as well as the lack of file, the terms do not meet the requirements and the accreditation is not in accordance with the provisions. (ii) The change of study permit after the release of the Minister of Relation & RB Number 4 of 2013 has many impacts, especially related to the provisions in the application of study permit and other problems that arise which must be resolved, such as: (a) the study program in the country to be followed has received approval / accreditation of at least B from the authorized institution; (b) Before undertaking

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lessons and lectures, civil servants must apply for a study permit; (iii) For civil servants who conduct lectures or lessons must report the progress of Education at most once a year;

Conditions of college status minimum accreditation B of the authorized institution has a very significant impact, especially for the position of Functional Nurse and Midwife who will increase their Competence higher level. Universities in Malang City especially study program of Nursing and Midwifery Accreditation status of study program from DIKTI assessed C, this matter causing many permit of Learning Permit can not in Process. The provision on this accreditation caused the lack of formation requirement on the functional position of Nursing and Midwifery residing in Malang City, to fulfill the requirement especially the Functional Nursing and Midwifery then hence that must be taken is to follow the lecture at the college that the program is Minimal B, the study program is in outside Malang City but with various considerations required if following lectures outside the city of Malang is feared that the schedule of lectures clashing with tupoksi embedded by the employee, therefore to give permission to study outside the city of Malang must complete the requirements with the direct approval of the secretary of the region through a staff review submitted by the head of the agency.

While based on the approach of Edward III Model, the results obtained analysis of things as follows:

Communication

The communication concept of policy implementation generally analyzes whether messages sent by policy communicators are acceptable and well understood by policy communicants. If the message is fully received, then the communication is called effective. In the development of communication policy today states that communication is called effective when the message of the policy objectives submitted communicator not only can be accepted clearly, but also affect and implemented by the communicant.

Communication plays a very important role in the success of a policy including the policy of Study Permit for Civil Servants with the issuance of Circular Letter of Minister of Manpower & RB Number 4 of 2013 on the study permit as stated by Edward III that the decision of the policy and its orders must be forwarded to the right people and communicated clearly and accurately to be understood quickly by the implementer. Edward III further notes that some of the things that encourage inconsistent communication and cause adverse impacts on policy implementation, such as the transmission performed, the level of consistency, and the level of clarity of communication.

Submission of changes related to the rules and procedures of granting a study permit, the regional personnel board in this case the education and training as the permit to do socialization and circulate the Letter to each SKPD related to the change of learning permit process in accordance with SE Menpan & RB

Number 4 of 2013 regarding the permit Learning, the form of socialization is done through the socialization of employment regulations conducted on August 24, 2015 which is followed by all Heads of General Sub-Section SKPD Malang and on preemptive debriefing activities for civil service candidates who will perform prajabatan training, this is done so that the process of study permit can be understood by all civil servants in Malang City government environment.

Transmission Dimension

The issuance of the policy of the Ministerial Circular Letter number 4 of 2013 is aimed to restore the provision of study permits for civil servants so that with the provisions contained in the policy civil servants can be more orderly and improve competence in accredited universities, to achieve these goals then The target group must understand carefully the intent and purpose.

Submission of information about policy changes Licensing Learning Permit It is quite Optimal but there is a need for further policy on the problems that occur as well as lack of understanding of policies related to delay submission of learning if this. It is known from the civil servants who take care of the learning permit is still less understood about the policy change procedure permit learning conducted by Menpan. Whereas the resistance to the policy changes is very important to change the mindset of civil servants who have a perception that the learning permit is done at the time will do learning on Education Level which will be taken, whereas in Permendagri Number 34 of 2012 stated that the granting of study permit on When civil servants will carry out education. This can be seen from the process of filing a study permit for civil servants in urban municipal government who take care of study permit has been done learning. Thus it can be said that the communication between the Regional Personnel Board of Malang with civil servants within the city of Malang is not in accordance with the expected in socialize Policy in Management Permit for Civil Service Students in Malang City Government need a re-emphasis associated with the Proposal License.

Communication Clarity Dimensions

If the policy is to be implemented as it should, then the implementation instructions should be clear so that it is easily understood by the implementor, the target group or any other party in need. Unclear implementation of a policy may occur because there are certain parties who may not like or disagree on the implementation of a policy that has been established or feared will harm and disappoint one of the parties. The uncertainty in communicating may also be because they have the freedom to impose their own views on policy implementation, views that may be different from the views of their superiors or views that should be their reference.

The clarity of understanding of this policy caused many problems amongst the nurses, midwives and civil servants who did not have a study permit, as we made some observations, we met some civil servants who asked for clarification

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regarding the changes to the provisions of the study program accreditation, By the Implementor in this case the Training Division gives explanation as clear as possible and explained about the applicable provisions, even from the nurse and the midwife carries a letter containing MOU cooperation on accreditation of Ministry of Ministry of Health with Ministry of Education, but Head of Education and Training give understanding to the midwife and the applicant On Aktitasi used is the Accreditation of the National Accreditation Board of Univercity (BAN-PT).

Based on the results of observation and interviews with informants can be seen that clarity communication information about policy changes permit learning in general It is quite clear, if any employees who have obstacles related to the provisions and requirements can be explained directly in consultation with the Head of Training Sector so the problem can be finish immediately.

Dimensions of Communication Consistency

Consistency dimension is required so that the policy adopted is not confusing and does not cause inconsistency by policy implementers, policy goals, and interested parties. Consistency here implies that the implementation of the policy will be effective if the implementing order is consistent and clear and unshakable whether it is related to position, interests or kolution, coruption nepotisme (KKN). This consistency is related to the attitude, perception, and response of the executing officers in understanding clearly and correctly the regulations implemented.

In addition, the consistency of policy implementation will be effective if the implementation order is consistent and clear. This consistency is related to attitudes, perceptions and responses of the implementing officers in understanding the clarity and correctness of the guidelines implemented. The level of effectiveness of policy implementation depends on the consistency and clarity of the implementation order. Nevertheless, although the orders conveyed to the implementers of the policy have an element of clarity, but if the order is contradictory then the command will make it difficult for the executor of the policy to carry out its duties properly. In addition, inconsistent policy implementation orders will encourage the implementers to take very loose measures in the interpretation and implementation of policies.

Based on interview and observations during conducting the research can be concluded that the consistency dimension (consistency) conducted by the Implementor in this case the employees of the regional personnel agency can apply the policy related to the consent of learning permit with consistent with applicable provisions.

Resource

The availability of resources is very important because of the limitations on available resources, resources, time, and policy formulation that are based solely on one of the small number of sources and gives the community respond in its own way, the political policy made Not getting the impact as expected. According to Edward III in Widodo (2010: 98) that these resources include human resources, budget resources, and equipment resources and authority resources. In accordance with the focus of research, the analysis of resources focused on human resources.

According to Edward III the discussion on human resources / staff is not just talking about magnitude only. Because the success of policy implementation is also strongly influenced by the ability (quality) of the executing staff. Based on this, Edward III suggests two principal points in analyzing the resources needed for the implementation of public policy, ie, analyzing the size and skills.

According to the data is known that for human resources who are in the Field of Training Personnel of Malang City Region amounted to 8 (eight) people perceived is sufficient to perform services, in addition to quality, educational background is adequate to perform excellent service. Especially in terms of speed and accuracy in processing the granting of study permits.

Thus it can be said that for human resources as one of the variables that determine the success of the implementation of the Policy Learning Permit in quantity and Quality is in accordance with the expected.

Disposition Factors

The disposition or attitude here is the attitude of the implementers who support the implementation of a defined policy. The attitude of the policy implementer is a factor that has consequences in the implementation of the policy. If the implementers are good about a policy, in this case there is support they are likely to implement the policy as desired by the policymakers and vice versa if the conduct or perspective of the implementers is different from the policymakers then the process of implementing a policy becomes more difficult .

Edward III says that a good or positive attitude of executives to a policy signifies an endorsement that encourages them to fulfill the duties as desired by policymakers. Vice versa, if the behavior or prospective of the implementers is different from the decision makers, then the implementation process of a policy becomes difficult. Dispositions / Attitudes are the characteristics and characteristics possessed by the implementer, such as commitment, honesty, democratic nature, so the attitude of the policy implementer will be very influential in the implementation of the policy. If the implementer of a good attitude then he will be able to run the policy as well as what is desired by policy makers, on the contrary if his attitude does not support the implementation will not be implemented properly.

Based on the results of interviews with informants it can be seen that the loyalty and dedication of the implementation of the policy permit can be accounted for in accordance with the duties and authority given. Giving authority given by the boss can be done with full responsibility, with such attitude then the process of study permit can be implemented properly in accordance with the Service Standards and applicable regulations.

Bureaucratic Structure Factor

The bureaucratic structure is defined as the characteristic characteristics, norms and patterns of relationships that occur over and over again in executive bodies that have potential relationships as well as real with what they have with the implementation of a policy. Edwards III (1980: 125) states that the two sub-variables that give a big influence on bureaucracy are Standard Operating Procedures (SOP) and fragmentation.

SOP is a response arising from the implementor to answer the demands of workers due to lack of time and resources and the willingness of uniformity in complex organizational operations. By using SOPs, implementers can optimize the time available and can serve to uniform the actions of officials within a complex and widespread organization, thereby generating great flexibility and great similarity in the application of rules.

Regarding fragmentation, Edwards III defines fragmentation as "spreading the responsibility of a policy to several different agencies that require coordination". The existence of organizational fragmentation (scattered organization and Complex) can hamper the coordination needed to implement a policy. The absence of good cooperation between the Organization in SKPD will lead to confusion and confusion which will all lead to deviations from the implementation of the policy of the objectives.

According to interviews with informants, existing standart operation prosedure are known and understood and applied in the implementation of Learning Permit activities. Indeed there is fragmentation of the organization because the administrative policy learning permit process can not be separated from the Role of all SKPD environment Malang City Government. However, the fragmentation of this organization is balanced by the coordination between the Head of Public Sub-Section in SKPD with the Education and Training Sector.

Thus it can be concluded that the bureaucratic structure factor in the Learning Permit process has supported the policy implementation of the policy change.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

This study discusses the implementation of the policy of the Minister of Administrative Reform Circular Letter Number 4 of 2013 on the learning permit in Malang City Government environment as well as the supporting factors and obstacles in Implementsai policy, based on the results of research and discussion that has been done then it can be taken as a conclusion following:

Implementation of SE SEPAN & RB Policy No. 4 of 2013 on the Study Permit in Malang City government environment. Implementation of license to study environment Malang city government can be implemented optimally but still there are some problems that arise with the enactment of regulation about the circular, based on approaches Implementation of Policy in can result as follows: (i) Procedure of granting: (a) Learning Permit. Procedures in the provision of study permit have been run well and are in accordance with the Procedure, but there are some civil servants who apply for permits still lacks in the requirements and there are deficiencies in the provisions in accordance with applicable regulations. (b) Communication. (ii) Transmission Dimensions. Distribution of communication on changes in the provision of study permit has been understood and disseminated through socialization, debriefing and distributing written letters with various efforts. The changes on the Permit of Learning Permit through the Circular Letter of Rector & RB number 4 of 2013 can be known and understood by all Civil Servants in Environment of Malang City. (iii) Dimension of Clarity. Clarity communication of information on policy changes general license of learning permit it is quite clear, but if any employee who has constraints relating to terms and conditions can be explained directly in consultation with the Head of Education and Training Division so that problems can be dismissed immediately. (iv) Dimension of Consistency. Consistency (consistency) conducted by the implementor in this case the employees of the regional personnel agency may apply the policy related to the study permit with a consistent in accordance with applicable provisions. (v) Resources. Human resources as one of the variables that determine the success of the implementation of the policy learning permit, the quantity and quality of the capacity of apparatus resources in the field of education and training of the regional personnel board of Malang in processing the learning Permit has been able and in accordance with the provisions and can process the learning permit in accordance with the ability which are owned. (vi) Disposition Factors. In relation to the delivery of the authority given, the Implentor has an attitude of loyalty and dedication to the Policy of Study Permit and able to be accountable in accordance with the Task and authority given. With such an attitude then the process of study permit can be implemented properly in accordance with the Service Standards as well as applicable provisions. (vii) Bureaucratic Structure Factor. SOPs are already known and understood and applied in the implementation of Learning Permit activities. Indeed there is fragmentation of the organization because the administrative policy policy Learning Permit process can not be separated from the Role of all SKPD environment Malang City Government. However, the fragmentation of this organization is balanced by the coordination between the Head of Public Sub-Section in SKPD with the Education and Training Sector.

Thus it can be concluded that the bureaucratic structure factor in the Learning Permit process has supported the policy implementation of the policy change.

Supporting factors and inhibiting implementation of license granting for civil servant employees.

Supporting Factors: Support Available Resources: (i) Human Resources. Human resources are vital organizational assets, therefore their roles and functions can not be replaced, or how much money is prepared, but without professional human resources they all become meaningless. (ii) Equipment Resources. In the policy on the learning permit does not mention about the means and the infrastructure is determined, however, the facilities and infrastructure are very influential in the process of learning permit, the observation that we do that the Personnel Agency especially the field of education and training has good facilities and infrastructure so as to support the process of granting permits study well. (a) Support Institutions In Malang City Environment. (b) Good cooperation between SKPD environment Malang city government is very supportive in the process of granting permission to study, Based on the observation of the author note that the relationship between SKPD already well established and mendukng policy permit this study, it is seen from the enthusiasm at the time of socialization of personnel regulations that are present in Activities and always coordinate with the Regional Personnel Board in any problems that occur. (c) Malang City as Education City. Malang City has a mission of making the city of Malang as a city of education, as well as the number of universities in the city of Malang to be an advantage for the Malang city government apparatus to improve the Competence at schools / colleges in the city of Malang

5.2 Obstacle Factor

The inhibiting factor in the learning permit process is the absence of a regulation that is specifically owned by Malang Municipality related to the study permit, in contrast to other districts / cities that have special policies or regulations that become the reference in the implementation of study permit in the area.

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Personal Factors on The Behavior of Interactionist Traders in a Traditional Market Environment and Semi Modern (Ethnographic Study on the market in Malang Regency)

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ABSTRACT

This dissertation research that has been done, obtained financial support from the Ministry of DP3M Ministry of Technology Research and Higher Education of the Republic of Indonesia in year 2017. The results of this interactionist behavior of traders research, was to respond to the insufficiency of structured studies of market status changes from traditional status toward semi-modern. The reality of increasing status of the perpetually growing market is solely determined by the physical facilities and the quantity number of the commodity. This view has been deteriorated by market participants themselves, because in fact it is not just a commodity transaction markets with all the facilities, but positioning market institutions that offer new norms. Put in depth about the market culture, the more it is revealed the important role of the traders lead as the actor that drives the changes in the social structure of the market. Even the trader's personal factors are contributing in shaping new identity with its own characteristics. Using ethnographic studies as well as the participatory approach of the semi-participative survey, then during the process of the research it is easy to expose the data of 16 informants, and systematically follow the movement in four (4) of the trade network of the vegetables. The snowball technique surely supports the application of qualitative interactive analysis, so that the verification of the analysis results can be directly discussed. Results of the study can be described as follows: (1) personal factors that encourage the growth of the trade's interactionist behavior which is dominated by the closeness, openness, and commitment; (2) the concept of self-traders represent its position as regulator of the commodity chain supply; (3) the presentation of self-traders reflected on the assertive style in building relationships with other merchants; (4) the communication behavior using symbols of the cultural context of the low and the high context on constant basis; (5) the communication pattern occurs in a similar structured conventional on commodities traders; and (6) mobile media is used to interact with the other traders outside the market.

Keywords: personal, behavioral factors, traders, market interactionist

1. INTRODUCTION

Economy in a country is said to be the heart of the pulse of the society. Indonesia is the country that has the economic potential that can go ahead, and will become an internationally prominent potential. The economy in Indonesia also has characteristics which put Indonesia in a great position because of rapid progression. In addition, in recent years, the increased role of manufacturing industry in the economy and the infrastructure development is the main goal of the government which is expected to bring up the multiplier effect in the economy. As for the micro, small and medium enterprises in Indonesia are also together contribute to 99 per cent of the total number of active enterprises in Indonesia is also the backbone of the economy in Indonesia (Indonesia investment.com, 2017). Economic growth is experiencing very rapid movement, and always will be expected to bring a positive value of the people of Indonesia because the public also wishes to get a decent life. Every movement towards the economic always monitored rapidly, due to the impact on other aspects.

The pace of economic growth will always be supervised, so that it is able to balancing the life of the society. One of the backbones is the presence of traditional markets that dispersed throughout Indonesia. From time to time, this traditional market condition still bringing up polemics that continue to look for solutions, especially regarding to the efforts in saving its presence. One of the issues which until now still experienced by the traditional market is a classic problem, for those who are struggling with the market physical environment. Traditional market conditions also struggled fiercely with the modern one. Minister of cooperatives and SMEs (*UKM*), A. Puspayoga also stated that efforts should be made to build and revitalize as many traditional markets and managing modern, because the life of the traditional market is the projectors of an economic growth (Arhando, 2016). The traditional market is also the representative place to develop the people's economy. Solutions that can think about is to improve management, giving priority to the market cleanliness with emphasizing on a better setup, maintain the quality of the commodities being traded as well as develop the technology that could support the existence of traditional market. The struggle to save the traditional market instead of just being on the shoulders of the traders, but it becomes shared responsibility for all the elements involved. The role of government becomes a controller of the existing rate of growth and the policies that brought traders dispensed to a better order.

From time to time, the lives of human beings both as individuals and in groups keep running the economy from simple to complex. Authorities on building the economy based on a notion that the survival of mankind lies in the passion for their sufficient life needs, thus able to move their body to be able to achieve the ideal life for them. The presence of exchange activities in the environmental society, have also arisen because there is demanding and supply. This condition remained until nowadays appeared and coloring in human life in particular related to the wheels of the economy to meet the daily needs. To meet this need, the presence of traditional market represented close to the residences of the society. Various needs are available, and the higher the demand of society, then the market will attempt to fulfill them so that the process of production and distribution continue to run normally. The availability of essential commodities for society brought about a change in traditional markets, which traders must be able to provide such commodities with good quality so it would retain shoppers who come to the traditional markets.

Traditional market conditions until recently also started with the presence of modern markets that feared provides more comfort as well as a variety of commodities that can be found in one location only. Traditional markets must compete with the presence of modern markets has infiltrated into remote places. It cannot be denied that chance to be close to the society is able to get by modern market through presenting a variety of things, ranging from comfort, cleanliness, quality and availability of goods, hospitality in service and there are always discounts as well as other bonuses that can be enjoyed by the buyer. The existence of the traditional market also did not easy to disappear from public life, owing to the economic level of society is still so many diverse drape its life on the existence of the traditional market. For that reason, traditional markets and semi-modern market should furthermore pay attention to the condition of a society that increasingly demands convenience when it comes to market. The superiority over the traditional market in terms of the proximity of the location with the of citizens residence also has started to shifted, modern shops continue to thrive because it goes for potential locations, and it can be said that the advantages of the traditional market started to eroded.

Synergies between traditional and modern markets are expected to start running, to be able to mutually beneficial. The Minister of Trade (*Mendag)* Enggartiasto Lukita explained that the prices of basic commodities in the modern wholesale market are cheaper than in ordinary or traditional market stalls. The modern wholesale market is expected to be able to establish a partnership or a braiding between traditional markets in terms of staple materials procurement (Fauzi, 2016). The synergies give the vastness for merchants to get the products at affordable prices and with better quality, so that the buyer can get the products of the same quality. However, today's society is more emphasis on quality in buying goods, not only insistence on cheap prices. The presence of modern retail in collaboration with traditional markets must begin in earnest across the region, and with an evenly distribution that will provide the traditional market to be existent.

The dynamics of society in facing the new shopping presence are also varying, sometimes it is congested at the moment when there is a new modern market open, all eager to see, come and buy what is in there. However usually this doesn't last long, because the public will again get used to its mobility in an effort to meet daily needs, namely to rely on traditional markets provide possibility for bargains. Modern market is indeed offering the goods which can be selected directly by the buyer, it's just personal satisfaction factor doesn't just

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stop there, there is no deep meaning of interaction between buyers and sellers, because the trader are communicate with standard in the modern market, not like the one in traditional markets, by presenting family values. As if the process that happens when visits modern markets, take belongings, heading to the checkout, pay and you're done. Communication that is used internally by the "anything else?, want to *pulsa* top up? Thank you and welcome back ". That is the repetition of sentence when it comes to a modern shopping center to another, so that communication built did not bring its own meaning for visitors or buyers. Socio-economic functions that exist in traditional markets move quickly, where the people that came to the traditional market can compare prices, bargain in accordance with their wishes, specify preferred stall, or even asking for a bonus to the sellers when buying in large quantities. Those kinds of direct interactions with the merchant are able to build more meaningful interaction.

The realities that exist in traditional markets is also visible from the interaction between traders with each other, the rivalry is still there, especially to get the buyers until defend them become the regular, because communication still can run well. The traders are like friends and relatives who share a place in search of fortune. In the midst of the activity of selling every day are able to construct tolerance, harmony up to help without distinguishing. Traditional market not only presents the process of buying and selling, but there is trust and honesty that continue to be built and maintained, either between the traders or with the buyer. When traced further, there is a high concern over what is experienced by other traders. Therefore the humane side are more prominent, and the uniqueness of being able to survive to the present. The changing rules on traditional markets, not to shift what has become typical of the traditional market, particularly the interaction between traders with high tolerance based on each other.

Traditional markets provide a local wisdom values as a manifestation of Indonesia people. A heterogeneous society has the uniqueness of the society illustrates that it is dynamic and always ready to anticipate any changes that exist in the environment in which these communities live. The local wisdom values embodied in market environment by engaging buyers, merchants, apparatus as well as other party that have an interest over the existence of the market makes the traditional market is moving towards the semi-modern. Bargaining without harming the price is still the survive value up to this day. Not only with the sold products, but the negotiation process that involves verbal and non-verbal language that can be understood. In addition it can happen the unwritten agreement, if the items purchased have been damaged, then by oral agreement can be returned. In traditional markets is not just limited to buying and selling, but the open spaces of communication that can be developed because there is freedom of choice and without any oppression. Either the buyer or the seller as an autonomous individual who gives freedom

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in bargaining without leaving the ethics in interacting with others. Communication plays a vital role in every line of public life, because not only personal encounters, but the society will form groups, ensuring themselves to enter an organization, and cannot be separated from the mass media, so the ethics of communicating is important as the signs in the interweaving of interaction.

The market is where the economic transaction and market concept can also be understood from various perspectives, such as economic, social and culture to politics. The existence of the demand and supply in the economy point of view, confirms that there is a change in the society, due to the demands of a growing society needs. Selling activities that occur at traditional markets and semi-modern with face-to-face encounters, colored by cultural values which emphasize the importance of the encounter directly, because the relationship between the seller and the buyer is getting closer and become social relations since the bargaining process, ask about the quality of the products, as well as other activities. The encounter that there are not limited to buying and selling goods, but also a tools that bring together the members of the society to build social interaction and can communicate with the topic of personal problems to existing problems in the vicinity. Personal communication plays an important role from the encounter between the traders or the sellers with shoppers, because personal communication in response can be quickly seen. Communication for individuals is a line connecting one another, means to convey the impression, express themselves to affect other people, which means that someone will learn about the world and others, who is he, can jokingly, persuaded as well as informed, and through the communication of a person is said to build a relationship on many levels, whether personal, group to join on an organization and society (Reuben, 2014).

2. RESEARCH METHODS

The research was carried out using ethnographic studies as well as participatory and spring survey approach to systematically follow the movement in four (4) of the trade network of the vegetables. According to Le Clompte in Pujileksono (2015), ethnographic research methods that are useful for finding the knowledge contained or embodied in a particular culture or society. The application of snowball technique is very efficient in supporting qualitative interactive, so that the verification of the result analysis can be directly discussed. As for the informant this study is representative of the elements that exist in the market, especially in the Malang district of the Karangploso and Lawang market. The techniques for data collection are using the interview, observation and documentation.

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3. RESEARCH RESULTS

3.1. Personal factors that encourage the growth of interactionist traders' behavior.

Awareness to build interaction with other people is fundamental in the life of human beings, including traders. With communication being run will imply that awareness building relationships with others is a part of human life. Everyone has challenges in their private life to relationships at work, even when the attitude of caution appears in certain situations, it is not going to make connections with others for worse. The efforts that can be made is how someone is able to control the attitude and behavior in the life of society. A harmless situation went smoothly and there will be an effort of improvement is at fundamental thing in building relationships with others. The nature of man is in need of other people in different levels so that it is able to do their activities based on the nature of the man is a creature of each uniqueness.

The merchant profession also requires the ability to be able to analyze the situation, develop a communication strategy to attract and retain customers by running effective communication, capable of working with others and able to convey ideas in a variety of situations. In the profession of merchant, technical expertise related to the knowledge and ability to communicate with other traders and buyers. Traders with each other will have characteristics that could be carried away at a time when the interaction is carried out, in particular concerning the personal side or personality. As individuals who have also evolved in an environment, then the traditional market traders will also bring certain habits that characterizes the life of traders.

Custom that brought by the traders showed mixed behavior, because the behavior as a man who has a distinctive or characteristic trait on him. The behavior of these traders is very dynamic, as traders also have the ability of creativity, so being able to master the circumstances surrounding it. The ability of every human being are essentially different, both in the ability to think, the attitude to behave as a whole. Sometimes what is not the same as their feelings, as a result it looks different from their body language. Typical of the man seen from social sensitivity, have aspirations towards any effort being striven for and have a uniqueness that are different from each other.

Personal factors that encourage the growth of the merchant interactionist behavior are dominated by the closeness, openness, and commitment. These personal factors patterned on communication that runs in environment of traditional and semi-modern market. Although in a different order, nonetheless the merchants assuring themselves that the interactions based on the belief to perceive others as brothers. In a deal and a relationships that are considered important in this way economic transactions within the framework of not only as a human relations but also one model that underlies actions and human relationship, whether in friendship, fraternity until the formation of a family.

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3.2. The concept of self-traders represents its position as regulator of the commodity supply chain

The self-concept is an important part in people's lives, because it is inherent in the nature of owns with eliciting the uniqueness so that it becomes the criterion with others. The concept of self will appear strong and attached when someone is able to actualize himself as organisms that have the drive to thrive and look at that other people also requires the presence of a person. Every interaction that that has been built would further strengthen the concept of one's self, starting from development realized by someone, to consciousness is implanted by others. The development experienced by a person will help the formation of the self-concept. Consciousness that appears in a person at different stages, as in the individual have different properties, they do not have confidence in them, some even encountered very confident in interactions that take place. A way of looking at one's self also relies on quality, and with regard to positive or negative toward them will have an impact on quality in doing a job.

Behavior that appears in the interaction of reality that can be caught by others, as it played all the symbols that exist as well as custom in everyday life. If it is associated with the life of the trader himself, the trader will indicate the behavior of the overall picture of the characteristics of a trader that built up on constant basis. The existence of the contribution of the communication are constructed with other traders will progressively enrich the characteristic in a person. Traders could not escape from the involvement of others in daily life, both in and outside the market environment. Traders almost spending their time on the market, due to the routine that became the choice demanded his presence to guarantee his choice of profession as a trader. Travel time from midnight until morning, and then proceed to the afternoon until late in the afternoon by the time the market closed. Practically, only a few hours of time spent in the merchant's home environment. After that the behavior that appears as a trader with identical of unstructured behavior, only emphasizes the habit only.

The characteristics of the traditional market traders in shaping behavior also realized from the relationships which built with fellow traders, that is a relationship of mutual trust. This connection is done by traders who already know each other and each trader already understand the person's history, obtained from the results of the discussion with others. When traders have good behavior, their good name stayed up and have a high tolerance towards others, then others will surely also treat them good. Mutually beneficial relationship, although it does not counted in the material. However will certainly be strengthened because of the personal encounter took place each day of the activity in the traditional market. Cannot be indisputable that between traders are known each other and be able to give a precise assessment.

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Interactions between traders that entwined in time will indicate the role that brought in the market environment. The concept of self-trader represents the position of the trader as a regulator of the commodity supply chain. Each traders has been determining what commodity will be run, there are consistent from the start of trade with one commodity, but it is also undeniable that the changes to the supplied commodity occurred at some merchants with a variety of reasons and the goal is surely to earn their income that can be used to meet daily needs and other necessities.

3.3. Conventional communication pattern occurs on a structured on similar commodities trader

Growing together in one society becomes the real picture that the public remain in the corridor to complement each other. In its own market environment, each trader will be faced with a wide range of people that have different character, and yet still be understood that among the traders and buyers definitely need each other. On behalf of, it did not close the possibility that interactions is requiring many things, the most important are mobility in traditional markets can walk. The market is known as the principle of life in society and become life interaction center of society, because in this society could unite to determine the economy and the existing values represented into a power to maintain traditional markets.

The communication pattern during of this run was to meet directly or face to face communication that has become a daily life of the society. Conventional pattern is becoming more structured on merchants that have the same commodities. The intensity of the encounter is also getting higher, where each other is going to act as merchants or buyers. The communication pattern is a picture of the communication process, which is related to each other. The communication pattern being formed into a relationship will be effective in the process of sending and receiving of messages took place appropriately. Its success is not only located on one side only, but both parties is involved in the interaction. Face-to-face communication patterns, will reposition the communicator as well as a communicant, and feedback occur directly. The communication pattern proceeded between the merchants that offers companionship to the buyer, or there are also buyers who initiated the conversation by asking about the price of a commodity which likely to be purchased.

In Karangploso market itself, vegetable wholesale centers have become a semi-modern market is already able to provide commodities with good quality and quantity, so that small traders, retailers do not need to move the market to find the products. Traders in the Karangploso market already provide one-stop service, which means in one place all the activities can be done at one place. While Lawang market which also provides places for selling to vegetable commodities, also fixed to synergize market Karangploso market. Has no hesitation quality of the product, the market prepared as Lawang tourism market, a place for tourists to shop vegetables and other commodities. By keeping the quality of the products, then the Lawang market will not be abandoned by shoppers.

With the concept in both the market, it was seen that the communication pattern of social interaction that is created between the sellers or buyers-sellers which ultimately bring positive value of traditional markets. An intertwined interaction in the market can continue turn into a relationship outside of the market, which represents growth of hospitality cord among market participants. The existence of the traditional markets will be maintained when there are individuals able to maintain communication and control the situation to stay safe, comfortable and not leave the characteristic that has already formed a long time ago. The hospitality on the market becomes a growing power character in of bargaining process which is the traditional process in the mechanics trade. The market will get to be a strategic place in the buying and selling activity and transactions made by bargaining, although in the process requires special skills, for example in constructing the word, play the intonation when speaking to supplementing with nonverbal symbols. It cannot be denied that communication holds a key role in human relations, which involves sending and receiving messages between individual, and if effective reciprocal understanding then between the individual occur more smoothly (Hanurawan, 2010). Communication could not be detached from human roles as an actor, and functional ability as individuals and as the most important elements in human life. One of the basic human needs of interaction in the sphere of braiding is spacious to be able to meet the needs to socialize. However, people will learn from all the process that took place, which requires mutual understanding, and be ready with the consequence that arises from the interaction of the run. Complexity in the human self eventually results of a dignified society.

3.4. Mobile Devices as Medium Used to Interact with Other Traders Outside The Market

Social economy conditions of the traditional market environment will be associated with the traders welfare that is mapped from the daily consumption, such as adding venture capital, the need of the production cost, cost of education, the need of the health care costs which is relatively stable despite the increasing necessities of life. Socio-economic position of these traders can also be examined from traders' stall, and no doubt each area has various price. Both of traders placement, new and old merchant traders, are set up in such a way, but nonetheless it is still not fit for overall traders so that it is still found traders which hold their merchandise outside the market area. However, the interaction will not be stopped offhand, due to the dependence of human life toward a need to interact and sosialize is a phenomenon of human activities that can not be released from the fundamental interests factors of mankind

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itself. So that, the activities of the market life largely determine human social activity. The culture of the market gives an overview that individual will be associated with inherent norm in society. Culture is a belief that will continue to be maintained and strengthened in each of parties involved and have the same desire. Within the society itself there is a relationship between individuals or groups, and usually this relationship has a strong influence on the market environment.

The reality depicted from traditional market is not only to confront sellers and buyers directly, but also it is through mobile devices which become the current trend nowadays. This communication aims to speed received information to each other and use the time to immediately complete the activity in the market. Using mobile devices as a communication channel is indeed as the impact from the communication development that change the pattern of information access in the society, without exception in the traditional market. In the communication context, mobile devices are media for conducting effective communication with customer, because the message will be conveyed directly according to the wishes of party who begin communication. Mobile media for all people has become the primary needs and this media is always carried everywhere by users. This is the power of mobile media compared to others.

In traditional market environment, retail traders until the supplier have made the mobile medium as a bridge to transact, starting from ordering goods, pricing information until paying bills. This media is not only used by fellow traders who were in one market area, but it can also link with traders outside market. With fast information, traders outside the market will not come in vain to market or will not run out of merchandise when they book via the mobile medium. This is to minimize disappointment of other traders who used to frequently run out of merchandise caused loss information. The market is indeed a place to gather traders who sell many merchants that needs of the society. Good service is visible from the trader hospitality, so that the buyers are happy to transact in the next day. Market movement is not only in one place, Karangploso and Lawang market which are central market run fastly, and certainly the merchants will communicate intensively to inform about the usual merchandise purchased in large quantities.

4. DISCUSSION

An area development, especially in the economic field, could be impacted by trading activity happening in the market itself and the frequency of activities that support the sector. Trading activities require many facilities beside the existence of spaces equipped with adequate facilities and infrastructure. Traditional markets itself in the last few years are trying to improve themselves in order to maintain its existence in society, and keep working to maintain their characteristic. Bargaining directly is an activity that

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can still be found, although the society is starting to understand that sometimes the price offered can not change. By giving understanding to the buyer that it is fitting and the cheapest price given, so the deal between the two sides is happening. Bargaining is not only to get cheap prices, but that process also rises a personal communication form which requires each party to play verbal or non verbal language.

Meanwhile, the goods purchased and saled in traditional market is also a staple goods. Traditional market in which there is a transaction to obtain desired goods, has variations in interacting with customers. It tends to change, and it is related to each individual perception. The service quality provided to customers will have impact on recurring activity. The economy movement in the traditional market could be in a high position on a specific situation, for example in the fasting month of Ramadan or new year. Here the traders activity and commodities being traded is very varied, changing and having a rich stock. Many merchants are turning a commodity on the month, due to meet the society needs. On the other hand, for other traders with the same commodities, also have an effect on the number of items that are requested by the customer, and it was filled by the traders.

The current traditional market conditions have changed, but the public views about markets cleanness, public facilities that are unwell preserved, still attached strongly in the public minds. To respond the situation, government think quickly of it, with improving public facilities that exist in traditional markets. Sustainable innovation has done to restore the image of the traditional markets in the society. Not all of them becomes the government responsibility, traders also should be able to take care of the exist facilities because the traditional market is an asset whose existence must be maintained.

However traditional markets in some regions, are still faced the same condition, no exception in Malang. Rapid growth in development of Malang effects on greater complexity of societies living needs. For the societies of Malang itself, the existence of traditional markets are still very important and sought after. This is due to the merchandise or commodities traded had a cheaper price as well as goods quality which are not inferior to the supermarket, making it achievable by all people. In addition, the traditional market is still the main objective for the society to complement the needs, especially daily necessities. Although modern shops have already existed in traditional markets neighborhood, they do not still fully shift the existence of traditional markets.

To meet the needs of the society, the market comes with providing convenience for the public to complement the needs without difficulty. Market development itself also carries the impact on increasing variation of consumptive patterns, so that market presence became essential needs for the society. In the regulations of the President about the arrangement and

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construction of traditional markets, shopping centers and modern stores, market is a loacation where people buy and sell goods with number of seller more than one well known as a shopping center, traditional market, shops, mall, Plaza, so forth.

The traditional market as one of the public facilities meets sellers and buyers to make deals, usually it is in a strategic location and close to the settlement, hence the market is not only as a place for process of buying and selling, but also as a place of exchange information and as a place for crowds of people. Activity in the traditional market allows the occurrence of social process between communities in terms of communicating and interacting because the market has a function as the site of a social process. This encourages the formation of cultural market with the complexity of the interaction process that is formed and sustained so that conjures up an image that the daily activity is able to survive to the present.

The modernization market to improve small traders can be started from the application management market oriented standardization of physical building, standardization of commodities, standardization of sale quality and price. Deputy of production and marketing, Kemkop and UKM I Wayan Dipta explained that based on the results of a study of AC Nielsen, a modern market in Indonesia is growing 31.4 percent annually, while the traditional market shrank 8 percent per year. The number of traditional markets in Indonesia as many as 13,450 with approximately 12.6 million small traders. Revitalizing market program has already been encouraged since the year 2003, and up to 2015 as many as 569 traditional markets revitalized. (Harnum, 2016)

From time to time, this traditional market environment brings out nuances that counterbalance the presence of modern markets. Moreover, the society began to feel that the bargaining was quite complicated, they can be a winner if fortune or on the contrary get expensive price. Not everyone has a courage and skill in bargaining. The embarrassment began to appear when making a bid, until the advent of compassion to the seller. In the end the buyer always insists to request fitting prices to the buyer, so the interaction takes place faster. Whereas the traders themselves also begin to understand the changes that occur in interaction with buyers, so that they are able to play the rhythm to have equally benefit. In the free time, traders discuss each other, especially when the market is not crowded. The subject certainly will always change at any time, because each person who involved in the interaction has different background and experience. Another uniqueness which is visible in the process of the interaction is, hope to achieve the common goal which must not end with a sameness of views, but the satisfaction when it was able to give a mean on the topic of conversation.

Interaction among traders does not leave character that adhered inside. However, personal values can not be separated because since the early human birth, self concept arises on the basis of other view during communication so that someone are able to know herself from someone else's glasses. In a relationship, identity and communication is important because communication with others does not only affect the sense of identity, but also directly affect physical health (Syam, 2013). The communication also plays an important role in building a relationship. At that point, the personal identity appear because each individual is involved in interaction both verbal and non verbal. Traders behavior inside or outside market do not much change, due to the same behavior and repeating every day. So it can be said that traders dynamics in the aspect of the establishment of the interaction starts from a character that exists in itself. Behavior that appears when interacting insisted that there were many factors that made the traders have a uniqueness in their loose talk, style, choicing of simple language, intonation that tend to rise and could call other people names spontaneously.

The characteristic of the traditional market traders in shaping behavior is also realized from the relationships built with fellow traders, that is a mutual trust relationship. This connection is done by traders who already know each other and each trader already understand the person's background obtained from the results of the discussion with others. When traders have good behavior, his good name stayed up and have a high tolerance on the others, then others will surely also treat them well. It is called mutual relationship, although it is not counted in the material. However psychologically it will certainly be strengthened because of the personal encounter took place every day in the traditional market. It cannot be disputed that traders know each other and be able to give a precise assessment.

In brief, personal factors that underlie the interactions among traders in an environment of traditional markets and semi modern are not detached from the circumstances that support these interactions. By trying to understand thoroughly and examine various factors, it is depicted that interactions will keep the economic potential built. On the situational perspective, the running communication emphasize on important aspects include a number of communicants and communicators, proximity and availability of physical communication channels (Berger, 2014). On the communication situation, face-to-face communication has an equal chance in giving feedback immediately.

5. CONCLUSION

The changes in traditional markets gradually to semi-modern market is a reality that cannot be rejected by the society. The dependence of the presence of this market still survive until today and supported by caring government in traditional market management so it is to able to survive amid fierce of modern market. The exist competition does not decrease traders in traditional markets to still exist to trade every day and provide opportunities to advance the traditional market. Traditional markets and semi-modern gives an overview that the life of a trader is waked up and getting stronger, conjuring up a unique character through interaction that is built with fellow traders, buyers, apparatus and other market participants. The interaction give impact on traders behaviour that can not be separated from personal factors. By constructing personal side of the traders comprehensively, it ultimately showed that the traders presence must also be supported by policies that prosper the traders and rules of governance that did not harm the traders. Interaction among traders is created naturally in a process that is not instantaneous, but the intensity of communication has been awaken continuously.

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Effectiveness of Field Officer's Visits For the Religiosity of Families of Children with Disability in Donomulyo

Teresia Noiman Derung, Lorentius Goa

ABSTRACT

The family is a cell, a womb, and a school of humanity. In the family an individual is born, grown, and developed. Growth and development are not only related to physical matters, but also religious matters. The long-term goal, as well as a form of religiosity of a family of children with disability, is the awareness of the family in accepting the presence of children with disability and empowering them with life skills so that they can live independently. Moreover, parents can gather in a community or a coordinating institution called Parents of Children with Disabilities, so they can visit each other as the fellow family of children with disability, live a harmonious life despite different tribes, religions, races, and cultures to create a family bond. This family bond is built so that families of children with disability do not feel alone in dealing with children with special needs; they are together with those who share the same fate to learn together to handle children with special needs so that their children can be independent in line with the ability they have. Meanwhile, the short-term goal to be achieved in this research is that the researcher wanted to know the effectiveness of field officer visit to religiosity of family of children with disability in *Donomulyo*. The methods used in this research were interview and observation. The interviews and observations were conducted by a team of researchers and field officers on families who had received prior field visits. From the results of this study, it turned out that (1) parents who do not have children with disabilities were 15 families (42%) of 36 families, (2) Parents of children with disabilities, 8 families (50%), did not realize their children's disability, (3) Three parents (8%) of children with disability had not joined the Parents of Children with Disabilities Community.

Keywords: disability, family visit, religiosity.

1. INTRODUCTION

Allah created mankind and His natural surroundings for one purpose; in order to make His creations happy. This happiness happens because people live together with others; living together as a family or community including the families of children with disabilities. True parents can accept the presence of children with disabilities in the family, live harmoniously as a family, between father-mother and children with disabilities and among disability families. The life of religiosity is the mutual acceptance of one another, knowing each other, mutual love, mutual understanding, and helping each other, to create a brotherhood in which people help each other including children with disability so that they can be independent eventually.

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The development of the world and the advancement of science today lead people to individuality and selfishness; people are too busy with the world and their own business. Each person sees his busyness a very important and urgent matter. Greetings, smiles, and visits between disability families become very difficult to do, either by individuals or in groups. In the family, each member is busy with himself. Parents are busy with their work; leaving early in the morning and returning home in the afternoon or evening, and children with disabilities are not empowered so well that they are difficult to be independent, at least progressing well in accordance with their abilities. Being preoccupied with each other's business, it seems that parents with disabled children do not have time and opportunity to gather and greet each other in the family, to eat together, pray together, or visit others including gathering with other families of children with disability. A worse case, parents do not know how to handle children with special needs so that children never get a good training program.

It is common in the society that children with disabilities get less attention, even they are considered a burden for families and the surrounding communities. Many parents have an assumption that children with disabilities are due to parents or family mistakes so that those children are often hidden from the community.

Seeing disabled children in some families in *Donomulyo* are not handled properly in their respective families, the Bhakti Luhur Foundation through the CBR program (*Cari, Bina, Rehab*) fostered field officers for two years to handle this child with disability by empowering his own parents both in Physical rehabilitation and religiosity of parents so parents can accept the presence of children with disabilities and gather together in parent s of children with disabilities. Seeing the field officer's visit to the family with disabilities, the writer was moved to examine "The Effectiveness of Field Officers' Visit for the Religiosity of Families of Children with Disability in *Donomulyo*".

2. STUDY MATERIALS

2.1. Phenomenological Analysis

According to Paul Janssen (2010:40), phenomenological analysis is an analysis of the human condition, because human life is always dynamic and in a changing times and circumstances. Because it is always dynamic, then people need care and empowerment. The care in question is the personal responsibility for a of people with special needs or disabilities. The purpose of this accountability is for an individual to attain, or to be "existed" as they are or should be as the Creator desires. One form of praxis of care and empowerment in CBR is through visits on families with disabled children and the establishment of Parents of Disabled Children Community. Activities undertaken by CBR are (i) establishing relationships with local authorities to seek information about the presence of children with disabilities. (ii) Recording children with disability. (iii) Family visits for disabled children as well as detecting the type of disability experienced. (iv) Arranging the handling program according to the type of disabilities. (v) Handling of children with disabilities. (vi) Empowerment of parents of children with disabilities through the *paguyuban* (Parents of Children with Disability Community). (vii) Evaluation and follow up.

Phenomenology, according to Husserl, emphasizes one important thing, reality. Reality is here means that the life of family with disabled children is not different from those who observe it. In other words, men are created equal. Nevertheless, reality is always in *noema* (object) and *noesis* (subject). Object always shows itself, without being given a subject by interpretation. Phenomenology will try to understand the informant's understanding of the phenomena that arise in his consciousness as well as the phenomenon experienced by the informant and considered as an entity. The aspect emphasized in phenomenology is the descriptive analysis of social situations and social buildings that occur in reality. In principle, phenomenology will try to understand information on the phenomenon that emerged is the phenomenon experienced by the informant. Phenomenological research makes real life experience as the basic data of reality, trying to understand the meaning of events and their connections to people in certain situations, and trying to enter into the conceptual world of the subjects they examine.

The Basis of Family Visits according to Paul Janssen, there are seven basis of family visits. as follows (i) Rescue: the salvation of religious humanity or holistic and comprehensive salvation as it as it was created. (ii) Concern: Caring for the needs of others "But when he saw all the people He was moved with pity for them, because they were troubled and wandering like sheep without a keeper. For Caring, people have a sense of Empathy (Matt. 9:36)." (iii) Responsibility: Responsibility towards the person entrusted. (iv) Individual and group integrity: The intended integrity is both quantitative and qualitative wholeness. (v) Guidance/Coaching: Guidance means directing the destination so that the person visited reaches the real destination, salvation. (vi) Service: Providing what the herd needs(vii) Spiritual Maintenance/Care/*Cura animarum*: Maintaining sustainability, Trying to stay in good shape, Trying to keep nothing away.

2.2. Terminology of Disability

Currently, the term *cripple* is no longer used. As it deems to discriminate against persons with disabilities. The term *cripple* always has a negative connotation. The word *cripple* gives a predicate to a person with a negative mark or label on his or her whole self. In reality, sometimes a person with a disability has only a certain physical defect and not a disability as a whole. Therefore, the term *cripple* is changed to disability which means incomplete inability.

Since March 29, 2010, the term *cripple* has been replaced by the term *disable*. This disability includes disruptions, activity limitations and participation restrictions. Disability comes from the word *dis* and *ability*. Dis is used to refer to a condition that is the opposite of something that is in the word following it. While ability means to have the ability. If the definition of dis and ability combined then it will produce an understanding of the state of someone who has the ability to do something that can be done by people in general.

Recently, people still consider that people with disability are the low class or second class, so they have not been given the trust to hold a strategic position in the society. People with disabilities are also still difficult to be admitted as employees in companies or offices that require labors. The UN Convention on the Rights of Persons with Disabilities on December 13, 2006 defines persons with disabilities as persons with physical, mental, intellectual or sensory abnormalities. Long-term damage that can restrain and impede full and effective interactions and participation in the society on an equal basis with others.

The World Health Organization or WHO provides a definition of disability in 3 categories, namely: impairment, disability and handicap. Impairment is defined as a condition of abnormalities or loss of structure or psychological or anatomical functions. While disability is the inability or limitations as a result of impairment to perform activities in a way that is considered normal for people in general. As for the handicap, is a significant disadvantage for a person as a result of impairment and disability, which prevents him/her from fulfilling the normal role (in the context of the age, gender, and cultural factors) for the person. Government Regulation No. 36 of 1980 on Social Welfare Enterprises of Patients with Disabilities states that a person with disability is a person who, according to medical science, has a physical or mental disorder which, therefore, constitutes an obstacle for him/her to carry out activities properly, consisting of body disability, visual disability, mental disability, speech disability, and disability of former chronic diseases.

2.3. Terminology of Religiosity

According to Rm. Mangunwijaya, religiosity often identified with religious life. Religiosity is defined as how deep the appreciation of the religion one embraces. The appreciation is to accept others as they are, in this case to accept the presence of children with disabilities in the family and community, empowering children with disabilities in accordance with their abilities, living in harmony in the nuclear family (community) and the community, especially fellow of disability families called Parents of Disabled Children Community. A proper concept of religious teachings will guide people on the right deeds and proper path. In order to achieve this, it is necessary to have a continuous coaching in the parents' community of the disabled children.

To understand religiosity is not easy. To have experience of religiosity, people have to experience life and its problems, especially problems for parents of children with disabilities in accepting and empowering their children. Concretely, religiosity is a humane reality which is open to God's greeting and at the same time demands humans' responses and participation expressed in the attitude of parents who are open to others, easy to accept, and empower children with disabilities.

2.4. Javanese family

The terminology used to explain family the ties in Javanese society is the bilateral system. The bilateral system is drawing a lineage from the father and mother. In terms of the above terminology, the term *somah* is a term whose meaning is nuclear family. The meaning of the word nuclear family is father, mother and children. According to the Javanese community, the *somah* is the only important family linkage unit. *Somah* is tightly intertwined with others. *Somah* does not stand alone without the others. *Somah* becomes meaningful when building relationships with other *somah*s. The other *somah*s intended here are close relatives of both father and mother. *Somah* of children with disabilities are gathered in a community formed by Yayasan Bhakti Luhur under the name of *Paguyuban Orang Tua Anak Disabilitas* (Parents of Children with Disability Community). The interconnection relationship of *somah* is seen as a social unit. Here comes the social dimension of the word *somah* in the Javanese family. There are some tasks of *somah* in the parents' community, which are to socialize the information from field officers about children with disability and how to handling them, parents' sharing about the developments and difficulties experienced, therapy training or handling of children with disability, evaluate the development of children with disabilities who are trained and Holding an *arisan*. This community meets in monthly routine meetings in turns from house to house. In the Javanese view, each family member is a single person. Parents, children, husbands and wives are the most important persons in the world because they can provide emotional welfare, provide a balance point in social orientation and can provide moral guidance.

2.5. Kinship System in Javanese Family

Geertz (1982: 20) states that Javanese social relations are hierarchical. Inside the hierarchy there is a regular ladder. In addition, in the hierarchy also contains values that exist in itself. For example, the relationship of superiors and subordinates. Superiors are valued for accommodating more of the divine cosmic reality.

Hierarchical hierarchy is a fundamental reality that must be considered in the context of self-settlement. Self-settlement is based on the basic norm of morality. The basic norm of morality of Javanese people is an individual freedom. Thus, respecting the freedom is a basic principle in building respect for others.

3. METHOD

The method used in this research was interview and observation, while the approach used was descriptive qualitative approach. Through a descriptive qualitative approach, the authors will describe three things obtained from the field officer's visit. These three points illustrate the religiosity of the families of children with disability visited. The author used a descriptive qualitative approach because it was a phenomenological research; the authors describe what was obtained from the field. To better understand the effectiveness of field officers' visits for the religiosity of families of children with disability in *Donomulyo*, the authors also explored the life of families with disabled children, the culture that shapes the community, and the pattern of community life.

The data source of this research was obtained from the interview with the families of children with disability who had been visited by field officers. In addition to interviews, the authors obtained the data from the field officers who observed monthly families of children with disability. The results of interviews and observations, greatly assisted the authors in completing the data obtained from books and other sources.

4. RESEARCH FINDINGS

The number of persons with disabilities in *Donomulyo* is 36 persons. They are spread in ten villages. These thirty-six children with disabilities live with parents or families. The types disability experienced by those children are mental disability, *tunadaksa* (quadriplegia), and down syndrome. The things examined in this study were as follows. First, the acceptance of parents to the presence of children with disability. Among the 36 families, the authors found that there were 15 families (42%) who initially did not accept the presence of their children due to disability. Second, the understanding of children with disabilities and their handling. Among the 36 families, the authors found 18 families (50%) who did not understand the child's disability and the treatment because the parents had not been informed about the child's disability and the handling. Third, the community or coordinating institution that becomes the place to conduct the handling exercises and empowerment of children with disabilities. A total of three families (8%) do not have a coordinating institution to handle children with special needs because parents do not yet know the special coordinating institution to handle children with disabilities.

5. DISCUSSION

The authors begin this discussion by examining the point of view or approach used in this study. The approach used was phenomenological approach. This approach is very urgent to be utilized in this study because this research was born and was derived from a phenomenon; the phenomenon that occurs in the parents of children with disabilities, when children are born and known to have disabilities, parents often reject them because the children are not like other children in general. As a result of this rejection, the children with disabilities do not get proper attentions. If parents accept the children as they are, handling them will be much easier. Moreover, parents will be more willing to join the Parents of Children with Disabilities Community.

In 2015, based on field officer's visits, there were 36 children with disabilities in *Donomulyo*. The field officer detected all the 36 children were with different disabilities, 12 persons were *tunadaksa* (quadriplegia), 19 persons were mentally disabled, one person was hearing impaired and four persons had epilepsy. After detecting the presence of children with disability, the field officer then communicated the type of disability and the children's circumstances to the specialist (competent person in the field) and the specialist prepared the handling program according to the type of disability based on the results of the detection and the actual state of the children. The elements contained in a specialist-made program generally included: the title of the program, the objectives, the tools used, the execution steps, the time targets and the evaluation. The program that had been created then implemented by field officers in collaboration with parents and families of children with disabilities. Parents were involved so that the children's handling treatments could be carried out continuously because field officers were not always present every day.

6. CONCLUSIONS AND SUGGESTIONS

6.1. Conclusion

Based on the results of the research, it can be concluded that the family visits conducted by field officers to the families of children with disabilities in *Donomulyo* are effective. It is said to be effective because (1) the parents or families of children with disabilities who initially did not accept the presence of children, as many as 15 families (42%), all accepted the presence of their children as part of their family after the visits. (2) The 18 families (50%) who previously did not understand about the child's disability and how to handle it began to understand the type of disability their child is experiencing and know how to handle it although they are still under the control of field officers. (3) The three families (8%) who did not join the community before the visits joined the Parents of Children with Disability Community that has been established since 2010.

6.2. Suggestions

The researcher's suggestion is given to two parties, the field officers and the parents of children with disability. First, field officers are suggested that they: (1) keep the regular visits to parents or families of children with disabilities; (2) to look for and find untreated children with disabilities. Second, parents ought to; (1) be open to the social environment including field officers regarding the presence of children with disabilities so that they can be empowered. (2) join the Parents of Children with Disability Community as a place for the empowerment of the children.

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Water Drinking Public Services (Implementation Study: Municipal Waterworks Services Based on the Law No.25 2009

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ABSTRACT

This study is aimed to describe and analyze the implementation of Constitution Law No.25 of 2009 about public services in Boliyohuto unit, Gorontalo Municipal Waterworks and also to find out the proponent and obstacle factors of public services implementation Municipal Waterworks of Boliyohuto unit, Gorontalo. There are two research questions in this study which are (1) How is the implementation of drinking water to people in Law No.25 of 2009, in municipal waterworks of Unit Boliyohuto Gorontalo? And (2) what is the proponent and obstacle factor in water drinking services to people in municipal waterworks of Boliyohuto, Gorontalo? The main focus of this study involves the implementation of Law No.25 2009 about public services in municipal waterworks Boliyohuto unit, Gorontalo District as the following: (1) Service mechanism, (2) disclosure of services, (3) services accountability, (4) services facilities, (5) speed, accuracy, ease and affordability and also proponent and obstacle implementation factors of the services in municipal waterworks Boliyohuto unit, Gorontalo District. Purposive samplings are used to define the population of this study, as well as pick up the sample. Data analysis used in this study was descriptive qualitative. Descriptive qualitative is study which purpose to give description and explanation about the researched variable. Analysis interactive data model by Miles and Hubermen, which begin with collecting data, simplification of the data, presentation of the data and conclusions also used in this study. The result of this study shows that the implementation of municipal waterworks services Boliyohto Unit, Gorontalo District has sought to do public services based on the indicators of the study which is Law No.25 of 2009. Nevertheless, there is not yet maximum implemented. There are still obstacles in the services which are: supporting facilities that have not been adequate and the services given by the employees are still slowly due to the lack of number of employees. There are also several proponent factors in municipal waterworks services in Boliyuhoto Unit, Gorontalo District which are over capacity of water source, the solidarity of the staff become one of the strength in facing the services problems. On the other hand, the obstacle factors are lack of facilities and employees that cause slow service.

Keywords: implementation, public services, water drinking

1. INTRODUCTION

The existence of a country basically is to improve the people welfare. A country tries to fulfill what people need. Therefore, the essence of government existence in a territory is to give services to their people. It means that government is not standing by themselves, yet they stand because of their people. They are existed to serve people and also improve their potentials. These potentials are related to the achievement of result that is mutually agreed due to manifest their people welfare. Consequently, government through their inner organization tries to give the best services to their people.

Furthermore, public services are the responsibility of government and held by government organizations; whether in central, region or Ministry of State Owned Enterprises. Public services have form of public goods services or services. Nowadays, people are more open-minded in giving the critics toward public services. Hence, administration substance is very important in arranging and directing the whole organization activity to achieve the goals.

Due to manifest the improvement of that services function accordingly, there should be a thinking shift on the bureaucracy especially in the process of giving services in public. The performance of public bureaucracy should be directed on how to create and give better services and satisfaction to the public. People satisfaction becomes real benchmark for public bureaucracy.

The role of municipal waterworks in the future become more important to the regional people related to the main duty to organize water drinking management. It can improve people welfare which include social aspect, health, and public services by doing these followings functions (i) public Services (Services). (ii) Organizing Public Benefits (iii) Improve Incomes.

Since law No. 25 of 2009 about public services applies in 2009 until now, it becomes one of the government problems. It is because of the law is not fully enough held by the government. Empirically, public services are still convoluted, slow, costly and tiring. That tendency happens because the people are still positioned as services party, not as a served party.

Nonetheless, until now on, government's effort in fulfill the need of their people regarding to the municipal waterworks could not satisfy their people expectation. Lots of community members who complain and are not satisfy with the services given by municipal waterworks. It is whether from the poor services of the staff, long term services, employees' skills, facilities, and services waiting time.

Boliyohuto Gorontalo District Municipal Waterworks is the only one municipal waterworks in Boliyohuto Groups. To reach the optimum degree of services and satisfaction for the customers through increasing the quality, it is needed to have better services given by the staff. Thus, the staff is prosecuted to have higher performance. The services in municipal waterworks in Boliyohuto unit, Gorontalo District still not yet appropriated with the desire of the people. It is due to the frequency of complaining is still exist where the municipal

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waterworks staff still slowly in giving the services. The customer is often waiting too long just to be served.

To overcome these problems, it is needed to hold an effort of services which suitable with standard profession and customer (people) satisfying services. Therefore, the government should manifest that discourse soon, due to fulfill the people's demand which increase concerning in good services. People's demands need to get serious consideration from all competent circles, especially municipal waterworks. As a result, the researcher interests to investigate the policy of water drinking services of the people which used by the municipal waterworks to improve quality services toward the customers (peoples).

Likewise, the research takes place in municipal waterworks in Boliyohuto unit, Gorontalo District. In the way of the services, they often get complain from their customers (people) because of the poor services they gave such as; sometime the water suddenly stop and dirty, the pipe is damage by leakage, and indicator sometimes off. From those several problems, the service problems are the most complained by the people. Those problems are where the staff's performance in giving services in term of punctuality, quantity and quality is under average. Low performance services will gain bad image to that municipal waterworks. If the customers are not satisfied, they will tell their friends and colleagues about that. On the contrary, the highest performance gave by the municipal waterworks staff, the highest good reputation will take. Consequently, the customers will be satisfied toward the services given by the municipal waterworks. Municipal waterworks can distinguish the services performance from the customers through feedback given by the customers. Thus, it can be used as an input for better improvement. As a result, they are prosecuted in improving the services staff performance in municipal waterworks Boliyohuto unit, Gorontalo District. It is because of the unsuitable services toward customers' need due to the poor and slow services of the staff which trigger customer complaint. From the explanation above, it can be concluded that the less fulfilled of people rights in receiving a good service is caused by the Municipal Waterworks (PDAM) employees. Moreover, Law on Public Services which has not implemented yet by the employees also became one of the problems in fulfilling people's rights. Hence, the implementation of public service should be improved from its service system, so it can create a good public service. In order to make it works, the principles of public service law should be done seriously. Therefore, the public service can be run well and will give satisfaction for people.

1.1 Statement of Problems

Based on the background above, the problems can be stated as follows (i) how is the public service of drinking water for people based on the Law No. 25 of 2009 in Municipal Waterworks of Boliyohuto Unit, Gorontalo District? (ii)

What are factors that become supports and obstacles of the public service of drinking water in Municipal Waterworks of Boliyohuto Unit, Gorontalo District?

1.2 Research Significances

Based on the statement of problems above, the research significances can be stated as follows (i) to describe and analyze the implementation of public service of water drinking based on the Law No. 25 of 2009 in Municipal Waterworks of Boliyohuto Unit, Gorontalo District. (ii) To describe and analyze the factors of obstacle and support in Municipal Waterworks of Boliyohuto Unit, Gorontalo District.

2. LITERATURE REVIEWS

2.1 The Concept of Public Policy

All of the government policies will mean something if the implementation is done properly at its finest for the public. There are many rules that did not apply properly and in the end it disserves people as well as our country.

Generally, the role of the implementation is to hook the purpose of the realization. The implementation of policy is one of the steps of public policy process. It is a crucial study, because how good the policy is, if it is not well prepared and planned in its implementation the purposes of policy won't be achieved.

In a part of public policy process, it is viewed as a process. It means that public policy will be viewed based on the level of their practices. It is how the policies are made and implemented. Finally, those policies should have certain changes. Many experts offer this kind of policy process. However, most of those offers, Jones (as cited in Putra, 2003, p. 2-32) concluded that basically all of those process can be grouped into four steps. Those steps are first, how the problems can enter into public room. Second, how the government take a concrete actions to respond those problems. Third, how those goverments' concrete actions start to enter the problems in the field. Fourth, this step is where all the policies are back to the government in order to be reviewed and if possible, have changes.

According to Nugroho (2008, p.432), in its principles, implementation of policy basically is how a policy can achieves its purpose. To implement the public policy, there are two options, first is directly implementing them into a program. Second is formed the policy through statement of derivation policy or its derivative.

From the definition above, Agustino (2008, p. 139) concludes that the implementation of public policies has these three things (i) there are purposes or targets of policy (ii)There are activities to achieve the purposes. (iii)There are results of the activities

2.2 Model of Implementation of Policy

If the policy problems are getting more complex and urgent and needs a problem solving, it will be easier if the statement of policy is using a model or certain approach. Hence, it is needed to get model, theory, or approach that is relative operational. Those things must be able to explain the causality of relation between variable which is it is the focus of the problems.

Although the model of policy is useful and needed, it is a creation that cannot be trusted. By simplifying a problematic situation, unavoidably model causes selective distortions toward reality. The model cannot explain how to separate essential or unessential problems. Moreover, it is unable to predict, evaluate or suggest. It is because the considerations are excuded from the model and they are not part of them. Because the model can help us to do our task, the key is not the model which gives assumption to interpret the reality that already explained by the model. Finally, the model of policy often communicates by taking decision. Besides, it also takes the other actors to whom the model got designed, as a helper to the well decision.

Edward III (as cited in Widodo, 2008, p. 96) proposed four factors or variables that influence on the success or failure of the policy implementation. Those variables or factors are communication, resource, disposition, and bureaucracy structure. They are interconnected to each other.

2.3 The Concept of People (*Masyarakat*)

People in English called society which comes from Latin word *socius* which means "friends". The term People (*masyarakat*) in Arab language is called *syaraka* means "participate and take a part". People (*masyarakat*) is a group of human who are associating, the science term is interacted with each other. A group of human can have facilities through the people so they can interact with each other. Another definition of people (*masyarakat*) is a group of human' lives which interacted based on a certain cultural system. This system is continuing, and attached by togetherness. Continuity is a unit of people that has four characteristics, namely interaction between the people customs, continuity of time, strong identity which ties all people (Koentjaraningrat, 2009, p. 115-118).

2.4 Public Service

The definition of public service

Service is the key of success in many businesses like service, either done by private or public organization. Therefore, Osborne and Plastrik (2004, p. 322-323) state that government is owned by people. It means that government is the one that switches its control authority to the people. People are being empowered, so they can control services that are given by bureaucracy. As there is control by people about public services carried by government, the services' execution will be better, more caring and creative in solving problems.

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Generally, service is anything done in order to give benefits for others. Service is a series of activity by organization for others, either physically or not. Meanwhile public is anything involves in public benefits. Hence, it can be concluded that public service is a service giving (to serve) others' or people' needs. The needs are related to the organization whom served based on the main rules and procedures made, so the process of service giving can work well based on people hope and organization purposes

The elements of service

In marketing the product, the producers always try to satisfy their customers' want and need. Tjiptono (2006, p. 58) states that "a good service can create customers' trust and will stay". Hence, the sellers or producers need to master these elements namely (i) speed. (ii) Accuracy. (iii) Safety. (iv) Friendliness (v) Comfort.

Sedarmayanti (2004) underlines that the essences of public service are (i) improving the quality and productivity of the duties and public installation in public service. (ii) Encouraging the efforts of effective system and planning of service, so public service can be conducted more useful and success. (iii) Encouraging the growth of creativities, initiatives and roles, and also the people in creating improvement of prosperity.

According to Waluyo (2007, p. 128) service is response toward a managerial needs. It can only be fulfilled if the service users get the product they want. Government is basically the one who serves people. It is exist to serve people. Besides, it also creates possible condition for every people to improve their ability and creativity to achieve their purposes.

Meanwhile, Kotler (as cited in Sinambela, 2007, p. 4) defined service as every activities which profitable in a certain group or unit. It offers satisfaction although it is not attached to a physical product. Service is an activity or in-a-sequence activity. It is happened in direct interaction between people or machine physically and provides customers' satisfaction.

Based on the definitions above, it can be concluded that Service is the way to treat, help to prepare, manage, and complete a necessity of personal or group of people's needs. It means that object which has to be served is people that consist of individual, group, and organization (a group of organization). Considering that the activity is handled by the management to provide and give the service, it is necessary to organize the structure of the management process.

Law No. 25 of 2009 on Public Services

Public service is activity or series of activities in order to complete the service needs. It based on law and regulation for every citizen and resident on goods, services, and/or administrative services which are provided by public service providers.

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Public Services Law (officially named as Law No.25 of 2009 on Public Services) is a law which regulates on good principles of government. It is about the effectiveness of the government functions. Effective public services from government or union can strengthen the democracy and human rights, promote economic prosperity, a good utilization of natural resources, and deepen the trust of government and public administration.

Public services must be always changed and follow people progresses because people are dynamics. In this case, the government should negotiate and collaborate all of people needs. Public service implement in a series of integrated activities with several characteristics, which are simple, open, smooth, complete, normal and affordable.

Law on public services intends to give legal certainty for people and provider relationship in the public service. The objectives of law on public services are (i) realization of clear boundaries and relationship on right, responsible, obligation, and authority of each party which related to the organization of public services. (ii) Realization of management system on public services which suitable for general government principles and for a good cooperative (union). (iii) Completion of the organization of public services based on the law and regulation. (iv) Realization of protection and legal certainty for people in the organization of public services. Organizer of Public Services is based on (i) public interest. (ii) Legal certainty. (iii) Rights equality. (iv) Balance of rights and obligation. (v) Professionalism. (vi) Participative. (vii) Treatment equality/ no discriminative. (viii) Openness. (ix) Accountability. (x) Facility and special treatment for susceptive group. (xi) Punctuality. (xii) Rapidity, facility, and affordability.

In the Ministerial Decree of the Empowerment of State Apparatuses, decree No 63/KEP/M.PAN/72004 on Public Guidelines of Public Services Organization, states that there are several elements of service quality, which are: (i) Simplicity, it means that the service procedure is easy, not convoluted, and easy to implement. (ii) Clarity (iii) Clarity of time. (iv) Accuracy(v) Responsibility. (vi) The completeness of facilities and infrastructure.(vii) Ease of access. (viii) Discipline, politeness, and hospitality. (ix) Comfortless.

Based on those definitions, public services will be qualified if it fulfills these principles, which are: transpiration, accountability, participative, rights equality, balance of rights and obligations, professionalism, facility, rapidly, and convenience.

The Quality of Public Services

In a country, people have rights to receive a service quality. The improvement of that service quality cannot be separated from these conditions, such as (i) the willingness of people to give an input for the improvement of service quality in the form of complaint and denunciation. (ii) There is a freedom for people who want to express their denunciation. (iii) There is a

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collective attitude from the government to realize the commitment of improving the service quality.

There are several dimensions or factors which are used by the customers or service users in determining the service quality, according to Zeithamal, Berry, and Parasuraman as cited by (Fandi Tjiptono, 2005:14) stated that there are five main dimensions which can be used to measure service quality, which are tangibles, reliability, responsiveness, assurance, and empathy.

Furthermore, Sinambela, (2006:6) has proposed that theoretically, the objective of public service is basically to satisfy people. To achieve that satisfaction, it is demanded that the service quality is reflected from transparency, accountability, conditional, participative, rights equality, balance of rights and obligations.

Based on those descriptions, accordingly, Municipal Waterworks (PDAM) of Goronlato District, Boliyohuto Unit needs to give a good services or prime services, because those things are people needs and demands.

Standard of Public Service

Based on Ministerial Decree of the Empowerment of State Apparatuses, decree No 63/KEP/M.PAN/72004 on Public Guidelines of Public Services Organization, states that the standard of services at least consists of (i) Service procedures. (ii) Service times. (iii) Service products. (iv) Facilities and infrastructures. (v) Competence of employees who give the service.

All this time, there are several things that cause the public services did not work maximally, for instance:(i) Availability of supporting facilities for people who are not served in a good way. (ii) The work procedure which tends too long and convoluted because of provisions which already outlined (i)The ability of employee who still didn't work maximally. (ii) Material-oriented of the employees (iii) Inadequate employee's incomes became a factor of doing bribe.

Widodo (2001:273) states that public service parties in giving the public services at least should know the needs that would be served, those consist of (i) Applying organization required to support the performance. (ii) Monitoring and supporting the performance.

In addition, Widodo states that as an embodiment of what should be considered and what should be done by the public services to make the service quality better, so that in giving the public services should be (i) Easy to handle, for those who want to use (the process is simple). (ii) Receive/got a fair service. (iii) Got the same service, without discrimination. (iv) Receive a truthful and frank treatment (transparent). (v) From those illustrations, services should satisfy what people want. Therefore, the government must always notice what people need and try to increase the quality of the services.

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3. Definition of Conception

Generally, concept in a research became one of the important elements because it gave the description of the research. To avoid misinterpretation and limit the study/discussion, the researcher formulates the conception definition which associated with this research. The concept of this research was: Implementation of Law No.25 of 2009 on Public Services is a policy implementation which consists of activities in order to complete the services needs, based on the principle of service mechanism, open service, service accountability, service facility, accuracy, rapidity, convenience, and affordability. Those are including the supporting and inhibiting factors of services implementation.

4. METHOD

4.1 Research Design

This research used descriptive method and analyzed by using qualitative approach. According to Sugiono (2015:13) in his book entitled *Metode Penelitian Kuantitatif, Kualitatif dan R&D*, qualitative method often called as naturalistic method, because the research was done scientifically (natural setting). In the qualitative research, the instrument is people or human instrument, which is the researcher itself. Meanwhile, Bogdan and Taylor (Moleong, 2007:5) state that qualitative is a research procedure which generates descriptive data in the form of written or spoken from people and doer who are observed by the researcher. Another idea was stated by Kirk and Miller, they define that qualitative as traditions in the social science knowledge which fundamentally depends on the observation of people from their region which related to their language and their terminology.

4.2 Focus on the Research

In this research, the focus of the research is: (i) The implementation of the Law No.25 2009 about the Municipal Waterworks publics service Unit (PDAM) of Boliyohuto, Gorontalo, which are (i) Service mechanism. (ii) Public disclosure of the Municipal Waterworks' employees. (iii) Accountability service of the Municipal Waterworks' employees. (iv) Facilities. (v) Accuracy, rapidity, convenience, and affordability. (ii) Supporting and restricting factors of the implementation of the Municipal Waterworks publics service (PDAM) Unit of Boliyohuto, Gorontalo.

4.3 Location of the Study

This study is located at the office of the Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo.

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4.4 Data and the Source of the Data

Data

The primary data source is the major data that gained from observation and interview. It consisted of description and people acts. The data was directly obtained from the informant based on the interview questions. The primary data of the study was obtained from the government officials or the employees of the Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, public department staffs, financial department staffs, costumer relation department staffs, distribution department staffs, planning and maintenance department staffs, and public figure (costumer).

The secondary data is the data that obtained or investigated by another department related with the study. The researcher used documenter technique as the data collection method in order to obtain supporting data that complete and accomplish the result of the study. The data was obtained from the office of the Municipal Waterworks Unit of Boliyohuto, Gorontalo.

Data Resource

The primary data resource was obtained from the public figure (costumer) of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo and the secondary data was obtained from the Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo.

4.5 Sampling Technique

The selection of informants as the data resource was based on the people who understand the related problem, having the data, and available to give complete and accurate information related with the study. The requirements of the key informant were the chief of the office, and public figure (costumer) of the Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo. Purposive sampling technique is commonly used in qualitative research. Purposive sampling technique conducted based on certain consideration. For instance, people who understand the topic under study that help the researcher to investigate the object of social condition of the subject under study. (Sugiyono, 2015).

4.6 Data Collection Method

The researcher conducted two data collection methods to obtain the data, which are: (i) Literature investigation that requires the study of books, theories, notes, and documents related to the study. (ii) Field observation that consist of: observation, interview, and documents review

4.7 Data Analysis

The researcher used interactive descriptive technique that contained the facts description obtained from the study that related with the object. Furthermore, the data combined and analyzed in descriptive qualitative that contained description and interpretation of the facts in interactive model. The data obtained from the study then analyzed in several stages, which were (i) data collection; (ii) Data reduction; (iii) Data interpretation; (iv) Conclusion.

4.8 Research Procedures

Generally, research is divided into several procedures, which are preparation and planning, conducting the research, organize the report of result of the study, and the interpretation of the data. In this study the researcher conducted three procedures, which were: (i) Preparation stage; (ii) The implementation stage; (iii) Evaluation and report stage.

5. FINDINGS AND DISCUSSION

The Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo as the public water service is coveted by the society. People become more critical towards the Municipal Waterworks. Therefore the Municipal Waterworks has to give efficient service to increase costumers' satisfaction. The Municipal Waterworks Unit of Boliyohuto, Gorontalo always try to improve the service. The implementation of the Law No.25 2009 about public service and Supporting and restricting implementation factors, aims to maximize the authority of public service. In this case, the public service department has to implement the substance of public service regulation. Every regulation has purposes and objective in the implementation.

5.1 The implementation of the Regulation Indicate the Reality Occurs in the Field Based on the Law No.25 2009

The reality that occurred in the field was influenced by supporting and restricting factors of the regulation of implementation. The implementation is the acts conducted by the individual or group of the Municipal Waterworks Unit of Boliyohuto, Gorontalo, who targeted based on the law No.25 2009

Service Mechanism

Service mechanism is the structural conceptual that organized from chained procedures of the organization in order to reach the effective and efficient public service.

The mechanism of this research covered: (i) The mechanism of the installation of new extension; (ii) The mechanism of water bill account payment. It is required clear mechanism and procedures to guarantee the fluent and good implementation.

The study at Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo in case of new installation extension service and account payment showed a good result. Moreover, the implementation was suitable with the regulation. However, there were some restrictions in the implementation. The difficult location of the house and lack of staff were increase the time required to build the new installation. Moreover, water bill payment still used off line system because on line system payment was not affordable and consumed high cost. This condition needed cooperation with the other institution. Therefore, Municipal Waterworks conducted one gate payment system in the office of Municipal Waterworks (PDAM) Unit of Boliyohuto Gorontalo. Furthermore, Municipal Waterworks conducted another alternative to give the authority for the staff to come directly for the water bill payment. The problem of this alternative was the delay of water bill payment that people not always available at home.

Thus, it can be concluded, the mechanical service of new connections and payment mechanism of water bill accounts provided by employees is getting better, but the delays in terms of service in the field due to lack of employees, the location of hilly homes and service is still manual "of line" for payment billing account. As the result, slow action of the services to the customers happened.

Public Disclosure Services

The services should be more fair and open to the public, people wants that employees who provide services to the public (customers) should have a good attitude and easy to understand. On the topic of "Public Disclosure" in this research, more leads to openness about rate. In Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, it is very clear, fair to the employees, and public because of the brochures listed in PDAM Unit of Boliyohuto, Gorontalo.

Hence, the conclusion is public disclosure of cost / rate and fine of service is getting better, therefore the customer understand and know the rate list clearly, Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo implemented the rules that have been set. It proves that employees use consistent standards in delivering services in terms of rate openness.

Accountability of Service

Accountability in public services requires the government in providing services should be accountable in accordance with the provisions of legislation. One of the most important measurements in the accountability of service performance is the accuracy of the officer in providing services, in which the employee's accuracy refers to their professionalism according to specific duties. For the purpose of employee's accuracy, it is give a possibility for every employee to devote their thinking, their ability to carry out the job tasks that their responsible for.

The result of the interview above was reinforced by the observation result at the Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, shows that the service given by the employees has been meticulous enough in completing the task. The service providers have given the accuracy of service to the public service to the resulting service.

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The service providers already have their best and carefulness on works of services to the people (customers) concerning the services result. Those things seen from the performance of the officers were in line with the regulations and rules, thus, satisfied the customers due to the services result. As well as in the making of customer and payment account before the process, officer would carefully check the completeness. Many processes did it in order to avoid the errors in data. Sometimes, despite of the mistaken done by the officers, they were take the responsibility immediately to fixes its problem and provide the best action for the people (customers).

Thus, the conclusion is reviewing of the level of accuracy of employees in performing their duties is worthy enough. It means that the provision of services is sufficient to provide careful service to their products services which produced by them. The accuracy of the performance of service toward the result of product services will certainly provide satisfaction to the community (customers).

Service facilities

This section is related to the usefulness of facilities and infrastructure owned services. Facilities and infrastructure are important proponents in a unit services. Facilities and infrastructure become useful if the tools are complete, so it makes easier for services, facilities and infrastructure used by Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo in running their duties, all kinds of instrument, equipment and work facilities as a tool in carrying out the task.

The result shows, at the office of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, that the service facility is still minimal so that the service grant in completing the task. The lack of facility has an effect on the running of Municipal Waterworks (PDAM) service, where they do not have adequate, complete and comfortable service office and waiting room. However, the employee in providing service with minimum facilities and what is the existence of permanent employees eager and try to improve the optimality of its performance in providing services. This was seeing on performance of officers that always provide in accordance with the rules and procedures despite of the lack of existing facilities and infrastructure.

In consequence, there is a conclusion that in review from the level of facilities employees in carrying out their duties is good enough, but the slow service caused by the lack of existing facilities and lack of employees served, so that services become very slow.

Accuracy, Velocity, Convenience and Affordability of Services

The implementation of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo in terms of accuracy, velocity, ease and affordability that was seeing from the service accuracy has not seen the clarity of the completion time. There was a little problem because by the lack of employees, who was not balanced with the hustle of the process in provide employee services because of the lack of facilities. What does it mean with an ease here is no difficulties at all in terms of services, and affordability in terms of the distribution of piping that was once not evenly distributed over time has been spread evenly and can be reached by the public.

From the result in the field, it is shown that the accuracy, velocity, ease and affordability were not completely worked well. There is one indicator only which customers thought very well, in which at first distribution, pipe has not yet reached their specific area/region and now it is all over smooth and affordable.

The Supporting and Obstacle Factors in Implementation of Services by Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo

Based on the result of this study, there are supporting and obstacle which affect the policy implementation of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo: (i) Supporting factors in implementation of services in Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo; (ii) The water source is still over capacity so it still possible for new customers; (iii) Right of the bat to field for better services needed in this job; (iv) The team-works from staff makes the strength in solving service problems; (v) The obstacle factors in the implementation of the service of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo such as: (a) There is lack of bureaucracy. This is because of slightly employees who work in providing services, so the employees must work more than one job that is why services become slow. (b) Lack of service facility, where it caused some prevent on administration services at Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo. (c) Less coordination between unit and higher position, that is why there is slow services.

6. CONCLUSION

Implementation of drink water services for people at Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo: (i) Some of the indicators on the principle of service mechanism, service transparency, and accountability of services have been running well, but the service facilities that inhibit the smoothness of services due to the lack of existing facilities and accuracy, velocity, not as what people expected, because of the problem on numbering of bureaucracies which only a slight services and minimum facilities. However, ease and affordability have been running well because employees do not complicate and the installation of water piping that was once difficult to reach, as time goes by, everything is evenly and can easily reach the customers. (ii) The Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo services until now has not run with highest expectation. There are several points, which need to be improved; the lack of facilities and bureaucracy can hamper all the services that customers need. (iii) Lack of staff numbers can slow down the services in which employees have to work more than one job thereby lengthening the time of services.

Supporting and obstacle factors in the implementation of drink water services for the people at Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo: (i) Supporting factors of the implementation of drink water services for the people at Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, such as: The water source is still over capacity so it still possible for new customers, Right of the bat to field for better services needed in this job, The team-works from staff strengthen their thinking in solving service problems. (ii) Obstacle factors of the implementation of the services of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, for instance: There is lack of bureaucracy. This is because of the lack of employees worked in providing services, so the employees must work more than one job that is why services become slow. Lack of service facility, where it caused some prevent on administration services at Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo.

7. SUGGESTION

Based on the results of these studies, the authors provide suggestions that might help the performance of Municipal Waterworks (PDAM) Unit of Boliyohuto, Gorontalo, for instance: (i) The more of employees they have, the more good result in quality of services, or complete the existing facilities to provide quality and excellent service for customers of PDAM. (ii) The need for cooperating with other institutions is very important, such as banks, or other institutions in order to facilitate customers on paying water bills.

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Giving of Media Modules Reviewed from Personal Hygiene Against Capitis Pediculose Incidence in Islamic Boarding School of Al-Fattahiyyah Tulungagung

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ABSTRACT
Capitis Pediculose is one of the health problems that cause interference in the child's hair resulting in decreased learning achievement. Students who have Capitis Pediculose one cause is lack of personal hygiene. The purpose of this study was to determine the effect of media module on the occurrence of Capitis Pediculose. Pre-experimental research design is with posttest only. Sampling technique with Total Sampling got sample of 53 respondents. Independent variable of module media, dependent variable of Capitis Pediculose incidence, data collected by observation, analysis with Binomial Test with α = 0,05. The results showed most respondents who experience Capitis Pediculose after given media module in the category did not happen that is 40 respondents (75.47%). The result of data analysis with Binomial Test shows that the significance level = 0,000 <α = 0.05 H0 is rejected which means there is influence of module media to the occurrence of Capitis Pediculose in the Islamic Boarding School of Al-Fattahiyyah Tulungagung. Suggestion for cottage girls is to make efforts to eradicate or prevent Capitis Pediculose.

Keywords: achievement, capitis pediculose, media module

1.INTRODUCTION

Adolescence is said to be known as self-identity, a phase in which individuals experience rapid physical growth and varying psychic growth. A person is said to have good personal hygiene if, that person can keep his or her hygiene including skin, teeth and mouth, hair, eyes, nose, and ears, legs and nails, genitalia, and the cleanliness and tidiness of his clothes, therefore personal hygiene becomes An important aspect of maintaining the health of the individual because good personal hygiene will minimize the entry of micro-organisms that are everywhere and ultimately prevent a person from a good disease skin disease infectious diseases, as well as infection Capitis Pediculose on head hair (Laily, 2012).

One of the problems in school-age children let alone living in the lodge that is with the lack of maintaining personal hygiene and the environment around the lodge can cause the occurrence of some health problems such as hair mites (Capitis Pediculose) scabies, ringworm, scabies. Capitis Pediculose is also called head louse which is an ectoparasite that infects humans, including in the family pediculidae that is transmitted by direct contact and by intermediate goods used together. This can be transmitted through comb, hair brush, hat, scarf, towel, blanket, pillow, hat, mattress, veil and others. Generally, this disease is still the second highest after scabies, especially in school-age children, because the habit of the patient does not pay attention to personal hygiene so infected on the scalp that can also be caused by fleas (Weems and Fasulo, 2013).

The prevalence and incidence of Capitis Pediculose worldwide is high, estimated there are hundreds of millions of people infected with Capitis Pediculose every year. In the United States about 6-12 million children aged 3-11 years are infected each year, with the incidence of girls higher than boys because girls have long hair and often wear hair accessories together. Meanwhile, according to data in Belgium there are about 6,169 children aged 2.5-12 years who are infected. The Turkish health agency reported incidence of Capitis Pediculose in Turkey reached 16.7% or about 1,569 school-aged children with a higher incidence of girls than boys (Sriati, 2008).

Results of research conducted by Wijayanti (2007) dipesantren Jombang area showed that 50 100% santri infected Capitis Pediculose from 50 subjects who checked his hair. The results of research conducted Sukarmani (2006) showed that in school-age children the number of infected children with hair mites reached 21.31% in urban areas while in rural areas reached 36.53%. The results of preliminary study conducted on July 27, 2016 showed that the number of students in boarding school Al-Fattahiyyah Boyolangu District Tulungagung regency amounted to 53 female teenagers who are divided into three rooms that have infestation of hair lice. Each room ie, the first room amounted to 19 people, the second room amounted to 21 people, and the third room amounted to 13 people. The results of these data indicate that the percentage of infected hair lice is quite high. Learning with the module allows a learner who has a high speed in learning will be faster to complete compared with other students (Anwar, 2010). The purpose of this study is to determine whether the influence of media module delivery in the review of personal hygiene to the incidence of Capitis Pediculose in boarding school Al-Fattahiyyah Tulungagung.

2. RESEARCH METHODS

Pre-experimental research design is with posttest only. Sampling technique with Total Sampling got sample of 53 respondents. Independent variable of module media, dependent variable of Capitis Pediculose event, data collected by observation, analysis with Binomial Test with α = 0,05.

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3. RESEARCH RESULT AND DISCUSSION
3.1. Characteristics of Respondents

Table 1. Characteristics of respondents in this study include age, knowledge of how to eradicate and the occurrence of Capitis Pediculose

No	Characteristics	ΣN	Σ%
1	Age (year)		
	13	21	40
	14	19	36
	15	13	24
2	How to eradicate		
	Understand	34	64
	Do not understand	19	36
3	The incidence of Capitis Pediculose		
	Occurred	13	24,52
	Not occurred	40	75,48
	Total	**53**	**100**

Source: Result of data analysis, Year 2017

Based on table 1 above it is known that from the total of 53 respondents almost half of the respondents aged 13 years as many as 21 respondents (40%), most respondents understand about how to eradicate Capitis Pediculose that is as many as 34 respondents (64%) and respondents who experience Capitis Pediculose in Category did not occur as many as 40 respondents (75.47%) respondents.

Table 2. Results of data analysis Recapitulation Description Giving Media Module in Review of Personal Hygiene Against Occurrence Capitis Pediculose in the Islamic boarding school of Al-Fattahiyyah Tulungagung.

Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
PC incident After being given media module	Group 1	occurred	13	,25	,50	,000
	Group 2	Not occurred	40	,75		
	Total		53	1,00		

The result of data analysis shows that there is a systematic effect of media module on the occurrence of Capitis Pediculose where the significance

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level of 0.000 means the test statistic 0,000 <α = 0.05 then Ho is rejected which means there is influence of media module delivery to the occurrence Capitis Pediculose.

4. DISCUSSIONS

Genesis Capitis Pediculose After Administered Media Module Treatment

The occurrence of pediculosis of capitis after being given module media showed that most respondents who had contracted Capitis Pediculose in the category did not occur as many as 40 (75.47%) of respondents and respondents in the category occurred as many as 13 (24.52%) respondents. From these results it is known that the majority who contracted Capitis Pediculose after being given module media treatment that is not the case.

Hair lice (Capitis Pediculose) existed thousands of years ago and spread throughout the world. Hair lice are flat insects with no wings. The length of head lice is approximately 2-4 mm and is usually found on the scalp of the back. Head lice suck human blood and at the time of sucking blood, saliva spilled on the scalp will cause itching (Natadisastra, 2009).

A hair louse is one of the diseases transmitted in lodges or schools due to unhealthy behavior of schoolchildren or cottage or due to a less clean environment. And school or cottage is a potential place for the transmission of hair lice. Hair lice provide a disorder that can lead to reduced concentration in children while listening to the lesson. In addition to the environment can also be caused by the lack of hygiene in each individual that includes hygiene conditions in yourself and furniture around such as combs, pillows, headscarves, accessories, towels etc. Hair lice can be transmitted through direct contacts as well as intermediate furnishings that often take turns (Meinking, 2009).

As a result of untreated pediculosis of capitis infestation can lead to various effects on the patient, among others, lack of quality sleep at night due to itching, disrupting the concentration of learning social stigma, shame or low self-esteem (Fitzpatricks,2007).

Based on this study it is known that the incidence of Capitis Pediculose after being given module media at age 13 years in the category did not occur as many as 17 respondents (32.07%). This is because teenagers age 13 years is no longer the age of their children can already think which is good to do and which is not good that should not be done. For that at the age of 13 this year many students can apply what they should do to interfere or eradicate the problem of Capitis Pediculose.

From the results of observation note that the respondents who are still infected Capitis Pediculose caused by lack of awareness and discipline in applying the contents in the module properly and correctly. Based on the above facts and theories, the improvement of hygiene in young women in the cottage in applying personal hygine behavior, especially on the head hair that starts from within the family and educational institutions is needed to prevent the occurrence of Capitis Pediculose, especially in adolescents infected with hair lice. The occurrence of Capitis Pediculose can be overcome by shampooing using drugs that can relieve itching and eggs slowly.

Influence Analysis of Media Module on Capitis Pediculose Occurrence Based on the results of the above statistical analysis using Binomial get the value of significance level 0.000 means statistical test 0.000 <0.05 then H0 rejected which means there is effect of media module on the occurrence of Capitis Pediculose in the Islamic Boarding School of Al-Fattahiyyah Tulungagung.

Modules are teaching materials that are arranged systematically with language easily understood by students, according to their age and level of knowledge so that they can learn independently with minimal guidance from educators. The use of modules in learning aims for students to learn independently without the teacher. In the teaching of teachers only as facilitators of educators who claim that the module is part of a planned learning unity designed to help students individually in achieving learning objectives. Students who have high speed in learning will more quickly master the material. Meanwhile, students who have low speed in learning can learn again by repeating the parts that have not been understood until really understand (Andi, 2012).

Modules are part of a planned learning unity designed to assist students individually in achieving their learning objectives. Students who have high speed in learning will more quickly master the material. Meanwhile, students who have low speed in learning can learn again by repeating the parts that have not been understood until really understand (Sukiman, 2011).

The module is a program package that is structured and designed in such a way as to the interests of student learning. Approach in module learning uses student experience. Based on the above opinion there are important things in defining the module that is independent teaching materials, helping students master the learning objectives, and program packages are arranged and designed in such a way as to the interests of student learning (Rudi, 2008).

The results of this study indicate that there is influence after giving media module with the incidence of Capitis Pediculose and understand how eradication of pediculosis capitis in the category does not occur as much as 29 (54,71%) of respondents. It shows that in this study the researchers actually provide the material well and active respondents to ask if there is not yet understand the material. The importance of applying disciplinary behavior in terms of personal hygiene related to how to combat Capitis Pediculose, especially hair hygiene head to break the chain of transmission.

The prevention of health problems related to the incidence of Capitis Pediculose will actually be more meaningful if starting from the lowest level such as providing guidance and understanding of how to eradicate Capitis Pediculose. To inculcate good and correct behavior about eradication Capitis Pediculose in cottage can use media module. The module can be used as an independent evaluation.

Based on the above facts and theories, the importance of media module influence on how to eradicate the hair louse especially in adolescent infected by hair lice further is to increase awareness and discipline in applying the contents in the module properly and correctly to overcome the problem of Capitis Pediculose. If the discipline continues to be implemented properly and correctly then the problems that occur will be resolved and there will be no more problems that burden the student. This will facilitate students in performing daily activities.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusion

(i) In adolescent girls at the Islamic boarding school of Al-Fattahiyyah Tulungagung after being given media treatment module most of the respondents not infected Capitis Pediculose . (ii) There is effect of module media to decrease the incidence of pediculosis capitis in Al Fattahiyyah Tulungagung Pesantren.

5.2. Suggestion

(i) For Educational Institutions ;As a reading material so as to further enhance the personal head hair hygiene in order to prevent the outbreak of Capitis Pediculose so that it can decide the chain of transmission of pediculosis capitis. (ii) For the Profession; In order to provide support by providing more information about head hair health and hygiene as an input to carry out health and hygiene research to adolescents in order to increase the prevention of the incidence of Capitis Pediculose.(iii) Share the respondents; As an input to prevent the occurrence of pediculosis capitis to prevent the decrease in learning concentration. (iv) For further researchers; Expected to develop this research by conducting research on Capitis Pediculose.

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The Improvement of Education Quality

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ABSTRACT

Educational management in strategic, managerial, and operational level determines the quality of education. One important aspect of education management is the issue of educational leadership. Educational leadership, educator standards and education personnel are directly proportional to the quality of education. In other words, the quality of good education is determined by the good leadership of education, well educational leadership will be decisive for the realization of educator standards and education personnel. Effective educational leadership is predicted to be able to support the efforts to realize the standards of educators and educational personnel, which then certainly will also support the efforts to improve the quality of education.The commitment of the parties who involved in educational leadership in order to realize the standards of educators and educational personnel into a necessity.

Keywords: educational management, educators standard,educational staffs,the quality of education

1. INTRODUCTION

The quality of National Education will be measured through the achievement of all the National Education Standards, including content standards, processes, graduation competencies, educators and educational staff, facilities and infrastructure, management, financing and educational assessment (PP RI No. 19 year 2005 has been enhanced by PP RI No 32 year 2013). Serious and earnest attention by the parties towards the fulfillment and realization of all these standards will determine the quality of education.

The problem of the quality of education is an issue that is always interesting to discuss. It is aligned with the demands of development and change. A change demands role the agent of change in generating ideas of renewal and change managing. The figure of the agent of internal change of the institution of education is the existence of a leader who runs leadership effectively, which is the leadership who capable to managing all resources in the institution he leads towards the expected vision and mission.Especially the human resources consist of educators and educationalstaff who allegedly loaded with various problems, including issues of qualification, coaching and professional development, and performance that requires intensive, sustained

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attention, direction and guidance so that they really able to carry out all duties, functions and responsibilities professionally, in line with the required educational standards and educationalstaff.

According to Mohd. Ansyar, Ph.D (2012), There are three determinants of quality of education, they are "(A) the person (educator), (B) the program (curriculum); and (C) institutions (leaders)". Thus, the fulfillment efforts and the realization of all national education standards should be ideally supported by personal (people) quality, accompanied by a good program (curriculum) and effective (leadership) institutions.

Reality on the field, a factor that is often highlighted and noticed by government andstakeholdersmake changes in terms of the program (curriculum change) without being accompanied by a harmonious and balanced effort ith the effort to fix the person (educator and education), as well as education management (by the leadership of the institution). Its mean, the program (curriculum) is changing, but people who will carry out it and management of the implementation of the program (curriculum) is not organized and well managed. Finally the established program (curriculum) can not be implemented optimally as expected, because it is not accompanied by the educators who competence and adequate educational personel, and also not supported by good management, such as the absence of intensive monitoring or control which is sustainabletowards the implementation of sustainability program (curriculum).

The problem above can be identified from the appearance some comments, complaints and criticism from educators and educational staff with the phrase "change the leadership the policy will change, change the minister the curriculum will change".This is an indication that changes was did in the field of education not based by correct understanding of the meaning of change. Changes made only based on the ideas and ideas of a handful of people who have the authority to make decisions and produce education policy. Ideally the change should be done by involving all the related elements in order to identify relevant and useful inputs in decision making, so that decisions or policies that taken understood by the parties concerned until finally get support and can be implemented properly. In other words there will be no resistance to change,if the parties concerned feel involved and valuedand feel become an important part of the effort of its manifestation.

Leadership is one of the critical success factors in achieving the quality standards of educators and educational staff to improve the quality of education in an educational institution. A leader must have good managerial skills, so that he or she can bring the elements of the institution systemically in the desired direction in accordance with the vision, mission and objectives of the institution he or she leads.Leaders of educational institutions should be able to realize a sustainable program (sustainability) refers to the required quality standards.

The problem of education quality actually can not be partially studied,because it is a systemic problem.But the discussion on the quality of education this time is limited on the issue of leadership in relation to efforts to realize the standards of educators and educational staff in order to achieve the quality standard of education or in order to improve the quality of education in an educational institution in particular. This paper discusses some of the relevant issues. First, describes the conception and implications of educational leadership, quality standards of educators and educational staff and the quality of education. Second, discuss the role of leadership in realizing the program and the quality of continuing education for educators and educational staff. Third, the importance of leadership commitment to realize the standards of educators and educational staff in order to improve the quality of education in an educational institution.

2. CONCEPTION AND IMPLICATION (LEADERSHIP, EDUCATIONAL AND EDUCATIONAL STANDARDS, QUALITY OF EDUCATION)

2.1. Leadership

Leadership is the number of skills which is used by someone within an organization, and leadership is a combination of many things. Leaders need to have a view of the future and bring the people they lead to achieve the goals the organization desires (Veithzal Rivai, 2004: 229-230).

According to Bennis and Nanus (1985:3), "*Leadership is necessary to help organizations develop a new vision of what they can be, then mobilize the organization change toward the new vision*." The definition suggests that the leader must be able to be a change agent for the institution he leads. The change means has a clear vision.

According to Sallis (1993)a leader can develop his subordinates by seeking various aspects, individually or in groups, psychologically or sociologically, in an explicit or explicit manner which can be referred to the details of attitudes and behaviors or activities presented as detailed below: (1) initiate (4) explain or parse ideas, (5) conclude, (6) tests for consensus, (7) act as moderator, (8) compromise And creative in overcoming differences, (9) trying to reduce tension within the group and trying to penetrate difficult problems. (10) expressing the group's feelings and asking others to check the impression, (11) making the group agree on the standard, (12) referring to documents and data (13) praising and correcting members in a fair manner, and being able to accept complaints equally with compliments. (Sallis: 1993).

Belascoin Abdul Aziz Wahab (2008:313-314)poses potential obstacles that a leader must be wary of, understood and anticipated for the implementation of change (empowering performance): first, It always take longe. People are slow to learn and can forget the problem easily, and usually last longer than expected. Changing habits that last a long time is difficult. The larger the organization the longer it will take to change. Second, Exagerated expectation, everyone wants everything nom. If people are encouraged to be ready then they will be ready. But sometimes they see it is something that can be done instantly. For that we need a reliable person to deal with various problems in various situations. (3) Carping sceptics. In any professional organization there are always people who are skeptical. It could be something that is raised right or wrong, therefore every criticism that appears to be tested the seriousness and breadth. Third, Procastination. Empowering vision takes a lot of time. The vision of the organization faces things that do not seem like customer attitudes or employee motivation. Generally managers avoid things that are difficult to measure. And it is even more difficult to maintain subjective judgments against challenges. Fourth, Imperfection. Must be prepared with all the mistakes. Turn error and mistakes into a learning experience. Make mistakes a chance to refocus on the vision and re-clarify everyone's role to create a vision of life. In order for change to work properly, empowerment of change must take into account the various components relevant to the desired change.

FurthermoreBelascoinAbdul Wahab(2008)explain about empowerment of change: (1) Empowering change. "Your actions tell the tell". Your actions tell you what to do. The basis of any change effort is the dedication and commitment shown in concrete, specific and individual actions that drive the process. This means actions that reflect the vision will motivate workers to use that vision. (2) Getting ready to change. Changes can be fun and successful or otherwise fail. People survive and insist on old habits and behaviors that in the past have proven to be very useful. Realize this will limit the progress of the organization. (3) Anticipate the obstacles. Empowerment of change is not easy to do but it is possible and essential for advanced and developing organizations. Every obstacle and problem must be faced and anticipated. (4) Create tomorrow. The various conditions that cause various problems to be solved. You must be able to determine what to do and where to go to the organization in the future (the goal). (5) Focus resources. An executive without resources like a ship without a screen will not be able to go anywhere. It means that focus clarity begins with a strategy of identifying essential macro activities to maintain and eliminate nonessentials. Likewise with micro activities.

2.2. Educators standar and Educational staff

Fasli Jalal dan Dedi Supriyadi (2001) citing a World Bank report entitled Education in Indonesia: From Crisis to Recovery dated September 23, 1998, among others highlighted the issue of teachers and educational staff, that teachers are central to efforts to improve the quality of education, so every effort to improve education will and must maintain the arrangement of teacher. He further explained that in principle there are three dominant issues concerning teachers highlighted in the report, namely "the quality of teachers relating to pre-service education and selection, the incentives it obtains, and the unequal distribution of teachers. Future challenges and strategies are how to improve the quality of teachers (both through pre-service education and through in-service education), make them better trained, teachers' welfare / incentive levels are better, thus making the teaching profession more interesting and competitive in line with the demands of the task, Teachers are more equitable.

Efforts to fulfilment of the expectations above are politically regulated in legislation that is P.P No. 19 year 2005. There are several important terms and explanations that can be abstracted about the standard of educators and educational staff contained in Government Regulation No. 19 of 2005 as follows:

In article 1 it is explained that: "The standards of educators and educational staff are the criteria of pre-service education and physical and mental appropriateness, as well as in-service education." This means that the standards include a number of criteria that must be fulfilled before and after serving as educators and educational staff.

In outline there are two qualifications required are academic and non academic qualifications. As affirmed in article 28 that educators and educational staff must have academic and competence qualifications as learning agents, physically and mentally healthy, and have the ability to realize the goals of national education. The intended academic qualification is the minimum level of education that must be fulfilled by an educator and educational staff as evidenced by a relevant diploma and / or certificate of expertise in accordance with applicable laws and regulations. Competence as a learning agent in elementary and secondary education and early childhood education includes: Pedagogic Competence, Personality Competence, Professional Competence, and Social Competency. Then for someone who does not have a diploma and / or a certificate of expertise but has a recognized and necessary specialist expertise can be appointed as an educator after passing the feasibility and equality test.

Academic competence and competence as a learning agent developed by BSNP (National Education Standards Agency) and stipulated by Ministerial Regulation. Furthermore, in the framework of pursuing teachers with academic qualifications and competencies, an Education Quality Assurance Institution has been established, named as LPMP is a technical implementation unit of the Department domiciled in the province and is tasked with assisting the Regional Government in the form of supervision, guidance, direction, advice and technical assistance to Elementary and secondary education units as well as non-formal education, in various efforts to ensure the quality of education units to achieve national education standards (article 1).

Then in article 2 stated that for the guarantee and quality control of education in accordance with the National Standards of Education conducted evaluation, accreditation, and certification.

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2.3 Quality of Education

The term of educational quality refers to the concept put forward by Sallis (1993: 7) that "*TQM is how much its philosophy corresponds with the best educational management practice*" It is understandable that philosophically emphasizes the best practice of management education "TQM is a means of assuring quality and standards in education. It provides a philosophy as well as a set of tools for improving quality". Quality of education in question is a continuous quality that refers to the standard of education quality in accordance with the demands of the development and progress of the age of the basics.

Conceptually Sallis (1993: 22) asserted that the concept of quality is a dynamic idea contains two kinds of concepts namely the concept of absolute and relative concepts. In the daily life of the concept of quality is more of an absolute concept, which implies goodness, beauty and truth, is ideally without compromise, to the highest standard so that it is admired by many and few who can afford it. In this case scarcity and expensive price are the hallmarks of quality in the absolute concept. Quality here is used as a differentiator between the status of having and who do not have it. In the field of education the concept of absolute quality essentially creates an elite group. The concept of absolute quality contains "luxury and status". Overall this concept presents a high standard. In the relative concept of Sallis (1993: 23), quality is not regarded as an attribute of a product or service but as something that belongs, which does not have to be expensive and exclusive, does not have to be special, maybe even mediocre. According to this concept the quality is there when needed the quality means must be in accordance with the desired goals. Relative quality concept contains two aspects, namely (1) describe clear specifications, (2) Fulfillcustomer needs. Quality is demonstrated as a procedure in a system that is understood as a quality assurance system, so as to provide services and good results for specific standard specifications.

The concept of quality proposed by Sallis is interesting to be a reflection. Because of the tendency of society and the politics to see the quality of education is something expensive and difficult to realize. So only a few people who can achieve it.The writer optimis that effective and thoughtful leadership will bring the education into a sustainable and affordable quality.

Sa'ud (2006) in his paper on quality assurance, argued that the improvement of the quality of education in a sustainable manner(Continuous quality improvement) needs to be done within the framework of quality, both internal initiative and / or involving external parties.

To achieve the quality targets and quality standards of education expected is needed a formidable team consisting of all elements of educational and non-educational staff. Why is a tough team important? Sallis (1993) describes the following (i) a strong team is important for an organization as a

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first step or a solid foundation for building Total Quality Management (TQM). In some educational sectors, teams have been developed as a basic unit of curriculum delivery. (Sallis: 1993) (ii) The team performs certain tasks in the framework of functionalization of teamwork. (iii) Useful to achieve a specific project. (Ad-hoc and short-term projects and improvement teams are key elements in improving quality.) (iv) The team becomes the motor of quality improvement.(v) The team has a number of important functions. As exemplified by Miller, Dower & Innis in Sallis: 1993) on the subject composing team has a number of important functions: (1) responsible for the quality of learning, (2) Responsible for the utilization of teachers' time, materials and space utilized, 3) being a means to supervise, evaluate and improve quality, evaluate and improve quality, (4) act as a supplier of information to the management about changes required in the process of quality improvement. (vi) The team is a means of making and proposing changes" The team is a solid way of making changes.

3. IMPLICATION OF LEADERSHIP ON REALIZING EFFORTS OF EDUCATIONAL STANDARDS AND EDUCATIONAL PROGRAMS FOR THE EDUCATIONAL QUALITY ACHIEVEMENTS

Leadership that intended here is the leadership applied by the leader of education. Bush & Coleman (2000) states that educational leaders are "Culture Creator". According to Duignan & Macpherson that school effectiveness emphasizes the importance of what happens within the classroom and educational leadership that provides a culture in the teaching and learning process, therefore, educational leaders have a responsibility to create an organizational culture that enhances organizational development and growth. The qualities identified by Duignan and Macpherson on educational leaders, are similar to transformational leaders, who emphasize leaders who encourage and empower subordinate responsibilities, by (i) Create opportunities for participants (participants) in the change process to reflect on their practice and develop a personal understanding of their own implications and changes. (ii) Encourage those involved in implementing an improvement to establish social groups and provide mutual support throughout the change process. (iii) Provide positive feedback opportunities for all those involved in the change. (iv) Be sensitive to the outcome of process development and provide essential conditions for feedback and follow-up so that those involved have the opportunity to discuss and rethink their ideas and practices.

Fiedler (1997) cited Sulastri (2011) noting the above implications for teaching leadership include: (1) Managing teaching and curriculum; (2) Teaching supervision; (3) monitoring of student progress; and (4) Provide teaching climate. Northfield added that the key character of educative leaders is that leaders provide opportunities for participants to develop personal understanding and encourage the conditions to reflect in practice (Bush &

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Coleman, 2000).

According to Lunenberg & Orstein (2000) the educational leadership outline has three main roles: leadership, managerial, and teaching curriculum. The following will explain each of these roles.

3.1. The role of principal leadership

(i) Principals are key in shaping school culture. The principal should be able to form a positive culture, where staff share insight, and have a dedication to school improvement and teaching. Student success is highlighted and collegiality spreads throughout the school. High moril, caring, and committed. (ii) The headmaster should be able to make relationship with the group, internal and external school, such as (1) the supervisor and manager of the central education, (2) the school board, (3) peers, (4) parents, (5) the surrounding community, (6)) Teachers, (7) students, and (8) external groups such as professors, consultants, accreditation bodies, and so on. Effective principals need to believe in their ability and be able to synergize the perceptions, hopes, and capabilities of these groups to support the progress of the school.

3.2. The managerial role of the principal

(i) The managerial role is a major aspect of school leadership. Katz and Kanz share management skills into three main areas: (1) technical, including management process techniques (planning, setting, coordination, supervision and control), (2) human, relations skills, Motivate and build morale, (3) conceptual, emphasizing knowledge and technical related services (or products) about the organization. Sergiovanni adds two other areas of management for school administrators, namely symbolic leadership, principals' actions modeling schoolchildren, and cultural leadership, that the principal's beliefs and values are an important element. Fullan and Sarason add a dimension of school management that is principal as a change agent and facilitator. (ii) In general, the principal must "lead from the center": democratize, delegate responsibility, empower decision-making, and develop collaborative efforts that bind students, teachers, and parents. It implies that the leader in all things should be in the middle of the organizational (participatory) component. (iii) Lipham developed a four-factor theory of leadership for principals: (1) structural leadership, (2) facilitative leadership, (3) supportive leadership, and (4) participative leadership. All these leadership factors emphasize managerial and administrative skills. The principal's success is to be able to modify or adapt the four leadership factors according to the school's needs.

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3.3. The role of the principal curricula of the curriculum should be the principal work priority of the principal so as to improve the quality of education in the school. Murphy develops six principal roles in curriculum and teaching.

(1) Ensuring the quality of instruction, (2) monitoring and evaluating teaching, (3) allocating and protecting teaching time, (4) coordinating the curriculum, (5) ensuring the content of the lesson is delivered,and (6) monitoring student progress. According to Murphy, these six roles represent an example of an effective principal.

4. THE ROLE OF LEADERSHIP IN MAKING PROGRAMS AND QUALITY OF SUSTAINABLE EDUCATION

In order to realize the program and the quality of continuing education in an educational institution, a leader must realize that ""Successful institutions of the future must be as responsive and fluid as the world around them." (Sallis, Edward: 1993, p.78). Meaning: Successive institutions (organization) toward the future are institutions that are responsive and change according to the demands of the world around them. It is understandable that it demands innovative leadership and is capable of facing the challenges of change.

There are three important things that the leader must strive for regarding the needs of an organization (educational institution) as Sallis (1993. p.83-84) puts it as follows (i) unit optimization: Each person must run effectively and efficiently based on clear standards of quality. (ii) Vertical alignment: each person must understand the institution's strategy, direction and mission. (iii) Horizontal alignment: competition between units based on an understanding of the goals and needs of the organization and has mechanisms for solving problems.

Furthermore, to fulfill all it needs to be pursued a single command for each process: a key process must be designed and organized to be aligned with customer needs.

Based on the concept above can be understood that the role of a leader of educational institutions is decisive in an effort to fulfill the needs of the institution he leads. As can pursue a variety of programs and activities relevant to the fulfillment and improvement efforts and development of competence of educators and educational staff in the institution according to the standards set. Effectiveness and efficient principles, strategic precision, direction and mission clarity understood by all elements of educational institutions, and healthy competition are important things that need to be pursued. It can be a strength and key to the success of leadership in carrying out its duties, functions and responsibilities to advance the educational institution in accordance with the quality standards required for all elements and components of the institution it leads. *Glenn Cummings*(2010)has conducted research about *"sustainability in higher education"* with the research

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question*"what common characteristics and actions were taken by successful university and college leadership pursuit of sustainability.*His research took place in four colleges for about four years.The first two years of research about *public research universities* and the next two years about *public community colleges.* The four colleges are: *Arizona State University, University of New Hampshire, CapeCod Community College and Foot hill D'Anza Community College District*. Senior leadership at the institution awaits the same character and some strategies that make leaders sustainability. Cummings concluded that effective leaders are leaders who are able to build coalitions and are able to maximize personal utilization and administrative strength. The integration of sustainability in the leadership effort of improving the curriculum can encourage and encourage sustainability in maintaining the good name of the faculty. Leadership skills find ways to achieve institutional success and maintain institutional reputation. Then the ability to raise external funds (personal or government) is also an important thing in order to realize the sustainability of the institution.

5. LEADERSHIP COMMITMENT IN REALIZING EDUCATOR AND EDUCATIONAL STANDARDS FOR EDUCATIONAL QUALITY ACHIEVEMENT

Lestari states that the school model is effectively policy and practice embodied in the School Based Management Quality Improvement program or MPMBS (MoNE, 2002: 14). In an effective school, the principal has a strong role in coordinating, mobilizing, and harmonizing all available educational resources. Principal leadership is one of the factors that can encourage schools to realize their school vision, mission, goals and objectives through programs implemented in a planned and gradual manner. Therefore, principals are required to have strong management and leadership skills to be able to take decisions and initiatives to improve school quality. In general, tough principals have the ability to mobilize school resources, especially human resources, to achieve school goals.

To realize an effective school with a good quality of education requires a shared commitment to equally promote the institution and improve the quality of education. Commitment of all elements of the institution, especially the commitment of educators and educational staff can be built especially from a strong leadership commitment that is able to inspire and motivate and strengthen all elements and institutional resources together to move forward towards the quality of education expected. In this case the concept of relative quality proposed by Sallis should be able to inspire the leaders of educational institutions not to rely on the quality of their institutions on expensive things. Quality can be improved starting from the small and simple things, such as sincerity, persistence, persistence and teamwork (teamwork) in carrying out the task in order to achieve the expected goals. Limited facilities and infrastructure should not be used as a barrier to run a quality job, because the tool is one small part of the critical success factors. Of course in this case it takes a creative and innovative effort from all elements of the institution to be able to provide good education services so as to fulfillall the standards required for educators and educational in particular and quality standards of education in general.

6. CONCLUSION

Based on the description above can be concluded that many things mastered and noticed by a leader in order to become an effective leader to bring the institution he leads in the direction aspired in accordance with the standards required for all elements of the institution.

Effective education leaders should be able to awaken the people they lead, especially educators and educational staff that the quality of good education does not always have to be expensive. With good sincerity, tenacity and cooperation (teamwork) any goal can be achieved, especially the qualification standards of educators and educational staff can be met and achieved and maintained sustainability.

Educational leaders have a responsibility to create an organizational culture and a climate conducive to promoting growth and enhancing the development of educational institutions in accordance with the required quality standards. In this regard education leaders have three main roles: leadership, managerial, and educational fields for all elements of the institution.

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Multiplatform Visual Novel for Culture Education in a Part of Using ICT for Developing a Lifelong Learning

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ABSTRACT

Over the past decade, ICT (Information Communication Technology) have enabled changes in the way people live, work, interact and acquire knowledge. In Indonesia, the progress of using ICT for education and training has growing rapidly, it called E-learning. However, until this time, they still have limitations in a term of system, platform, and usage. E-learning system that we are using until now, one of these, they are usually only available in web-based system take a small part of supporting the whole basic education such as Science and IT only. Teaching social and culture is very important especially when the students still at elementary school. There is a good point for developing software that could teach these students about Indonesia's social and culture that can be accessed whenever and wherever they are available. Therefore we create the application in a form of visual novel that can be used in multiple platforms. Here, we will present the Visual Novel that used for moral education, there will be a story about honesty, be grateful, helping each other etc.

Keywords: ict, lifelong learning, visual novel

1. INTRODUCTION

Over the past decade, ICT (Information Communication Technology) have enabled changes in the way people live, work, interact and acquire knowledge. Successful education and training in our knowledge society depend increasingly on the confident, competent and innovative use of ICT [1].

In Indonesia, the progress of using ICT for education and training has growing rapidly, it called E-learning. By the time, E-learning has becoming progressively sophisticated, it has positive effect for many of the users, for the example, the teacher and their students to developing more efficient and flexible system for teaching and learning activities. However, until this time, they still have limitations in a term of system, platform, and usage.

There are some limitations of the E-learning system that we are using until now, one of these, they are usually only available in web-based system.

The other limitation is the E-learning only take a small part of supporting the whole basic education, for many times, it was only use for teaching and learning about IT and Science. There are many parts of a basic education taught at school that practically still take a minor part in the E-learning system, such as social and culture which required since at initial education level and they are also the part of basic and continuing education. In fact, Lifelong Learning, its definition covers the whole education area: initial education, basic continuing education and university continuing education.

Teaching social and culture is very important especially when the students still at elementary school. In Indonesia, these students already familiar with the *gadgets* such as android phone or laptop, especially in a major city like Jakarta and Surabaya. There is a good point for developing a software that could teach these students about Indonesia's social and culture that can be accessed whenever and wherever they are available, the application that worked in a multiple platform, with the graphics that could interest the students so they will not easily get bored, which teaches social and culture.

2. INFORMATION TECHNOLOGY AND LIFELONG LEARNING

The Lifelong Learning concept is preparing a new type of highly qualified personnel, adopting the technological innovations, achieving a competitive and growing economy and for molding of personality, capable to participate in the socio-economic process actively.

Education material become harder every years, and their scope also become boarder. These revealing the problem that ineffectiveness of a traditional education. We need the innovative steps utilizing today's technology. Information and computer technology has become an important stimulus for Long life learning development and improvement in the quality of education [2].

3. WHAT IS VISUAL NOVEL?

A Visual Novel is an interactive game introduced in Japan in the early 1990s, which consist predominantly of narration and have very few interactive elements, and adventure games[3].

Most visual novels have multiple storylines and more than one ending; the mechanic in these cases typically consists of intermittent multiple-choice decision points, where the player selects a direction in which to take the game. This style of gameplay is similar to story-driven interactive fiction, or the shorter and less detailed real-life gamebook books[4].

4. VISUAL NOVEL FOR EDUCATION

Here, we will present the Visual Novel that used for moral education, there will be a story about honesty, be grateful, helping each other etc. Students will be choosing one of the multiple choice available at the middle of the game, then the gameplay will determine the ending or the route of the story.

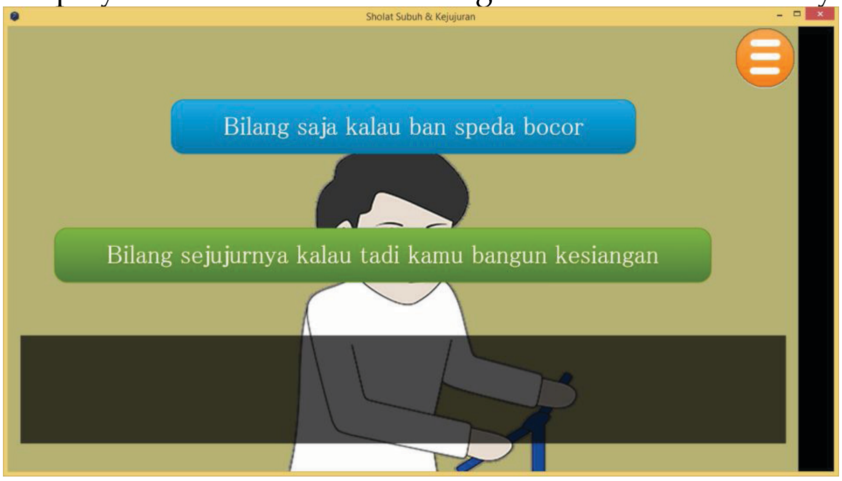

Figure 1 : Multiple choice that appear in the middle of the game

5. MAKING THE VISUAL NOVEL

The first step is the storyboard, a graphic organizer in the form of illustrations or images displayed in sequence for the purpose of pre-visualizing a motion picture, animation, motion graphic or interactive media sequence.

Figure 2 : The Storyboard

The second step, by using the TyranoBuilder, put the parts from the story board, e.g : background, character, sound effect like a puzzle until it ready to export to multiplatform application. TyranoBuilder is a complete visual interface that builds on TyranoScripts functionality, making producing multi-platform visual novels. TyranoScripts is a scripting only multi-platform visual novel engine, developed by STRIKEWORKS[5].

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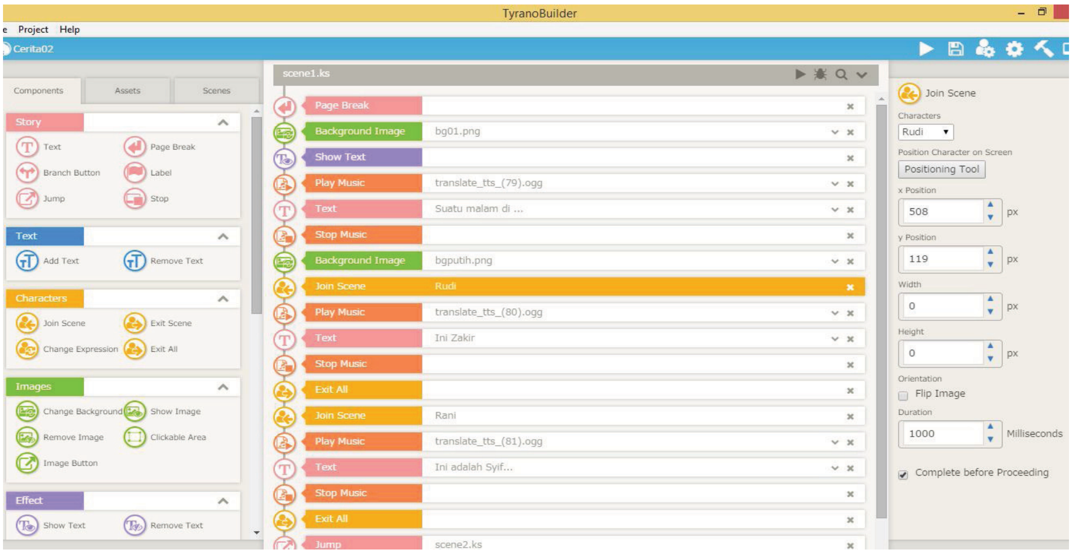

Figure 3 : The process of making a visual novel from the storyboards

The third step, exporting to all platform you need, TyranoBuilder capable exporting to a Windows, Mac, Iphone, Android and Web, and they are ready to published and used by students.

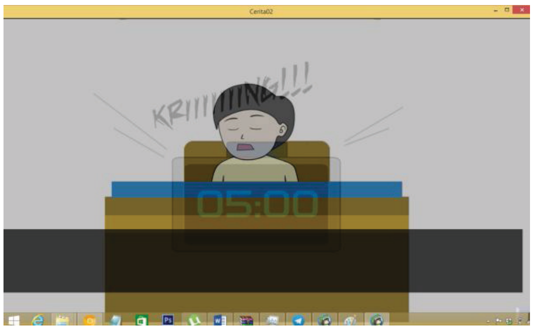

Figure 4 (left) : web-based application. Figure 5 (right) : windows-based application

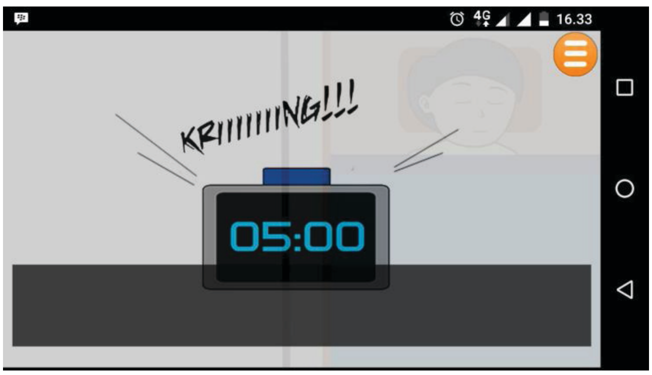

Figure 6 : mobile (android) – based application

6. CONCLUSION

The visual novel with basic moral and culture education story is one of the alternative solution for developing Lifelong Learning in ICT aspect because

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it could be published in many type of platform to overrun the limitation of the E-learning in Indonesia that many still using the web-based system and the perception that E-learning only used for IT and Science purpose only.

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About STRIKEWORKS. TyranoBuilder. *http://tyranobuilder.com/about/*

Empowerment Salt Farmers to Alleviate Poverty

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ABSTRACT

Government policy in empowering salt farmers faces its own dilemma. On the one hand the government in this case the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia to create a program directed at the empowerment of salt farmers to improve welfare and alleviate the poverty of salt farmers and families, ranging from the Salt People Empowerment Program (PUGAR) given to salt farmers groups, diversification of salt farming methods, with geomembrane technology.

But the policy is facing its own problems, when the government in this case the Ministry of Trade of the Republic of Indonesia to open import faucet quite freely to salt entrepreneurs. In addition, another policy that becomes a problem for the empowerment of salt farmers is, the purchase price of salt at the farm level is still not in accordance with the provisions set by the government. Good for first quality salt, second quality, and third quality, remain under government regulation. This makes the salt farmers' income not increase, so the desire to prosper the salt farmers becomes difficult to realize.

This research was conducted to find out what kind of policy is implemented by the government in empowering salt farmers, especially in Pinggir Papas village, Kalianget, Sumenep, Madura, East Java. To get the research describing reality, this research method is a single case study with descriptive qualitative approach. Thus, this research is done through direct observation of the object at the time of research conducted by using observations and interviews to various informants directly related to salt farmers in Pinggi Papas, Sumenep, East Java.

There is a need for a concerted step taken by the government government horizontally between departments/ ministries, and vertically, namely the government at all levels, both central, provincial, district, village, to synchronize the salt farmers empowerment program. That way, the ideals and desires to improve the welfare and eliminate the poverty of salt farmers and families, will be realized.

Keywords: public policy, empowerment, poverty, government, salt farmer, over lapping.

1. INTRODUCTION

History of salt policy has been ongoing since 1813 when Raffles[1] hold the salt monopoly in the entire area under his jurisdiction. Because of the salt workers on the coast (Banten, Karawang, Cirebon, Semarang) easily managed to deceive regulations, in the year 1870 finally the exploitation of salt is arbitrarily limited on the island of Madura alone that looks more easily supervised. The early government bought only salt from its makers at a fixed price, then opened the company in 1918 and eventually in 1936 took over all its production. The salt pond at that time was an area of approximately 6,000 hectare, located in various places of the south coast, especially the east, in the Sumenep area. 600 hectare is located on the coast of Java, around Gresik. Annual production which from time to time may vary considerably, on average estimated at 50 tones/ hectare, meaning a total of approximately 300,000 tones. *Regi* [2] employs 5,000 permanent workers and 15,000 seasonal workers. The development of salt ponds in Madura has indirectly stimulated fishing throughout East Java Province, due to possible salting and export of fish (Lombard, 1996: 98).

Since the nineteenth century, especially after 1870, Madura has an important role in economic matters primarily as a major production of salt to Dutch-controlled areas throughout the archipelago, where salt is a favorable monopoly for the Dutch Colonial Government (Ricklefs, 2008: 291) .

In the course of salt management is then nationalized. At the beginning of the nationalization of the policy of salt monopoly as a colonial legacy still run by the Indonesian government. But the government also made some necessary adjustments to monopolize. The nationalization of the salt enterprise started by placing the Indonesian employees into the salt company, realized by the letter of the Lord to the Registrar of Salt in Jakarta on March 30, 1950 (Cahyono, 2014:vxi).

Until now, salt and salt farmers have been a problem that remains unresolved. On the one hand, the price of salt at the farm level is still very low. Although the price of salt in every region in Indonesia varies, but the price is still far from the expectations of farmers, as well as those established by the government, in this case the Ministry of Commerce of the Republic of Indonesia.

In Madura, by 2016, the price of salt is relatively high compared to the price of salt in other regions, including Indramayu, West Java. For quality salt (KW) 1 costs about Rp 450,000,- per kilogram and for quality (KW) 2 cost about Rp.350,000,- per kilogram (www.mediamadura.com , October 4th, 2016).

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[1] Raffles has the full name Thomas Stanford Raffles by England given the rank of lieutenant-governor of Java, 1811-1816 *(Nasruddin Anshoriy, Bangsa Gagal Mencari Identitas Kebangsaan. LKiS, Yogyakarta, 2008, p, 66).*

[2] Regi is Regie Tjandu and Salt Bureau established the Dutch East Indies.

Even so, the price is still far from the standard set by the Ministry of Commerce (Kemdag). The benchmark price of salt at the farm level should be at least Rp.750,- per kg for quality (KP) 1, and Rp.550,- per kg for quality (KP) 2. That condition makes salt farmers in Madura halt the sale of some of their salt production. They will only release salt in the range of Rp.500,- to Rp.600.- per kg. Madura is the largest salt production center in Indonesia. (www.kemenperin.go.id).

Data from the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia, which states that national salt production in the range of 2.2 million tons. While the national salt demand in 2014, both for salt consumption and industrial salt, reached 3.9 million tons. This means there is a deficit of salt needs in Indonesia of 1.7 million tons per year (kompas.com, Thursday, September 29, 2016).

To overcome the deficit / lack of salt, the steps taken by the government of the Republic of Indonesia, by importing salt from several countries and the second increase the amount of salt production in the country with efforts to carry out the salt farmers empowerment program through the community salt empowerment program or PUGAR.

Madura Island is the largest salt producer in the archipelago. Salt production in Madura is scattered in several areas of Madura, one of them is in Sumenep which is the largest salt producing region in Madura. There are six sub-districts of the largest salt producers in Sumenep area, Kalianget district which has the largest salt area owned by PT Garam, Gapura subdistrict, Pragaan subdistrict, Saronggi subdistrict, Gili Genting subdistrict and Dungkek subdistrict.

Salt is a superior commodity, in addition to tobacco for the people of Madura, it is not wrong if Madura is known as a salt island. Salt production is a vital source of livelihood for some people, especially those living in coastal areas of Sumenep regency.

Sumenep regency is one of salt production center in Madura which has high salt agriculture potential. This can be seen from the salt productivity in some existing districts, approximately 80 to 120 tons per hectare per year. From 27 existing subdistricts, salt farming is spread in 11 subdistricts, namely Gapura subdistrict, Kalianget subdistrict, Giligenting subdistrict and Pragaan subdistrict, Saronggi subdistrict and Raas subdistrict, Talango subdistrict, Sapeken subdistrict, Arjasa subdistrict, Sumenep subdistrict and Dungkek subdistrict (BPS, 2013).

Sumenep Regency is one of the largest salt farming centers in Madura after Sampang district. Salon area in all areas of Sumenep regency around 2012.52 ha. While the number of farmers involved become salt farmers is estimated as 3219 people. Sumenep itself has a sea area of 50,000 km2 and a tropical climate with an average annual rainfall of 1200 mm/ year and an annual average temperature of 30^{o}C (www.ugm.ac.id).

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Until the end of September 2016, the production of salt in the eastern regency of Madura Island is only 16,686.4 tons. In fact, in 2015 total salt production in Sumenep regency of about 227 thousand tons. This amounts to 8.7 percent of the total national salt production of 2.7 million tons. This amount also decreased from the amount of salt production in the planting season in 2014 as much as 292 thousand tons, with salt land area of the people in the eastern region of Madura salt is about 2,060 hectares spread in 11 districts (koranmadura.com, October 12, 2016).

Given the vastness of the salt problem spread throughout the country, this research is focused on the form of empowerment of salt farmers in Pinggir Papas Village, Sumenep Regency, East Java Province, as the main buffer area in Sumenep regency, covering 690 hectares of salt land .

The topic of the empowerment of salt farmers is interesting to put forward for various reasons and considerations, one of which is the economic formula mentions that if the demand is high then the price will be more expensive, if the commodity is expensive the merchant income increases. But what happens to the industry and salt farmers does not apply. When salt is scarce and stock shortages, the price actually plummets. Given this issue, salt management policies and salt farmers appear paradoxical, between the activities of empowering salt farmers with price fixing and the imposition of imported salt from abroad that keeps the domestic salt commodity prices constantly plummeted which causes the lives of salt farmers never to be prosperous.

2. METHODS

This study uses case study method, because this research aims to observe the real events that occurred on the empowerment of salt farmers in the village Pinggi Papar, district of Kalianget, Sumenep regency, East Java. Observed in this study is related to data and facts found in the empowerment of salt farmers in Sumenep regency, East Java, among the efforts made by the government with the real conditions that occur and experienced by salt farmers. Thus, this study provides a relatively complete picture of what happened at the time of the study.

Meanwhile, the research design *(research design)* were selected in this study is a single-case study with descriptive qualitative approach. Thus, this research is done through direct observation of the object at the time of research conducted by using observation and interviews to the salt farmers in the village of Pinggir Papas, Sumenep regency, East Java.

The focus of this research is on the implementation of government policy towards the empowerment of salt farmers in Pinggir Papas village, Sumenep Regency, East Java, especially in the form of empowerment of salt farmers, the role of the program in improving the welfare of salt farmers and family, formulation, process, and policy implementation, inhibiting factors and potential that could be a driver of salt farming empowerment in Sumenep regency, East Java Province.

Data collection is done by observation conducted directly by researchers, to see the activity and life of salt farmers. In addition to observation, researchers also conducted direct interviews with key informants consisting of senior salt farmers, salt farmers group leader. In addition to key informants, interviews were also conducted with the government, both the government of Pinggir Papas village, the maritime and fishery agencies, and the industry and trade offices of Sumenep regency, East Java.

The data collected in the field is re-checked, verifying other informants who are also directly related to salt farmers, both salt farmers in general, and the head of the salt farmers group. The data obtained is then compiled using data processing techniques, reducing data, presenting the data already obtained, and drawing conclusions.

3. RESULT AND DISCUSSION

Program of empowerment of salt farmers conducted by the government in this case the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia is the *pemberdayaan usaha garam rakyat* or abbreviated PUGAR. PUGAR program is made by the issuance of Minister of Marine Affairs and Fisheries Regulation No. 41 of 2011 on Guidelines for Implementation of National Program for Empowerment of Mandiri Marine and Fisheries Community. The candy is then enhanced by the issuance of Minister of Maritime Affairs and Fisheries Regulation No. PER.07/MEN/2012 on Technical Guidelines for Salt Business People Empowerment (PUGAR) 2012.

The government-run PUGAR program, given in the form of direct community assistance (*Bantuan Langsung Masyarakat*/ BLM) received by all groups of salt farmers incorporated in the Salt Business People's Group (*Kelompok Usaha Garam Rakyat*/ KUGAR). The remainder is used as a budget for technical support activities of PUGAR programs such as socialization activities, coaching workshops to salt farmers, review (evaluation) of PUGAR implementation, management consultant fees, and administration of activities.

PUGAR program through several stages process, starting from stage of formulation of PUGAR aid fund including distribution and allocation of aid fund per group, formation of group of salt farmer (KUGAR), verification of proposal of salt farmer, survey of land whether land owned by salt farmer or if rent Proof of lease of land owned by PT. SALT by the salt farmers.

In the next stage is the distribution of PUGAR salt farmers who are represented by the group leader, PUGAR technical team and PUGAR assistant team of the Marine and Fisheries Office of Sumenep Regency and assisted by village officials such as village and subdistrict heads who get direct guidance and socialization from PUGAR technical team and team a PUGAR companion formed by the Office of Marine and Fisheries of Sumenep Regency. At this

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stage PUGAR technical team and PUGAR assistant team of Marine and Fisheries Office of Sumenep Regency collected group leader to explain the desire and details of the salt farmers in utilizing the grant and the proposed joint business plan (RUB) needs of salt farmers to propose the nominal amount of relief funds PUGAR.

The next stage is the disbursement of aid to salt farmers. The fund of the Salt People's Business Empowerment Program (PUGAR) comes from the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia which is disbursed by the Department of Marine and Fisheries of Sumenep Regency. The disbursement of funds is done in stages covering the first stage of 50 percent, second stage 40 percent, stage 3 by 10 percent. The amount of aid received is also diverse. For Salt Business Group (KUGAR) long maximum assistance received Rp. 12,500,000,- while for the new KUGAR maximum Rp. 40,000,000. PUGAR Fund in 2013 is smaller than the previous year, because in 2012 there are two categories of recipients. First about 17 new groups with assistance of Rp 40 million per group. Both categories of old groups as many as 153 groups with group aid value Rp 12.5 million. While in 2013 all the same groups whose value of aid is equal to Rp 12.4 million.

Interestingly, there is no significant change from the salt farmer's empowerment program, so there is no improvement in improving the welfare of salt farmers and poverty alleviation of salt farmers. As a result, the salt farmers empowerment program initiated by the government can not improve the welfare of salt farmers and families. Instead of improving welfare, many salt farmers are turning professions. They choose other jobs, apart from being salt farmers, the reason is salt farming can not improve their welfare. Similarly, many children from salt farm families who choose not to be salt farmers, but wander outside the area. Finally, in plain view a lot of salt fields are left neglected unkempt.

Data from Pinggir Papas village, Sumenep, East Java shows that there is a significant decrease of salt farmers with other people. In 2013, from the total population of 4799 people who farmed salt is still half salt farmed, both men and women. Three years later, precisely in 2016, the number of salt farmers only reached 617 people, who worked on 696 hectares of salt in the village of Pinggir Papas, district of Kalianget, Sumenep regency, East Java.

On average each farmer works on less than one hectare of salt land, with a harvest of approximately 60 tons per year. While the price of salt at the salt farmer level is in the range of 300 to 450 rupiah per kilogram. Revenue earned by salt farmers from salt sales every year an average of Rp 25 million. The amount is reduced production costs, operations and others, to reach half. So the net income of salt farmers every year is not more than Rp. 12 million, or equal to Rp. 1 million per month.

The amount will be reduced if the salt farmer is not the direct owner of the cultivated land, but by leasing another people's salt or land owned by PT

Garam, at a rental price of Rp. 5 million per year. Means income of Rp. 12 million reduced the rent of land to only Rp. 7 million.

Revenue of Rp. 7 million per year or equal to Rp. 584 thousand per month still can not be called as a prosperous life if it refers to the concept of existing prosperity. According to Law No. 11 Year 2009, on the Welfare of the Community, the welfare of society is the condition of the fulfillment of the material, spiritual, and social needs of the citizens in order to live properly and able to develop themselves, so as to carry out their social functions.

While the Central Bureau of Statistics (*Badan Pusat* Statistik/ BPS) formulated poverty as the inability of a person or household from the economic side to meet the basic needs of food and not food as measured by the expenditure side. Per capita expenditure per month is used as a variable to be compared with the poverty line value (*Garis Kemiskinan*/ GK) to determine whether a person is categorized as poor or not poor. A person who has an average monthly per capita expenditure under the GK, is categorized as poor (Ravallion, 1998: 133).

The World Bank uses two poverty line sizes, ie revenues of US $ 1 and US $ 2 per capita per day (LPPM IPB, 2009:10). If calculated in the form of rupiah, the income per day equals approximately Rp. 25 thousand, or equal to Rp. 750 thousand per month. In other words, the average income of Rp 584 thousand per month can be categorized as below the poverty line.

The ineffectiveness of government policies in empowering salt farmers is further exacerbated by the presence of other government policies, namely the importation of salt. The government has set the policy of importing salt, as contained in the Regulation of the Minister of Trade No. 58 of 2012 and then revised to *Permendag* 125 of 2015 on the provisions on the Import of Salt.

The government's policy to import salt is controversial. Government policy to import salt, in contrast to its potential. Salt as an agricultural commodity that can improve welfare must be managed through a synergistic policy both in terms of empowerment of farmers. However, imported salt even makes the price of salt come down, especially when imported salt has entered the country.

4. CONCLUSION AND PROPOSITION

4.1. Conclusion

From the previous description and discussion, it can be concluded that (i) there are empowerment program undertaken by the government to the salt farmers in the village of Pinggir Papas, Sumenep, East Java Province, both local government programs, in this case the Department of Marine and Fisheries Sumenep and East Java Province and the central government in this case the Ministry of Marine And Fisheries of the Republic of Indonesia. (ii) Empowerment programs undertaken by the government have not been able to improve the welfare of salt farmers and families. (iii) The process of policy-making made by the government, in terms of formulation, process, and policy implementation for salt farmers in Sumenep regency, East Java Province is still not in accordance with the wishes of the salt farmers. (iv) There are many factors that hamper the empowerment of salt farmers in Sumenep regency, East Java Province. Including the policy of salt importation and price fixing that still can not be realized at the farm level.

4.2. Proposition

(i) There is a serious need to empower farmers in salt, in the sense that not only given money, but it is also important to improve the skills and the ability to produce a salt that is more modern and has more results. This can be done with continuous and sustained government assistance. (ii) The existence of policies that favor salt farmers, so that what is done by the farmers will be able to improve the welfare. Not only to make a benchmark purchase price, but also guarding the policy until it is actually done in the field. (iii) It is better for the government to create an entity that can absorb the entire salt of the people, so that people's salt does not plummet at harvest time, and is bought according to government regulations. The good price of salt will again make passionate salt farmers to farm salt, and will further increase salt self-sufficiency.

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Good Governance: From Different Perspectives

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ABSTRACT

Good governance is gradually being seen as panacea for developing countries and considered as a holistic approach for development in the development debate. The concept of good governance has been promoted, especially by the international development community i.e., World Bank, International Monetary Fund, and United Nations Development Programme. The concept of 'good governance' has some of the following effective dimension, which are among all, namely : public accountability and transparency, the role of law, anti-corruption measures, civil society participation in development, and overall respect to human right. Therefore, in the implementation, a good governance concept should involves the active cooperation of three elements, which are : government, civil society, and business sector.

Keywords: bureaucratic reform, civil society, good governance

1. INTRODUCTION

Good governance is an important issue over the last two decades. Good governance has become the new paradigm replacing the old one in public administration developed by Max Weber. Such conventional model of public administration of "all about government " had been left and replaced by the new one that involves the cooperation of three elements, that is : government, civil society and business sector.

2. WHAT IS "GOOD GOVERNANCE"?

Good governance, according to World Bank's definition, entails sound public sector management (e.g. efficiency, effectiveness and economization), accountability, exchange and free flow of information (e.g. transparency), and a legal framework for development (e.g. justice, respect for human rights and liberty), (World Bank, 1993). A more succinct definition of good governance is offered by Hirst (2000) who propounds that it "means creating an effective political framework conductive to private economic action : stable regimes, the rule of law and efficient state administration adapted to the roles that government can actually perform and a strong civil society independent of the state".

In this regards good governance agenda places special emphasis on anti-corruption measures. In Malaysia, for example, some of the corruption practices involved the civil servants. In 1998 for example, among 300 cases reported by the Anti-Corruption Agency (ACA) 186 cases, or 64 percent, involved civil servants [1]). However, Malaysia is considered " better of " than other Asian countries if bribing is the indicator of the corrupt practices among bureaucrat personnel. The exclusive focus on corruption in public offices and institutions might fails to chronicle the large scale corruption practices carried out by private individuals and corporations. The involvement of western banks and transnational corporations in many corrupt deals in the poor and developing world is well documented. The extent of corrupt practice involving transnational corporation is so huge that during period of 1994-2001, the US government received reports of 400 International contracts worth US.$200 billion that involved bribery (Kavaljit Singh, 2005).

At the different side, it seems that transnational corporations have take over the roles of government in allocating and distributing primary goods and services. In collaboration with state officials , the 1998 Southeast Asian crisis witnessed the roles of entrepreneurs who look advantage of the currency depreciation and state subsidy for local currency stabilization by exchanging government funded monetary adjustment loans into foreign currencies and whisking them abroad for private gains.

Decentralization and local self-government constitute another important component of current governance agenda where reforms have been introduced in order to reduce poverty and achieve higher economic growth. Another dimension of good governance pertains to fostering popular participation. Hence, many goals are sets to make government close to public. In other popular words it is called "public-private partnership". However the society as well as the international donor agencies also has different views on good governance. The study in four ASEAN countries [2]) suggested that society as well as international donor agencies, which can be represented the private sectors, may have different views on "good governance" than from the government side. The summary of different perceptions on the good governance's target is summarized in Table 1.

Table 1. The importance of "good governance" practices as seen from different views

Government/Formal Institution Perceptions	Community/Civil Society Hopes	International Organization/Financial Institution Demands
1. Combating Corruption 2. Transparency	1. Better quality of life 2. Equitable distribution of wealth, income and natural resources	1. Downsizing bureaucracy 2. Privatization of the state-owned companies **(SOE)**

[1] **New Strait Times**, 4 June 1999; daily newspaper in Malaysia

*)This paper based on a secondary data analysis research project funded by API – The Nippon Foundation (TNF) which is mainly depend on published materials and deep interviewed with key persons, mostly from the government, in the respected countries studied.

[2] Prijono Tjiptoherijanto and Astrid Meilasari-Sugiana, *Bureaucratic Reforms in Four ASEAN Countries* (Jakarta: Kosa Kata Kita and Universitas Bakrie) Jakarta: 2011.

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3. Accountability	3. Full employment	3. Deregulations
4. Participation in decision making process	4. Better access to housing, health and education	4. Decentralization and encouraging local self-governance
5. Rule of Law	5. Restraining privileges of elite in politics as well as in wealth	5. Respecting human and property rights

Source: Author's own perception based on the research's findings from selected ASEAN's Countries in the period of 2007 – 2008.

The explanation within the Table 1 does not suggest differences among three actors in the implementation of the "good governance" agenda. It shows in the degree of importance of the so many goals and objectives underlying the practice of good governance, which is sometimes considered as the "second generation reforms" to facilitate the development of market economy [3]). The reform can facilitate or hinder the creation of new space for government, civil society and donor agencies in implementing the good governance agenda.

Table above also shows the priorities taken by the actors in "good governance" practices. The government and private sectors put more emphasis on the bureaucratic matters. The corruption practices mostly done in the public sector or civil service due to the low salaries for the public servants, therefore governments in these four ASEAN countries had put "combating corruption" as the highest priority to build a "good governance" in their government practice.

While the private sectors, represented by International Organization/Financial Institutions more concern on downsizing bureaucracy; since in their mind bottle neck to have a |good governance" in a country depends on the quality of civil servants. The community or ordinary citizens as well a civil society having more realistic hopes for a "good government" practices. They are more concerned on their daily life and more important on their right as a citizens of a country. Therefore they put a "better quality of life" as the first priority in relation to the practice of a "good governance" in a country or a government practices.

[3)] The " Second Generation Reforms " refers to re-designing the state and institutions, while the " First Generation Reforms " mostly concerns with economic reforms to cope with globalization process. All of these reforms are in accordance with the " Washington Consensus ". The term "Washington Consensus" was first coined by the US economist, John Williamson to refer to policy package pushed by the powerful Washington-based institution, namely, the World Bank, the US Treasury and neoliberal think-tanks. Initially aimed at Latin American countries in the 1980's, "Washington Consensus" was subsequently extended to the rest of the developing world. The important components of the Washington Consensus were fiscal discipline, trade liberalization, tax reforms, liberalization of foreign investment regime, privatization, deregulation, financial liberalization, and capital account liberalization, market based exchange rates, labor reform and protection of property rights.

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3. BUREAUCRATIC REFORM IN A "GOOD GOVERNANCE"

As for the administrative reform or "governance reform" previously noted, administrative reform was directed towards the "trust deficit". The "trust deficit" can be reduced only by creating a government that is efficient and also just. In the United States, this paradigm has stimulated rethinking about what government is and how it should function. Among the products were two theories of government administration which surfaced under two great presidents. One is the "minimal state" role, a form administrative strategy used by the Reagan Administration, whereas the other involved "reinventing government" during the Clinton Administration.

The minimal state theory is smilar to school of thought that have roots in the work of Frederick A. Hayek and Milton Friedman and draw intellectual sustenance from the work of William A. Niskanen, Gordon Tullock, Nobel Laureate James M. Buchanan, and other members from the school of public choice[4)]. During the Reagan's Administration, minimalism was implemented through various means that sought diminished expectations of government; budgetary restraints and centralized decision making; a leaner and more responsive political establishment; and a focus on a few objectives of overriding natural importance (Carrol. et.al 1985, p.807).

Reinventing government, on the other hand, takes the inspiration from the experience of practitioners such as David Osborne, a journalist, and a former city manager[5)], Ted Gaebler (1992). Ideas posted by Osborne and Gaebler had the enthusiastic endorsement of President Clinton when in 1993 has requested Vice President Al Gore Jr to review the performance of the federal government of the United States of America. The purpose of the review, as the title of the report that was submitted in the same year indicates, was to create a government that is result oriented, works better and cost less (Gore, 1993). The report notes that only 20 percent of the American people trust the federal government to act rightly most of the time. To reduce this "trust deficit" then becomes an important objective of the administration at that time.

In spite of the strategic differences among the two reform movements, there is a common theme : the urge to de-bureaucratize government administration. Several innovative public programs that have broken free of the constraint of bureaucratic procedures were introduced. In order to understand the de-bureaucratizing agenda in these two reform movements, comparison of them with regards to four dimensions of public administration namely : purpose; personnel, organization, and management procedures, is summarized

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[4)] William A. Niskanen,"Bureaucracy and Representative Government", Chicago: Aldine Atherton, 1971: Gordon Tullock, "The Politics of Bureaucracy" Washington: Public Affairs Press, 1965; and James M. Buchanan and Gordon Tullock,"The Calculus of Consent : Logical Foundation of Constitutional Democracy" The University of Michigan Press, 1962.

[5)] David Osborner and Ted Gaebler,"Reinventing Government : How the Entrepreneurial Spirit is Transforming the Public Sector" Addison-Wesley, 1992.

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in Table 2 below. These dimensions address the question of why, who, what, and how public administration ought to be conducted[6)]

Table 2. Characteristic of the Bureaucratic Paradigm in Two Reform Approaches

Characteristic	Bureaucratic Paradigm	Minimal State (Reagan Administration)	Reinventing Government (Clinton Administration)
Purpose of Government	Execution of the will of the state	Provision of public goods and services	Meet citizen expectations
Nature of public servants	Neutrally competent	Rational, self-interested, budget maximizes setting	Entrepreneurs
Management approach	Close supervision; Standard Operating Procedures **(SOP)**	Cost-minimizing; Consumer-oriented management	Facilitative management; total quality management **(TQM)**

Source : Compiled and modified from many resources by the author.

This summary is accomplished, of course, at the risk of over simplifications. Nevertheless, it provides a sense of the potential for and content of debureaucratization agenda. The debureaucratization movement as an administrative reform is more than political act. It is an act of cultural change, reflecting and challenging basic social values. As James Q. Wilson (1989), has commented. "The way in which a bureaucracy operates cannot be explained simple by knowing its tasks and the economic and political incentives that it confronts. Culture makes a difference"[7)]

4. CULTURAL INFLUENCES

Culture is the reflection of the economy and politics. The dominant and newly emerging forces in the economy and politics also embedded in culture. However, culture is neither simply the ideological reflection of current forces nor the contradistinctions in the economy and politics. It is also the accumulation of notions, customs, habits in current circumstances as long as there are transmitters and they are part of the social and psychological make-up of people within local sites.

The bureaucracy has a structure that breeds its own administrative culture. Incoming political leadership often reacts to the bureaucracy. Its inherits by instituting personnel purges or reorganizing or both, either to cleanse the old system and reorient it to the needs of the new dispensation, or to

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[6)] This a modification of the approach used by Hood and Jackson in their study of administrative doctrines. See: Christopher Hood and Michael Jackson," Administrative Argument" Brookfield, vi :Dartmouth, 1991, p.17 & 179.

[7)] James Q. Wilson, "Bureaucracy : What Government Agencies Do and Why They Do" Basic Book, 1989, pp.203.

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reshape the administrative culture and values in facilitating targeted policy and program objectives. Consequently, a new political order carries its own political culture to the regime-bureaucracy relation. As the bureaucracy accommodates and eventually trusts the new regime, an administrative culture supportive of the political leadership ensues.

The biggest hurdle to administrative reforms, however, appears to be the role of politicians in controlling the bureaucracy. Political leaders in a party-run polity are unlikely to appreciate the importance of political neutral civil service. They also may not be adequately restrained from pursuing extraneous goals in and through the bureaucracy. Indulgence by dominant-party politicians has also resulted in wide spread political interference in administrative decision and the politicization of bureaucracy decision making.[8)]

Another factor which contributed to the success of the administrative reform is the role of leaders. The implementation of change in public services require highly persistent and visionary leaders. Therefore, there has to be quality leadership that will provide guidance and inspiration for the whole community, especially in the bureaucracy as the government's machine. Leadership is thus a necessary but insufficient condition for institutionalizing public sector reforms. Leadership is the key element in reforming the office and, in a larger sense, in achieving and engaging and performance driven civil service within a challenging and globalizing world.[9)]

Good governance occurs not only when politicians are honest and accountable, but also when civil servants are efficient and productive. The quality of governance is largely dependent on the quality of people who run it. A government maintained by responsible and highly competent individuals who are motivated by a strong desire and improve the lives of others, can assure a government that truly works for the people. Most illness in government are said to be substantiated by the lack of this basic quality in service. Sadly, the reputation of public officials speaks for itself in almost all of the developing countries.

[8)] This kind of politicization in bureaucracy was branded as "bureaucracy polity" in Thailand (**See**: Fred Riggs, "Thailand : The Modernization of a bureaucracy polity", Honolulu, East West Press, 1996). And "Dominated Bureaucracy" in the Philippines (**See**: Ledivina V. Carino, "A Dominated Bureaucracy": An Analysis of the Formulation of and Reaction to State Policies in the Philippine Civil Services" Occasional Paper No. 89-4, National College of Public Administration, University of Philippines, 1989),

[9)] The Malaysian Prime Minister's Dr. Mahathir Mohammad had a vision 2020 and establishing a "Malaysian Incorporated", while Prime Minister Thaksin Shiniwatra of Thailand introduced the "CEO Manager" style for Thai Civil Service. Since the birth of the Philippine Republic in 1946, civil service reform has been undertaken during the administration of President Roxas, President Quirino, President Magsaysay, President Marcos and President Aquino. In Indonesia the late President Soeharto had reformed the civil service system in 1974. Since then no major changes in public service system occurred in Indonesia.

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5. FINAL REMARKS

Corruption and other bureaucratic practices lead to the conclusion that the problem lies in the weakness in building government mechanisms and institutions. This notion is promoted by the World Bank, which in 1989 explicitly identified as "a crisis of governance" behind the "litany of Africa's development problem[10]. Since then, the policies and interventions to promote "good governance" have become a central preoccupation in the international donor community. The concept of "good governance", therefore, has some if not all the following effective dimensions, namely: public accountability and transparency, the rule of law, anti-corruption measures, decentralization and local government reform, democratic performance, judicial reform, social safety nets, a regulatory but lean state apparatus for efficient private markets, civil society participation in development, and overall respect for human rights.

In practice, however, international donors have focused on governance largely through a much more restricted lens of "good governance". This restricted lens is the technical and non-corrupt management of government resources through effective implementation of macroeconomic and anti-poverty sector polices sought by the donors[11]. This nature of "good governance" often undermines local traditions and blind to contradictory interests of the elites and donors. Donors mostly take an "Alice in Wonderland" approach to governance, therefore the term means whatever a donor wants it to mean[12].

In the final analysis, therefore, the heart of the "good governance" debate lies in the issue of responsibility and leadership. The responsibility for creating the problems, the responsibility for solving them and the capacity and willingness of the leaders to fix the problems. Looking back in 1997 at the record of post-independence Africa, the Uganda political scientist Yash Tandon (1996, p.28) asked:"Who has made such mess of Africa?" The people said ; "Leaders who are self serving and power hungry". 'Lazy people, "say the leaders," People who just wait for the government to give them jobs and to feed them"."Bad governments," say the World Bank (WB) and transnational (TNCs),"Government that have not followed correct fiscal, monetary, pricing and trade policies, and government that are not accountable to their population".

[10] **See** : World Bank (1989),"Sub-Sahara Africa From Crisis to Sustainable Growth", Oxford: Oxford University Press, U-K, 1989, p.60.

[11] Paper prepared for the Realign of Aid International Advisor Council by Kavaljit Singh (2003) from Republic Interest Research Group (India) : "Aid and Good Governance : Discussion Paper for Reality of Aid", January 2003, access available at : \\www.realityoraid.org

[12] Lewis Caroll's children novel : "Alice in the Wonderful" has the following exchange :"When I use a world" Humpty Dumpty said in rather a scornful tone : It means just what I choose it to mean. Neither more or less," The question is ,"said Alice," Whether you can make words mean different thing". "The questions. "said Humpty Dumpty. "which is to be master…That's all".

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"The markets," says the left intellectuals (African and non-African),"The invisible forces of which work in favor of those who own capital and who exercise state power". "Out of these four possible explanations, "Tandon continues, "In the battlefield of competing ideas, the playing fields are not in the same level"[13].

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[13] **See**: Yash Tandon (1996) "Reclaiming Africa's Agenda" in Yash Tandon (ed), "African Conception of Democracy and Good Governance. International South Group Network: Harare, Uganda. 1996.p.28.

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Indonesia's Ability in Implementing Green HRM to Achieve SDG's Goals (Especially in Goal No.12)

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ABSTRACT

Strategic sustainability is associated with significant business benefits as well as positive environmental impacts, yet many organizations fail to recognize the potential of this approach, and neglect the factors necessary for its successful implementation. The topic of environmental sustainability is very attracting and considered to increased attention among management scholars and company management. Despite its importance to government, managers, employees, customers and other stakeholders, however, there are few research studies that consider the role of human resource management systems in organizations striving to achieve environmental sustainability. There is a growing need for the integration of environmental management into green human resource management (HRM). Green Human Research is the use of HRM policies to promote the sustainable use of resources within business organizations and, more generally, promotes the cause of environmental sustainability. Green initiatives within HRM form part of wider programs of corporate social responsibility (CSR). The objective of this paper is to detail about the function of green HR to achieve SDG Target (Poin 12) based of available literature on green HR. The literature has been classified on the basis of entry-to-exit processes in HRM, revealing the role that HR processes play in translating green HR policy into practice. The paper also examines about Indonesia SDG target, connection between Green HRM and SDG Target and Indonesia's efforts to achieve target SDG by 2030

Keywords: green HRM, green management, SDG's Target

1. INTRODUCTION

The concept of sustainable development has been highlighted as a major focus in the corporate world today. It enables individuals and companies to meet their current needs without hampering the environment for the future generations to fulfill their needs. Hence companies have now developed a greater sense of responsibility with a greater focus on environmental sustainability, which not only increases the image of the company and the confidence of the investors, but has also become a business imperative. Amongst all the functional departments operating in the organization, the HR function has become one of the important drivers of environmental sustainability. HR managers now have a major role to play in designing efficient strategies which align with the company's values and culture, investors‟ expectations, meeting government rules and regulations, and most importantly, initiate environmental friendly practices and awareness among employees.

The overlapping of sustainable development, environmental concern and HRM practices is on the social radar and being recognized as a new area for the development of society. It is also developing at a fast pace. With the growing need for corporates to adapt to environment-friendly behaviour, the 'HR function' (HRM function) becomes the potential contributor in bringing about the requisite organizational change. Therefore, this emerging area is pivoted on HRM. Moreover, for organizations to embrace sustainability, it is not just about the technical and scientific factors but as much about the human element too. The human resource plays a key role in the success or failure of an organization's efforts towards going green. It is the 'HR function' (HRM function) that enables to align the policies of the organization to the green goals and drives green practices to be ingrained in the organization's culture. Although there have been many definitions of Green HRM, as stated in subsequent paragraphs, however, the precise definition of 'Green HRM' for the purpose of this paper, may be taken as given by Prasad.(2013), i.e. "the contribution of HRM policies and practices towards the broader corporate environmental agenda of protection and preservation of natural resources".

Moreover, for organizations to embrace sustainability, it is not just about the technical and scientific factors but as much about the human element too. The human resource plays a key role in the success or failure of an organization's efforts towards going green. It is the 'HR function' (HRM function) that enables to align the policies of the organization to the green goals and drives green practices to be ingrained in the organization's culture.

2.LITERATURE REVIEW

According to Renwick et al, (2008), the integration of corporate environmental management into human resource management is termed as green HRM. They also stated that human resources aspects of environmental management are green HRM. These scholars broadly specified that distinguished policies in the field of recruitment, performance management and appraisal, training and development, employment relations and pay and reward are considered as powerful tools for aligning employees with an organization's environmental strategy. According to Jabbour et al, (2010), the "greening‟ of functional dimensions of human resource management such as job description and analysis, recruitment, selection, training, performance appraisal and rewards is defined as green HRM. In 2011, Jabbour again defined green HRM as „the level of greening of human resource management practices‟

in terms of functional and competitive dimensions of HRM. Green HRM is referred to "all the activities involved in development, implementation and on-going maintenance of a system that aims at making employees of an organization green. It is the side of HRM that is concerned with transforming normal employees into green employees so as to achieve environmental goals of the organization and finally to make a significant contribution to environmental sustainability. It refers to the policies, practices and systems that make employees of the organization green for the benefit of the individual, society, natural environment, and the business" (Opatha, 2013; Opatha and Anton Arulrajah, 2014). As far as the above definitions are concerned, the very latest definition provides a comprehensive meaning and understanding about what green HRM is in the context of organizational setting.

2.1 The Meaning of Green HRM

Green HRM is referred to all the activities involved in development, implementation and on-going maintenance of a system that aims at making employees of an organization green. It is the side of HRM that is concerned with transforming normal employees into green employees so as to achieve environmental goals of the organization and finally to make a significant contribution to environmental sustainability. The purpose of green HRM is to create, enhance and retain greening within each employee of the organization so that he or she gives a maximum individual contribution on each of the four roles, i.e., preservationist, conservationist, non-polluter, and maker (Opatha and Anton Arulrajah, 2014).

2.2 Importance of Green HRM

Understanding about why green is (mentioned above) indicates the importance of green HRM. If reiterated in another form, greening is essential for the following (Opatha and Anton Arulrajah, 2014): 1) To avoid or minimize global warming, 2) To avoid or minimize natural disasters such as acid rains, red rains, tsunamis, flooding, hurricanes, droughts etc owing to informal, harmful and greedy usage of natural resources for production and consumption. 3)To avoid or minimize health diseases owing to pollution, 4)To avoid or minimize harms to animals and other natural creatures, 5)To ensure appropriate balance of relationships among plants, animals, people, and their environment and 6)To ensure survival of humans and business organizations for a prolonged period of time.

2.3 Requirements required for Green HRM

In order to achieve organizational environmental goals, GHRM requirements need to be identified. There are four categories of green human resource requirements, i.e. green competencies, green attitude, green behaviours and green results. Though these major types of green human requirements are related they can be distinctly treated. Figure 1 shows these requirements and relevant dimensions.

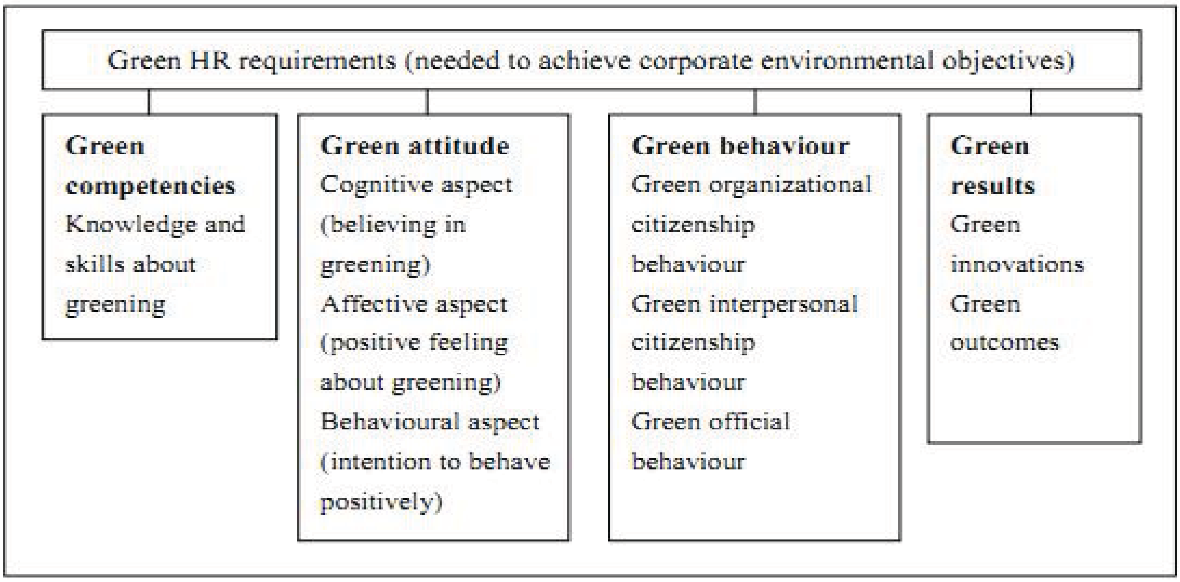

Figure 1. Green HR Requirement (Opatha and Anton Arulrajah, 2014).

Employee is required to possess a sufficient amount of knowledge and skills in respect of greening and without this knowledge and skills (competencies) it is not possible for the employee to become a green employee (Callenbach et al., 1993; Gupta & Sharma, 1996; Madsen & Ulhoi, 1996; Daily & Huang, 2001; Ramus, 2002; Rothenberg, 2003; Bhattacharya & Sen, 2004; Busck, 2005; Collier & Esteban, 2007; Garavan et al., 2010; Sudin, 2011). An active role of human resource management requires in developing cleaner technologies. Based on the environmental strategy of an organisation, HRM has to provide the competencies needed for the continuous improvement of the organisational environmental performance (Jabbour & Santos, 2008). Indeed there is a research gap with regard to specific green competencies to be possessed by the employee necessitating empirical research studies to be carried out in this regard. Also the employee needs to have a right attitude of greening. Right attitude (favorable) means appropriate beliefs (cognitive), feelings (affective) and intention to behave (behavioural) with regard to greening, and it should be identical to the one given. It does not matter whatever the job or the field of specialization of the employee is. What matters is that he or she should have a right attitude (favorable) about greening (Stern & Dietz, 1994; Barrett & Murphy, 1996; Cordano & Frieze, 2000; Dunlap et al., 2000; Bamberg, 2003; Naffziger & Montagno, 2003; Peterson, 2004; Schultz et al., 2004; Perron et al., 2006; Tallon, 2008; Bamberg & Moser, 2007; Park, 2009; Garavan et al., 2010; Milfont & Duckitt, 2010).

As environmental sustainability requires behavior change by employees (Harries & Helen, 2012) and all members of an organisation at all levels are required to exhibit a positive behavioral change. A critical green human resource requirement is green behaviour (Daily et al., 2009; Jackson et al., 2011; Bissing-Olson et al., 2013) one dimension of which is green organizational citizenship behaviour that is defined as the extent to which the employee engages in positive actions aimed at helping the organization as a whole to achieve greening. These actions do not become a part of formal job requirements. They primarily represent voluntary green actions. Examples of green actions: (i) use natural water rather than refrigerated water for drinking (this will reduce electricity consumption). (ii) Use both sides of the paper when writing or printing or photo-copying (this will reduce electricity and save trees). (iii) Come to work by walking or bus/train (this will reduce fuel consumption and air pollution) whenever possible. (Public Transport). (iv) Shut down computer or electronic devices when not working instead of hibernating it (this will reduce electricity and air pollution). (v) Use natural light when working (this will reduce electricity). (vi) Put plants in the working cubicles to absorb pollution. (vii) Bring his or her own mugs and dishes. (viii) Buy organic food for parties. (ix) Work with a minimum number of bulbs which are on. (x) Re-use many items at the office such as jugs, cans, bottles, bags, etc rather than throwing them away. (xi) Report to a relevant officer regarding damages, possible harms etc to the environment whenever noticed. (xii) Switch off the air-conditioners before the ending time of daily work (30 minutes in advance).

Considering the above mentioned green human resource requirements, a new concept is introduced namely employee green performance of job. It is defined as the extent to which a particular employee has engaged in behaviours (actions and activities) and produced results in respect of greening during a particular period of time. Green competencies and green attitude are viewed as green employee inputs and green behaviour and green results are viewed as employee green performance of job which contributes to green organizational performance meeting the CSR to a significant extent. See Figure 2.

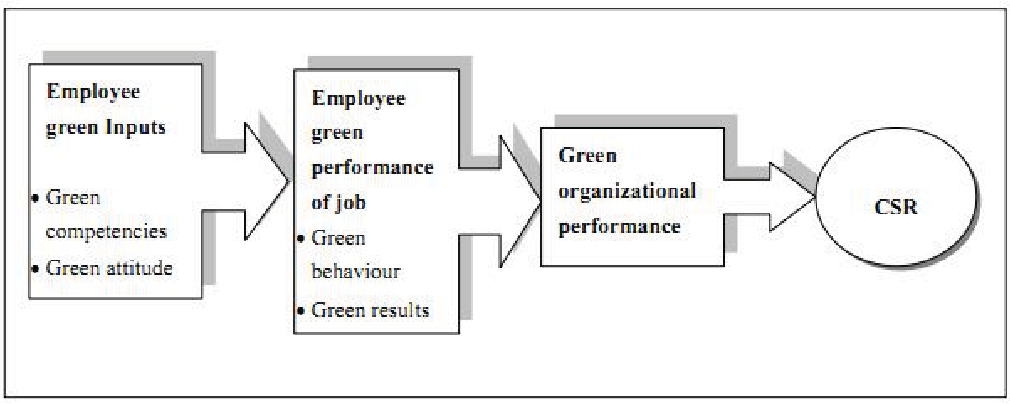

Figure 2. Employee Green Inputs and Employee Green Performance of Job

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2.4 Make HRM Green Function Optimally

In order to make sure that the organization gets right employee green inputs and right employee green performance of job, it is indispensable that HRM functions are adapted or modified to be green. traditionally there are 18 functions of HRM including job design, job analysis, human resource planning, recruitment, selection, hiring, induction, performance evaluation, training and development, career management, pay management, incentives management, welfare management, management of employee movements, discipline management, health and safety management, grievance management and labour relations. Making a HRM function green involves inclusion of policies, procedures, and practices which ensure right employee green inputs and right employee green performance of job. Ideally it is possible to make each function green. An attempt is made to show how to make some major HRM functions green in this paper. For the purpose, the following Table 1 was developed:

Table 1. Some HRM Functions and Ways of Making Them Green (Opatha And Anton Arulrajah, 2014)

HRM function	Green Policies, Procedures, or Practices
Job analysis	To include environmental dimension as a duty in job description. To include green competencies as a special component in job specification.
Recruitment	To include environmental criteria in the recruitment messages To communicate the employer's concern about greening through recruitment efforts.
Selection	To select applicants who are sufficiently aware of greening to fill job vacancies. To select applicants who have been engaging in greening as consumers under their private life domain
Induction	To make new employees familiar with greening efforts of the organization. To develop induction programs showing green citizenship behaviour of current employees.
Training	To impart right knowledge and skills about greening (the four green roles) to each employee through a training program exclusively designed for greening. To do training needs analyses to identify green training needs of employees.
Performance evaluation	To evaluate employee's job performance according to green-related criteria. To include a separate component for progress on greening in the performance feedback interview.
Rewards	To give financial incentives to employees for their good green

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management	performance of job. To give non-financial rewards such as praises and recognitions to employees for their greening.
Discipline management	To formulate and publish rules of conduct relating to greening. To develop a progressive disciplinary system to punish employees who violate the rules of green conduct

3.INDONESIA SDG'S TARGET

The SDGs call on companies everywhere to advance sustainable development through the investments they make, the solutions they develop, and the business practices they adopt. In doing so, the goals encourage companies to reduce their negative impacts while enhancing their positive contribution to the sustainable development agenda. The degree and speed with which companies around the world develop more sustainable and inclusive business models will play a large role in the success of achieving the SDGs. In turn, all companies are impacted by the challenges that the SDGs address. In order to be able to measure the achievements of the SDGs targets, set of indicators are required and data needs to be available to apply those indicators. In that context, UNDP and UNEP supported government of Indonesia in mapping availability of relevant indicators and data that can be used to measure SDGs. This exercise offers a preliminary look at the readiness of national data for individual goal of SDGs, data gap and key challenges in the context of data system to measure SDGs.

The results of the exercise are expected to contribute in Indonesia's preparation for SDGs implementation and to support Government of Indonesia in SDGs negotiation at global forum. The UN General Assembly's Open Working Group on Sustainable Development Goals (OWG) agreed on and published a 'zero draft' proposal at the conclusion of its thirteenth and final session on the 19th July 2014. The proposal contains 17 goals, accompanied by 169 targets. This list of goals and targets is, however, only temporary as the final decision on the Sustainable Development Goals (SDGs) and related targets will be taken during 2015. In fact, the post-2015 sustainable development agenda is expected to be adopted by UN Member States at a summit in September 2015 at the UN Headquarters in New York. By the end of 2014, the UN Secretary-General will produce a synthesis report bringing together the results of all the different work streams on the post-2015 development agenda to facilitate the General Assembly's further deliberations.

Goal 1 : End poverty in all its forms everywhere
Goal 2 : End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
Goal 3 : Ensure healthy lives and promote well-being for all at all ages

Goal 4 : Ensure inclusive and equitable quality education and promote life-long learning opportunities for all
Goal 5 : Achieve gender equality and empower all women and girls
Goal 6 : Ensure availability and sustainable management of water and sanitation for all
Goal 7 : Ensure access to affordable, reliable, sustainable, and modern energy for all
Goal 8 : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9 : Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10 : Reduce inequality within and among countries
Goal 11 : Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12 : Ensure sustainable consumption and production patterns
Goal 13 : Take urgent action to combat climate change and its impacts
Goal 14 : Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15 : Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16 : Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17 : Strengthen the means of implementation and revitalize the global partnership for sustainable development

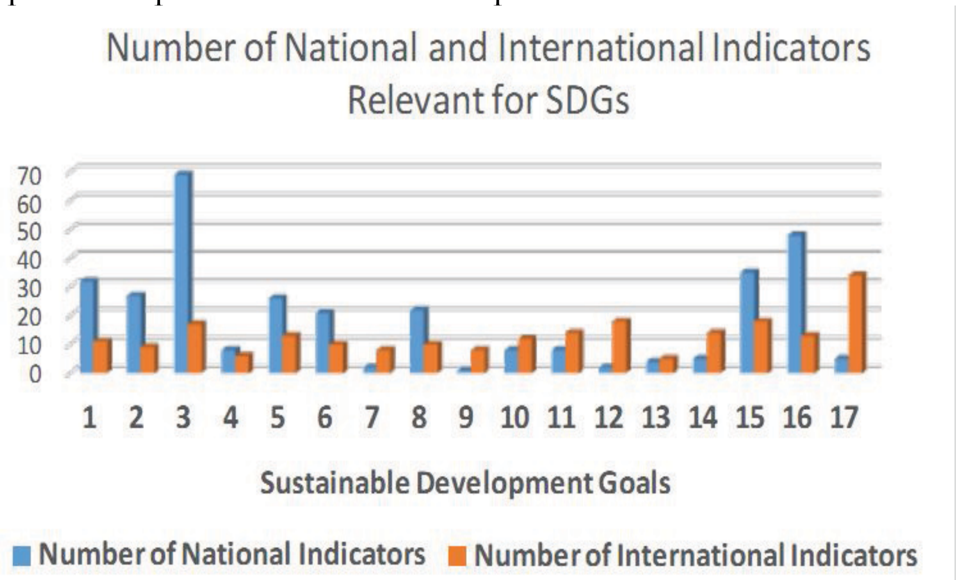

Figure 3. Number of indicators from national agencies and UN-Stat

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4. THE RELATIONSHIP OF GREEN HRM WITH THE ACHIEVEMENT OF SDG'S TARGET

Many companies are adopting green practices which help them in reducing carbon foot print through less printing of paper, video conferencing and interviews, etc. Businesses are sustainable because of their operations and culture, but it's the employees who craft and execute eco –friendly policies and create green corporate culture. Without developing personnel and implementing sustainable strategies, it's rather difficult to go green successfully. That's why human resource practices are the key component of sustainable development goal. The HR professionals are enabling companies to make green business in ways like encouraging employees to switch off lights when not in use, turn off the computer monitors when not being used, keeping only minimal lights during non-working hours for safety, online sharing of training material use 'print this e-mail only if necessary' in their official e-mail signature and more. Green HRM strategies like replacing the use of non-green activities where possible for an example, minimize travel by use of teleconferencing emailing and scanning instead of letters and fax. The HR encourages use of compostable cups and plates thereby reducing use of paper cups, deploy recycled paper, make duplex printing default etc. In cases of large factory premises use of electric vehicles for internal travel in place of the petrol/diesel counterparts.

Table 2. National indicators vs UN-Stat indicators

Goals	National Indicators				UN-Stat Indicators			
	No. Of Indicators	Most Ready	Ready	Not Ready	No. Of Indicators	Most Ready	Ready	Not Ready
Goal 1	32	21	11	0	11	7	1	3
Goal 2	27	23	8	2	9	5	3	1
Goal 3	69	55	16	4	17	13	0	4
Goal 4	8	8	0	0	6	2	4	0
Goal 5	26	23	2	1	13	6	2	5
Goal 6	21	15	6	0	10	4	1	5
Goal 7	2	2	0	0	8	3	5	0
Goal 8	22	5	12	5	10	5	4	1
Goal 9	1	1	0	0	8	2	4	2
Goal 10	8	8	0	0	12	5	7	0
Goal 11	8	8	0	0	14	7	4	3
Goal 12	2	1	1	0	18	0	6	12
Goal 13	4	4	0	0	5	1	0	4
Goal 14	5	3	2	0	14	8	4	2
Goal 15	35	25	10	0	18	9	1	8
Goal 16	48	12	19	5	13	0	9	4
Goal 17	5	5	0	0	34	5	3	26
Total	323	219	87	17	220	82	58	80
%		67.80	26.93	5.26		37.27	26.36	36.36

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Some of the HR initiated green programs being implemented in organizations include: (i) Adopt video-conferencing or internet based applications for meetings and reduce business travel; (ii) making internal company documentation (including plans etc.) online; (iii) reducing paper usage and promote ways for the same; (iv) offering work-from-home options to employees and opportunities for "telework"; and (v) car-pooling programs, etc.

Some of the areas where companies can incorporate more environmental conscious practices include teleconferencing, online policy and manual documents, electronic storage of paperwork, providing recycling trash bins around the office and in the cafeteria. The companies are focusing on telecommuting/work from home programs. Car pool programs are also successful for greening of business. As companies begin recycling, upgrade to energy-efficient heating/air conditioning systems and seek production efficiencies that save energy or reduce carbon emissions, it's natural to consider green benefits. Specific actions like offering incentives to staff for buying a hybrid car, use of public transport and bikes are seen in practice. Organizations often launch carbon credit cards where employees receive points for taking public transport or walking to work, or video conferencing rather than taking a flight. Employees with most points are then rewarded. (Mehta & Chugan, 2015).

This step is one of the efforts to support the achievement of the target. Efforts to preserve the environment by using Green HRM are expected to increase the awareness of government, companies and employees to protect the environment. The thing done may be a simple thing but can give optimum results and maximize if it becomes shared consciousness. With the existence of Green HRM then the company can optimize the implementation of CSR that often only focuses to build corporate image, but also can reduce emissions and minimize environmental damage from within the company itself

5.INDONESIA'S EFFORTS TO ACHIEVE TARGET SDG BY 2030

5.1 Activities That Are Already and Underway

(i) Meetings with all stakeholders (KL, CSO and Media, Philanthropist and business, Academics and Experts, International Development Partners); (ii) Workshop with Jeffrey Sachs on TPB**;** (iii) Workshop/Socialization of Regional TPB in the Western Region (Surabaya, 23-24 May 2016); (iv) Workshop/Socialization of Regional TPB in the East Region (Makassar, 30-31 May 2016); (v) Socialization and area facility (DI Yogyakarta, West Sumatra, South Sumatra, Riau Islands, North Sulawesi, East Java, North Konawe, Musi Banyuasin, Kampar, etc.). (vi) Preparation of the draft National Action Plan for TPB; **(vii)** Drafting of the Definition of the OEO Indicator.

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5.2 Activities to be Conducted

(i) Finalization of Draft Guidelines of National Action Plan (RAN) TPB 2016-2019; (ii) Preparation of the National Action Plan (RAN) of TPB 2016-2019; (iii) Drafting of the draft Local Action Plan (RAD) TPB; (iv) Preparation of RAD TPB; (v) Facilitation of RAD preparation of TPB; (vi) Further workshop / dissemination of provincial TPB not present at regional meetings 1 and 2; (vii) Preparation of the draft of the Monitoring and Evaluation Guidelines of the TPB; (viii) Continued meetings with stakeholders (Majelis Rektor PTN, Rector Forum, Youth group); (ix) Preparation of Road Map of TPB 2016-2030; (x) Preparation of Communication and Advocacy Strategy. Activities to be Conducted

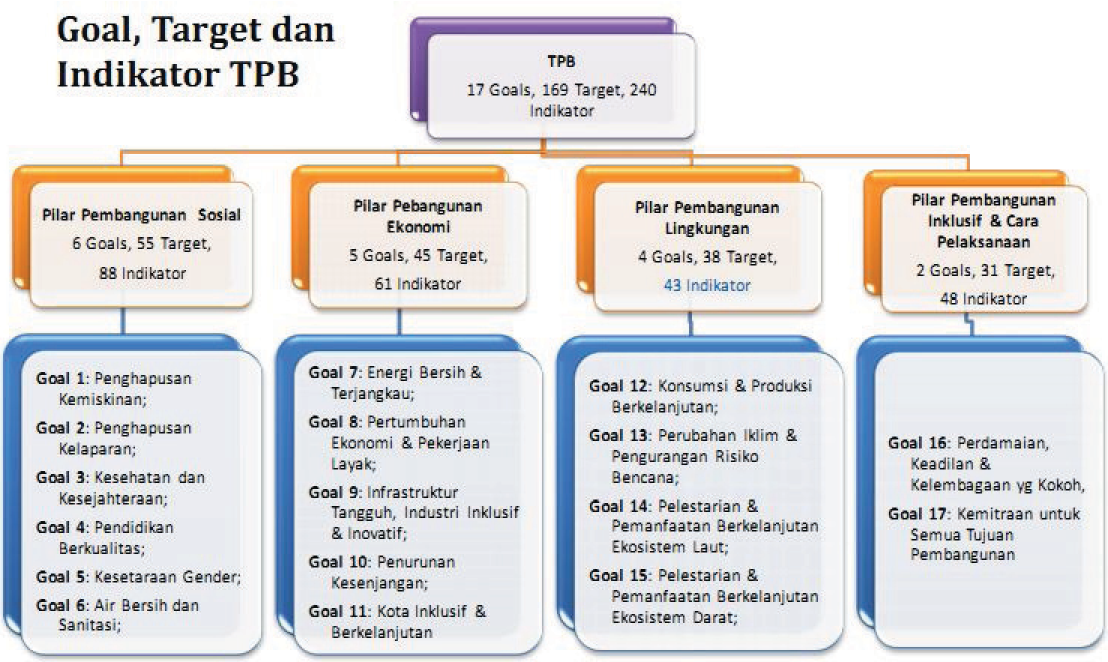

Figure 4. Goal, Target and Indicator SDG in Indonesia (Wahyuningsih Darajati
Ministry of PPN / Bappenas Delivered on WPD ContributionWeb Network Activity for Achievement of SDGs Jakarta, June 29, 2016

6. CONCLUSION

By understanding what the SDGs are and gradually in the sphere of determining priorities that ultimately we can do goal determination, intergrating, reporting and communication to companies and stakeholders. SDGs ought to be at the center of the global political agenda. The 17 new goals are to be adopted during the UN summit on September 25, 2015, in new york. With 17 new goals, this paper describes the 12 target and production target with a special discussion on green HRM. Where, the side of HRM that is concerned with transforming the normal contribution to the environment and sustainable to environmental sustainability. Green HRM is important because with workers' knowledge of environmental sustainability and availability of natural resources it will achieve or realize the 12th goal for SDGs. In Indonesia alone based on performance report 2015 shows that 50% of indicators are available or ready to be implemented. In the national medium-term development plan (RPJMN) 2015-2019 Indonesia seen that there is no readiness to implement green HRM. In developed countries have implemented green HRM and as an example for developing countries implement destination number 12 SDGs. Not all countries in the region asia already apply green HRM, Indonesia as a tropical country should be able to do it. However achieving the goal of 12 SDGs is not easy, it takes the commitment of the government, the company and the tablespoon in Indonesia to make it happen. The Indonesian government is expected to make further development plans by entering or implementing and planning the readiness of tbsp so that the target of 12 sdgs target can be achieved.

The future of Green HRM appears promising for all the stakeholders of HRM, be it the employers, employees, practitioners, or academicians. We propose that GHRM has substantial scope for research in management field but lacks behind in practice within academic arena; hence, there is a need to bridge the gap between professional GHRM practices and preaches in research and teaching environmental management. Pushing further, we look forward to see more research on this topic in near future, which can highlight the role of HRM activities in supporting green initiatives and to some extent even influencing environmental management strategies. Studies that observe the overall impact of GHRM systems rather than individual practices would be particularly helpful in this respect.

Such studies can help organizations to reduce degradation of the environment become healthier both physically and financially and, make the world a cleaner and safer place to live. On the concluding note, we would like to add that HR is the major role player in implementing GHRM practices and policies. Apart from this, they have a crucial role to play in recruitment of new employees who are more responsible toward green business practices thus, indirectly saving the Earth. Last, but not the least, HR has significant opportunity to contribute to the organization's green movement and plays important role in enthusing, facilitating, and motivating employees for taking up green practices for greener business.

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The Implementation of Sustainable Livelihood Approach in Developing Country; A Proposal to Solve Problem of Poverty, Hunger, Low Quality of Education and Health

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ABSTRACT

The sustainable development goals (SDGs) could be as serious challenge for entire government in the world especially developing world. Poverty, hunger, low level of quality of both education and health are among serious problem they are facing. To overcome these problems, they need special policy and approach, which differ among developing countries. Countries which huge stock of natural resources, usually exploits more it to increase economic growth, and on the other hand, countries which limited natural resources, trapped in problem of fulfilling the people's basic needs. Developing world usually account for high level of economic growth compare with developed world that in turn have low level of well-being. Natural resources abundance which developing world rely on, in facts have no strong relation with the increasing prosperity of the people. Natural resource curse sometimes called as the main problems. Policy and approach should be found by the world community to enable developing world reach or approaching the target of SDGs by 2030. There is no single formula for entire developing country, there should problem finding and understanding, formulating development policy and what approach should be implemented that meet with the potential resources available of both, human resources and natural resources available.This paper would like to discuss about problem of poverty, hunger, low quality of both education and health in developing country which special attention on the way in which they could be exit from these problems. Assets and activities of people that still living in low level living standard should be examine first, that mostly based on natural resources. Theoretically, it can be found in the Sustainable Livelihood Approach (SLA) that focus on the smallest economic actors, a household especially for them living in rural areas. By understanding the problem facing by a household, hopefully policy development and target of the program to overcome these problems will effectively increase their people living standard, that will enable the country reach the target of SDGs by 2030.

Keywords: poverty, hunger, education, health, natural resources, developing country, sustainable livelihood, sustainable development goals.

1. INTRODUCTION

Some target has set out by the United Nation about Sustainable Development Goals (SDGs) that hopefully can be reached by 2030. These development goals are known as the continuing of target of Millennium Development Goals (MDGs) that ended in 2015. Some goals are new, but some goals are remains the same. Interestingly, the goals remain the same as set out in MDGs are main struggle and become dominant theme of development in developing world. Poverty, hunger, education and health as well as issues of environment especially the degradation of natural resources upon which they depend on are still become target of SDGs.

As known, on September 25, 2015, the United Nations General Assembly formally adopted the 2030 Agenda for Sustainable Development, which guides global action over the next 15 years. Consisting of 17 Sustainable Development Goals (SDGs) and 169 associated targets, this new agenda builds on the achievements of the Millennium Development Goals, but is far wider in scope and ambition. As reported by The World Bank (2017) through their publication about World Development Index (WDI) the World Bank's compilation of internationally comparable statistics about global development and the quality of people's lives, it known that some target of MDGs were reached and some are still need more effort. Here we will examine the first fourth SDGs; (1) poverty, (2) hunger, (3) good health and well-being, and (4); quality education.

SDG number 1 is End poverty in all its forms everywhere. The World bank reported In 2012, 13 percent of the world's population lived below the international poverty line of $1.90 a day, down from 37 percent in 1990. Declines in all regions contributed to the early success of meeting the Millennium Development Goal target of halving extreme poverty globally. Sustainable Development Goal 1 builds on this and proposes ending poverty in all forms by 2030. It also aims to ensure social protection for poor and vulnerable people, to increase access to basic services, and to support people harmed by conflict and climate-related disasters. So, the work is so hard, because by 2030, the 13% poor people in 2012, become zero.

End hunger, achieve food security and improved nutrition, and promote sustainable agriculture is SDG number 2. It reported that over the past 25 years the share of the world's population suffering from hunger has fallen. The prevalence of undernourishment, where food intake does not meet continuous dietary energy equirements, has been almost halved globally, from 19 percent to 11 percent, but remains far higher in low-income countries than elsewhere. This means a special program should be designed. Agriculture should be more productive and the world bank claimed that Efforts to end hunger by 2030 will not be successful if current trends continue. Improvements in food security and sustainable agriculture, especially in cereal yields, can help.

SDG number 3 is Ensure healthy lives and promote well-being for all at all ages. By 2016 it known that In low-income countries more than half the

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population dies from communicable diseases or maternal, prenatal, or nutrition conditions. In middleand high-income countries the pattern is different: More than two-thirds die from noncommunicable diseases. Therefore, Sustainable Development Goal number 3 focuses on improving well-being, especially at the most vulnerable stages of life, providing health services, and improving imbalances between poorer and richer countries. Can we do by the time left? This is the main questions for developing world relating to health quality.

The SDGs that would be like to focus on in this paper is SDG number 4, Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The World Bank reported that in education progress has been made toward universal education, with 92 percent of children worldwide completing primary education and 74 percent completing lower secondary education. But the gross tertiary enrollment ratio remains around 30 percent, a number that need extraordinary effort to make it lower by 2030. In relation with this Sustainable Development Goal 4 also focuses on education quality, proficiency in key subjects at various ages, and access to modern education facilities. . Increased access to higher education is needed to achieve a productive, talented, and diverse labor force and anempowered citizenry.

Based on that report we know that these four SDGs, could be says as main challenge for developing countries, since the average poverty line are mostly below $1.90 a day or measured with other way. Agriculture productivity in developing world will become main requirement for to end hunger. Meanwhile, we know that to increase agriculture production such as rice that mostly main staple food of people living in developing countries are not easy task. Green revolution known fails to increase production continuedly and as an impact of fertilizer, some areas of land become unproductive. Theoretically, the nutrition will determine our healthy conditions. Some of diseases are relating with our food neutrinos content. Developing world could be able to provide sufficient food to make people full, but in the point of views of healthy life, it could be not enough. Basic education is not enough to be move forward and to make more people productive. People need access to the modern education facilities to be skillful. These problems should be focus of development in developing countries, but which one we should solve first, since all the problems are need immediate action.

A program or development approach that able to work simultaneously to increase well-being and to increase assets of the people which respect to the environment (natural resources) is needed. The world scientist has long been talk about this. The theory is sustainable development that has a close relationship with the theory of sustainable livelihood. Sustainable livelihoods (SL) approaches have a historical relationship with the sustainable development (SD) paradigm. Ideas of sustainable development appeared first and later followed by the idea of sustainable livelihoods, as described by Chambers (1987) and later Chambers & Conway (1992) of the Institute of Development

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Studies (IDS). The work of these two researchers was developed further by Scoones (1998), also from IDS, and then later by the Department of International Development (DFID, 1999) and Ellis (2000). In the next sub topic we would like to examine briefly the Sustainable Livehood approach (SLA), as one of option to understand the problem relating with life quality of the people in developing world and base on it the policy maker have completed information of the people they would like to develop. A clear understanding about how people life would be very important data. Their sources of livelihood need to be examine first, since based on it they can generate money or foods. Before we discus about it we would like look at the condition of these fourth SDGs in developing world, where the problem mainly remain.

2. GENERAL OVERVIEW OF DEVELOPING COUNTRY; ACHIEVEMENT AND PROBLEMS IN SDGS

The world bank reported a pessimistic report about the ability of the world to end the poverty. Although there are progress, but the people left behind that are still living in poverty are them classified as living in extreme poverty. The bank stated, there has been marked progress on reducing poverty over the past decades as The world attained the first Millennium Development Goal target to cut the 1990 poverty rate in half by 2015, five years ahead of schedule, in 2010. Despite the progress made in reducing poverty, the number of people living in extreme poverty globally remains unacceptably high. And given global growth forecasts poverty reduction may not be fast enough to reach the target of ending extreme poverty by 2030.

More work have to be done although nearly 1.1 billion people have moved out of extreme poverty since 1990. In 2013, reported that 767 million people lived on less than $1.90 a day, down from 1.85 billion in 1990 but they live in areas such as Sub-Saharan Africa where the resources is limited. It also reported that majority of the global poor live in rural areas and are poorly educated, mostly employed in the agricultural sector, and over half are under 18 years of age.

The hunger people that should be feed with enough nutrition still high. Most of them are living in developing world. The world bank claims the vast majority of hungry people live in developing regions, which saw a 42 percent reduction in the prevalence of undernourished people between 1990–92 and 2012–14. Despite this progress, about one in eight people, or 13.5 percent of the overall population, remain chronically undernourished in these regions, down from 23.4 percent in 1990–92. As the most populous region in the world, Asia is home to two out of three of the world's undernourished people. Again reported that there has been the least progress in the sub- Saharan region, where more than one in four people remain undernourished – the highest prevalence of any region in the world. Nevertheless, the prevalence of undernourishment in sub-Saharan Africa has declined from 33.2 percent in 1990– 92 to 23.2 percent in

2014–16, although the number of undernourished people has actually increased. But good some good news come from Asia. It reported that although hunger continues to take its largest toll in terms of the number of people impacted in Southern Asia, which includes the countries of India, Pakistan and Bangladesh. The estimate of 276 million chronically undernourished people in 2014–16 is only marginally lower than the number in 1990– 92. Eastern Asia (where China is by far the largest country) and South-eastern Asia (including Indonesia, Philippines, Mynamar, Vietnam and others) have reduced undernutriton substantially and Latin America has the most successful developing region record in increasing food security.

In education sector, the same bad news is coming from Sub-Saharan Africa. In education, there are two important indicator; the level of literacy rate and primary education. Based on Max Roser and Esteban Ortiz-Ospina (2016); Global literacy rates have been climbing over the course of the last two centuries, mainly though increasing rates of enrollment in primary education. Secondary and tertiary education have also seen drastic growth, with global average years of schooling being much higher now than a hundred years ago, despite all these worldwide improvements, some countries have been lagging behind, mainly in sub-Saharan Africa, where there are still countries that have literacy rates below 50% among the youth.

The progress in heath quality can be measured by both indicators, life expectancy and child mortality. Based on Esteban Ortiz-Ospina and Max Roser (2016) life expectancy is the most commonly used measure used to describe a population's health. Historical data shows that global life expectancy has increased drastically over the last couple of centuries, with substantial long-run improvements in all countries around the world. In fact, recent life expectancy gains in developing countries have helped reduce global inequalities. However, despite recent progress towards long-run cross-country convergence, there are still huge differences that have to be addressed: people in sub-Saharan Africa have a life expectancy of less than 60 years, compared to 80 years in countries such as Japan. Indicator of child mortality also showing the bad and good news. Based Esteban Ortiz-Ospina and Max Roser (2016) they claims large remaining inequalities: where low-income countries still have, on average, child mortality rates that are more than ten times higher than those in high-income countries.

Looking more deep the first four of SDGs achievement and problem facing by developing country, we can conclude that more work hard should be prepared by the countries. Again, the question is which one we should solve first. But we should be optimistic that there is tool as problem solving. This can be done if there is peace in developing world. Therefore, ended of the conflict must be done first.

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3. SUSTAINABLE DEVELOPMENTS AND SUSTAINABLE LIVELIHOOD APPROACH (SLA)

Human civilisation history has shown how human beings used their environment to stabilise their society. In relation to the environment, the history of human civilisation has interwoven strongly with the history of climate and the environment seen as a major determinant of the growth and stability of human activities (Rao, 2000). Rao claims, historically, that the rise and fall of civilisation inextricably linked to the vagaries of climate change and variations in the use of natural resources, both of which have influenced population growth by eliminating large numbers of people in times of hunger and famine. The evidence found in the history of civilisations in ancient Egypt, the Indus valley in India, Mayan culture in Mexico and Mali in Africa.

The conclusion from such histories was that people disregard their environment, especially natural resources such as water and soil, at their peril (Rao 1998, 2000). Civilisations have long used natural resources to develop their economy, but then faced disaster because of managing them poorly. In the modern world, Thomas Malthus (1766 - 1834) was one of the first to warn of severe resources shortages especially food, as population tends to increase exponentially. Later it was proven that because of technology advances in agriculture, his prediction did not come true, but in some parts of this world, food shortages have occurred, e.g. in Bangladesh (Khalequzzaman, 1994) and in sub-Saharan Africa (Advisory Committee on the Sahel, 1983). The second major warning was the idea in the Club of Rome's report about "Limits to Growth" (Meadows *et al.,* 1972). These predictions have also failed to materialise because they give little recognition to technical progress, in the same way as Malthus did. Nevertheless, these ideas attracted considerable attention and helped to pave the way for a new development paradigm called sustainable development (Adams, 1990).

Because of the sustainable development (SD) paradigm, the debate about environmental resources management became global in focus and, in June 1972, formally launched with the help of The United Nations conference on the Human Environment in Stockholm. In this conference, the United Nations Programme on Environment (UNEP) launched. Later, in December 1972, the General Assembly of the United Nations passed a resolution that UNEP would act as a Governing Council for Environmental programmes, with a secretariat to focus environmental action within the whole UN system and create an environment fund to finance an environmental programme (Adams, 1990). In 1992, this organisation held a very important conference called the United Nations Conference on Environment and Development (UNCED), which known later became as the Earth Summit conference in Rio de Janeiro. The Earth Summit declaration set 27 principles of sustainable development and an action plan known as "Agenda 21".

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Based on Brundtland's report entitled 'Our Common Future' a definition of sustainable development was established; namely 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987). It contains two key concepts: the idea of "needs", more specifically the basic needs of the world's poor; and the notion that limitations imposed by the state of technology and social organization compromise the environment's ability to meet present and future needs. Meeting present and future needs may be easy in concept but could be very difficult to achieve in the real world. Development of course needs to do, but the resources required deriving and this would base on economic activities that mostly come from nature. To reconcile economic activity and the balance of nature is the main idea.

Reconciling economic growth and environmental quality is not an easy task. Land degradation for example can undermine and frustrate economic development, while low level of economic development can in turn have a strong causal impact on the incidence of land degradation (Blakie & Brookfield, 1987). Furthermore, as has been shown from the case of semi-arid areas of Africa, many forms of development erode the environmental resources upon which they based. In order to reconcile development and environment, Brundtland (1987) proposed seven objectives critical for environment and development policies, namely: Reviving growth; Changing the quality of growth; Meeting essential needs for jobs, food, energy, water and sanitation; Ensuring a sustainable level of population; Conserving and enhancing the resource base; Reorientating technology and managing risk; Merging environment and economics in decision-making.

A major focus of attention in developing and less developed countries is on the third objective, since they face poverty problems, and it has become embodied in the concept of *sustainable livelihoods* (UNDP, 1999). This approach aims at not only maintaining but also enhancing the productivity of natural resources, at securing ownership of and access to assets, and it requires that, to meet the basic needs, adequate stocks and flows of food and cash have to be ensured.

Based on these seven objectives, the third is very close to the idea of sustainable livelihoods, because sustainable livelihoods focus on jobs, food security, and energy and health facilities supported by the availability of resources, especially natural resources for the people who live in rural areas. Therefore, the concept of sustainable livelihoods is contained in the idea of sustainable development, but it also could be the case that the existence of sustainable development determined by the existence of sustainable livelihoods. Whether sustainable livelihoods come first, followed by sustainable development or vice versa, both concepts likely implemented simultaneously.

In order to be sustainable, livelihood needs to be able to cope with stress, recover from shocks, maintain or enhance its potential, without undermining the natural resources base (Carswell, 1997; Scoones, 1998). According to UNDP (1999), "livelihoods are the assets, activities and entitlements, which people utilise in order to make a living". More specifically, they are: (i) able to cope with and recover from shocks and stresses such as drought, civil war, policy failure through adaptive and coping strategies; (ii) Economically efficient, or able to use minimal inputs to generate a given amount of outputs; (iii) Ecologically sound, ensuring that livelihood activities do not irreversibly degrade natural resources within a given ecosystem; and; (iv) Socially equitable, which suggest that promotion of livelihood opportunities for one group, should not foreclose options for other groups, either now or in the future.

An analytical framework for sustainable rural livelihoods developed by Scoones (1998) is shown in figure 1. The five key elements are context, resources, strategies, outcomes, and institutions.

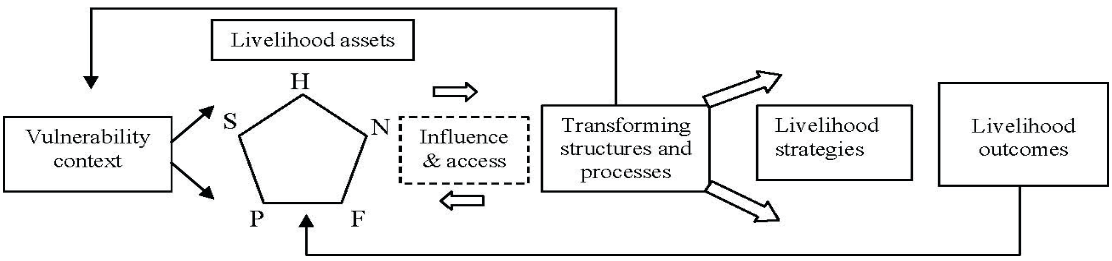

Figure 1. DFID's Sustainable Livelihood Framework
Key: H = Human capital, N = Natural capital, F = Financial capital, S = Social capital, P =Physical capital (Source: Carney, 1998)

Based on definitions livelihoods have three main components: assets, activities and entitlements. In this section, I shall examine these in more detail. In the following, the three main components of livelihood reviewed, starting with the assets category, followed by activities and ending with discussion about entitlement.

Assets

Assets described as "stock of capital that can be utilised directly or indirectly, to generate the means of survival of the household or to sustain its material well-being at differing levels above survival" (Ellis, 2000). The author argued that a fundamental feature of assets as capital is that they either exist as stock such as land or trees giving rise to flow of output, or they are brought into being when a surplus is generated. Surplus generated if there is positive stock between production and consumption, thus enabling an investment in future made productive capacity. This argument represents Ellis's way of thinking about livelihood diversification, that is similar to the idea of Reardon & Vosti

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(1995) and Scoones (1998). According to DFID (1999), positive livelihood outcomes are generated by combining assets in a multitude of different ways, different livelihoods requiring different assets. As presented in above figure; assets (capital) consist of Human capital, Natural capital, Financial capital, Social capital, Physical capital.

Activities

The second factors of sustainable livelihood are activities that divided into those based on natural and non-natural resources (Ellis, 2000; Scoones, 1998). Activities based on natural resources comprise gathering (e.g. from woodland), food and non-food cultivation, and livestock management. They also include non-farm activities such as weaving and brick making that utilize natural resources, and rural trade and other rural services. Scoones (1998) uses the term "livelihood portfolio" to describe the combination of activities pursued - either highly diversified or specialized on one or a limited range of activities. Households that depend mainly on gathering from the natural environment differ from those that derive their income mainly from cash crops cultivation, and they, in turn, differ from households that derive a small proportion of their livelihoods from food production. These kinds of activities represent potential contribution to the survival portfolio of rural households (Ellis, 2000).

4. APPLICATION OF LIVELIHOOD FRAMEWORK IN DEVELOPING COUNTRY; A PROPOSAL OF IDEA

The application of SLA in developing word is need to be internalize in the way in which government develop their development planning. So far most of developing country always focus on the effort to reach high level of economics growth. Meanwhile the Gini ratio showing that high level of economic growth is not guarantee, equality increase of people income. Most of us proud when our national income is so high and it make our income per-capita also high. We trust in trickledown effect, that in fact not working, since poor people are them that have very limited access to some economic sources developed as the result of economics growth. Our first attention is not household but other economic actors. We forget that in economics; household is the first actor. They need to be empowered first, to be able to access financial resources for example.

SLA is one of the idea how we can empower people by understanding their daily activities and their assets to generate income or produce subsistence needs. The unit of analysis is a household, the smallest economic actor in economic activity. We should have clear data and understanding about their problem through relevance and valid information about household assets and activities. Based on this some development program can be designed and it internalized in official development planning process and their development agenda. Find the true data not just the number about poverty, hunger,

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education and health are the first step to be done before the formulation about development program. Hopefully, the program will be effectively increase the well-being of the people who are the target of it program.

To operationalize the SLA framework in the process of development planning for certain areas, some key questions developed, related to both rural poverty and the access of rural people to the natural resources. **Questions related to poverty are** (a) Who are the rural poor? (b) What makes them vulnerable? (c) What assets do they have? (d) What is the impact of policies and institutions? (e) How do the poor make a living and (f) what is the outcome of the above on rural poverty levels? **Questions about access to natural resources are** (a) what are major issues and trends in that impact on rural livelihoods? (b) what are the major issues and trend in the natural resources sector? (c) How does the natural resources sector relate to wider livelihood issues? (d) What are the major underlying causes of rural poverty? (e) What is making a difference to peoples' livelihoods? (f) What are the success stories –, where are they, and why? (g) Where do future livelihoods opportunities lie in the wider sense and in the natural resources sector? The data found from the intensive survey, then will become the basis to formulate some development program that meet with the need and ability of the people.

5. CONCLUDING REMARK

People in developing world mostly depend on natural resources in their daily activities. The types of assets they own mostly related to natural assets. To generate more income and adequate subsistence needs, their natural assets must be the first of attention to be examine deeply. It must be able to be more productive and hopefully it will able support them eradicate their poverty, increase their education and free from some deseases caused by mall-nutrition or poor sanitation. Understanding of the factors of livelihood own or able to accessed by a household is the important step in develop development program and agenda.

Human capital, natural capital, financial capital, physical capital and social capital own by a household or a community need to be documented and analyzed deeply in order to design a development that meet with their need. We should stop using data that just showing number; but we should know exactly what the real stories about that number based on the first smallest economic actors; household; that in aggregate are the main biggest actor of economic activity. The increase of income of a household is the main agenda of economic development, not the national income.

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The Effect of Human Resource Management Management, To Performance Through Innovation Organization

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ABSTRACT

This study aims to describe human resource management practices, organizational innovation and organizational performance, analyze the effect of HR management practices on organizational innovation, analyze the influence of HR management practices on organizational performance, analyze the influence of organizational innovation on organizational performance, and analyze the impact of HR management practices on performance Organization through organizational innovation. This study included research to test the hypothesis (hypothesis testing). The sample in this research is 140 companies. The analytical technique using Structural Equation Modeling. Based on the results of the analysis shows that the practice of human resource management has an impact on organizational innovation. The practice of human resource management is concerned with organizational performance. Organizational innovation affects organizational performance. Organizational innovation mediates the impact of human resource management practices on organizational performance.

Keywords: Human Resource Management Practices, Organizational Performance, Organizational Innovation

1. INTRODUCTION

Organizational performance is very important as the end result of all organizational activities because it can be used to evaluate the level of ability, the success of the work process conducted by the organization whether it is in accordance with the expected or not. The organizational performance will be influenced by many factors, some of which are human resources, innovation ability and leadership that exist in an organization, organizational culture, strategy, team work and other factors. Therefore, good recruitment to get qualified employees, employee development, a good compensation system and performance evaluation of the company is an important factor in the organization, as well as leadership factors associated with a clear vision of a leader and able to encourage changes in the Improvements can also help employees. The ability of innovation itself must be built so as to create a dynamic, innovative and high-performing organization and, capable of producing competitive products in local and global markets.

Human resource factors, innovation, and leadership skills will be mediated by organizational innovation in order to be able to produce quality and competitive products in the marketplace. On the other hand, investors who invest in manufacturing companies also want the best returns, so companies are also required to perform to satisfy investors, so it is important to examine the influence of human resource management practices, innovation skills and transformational leadership on organizational performance.

East Java as the second largest province in Indonesia after Jakarta cumulative export value in the first quarter of 2015 experienced a slowdown compared to the same period in 2014 (Disperindagprov Jatim). It needs to be investigated what causes the decline in the ability to export manufactured products from quality factors Human resources, innovation ability and leadership of the organization.

Total exports of the first Quarter of 2014 amounted to US $ 4,947,185,600 to US $ 4,774,543,850 in the first quarter of 2015 (-3.49%). Based on preliminary information on spinning, textiles, packaging products or processed mushrooms of Kampinyon, even some producers in Mojokerto, Probolinggo have gone out of business because they can not compete in the international market. While yarn and plain textile products have been on reducing production due to intense competition in overseas markets, especially in terms of price. It needs to be explored why some companies can still survive, what tips are for human resources, innovative skills or leadership style. Organizational innovation as mediator whether it has been done to manufacturing company in East Java in a small degree, medium or until breakthrough.

But some companies that innovate in the middle and lower degrees have been able to make efficiency to continue to survive and compete in the export market due to the price of its competitive products in the global market. The decline in exports also occurred in vegetable oils, wooden goods, (-6.52%), cardboard (-5.56%), organic chemicals (-52.50%), processed fish (-12.59%). The top ten export destinations of East Java are Japan, the United States, Taiwan, China, Malaysia, Singapore, Thailand, India, South Korea and the Netherlands. Companies that are able to compete in some cases have attempted to innovate products, innovating the process by replacing parts and incremental equipment and machinery (incremental, distinctive and breakthrough innovation) for example in a baby seat and textile companies. Replacing or substituting raw materials, improving the administrative system (procedural innovation) for example in packaging food, recruiting new workers who have higher formal education than those who previously only graduated from junior high or high school now D2 or D3 and mastering English because the new equipment and machines all Using English language manuals, machine-installed experts, and English-speaking foreigners and in some companies in East Java still employ operational managers, GM expatriates who still use English communication. Here it is clear how important the company is to innovate products, processes,

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and procedures and improve the qualifications of its employees who have adequate knowledge of the technology used, good skills and foreign language communication (English) so that responsive to macroeconomic changes, changes in technology processes and changes Market tastes that continue to occur even can always be anticipative when led leader who is visionary and able to encourage employees always develop themselves to be in tune with the demands of his job.

Based on the background of the problem, there are several objectives to be achieved in this research is to describe the practice of human resource management, organizational innovation and organizational performance, analyze the influence of HR management practices on organizational innovation, analyze the influence of HR management practices on organizational performance, Organizational performance, and analyze the impact of HR management practices on organizational performance through organizational innovation.

2. LITERATURE REVIEW

2.1 Organizational Performance

Measuring the success of innovation is not easy but establishing relationships between the 2 categories of performance should be done although not easy, the success of organizational innovation can be measured using two main categories that are first associated with accounting and financial performance, such as profitability, Return on Investment (ROI). Second with marketing performance in the form of market share and market growth. According to Robbins and Coulter (2005: 226), Organizational Performance is the accumulation of the end result of all processes and work activities of the organization. Organizational Performance is a complex but important concept, and managers need to understand the factors that contribute to high organizational performance. Furthermore, according to Werner and Souder (1997) Organizational Performance is a measure of a company's success after making innovations that are often measured using commercial size.

Each job has its own performance standards, so a performance can be said to be good when it is able to meet or exceed predefined standards. The performance of an organization depends on the performance of individuals or in other words individual performance will contribute to Organizational Performance, meaning that the behavior of member organizations both individually and in groups gives strength over Organizational Performance. Organizational Performance is important for Robbins and Coulter (2005: 226) as it will result in good asset tangible and asset intangibles, improving the ability to provide customer value, create a good corporate reputation, and improve the size of organizational knowledge. Companies need to conduct performance evaluations that focus on skills and potential employees that are inadequate so

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that they can be developed and improved in order to achieve high organizational performance.

2.2 Organizational Innovation

According to Schumann (1994: 2), innovation is an organizational way to implement new ideas, creative concepts come true and as a basis for competitive advantage in order to anticipate and meet consumer needs. Schumann explains a lot about innovation, especially in manufacturing companies. According to Chan (2003) innovation is related to the introduction of new combinations of the essential factors of production into the production system.

Herkema (2003) defines innovation as a knowledge process to achieve new knowledge for commercial development and viable solutions. Innovation is the terminology to explain how an organization creates value by developing new knowledge and/or using existing knowledge in new ways. Furthermore Tan and Nasurdin (2011) define Organizational Innovation is the ability to create new ideas and new ideas and behavior for the organization, it consists of innovation in product, innovation in process and innovation on administration (procedure).

Innovation Management is the management of all innovation, research and development processes, in a broad sense R & D management can be defined as innovation management when it comes to invention processes and innovation processes.

According to Freeman (1982) and Johne (1999), there are 3 types of innovation: Product Innovation, Process Innovation, and Market Innovation. Product innovation will be clear to generate revenue. Process innovation is intended to control and improve quality and save costs. Market innovation is concerned with improving with the mix (mix) how the selected target market can be served with the best.

According Schumann (1994) innovation can be seen from 2 dimensions of the nature and how much change is done. Dimension I. (basic nature) of innovation can be classified into 3 categories: (i) Product Innovation is all related to functions that can be given to the customer (internal and external) or form that works. Product Innovation involves the way things interact with things. (ii) Process Innovation is anything that involves the way a product is developed, manufactured and prepared e.g. improvements in manufacturing processes, distribution systems. Innovation Process involves the interaction of people with things. (iii) Innovation Procedure is what involves the way in which products and processes are integrated into the operations of an organization. For example improvement marketing method, administrative methods. Procedure Innovation involves the way people interact with people.

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2.3 Human Resource Management Practices

An increasingly competitive and unstable business world over the previous year the manufacturing industry is looking for ways to gain a competitive advantage over all costs and resources, as well as human resource management (Sparrow et al., 1994). HR management practices are defined as attracting, developing, motivating and retaining employees systems to ensure effective implementation in ensuring organizational survival. Human resource management practices are also conceptualized as a consistent set of internal policies and planning and implementation frameworks to ensure human capital contributes to the achievement of business goals (Delery and Doty, 1996). Schuler and Jackson (1987) define human resource management practices as a system that attracts, develops, motivates and makes retain employees work to ensure effective implementation of a company's survival

According to Tan (2011), the study shows that PPSDM contributes 18% to innovation products and processes and 30% to administrative innovation. Then the PPSDM variable consisting of training and development, reward system, and recruitment can be used in this research.

2.4 Research Hypothesis

H_1 : HR management practices affect organizational innovation.

H_2 : Human Resource Management practices have a significant effect on Organizational Performance.

H_3 : Organizational Innovation has significant effect on Organizational Performance.

H_4 : Human Resource Management practices affect Organizational Performance through Organizational Innovation.

3. RESEARCH METHODS

3.1 Research Design

This research includes an explanatory explanation of causal relationship and test hypothesis of purpose to be analyzed (the purpose of Study), hence this research including research to test a hypothesis. From aspects of research methods including survey research that collects information from a number of populations. This study includes quantitative research to answer the formulation of the problem, with variables that are quantitative and in data collection using the perceptional approach as a measurement.

3.2 Operational Definition of Variables

Organizational performance

Organizational Performance is the end result of all activities of the company including the results of innovation activities. The indicators used are: (i) Marketing performance; (ii) Financial performance

Organizational Innovation

Organizational Innovation is the foundation that begins in a manufacturing company to improve its performance, organizational effectiveness and problem solving, added value, competitive advantage.The indicators used are as follows: (i) Product innovation; (ii) Process innovation; (iii) Innovation procedure

HR Management Practice

HR Management Practice is the best practice in managing human resources in a company which is one way to increase the competitive advantage of the previous ability for the manufacturing company. The indicators used are as follows: (i) Evaluate employee performance; (ii) Employee Career Management; (iii) Training and employee development; (iv) Reward system run; (v) Recruitment of employees

3.3 Population and Sample

The population in this study are all manufacturing companies in East Java which amounts to 228 manufacturing companies in East Java that exports in accordance with the SKA User Exporters List available at the office of Disperindag East Java Province in 2014 so that as the target population of this study as many as 228 companies spread in 10 cities in East Java. Based on the Slovin formula, the sample size is 140 firms, and it is satisfied to use SEM analysis. Sampling in this research with simple random sampling technique.

3.4 Data Analysis Technique

The data collected from the perceptual approach compiled in the questionnaire will be analyzed using descriptive analysis and multivariate statistical method (Structural Equation Modeling) with the application of AMOS version 18 software.

4. RESULTS AND DISCUSSION

4.1 Normality test

Based on the results of processing CR value of multivariate value of 2.163 which is between the interval -2.58 to 2.58, it is concluded multivariate normality assumption has been fulfilled, thus assumption of normality needed by SEM analysis have been fulfilled.

4.2 Outlier Test

The result of outlier test with Mahalanobis distance squared shows that observation variable has Mahalanobis Distance Observed Variable which is detected as smaller than chi square table (df = 20, α = 0,001) that is 45,32. Based on the results of the analysis is known that the 20 indicators used in this study have the value of Mahalanobis distance squared is smaller than 45.32 so that no containing outlier.

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4.3 Multicollinearity and Singularity Test

Based on the SEM output analyzed using AMOS the determinant of the sample covariance matrix shows a result of 1.103, which means that the value is greater than zero, so it can be concluded that there is no multicollinearity or singularity, so this data is feasible to use.

4.4 Results of SEM Analysis

In accordance with the study of literature and research objectives, then developed the overall structural model as follows:

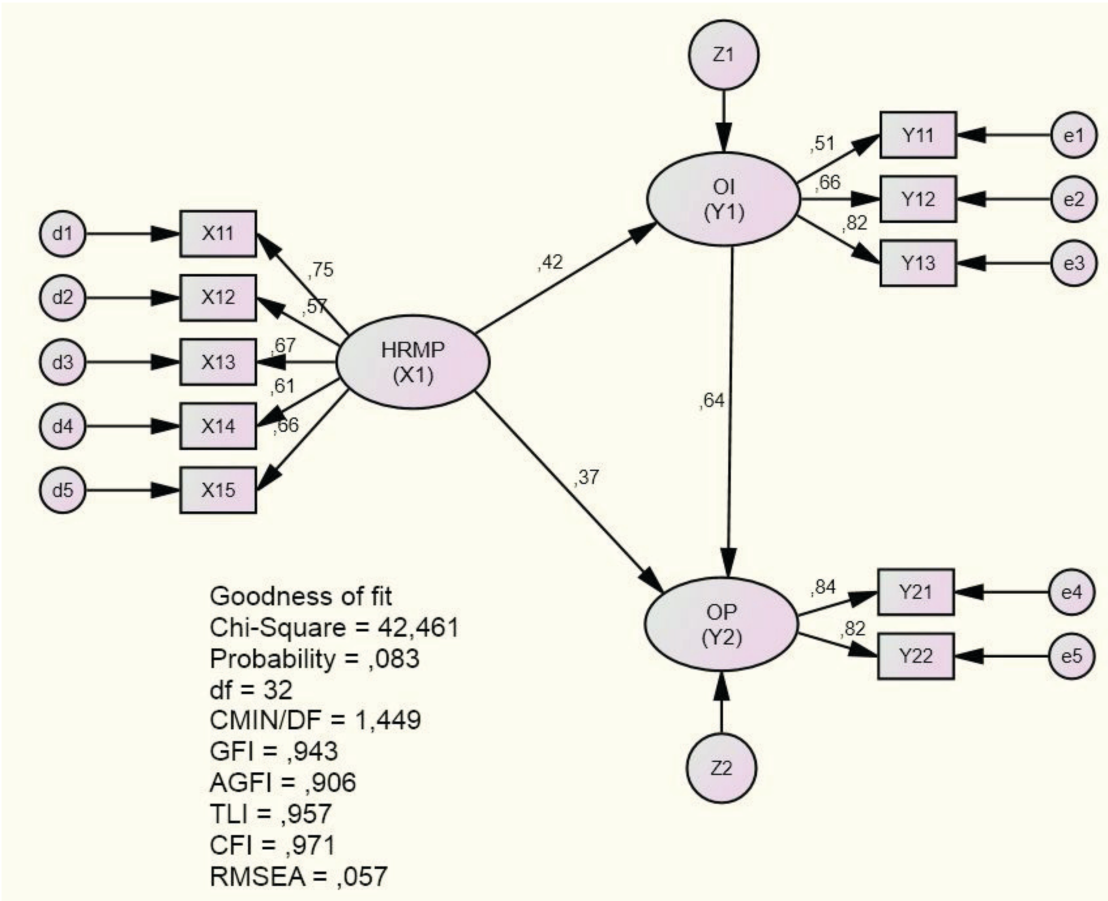

Figure 1 Results of SEM Analysis

Information:
HRMP (HR Management Practice)

X_{11} = Evaluate employee performance
X_{12} = Employee Career Management
X_{13}= Employee training and development

X_{14} = Reward system running
X_{15} = Employee recruitment

OI (Organizational Innovation)
Y_{11} = Product innovation
Y_{12} = Innovation process
Y13 = Innovation procedure
OP (Organizational Performance)
Y_{21} = Marketing performance
Y_{22} = Financial performance

Based on AMOS 18 computations for this SEM model, a goodness of fit indexes are presented in Table 1. Furthermore, these index values are compared with the cut-off values of each index. A good model is expected to have the goodness of fit indices that are greater or equal to the critical value.

Table 1. Test Result of Goodness Of Fit Modified Structural Model

Goodness Of Fit Index	*Cut-off Value*	Model Results	Information
Chi-Square (df = 32)	46,19	42,461	Good
Probability Chi-Square	≥ 0,05	0,083	Good
CMIN/DF	≤ 2,00	1,449	Good
RMSEA	≤ 0,08	0,057	Good
GFI	≥ 0,90	0,943	Good
AGFI	≥ 0,90	0,906	Good
TLI	≥ 0,95	0,957	Good
CFI	≥ 0,95	0,971	Good

Source: Primary data processed, 2017.

Based on the evaluation of the Goodness of Fit Indices criteria in Table 1, it shows that the evaluation of the overall model meets the acceptable model.

Table 2. Hypothesis Testing

Hip	**Variable**			**Regression Coefficients**				**Information**
	Eksogen	**Mediasi**	**Endogen**	**Direct**		**Indirect**	**Total**	
				Koef.	**Prob.**			
H_1	HR Management Practice	-	Organizational Innovation	0,42	0,001*	-	0,42	Supported
H_2	HR Management Practice	-	Organizational Performance	0,37	0,000*	-	0,37	Supported
H_3	Organizational Innovation	-	Organizational Performance	0,64	0,000*	-	0,64	Supported
H_4	HR Management Practice	Organizational Innovation	Organizational Performance	0,37	0,001*	0,27	0,64	Supported

* Significant at α 5%.

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5. DISCUSSION

5.1 Description of Organizational Performance, Organizational Innovation, and HR Management Practice

Organizational Performance is formed by marketing performance and financial performance. The most significant contribution to the formation of Organizational Performance is marketing performance reflected in sales revenue, market share and customer satisfaction. Marketing performance is a measure of achievement gained from the overall marketing process activities of a company or organization. In addition, marketing performance can also be viewed as a concept used to measure the extent to which market achievements have been achieved by a product produced by the company. Marketing performance is a factor that is often used to measure the impact of a company's strategy. Company strategy is always directed to produce good marketing performance and also good financial performance. Good marketing performance is expressed in three major values, namely sales revenue, market share and customer satisfaction. Companies that are able to create competitive advantage will have the power to compete with other companies because their products will remain in demand by customers. As the concept of Robbins and Coulter (2005: 226) which states that Organizational Performance is the accumulation of the end result of all processes and activities of the organization. Organizational Performance is a complex but important concept, and managers need to understand the factors that contribute to high organizational performance.

Organizational Innovation established product innovation, process innovation, and innovation procedures. The most significant contribution to the formation of Organizational Innovation is the innovation of the procedure reflected in the improvement of the administrative system so that the procedure is faster and efficient, the decrease in intensity of interaction between people and people in the company's activities makes administration faster, set new distribution channels so that product delivery to market faster Without lowering the quality, new marketing method policies lead to easier and faster administrative requirements and openness/transparency will encourage employees to work better in the administration/working procedures of the company. As Tan and Nasurdin (2011) concepts that Organizational Innovation is the ability to create new ideas and new ideas and behaviors for the organization, this consists of product innovation, process innovation and innovation in administration (procedure).

HR Management Practice is formed from employee performance evaluation, employee career management, employee training and development, reward system run, and employee recruitment. The main contribution to the establishment of HR Management Practice is the evaluation of the performance of employees reflected in the performance evaluation of the company is able to increase employee commitment and satisfaction, fairness in the evaluation of

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employee performance will greatly motivate employees to work better, commitment and employee satisfaction will encourage employees more innovative in work, A consistent performance evaluation used by the company in evaluating the performance of company employees, and annual performance evaluation helps many companies in improving the system of corporate administration. Performance evaluation is a method and process of assessment and execution of duties of a person or group of persons or units of work within a company or organization in accordance with predetermined performance standards or objectives. Performance evaluation is the fairest way to reward employees. The purpose of performance evaluation is to ensure the achievement of the goals and objectives of the company and also to know the company's position and the level of achievement of corporate goals, especially to determine if there is delay or deviation to be repaired immediately so that goals or objectives are achieved. Individual performance evaluation results can be utilized for many uses. As the concept of Delery and Doty (1996), HR Management Practice is also conceptualized as a consistent set of internal policies and planning and implementation frameworks to ensure human capital contributes to the achievement of business goals.

5.2 Effect of HR Management Practice on Organizational Innovation

Organizational Innovation is a new way and perspective to add value to the output of the organization. The success of Organizational Innovation is influenced by HR Management Practice, innovation ability, and transformational leadership. HR Management Practice has Organizational Innovation influence when applied employee performance evaluation, employee career management, training and employee development, reward system and recruitment of employees. An organization will be able to create Organizational Innovation by utilizing the potential of human resources, both knowledge, skills, and ability in creating innovative ideas. HR in the organization is a key element in the efforts to realize Organizational Innovation. Therefore employees in a company should be encouraged to innovate through the implementation and development of HR Management Practice. The results of this study are consistent with Tan (2011) which states that HR Management Practice contributes 18% to innovative products and processes and 30% on administrative innovation. HR management is required to be more proactive and responsive. All activities undertaken should be able to anticipate the various developments that occur, then take action to deal with business issues related to human resources. Human resource management (MSDM) has been transformed from a stand-alone specialization function into a function that is integrated with all other functions within the organization, to achieve established goals. Changing the functionality and focus of MSDM requires changing the qualifications of MSDM managers in order to keep up with developments and respond accordingly. As appropriate, current company

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calculations are aimed at the continuous and significant development of human resources management. The development of human resource management must meet the needs of the organization and developmental demands. Can not be denied by the rapid development of human resource management technology directed to support a broad and growing business. As Schuler and Jackson (1987) conclude that human resource management practices are a system that attracts, develops, motivates and retains employee so as to ensure effective implementation for survival a company.

5.3 Effect of HR Management Practice on Organizational Performance

HR Management Practice plays a role in improving Organizational Performance. HR Management Practice which gives the biggest contribution to the improvement of Organizational Performance is performance evaluation reflected from performance evaluation of company able to increase commitment and employee satisfaction, fairness in employee performance evaluation will motivate employees to work better, commitment and employee satisfaction will encourage more employees Innovative in work, consistent performance evaluation of the company's use in evaluating the performance of company employees and performance evaluation that do annual help many companies in the improvement of corporate administrative system. HR is part of the strategic planning process and is part of developing organizational policies and practices. The development of information technology and communications technology requires the company to have competent human resources that HR has managerial talent with knowledge, skills, and high ability to master the development of technology. Therefore, it is necessary for human resource management to achieve the main target of improving and creating high-quality human resources and managerial skills and mastery of technology so that Organizational Performance can be achieved. This is in line with Schuler and Jackson's (1987) opinion that human resource management practices are a system that attracts, develops, motivates and makes retain employees work to ensure effective implementation For the survival of a company. Organizational Performance is a description of the work of the organization in achieving organizational goals which of course will be influenced by the resources owned by the organization. The results of this study support Susilowati et al. (2013) stating that HR Management Practice has an effect on Organizational Performance.

5.4 Organizational Innovation Effect on Organizational Performance

Organizational Innovation is an effort to maintain the organizational existence and enhance organizational progress, with Organizational Innovation expected to respond to environmental complexity and dynamics of environmental change especially in tight competition and create resources for

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competitive advantage. This can be achieved through product innovation, process innovation, and procedural innovation. As Tan and Nasurdin (2011) concepts that Organizational Innovation is the ability to create new ideas and new ideas and behaviors for the organization, this consists of product innovation, process innovation and innovation in administration (procedure). Product innovation is reflected in new product innovations made technically, the specifications and functions as a whole are different from the present; The novelty of the product now leads to improved use and customer satisfaction; Product breaking now uses components and materials that are different from the previous ones; There is a decrease in the production costs, components, and materials of the present product and there is an increase in the quality of production in terms of components and materials of the present product. Process innovation is reflected in reducing the activity of distribution companies that have no added value for the company, lowering variable costs and increasing the speed of delivery in terms of logistics processes, reducing the process step so that production costs become cheaper, it is important for companies to choose the right location to get the production factor Cheaper locally and globally, and need optimization in terms of energy so that the production process is really the most efficient. Innovation of the procedure is reflected in the improvement of the administrative system so that the procedure is faster and efficient, the decrease in the intensity of interaction between people and people in the company's activities to make administration faster, set new distribution channels so that product delivery to market faster without lowering the quality, Leading to easier and faster administrative requirements and openness/transparency will encourage employees to work better in the administration/ working procedures of the company.

Organizational Innovation indicator that most influence Organizational Performance is innovation procedure. Innovation procedures involve the way in which products and processes are integrated into the operations of an organization. The better the implementation of organizational invoices can increase the Organizational Performance in terms of marketing performance and financial performance. The results of this study support the research Suryo (2010) and Sartika (2015) which states that Organizational Innovation effect on Organizational Performance.

5.5 Effect of HR Management Practice on Organizational Performance Through Organizational Innovation

HR Management Practice is reflected from employee performance evaluation, employee career management, training and development, reward system, recruitment. This research has provided theoretical meaning that Organizational Innovation is mediating the influence of HR Management Practice on Organizational Performance. Organizational Innovation indicator that gives the biggest contribution is reflected from the innovation of procedure

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such as improvement of administrative system so that the procedure is faster and efficient, the decreasing intensity of interaction between person and person in company activity makes administration faster, set new distribution channel so that product delivery to market faster Without lowering the quality, new marketing method policies lead to easier and faster administrative requirements and openness/transparency will encourage employees to work better in the administration/working procedures of the company. Thus the HR Management Practice represented by the employee performance evaluation reflected in the fairness in the employee performance evaluation will greatly motivate the employees to work better..

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

Organizational Performance is formed by marketing performance and financial performance. The main thing is the establishment of Organizational Performance marketing performance is reflected in the market share. Organizational Innovation is formed from product innovation, process innovation, and procedural innovation. The main thing in the formation of Organizational Innovation is the innovation of the procedure is reflected from the improvement of the administrative system so that the procedure more quickly and efficiently. HR Management Practice, in this case, is formed by employee performance evaluation, employee career management, training and employee development, reward system run, and employee recruitment. The main thing about the establishment of HR Management Practice is the evaluation of employee performance reflected in the fairness in the evaluation of employee performance will greatly motivate the employees to work better.

HR Management Practice has an effect on Organizational Innovation. This finding can be explained that the HR Management Practice that is perceived by employee performance evaluation can improve Organizational Innovation.

HR Management Practice has an effect on Organizational Performance. This finding can be explained that HR Management Practice that is preceded by employee performance evaluation, can improve Organizational Performance.

Organizational Innovation is an effort to maintain the existence of the organization in order to increase Organizational Performance. The results of this study are in line with Suryo (2010) and Sartika (2015) stating that Organizational Innovation has an effect on Organizational Performance.

HR Management Practice has an effect on Organizational Performance through Organizational Innovation. Organizational Innovation is a booster (mediate) HR Management Practice on Organizational Performance. This gives the meaning of Organizational Performance in the form of marketing performance and financial performance can be established if Organizational Innovation is formed from HR Management Practice that is supervised by employee performance evaluation. This HR Management Practice can create Organizational Innovation. Organizational Innovation will create Organizational Performance.

6.2 Recommendation

Theoretically

Enriching the concept of Organizational Innovation by developing the concept of HR management practices, as a driver of Organizational Performance.

Practically

The Company maintains a good Organizational Performance, and for the coming years is further enhanced on the financial aspect by operating cost efficiency as it will affect the size of the profits to be gained from the sale.

Companies can make improvements with the main priority that needs to be fixed on the ability is the adjustment of work given to employees who are tailored to the interests and talents as well as knowledge and motivation to employees to be more creativity in doing the work such as providing computer facilities and internet in the environment so that employees can With easy to see information and trends in the world of industry and commerce.

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Creative Industry Competitiveness in Indonesia (Study on Creative Industry Map)

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ABSTRACT

The Department of Commerce has determined the economy in the creative industry into 14 (fourteen) sectors: (1) advertising services, (2) architecture, (3) art and antiques market, (4) craft, (5) design, (6) fashion, (7) video, film and photography, (8) interactive games (9) music, (10) performing arts, (11) publishing and printing, (12) computer and software services, (13) television and radio, (14) research and development. Mapping of creative industrial areas is done so that the process of guidance and distribution of assistance from local and central government and the management of the creative industries from each region focused so that the regions have characteristics in producing the creative industry and can compete in the current era of globalization. Creative industry in Indonesia began to mushroom in 2007, but many people still do not understand what sectors are included into the creative industry and its development. With so many people's lack of understanding of the creative industry, it makes its own homework for the government to socialize the creative industries so that the government seeks to map the creative industries in Indonesia. Though the creative industry is able to contribute greatly to the Gross Domestic Product (GDP) of an area and create jobs. This study aims to further understand the characteristics of creative industries, as well as to identify the constraints and opportunities faced by creative industry players in Indonesia. To identify and analyze the creative industries used 4 quadrant statistical methods Location Quadrant (LQ) and Dynamic Location Quotient (DLQ). This study uses secondary data of large and medium industry statistics as well as small and micro industries in 2010-2013 at Provincial level obtained from the Central Bureau of Statistics (BPS). The results of this mapping study will provide a general overview of the creative industries sector that has competitiveness in every region or province in Indonesia.

Keywords: creative industry, competitiveness and globalization.

1. INTRODUCTION

The creative industry is often expressed by various economic experts as the fourth wave industry after agriculture, industry and information technology. Although still not widely popular in Indonesia, the creative industry is often declared a highly prospective future industry. Based on data of

Bank Indonesia Annual Report 2011 (Strategic Plan Kemenparekraf RI 2012-2014) the condition of national economic growth sourced from the sectors of the processing industry, trade, hotels and restaurants and the sector of transportation and communication. In all three sectors, the tourism business and creative industries show a link between the two industries. The main capital needed in the creative industry is not large-scale physical capital or large machinery, but a creative and resilient labor capital, a mix of creativity, expertise, and individual talent. According to the definition expressed by the UK Department of Culture, Media and Sports (DCMS), creative industries are activities that are sourced from the creativity, skills and talents of individuals who have the potential to achieve prosperity and employment through the manufacture and exploitation of intellectual property (UNCTAD, 2008 and Gibbon, 2011).

In some countries, the creative industry plays an influential role. In the United Kingdom, the pioneer of creative economy development, shows the growth of creative industries that affect the industry grows an average of 9% per year. This figure is far above the average growth of the country's economy ranges from 2% -3%. Contribution to national income reached 8.2% or US $ 12.6 Billion and was the second largest source after the financial sector. This exceeds revenues from manufacturing industries and oil and gas. In South Korea, the creative industry since 2005 accounts for more than manufactures. While in Singapore the creative economy contributes 5% to GDP or US $ 5.2 Billion. The global creative economy is expected to grow 5% per year and is expected to grow to US $ 6.1 Trillion by 2020. In Indonesia, the development of creative industries contributes significantly to the economy and employment, and has an important role in resource empowerment human.

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Based on Table 1 it can be seen that the development of creative industries from 2010 to 2013 contributed to the economic growth of Indonesia. Indonesia is one of the countries that have potential in the development of creative industries both in the ASEAN region and the world market. It cannot

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be separated from the potential of raw materials in Indonesia are abundant. However, the ability of Indonesian human resources in technology transfer and creativity is still relatively low, thus impacting the development of creative industries that tend to be slow.

2. LITERATURE VIEW

The definition of creative industry based on foreign reference is as follows: Creative Industries as the manufactures which have their origin in the individual creativity, skill and talent, and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. This includes: advertising, architecture, art and antiques market, crafts, design, fashion designer, film and video, interactive leisure software, music, performing arts, publishing, software and computer services, television & radio.

Table 1. The Development of Indonesia's Creative Industry Year 2010 - 2013 (Millions of Rupiah)

Indicators	Unit	2010	2011	2012	2013	Average
A. Gross Domestic Product Based						
Value Added Creative Economy (ADHB)	Billion Rupiah	472.999	526.999	578.761	641.815	555.144
Contribution of Added Value of Creative Economy to Total GDP (ADHB)	Percent	7,34	7,10	7,02	7,05	7,13
Growth of Value Added Creative Economy (ADHK)	Percent	---	5,02	4,47	5,76	5,09
B. Employment Based						
Number of Creative Economy Workers	People	11.493.875	11.661.900	11.799.568	11.872.428	11.706.942
Labor Participation Rate on National Employment	Percent	10,62	10,63	10,65	10,72	10,65
Growth of Creative Economy Workers	Percent	---	1,46	1,18	0,62	1,09
Productivity of Creative Economy Workers	Thousand Rupiah / Worker of the Year	939.480	964.030	985.515	1.038.795	981.955
C. Corporate Activity						
Number of Creative Economy Companies	Company	5.263.458	5.331.713	5.398.162	5.420.165	5.353.374
Contribution of Total Companies to Total Business	Percent	9,65	9,70	9,72	9,68	9,69
Growth of Corporate Number	Percent	---	1,30	1,25	0,41	0,98
Value of Export of Creative Economy	Million Rupiah	96.703.035	105.190.164	110.144.803	118.968.032	107.751.50
Contribution of Export to Total Export	Percent	6,10	6,95	5,51	5,72	6,07
Growth of Creative Economy Exports	Percent	---	8,78	4,71	8,01	7,17
D. Based on Household Consumption						
Value of Household Consumption of Creative Economy	Million Rupiah	642.327.558	707.499.440	781.871.935	866.542.117	749.560.26
Contribution of Household Consumption of Creative Economy	Percent	17,63	17,45	17,39	17,17	17,41
Growth of Household Consumption	Percent	---	10,15	10,51	10,83	10,50

Source: BPS, processed 2017

From the definition of the Ministry of Trade of RI further explore how to calculate it, then obtained one method of calculation quickly by using secondary data that is based on KBLI (data from BPS). From the data there are 14 subsectors that can be described the economic contribution figures. Other definitions related to crater industry are creativity, skill, and talent, namely: (i) creativity (or creativeness) is a mental process involving the generation of new

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ideas or concepts, or new associations between existing ideas or concepts. (ii) A Skill is the ability or talent to perform a task well or better than average. (iii) Talent is a personal gift / skill.

Some argue that creative economy is the same as creative industry. Research by the New England Foundation of the Arts (NEFA) states: Therefore, our definition of the economic economy is represented by the 'cultural core'. . Excluded are products or services that result from non-culturally based innovation or technology. While a broader notion of the creative economy is valuable to examine, we concentrate on what can be considered the cultural component of the creative economy. The center circle, labeled "Cultural Core," represents NEFA's new research deficit and is nested within a broader circle of creative industries. The band around the core labeled "Cultural Periphery" representing the occupation and industry categories that may be added to the core to customize a particular local creative economy study being done.

The creative economy according to Toffler's theory states that the wave of human civilization is divided into three waves. The first wave is the century of agriculture. The second wave is the industrial age and the third wave is the information age. In the meantime, Toffler just stopped here. But the theories continue to grow, today's human civilization with sharp competition and globalization, then enter human beings in the new civilization era is the fourth wave. Some call it a knowledge-based economy, some call it a creativity-oriented economy. According to Howkins (2005: 4) creative economy is an economic activity in which input and output are ideas. The essence of creativity is the idea. Imagine only with the idea capital, a creative person can earn a very decent income. Ideas that are original and can be protected by HaKI, for example are singers, movie stars, songwriters.

Thus, the views on creative economy and creative industries can be described as follows: (i) the industry basically focuses not only on the production of goods or services, but also on the distribution, exchange (sales, commercialization) and consumption of goods and services. It's just that industry is always associated with manufacturing or manufacturing (secondary industry), because in the era of industrialization is marked by the dramatic development of this manufacturing industry. (iii) Industry is part of the economy, or it can be said that industry is a segmentation of the economy (in the human effort to sort out the economic activity in more detail). (iv) Industry can be divided into major sectors (wikipedia version there are 4 main sectors, if based on BPS there are 9 main sectors), underlying the division of business field. These creative industry groups (ect music, advertising, architecture, etc.) will have a business field that is part of several industry sectors. Most of this creative industry field is a service industry. (v) The creative industry (version of the Ministry of Trade of the Republic of Indonesia) refers to the definition: "Industries which have their origin in individual creativity, skill and talent, and which have a potential for wealth and job creation through the generation and exploitation of intellectual property", Architectural services industry, advertising service industry. (vi) The creative economy is the same as the whole of the creative industry, that is, the entire industry covered by creative industry groups.

Thus, the views on creative economy and creative industries can be described as follows: (i) The industry basically focuses not only on the production of goods or services, but also on the distribution, exchange (sales, commercialization) and consumption of goods and services. It's just that industry is always associated with manufacturing or manufacturing (secondary industry), because in the era of industrialization is marked by the dramatic development of this manufacturing industry. (ii) Industry is part of the economy, or it can be said that industry is a segmentation of the economy (in the human effort to sort out the economic activity in more detail). (iii) Industry can be divided into major sectors (wikipedia version there are 4 main sectors, if based on BPS there are 9 main sectors), underlying the division of business field. These creative industry groups (eg music, advertising, architecture, etc.) will have a business field that is part of several industry sectors. Most of this creative industry field is a service industry. (iv) The creative industry (version of the Ministry of Trade of the Republic of Indonesia) refers to the definition: "Industries which have their origin in individual creativity, skill and talent, and which have a potential for wealth and job creation through the generation and exploitation of intellectual property" , Architectural services industry, advertising service industry. (v) The creative economy is the same as the whole of the creative industry, that is, the entire industry covered by creative industry groups.

1. Advertising services	8. Interactive games
2. Architecture	9. Music
3. Art and antiques market,	10. Performing arts
4. Craft	11. Publishing and printing
5. Design	12. Computer and software services
6. Fashion	13. Television and radio
7. Video, film and photography	14. Research and development

Figure 1. Creative Industry Sector

The influential contribution of the creative industry to GDP makes the Indonesian government begin to realize that the creative industry is a new economic source that must be developed further in the national economy. The Ministry of Commerce registers 14 sectors in the creative industry category: advertising services, architecture, arts, craft, design, fashion, film, video and

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photography, interactive games, music, performing arts, publishing and printing, computer and software services, Television and radio and research and development.

Geographical mapping of creative industries in Indonesia is conducted as a study of creative industries in Indonesia aimed at elaborating the dynamics and characteristics of creative industries in Indonesia. The results of this mapping study will provide a general overview of the creative industries sector that has competitiveness in every region or province in Indonesia.

3. RESEARCH METHODS

The mapping study on the competitiveness of creative industries at the provincial level is expected to elaborate the dynamics and characteristics of creative industries in Indonesia. The definition of 'competitive creative industries' in this study is a group of creative industries that have superior levels of labor productivity and have high sectoral added value growth. Some of the data used in this study are: Industrial Output, Total Manpower, Labor Productivity, Industrial Added Value, and Number of Companies.

The comprehensive availability of data for the creative industries is the biggest challenge faced in conducting this study. The limitations of secondary data resulted in a study that could only be conducted for a certain period of time, limited to the provincial level, and covering only five industrial sectors. This study uses secondary data of large and medium industry statistics as well as small and micro industries in 2010-2013 at Provincial level obtained from the Central Bureau of Statistics (BPS). The availability of existing secondary data, then there are only five groups of creative industry sectors that can be analyzed are: craft, design, publishing and printing, fashion, and music.

This study aims to further understand the characteristics of the creative industry, as well as to identify the constraints and opportunities faced by creative industry players in Indonesia. Of the 5 creative industry sectors discussed in the above mapping study, selected craft sectors were analyzed in more depth in this survey. The handicraft industry sector is chosen because it is considered to have an influential contribution in terms of contribution to the economy, employment, and the empowerment of local natural resources and Indonesian culture in a more optimal way. There is no possibility that this method of study will be used to see the characteristics, obstacles and opportunities faced by other sectors.

To identify and analyze industries with superior labor productivity compared to average industrial labor productivity, used Quadrant static Quadrant (LQ) and Dynamic Location Quotient (DLQ) analytical tools. In addition, there is also a classification of sector added value growth into high, average and low categories. The results of industry identification with superior labor productivity are combined in one dimension with added value growth. By using Geographical Information System (GIS) tool, we can know the location of competitive industries that have been analyzed previously and its characteristics or patterns. The typology approach is used at the end of the process to identify and analyze the patterns of creative industries competitive in certain areas, and specifically to see the potential of the industry to move forward in the future.

All of these provinces have been identified in geographic mapping studies as provinces with high competitiveness and strong value chains and have the largest number of creative craft industry entrepreneurs, both for micro and small and medium enterprises and large enterprises. The six selected provinces are: Central Java, DI Yogyakarta, Bali, West Nusa Tenggara, South Sulawesi, and West Sumatra. In addition, West Java Province was also adopted because although the study did not show that the province had a higher competitiveness than the national average, statistics show that this province is one of the most influential and highly valued industrial pockets in Indonesia Strong enough with other areas that have competitiveness in the handicraft sector. Limitations of statistical data allow for areas not identified as pockets of craftsmen and not represented in this study.

The number of samples in each Province is determined based on a percentage of the total number of companies listed in the data of Large and Medium Industry and Micro and Small Industries compiled by the Central Bureau of Statistics (BPS). Percentage of samples for each Province are as follows: Central Java: 34%, West Java: 24%, Bali: 13%, DI Yogyakarta: 11%, South Sulawesi: 7%, Nusa Tenggara Barat: 6%, and West Sumatra: 5%

4. RESULTS AND DISCUSSION

4.1 Profile of GDP of Creative Industry In Indonesia

Average Contribution of Creative Industry GDP Year 2002-2006 based on 2000 constant price is 104.6 Trillion Rupiah, which is 6.3% of the total value of National GDP. The contribution of creative industry GDP in 2006 based on 2000 constant prices amounted to 104.8 trillion Rupiah, which is 5.7% of the total national GDP. The largest contribution of creative industry GDP was in 2004, amounting to 108.412 Trillion Rupiah, which is 6.54% The contribution of the average GDP of the creative industry is ranked 7th out of 10 major business fields that have been defined by BPS. The GDP of Creative Industries has been contributed by Fashion, Handicraft, Advertising & Design Group with the average value of GDP of creative industry group in 2002-2006 are 46 Trillion Rupiah (44.18%), 29 Trillion Rupiah (27.72 %), 7 Trillion Rupiah (7.03%), and 7 Trillion Rupiah (6.82%).

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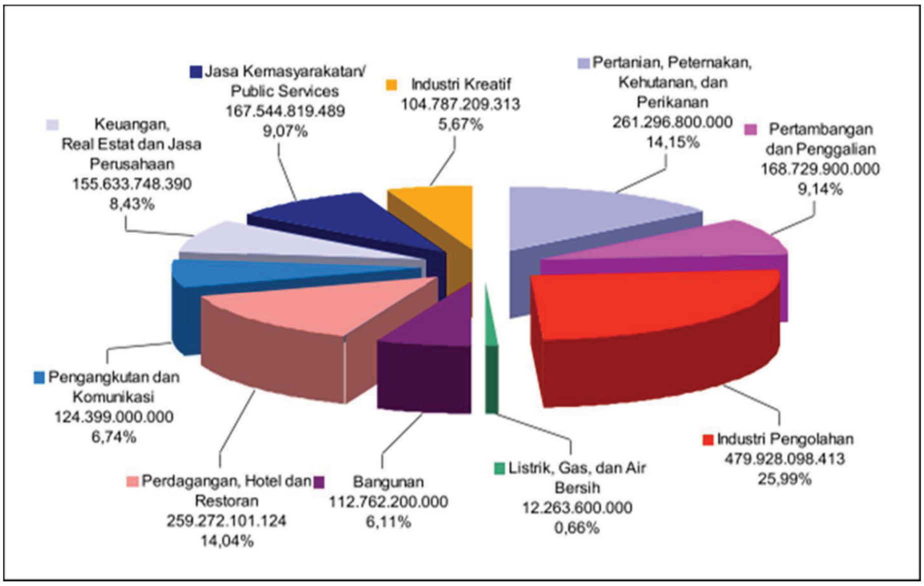


Figure 2. The Value of GDP 9 Main Sectors of Business and Creative Industries

The creative industry needs to be developed because it affects: (i) contributes to an influential economy. (ii) Creating a positive business climate. (iii) Building the image and identity of the Nation. (iv) Based on renewable resources. (v) Creating innovation and creativity is a competitive advantage of a nation. (vi) Provide a positive social impact

Impact of Creative Industry

Figure 3 Creative Industry Development

5. RESULT OF THE STUDY

5.1 Competitiveness Analysis of Creative and Large Scale Industry Sector

The results of secondary data processing for the large and medium scale creative industries are shown by Table 2 which provides an overview of the creative industries sector that is competitive in a number of Provinces in Indonesia. By sector, the secondary data processing results show that for the medium and large scale industries, from five creative industry sectors analyzed, namely the craft industry, design, fashion, printing and publishing, and music, there are only three industry sectors that can be categorized as A competitive industry sector. The three industry sectors are the handicraft, design and fashion industries. This is indicated by the value of LQ (Location Quotient), DLQ (Dynamic Location Quotient) greater than 1 and has a value of GVA (Growth Value Added) or high added value growth (positive value added growth).

Geographically, the results of data processing also shows that not all Provinces have a competitive creative industry sector. The competitive industrial sector is an industry sector that has a superior level of labor productivity and has a high growth of sectoral added value. There are only 10 Provinces with at least one competitive creative industry sector: West Sumatera, South Sumatera, Riau Islands, West Java, Special Region of Yogyakarta, East Java, Banten, East Kalimantan, Central Sulawesi, Maluku.

This competitive sector of creative industry is supported by highly qualified workers in their fields and has the potential to stay ahead in the future. Based on the methodology used in this study, an industry sector is defined to remain superior in the future if it has a positive and highly valuable growth trend in labor productivity over time so it can be predicted to continue to have that advantage in the future. Skilled, creative and productive human resources are the basic strengths of superior creative workforce or creative industry resources, but to make a superior industrial sector a role for a number of factors: infrastructure or other institutions such as work environment, technology, incentives, financial resources, Market access, and regulation that enable a sector to create high added value from the resulting product.

Table 2. Competitiveness Analysis 5 Creative Industries Sector Medium and Large Scale

SECTOR	West Sumatera			South Sumatera			Riau Island		
	LQ	DLQ	GVA	LQ	DLQ	GVA	LQ	DLQ	GVA
Craft	2.84	6.00	166.42	1.25	2.56	220.69	3.48	0.03	121.52
Design	0.00	0.00	0.00	0.00	0.00	0.00	1.41	31.45	128.29
Fashion	3.52	3.73	-33.67	0.83	2.02	75.09	1.19	25.34	198.63
Publishing & Printing	1.14	0.45	-28.52	2.27	-0.83	237.67	0.32	-1,312.37	302,889
Music	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SECTOR	West Java			DI Yogyakarta			East Java		
	LQ	DLQ	GVA	LQ	DLQ	GVA	LQ	DLQ	GVA
Craft	1.34	-3.05	-10.94	1.75	1.19	51.38	1.07	-1.05	51.19
Design	0.83	-0.32	-43.05	0.31	16.58		1.04	0.52	130.60
Fashion	1.12	1.95	93.53	3.40	2.33	101.67	1.30	1.23	245.01
Publishing & Printing	1.31	-2.09	-231.90	1.16	-2.44	140.14	1.15	-0.31	-14.74
Music	0.27	0.00	0.00	0.00	0.00	0.00	0.24	-0.04	46.00

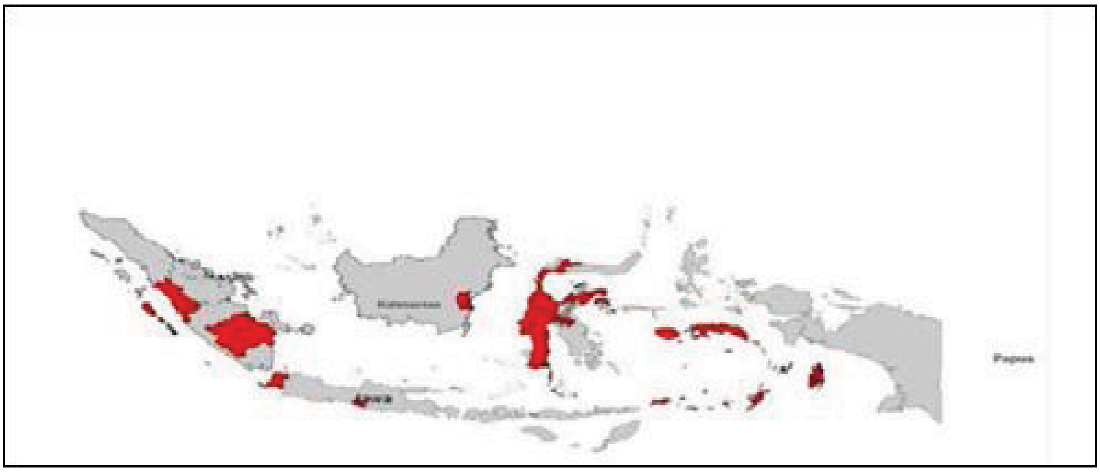
SECTOR	Banten			East Kalimantan			Central Sulawesi		
	LQ	DLQ	GVA	LQ	DLQ	GVA	LQ	DLQ	GVA
Craft	1.30	5.35	67.60	5.05	8.47	584.59	1.17	15.33	10.02
Design	1.12	0.55	25.89	0.00	0.00	0.00	0.00	0.00	0.00
Fashion	1.09	0.15	35.82	1.51	4.74	56.63	0.00	0.00	0.00
Publishing & Printing	1.16	-0.16	736.71	1.11	0.96	-41.16	2.51	0.15	204.98
Music	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SECTOR	Maluku		
	LQ	DLQ	GVA
Craft	6.56	1.32	36.35
Design	0.00	0.00	0.00
Fashion	0.00	0.00	0.00
Publishing & Printing	1.13	0.97	-32.50
Music	0.00	0.00	0.00

Source: BPS data is processed, 2017

Handicraft Industry

The competitive and competitive sector of handicraft industry can be found in almost every province, namely: West Sumatra, South Sumatera, Special Region of Yogyakarta, Banten, East Kalimantan, Central Sulawesi and Maluku. This is as shown in the mapping using GIS analysis shown in Figure 4.



Source: BPS data is processed, 2017

Figure 4. Location of Large and Medium Scale Business Competitiveness

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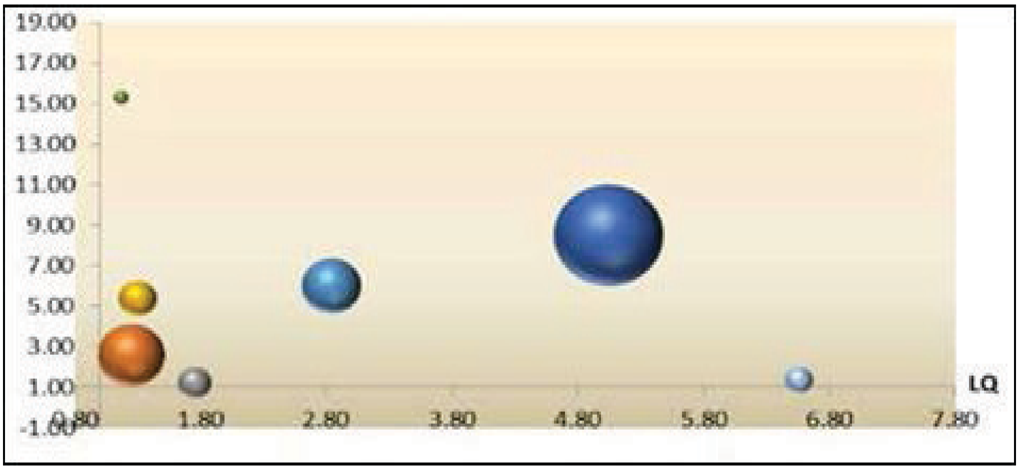
The result of competitiveness analysis on the large and medium scale handicraft sector shown in Table 3 shows that the labor productivity of the large and medium scale handicraft industry in East Kalimantan Province is higher (superior) and has the potential to keep ahead compared to the average Labor productivity of the sector in other provinces. The ability of existing resources also proved quite capable of creating a high added value growth.

Table 3. Competitiveness Analysis of Craft Industry Sector Medium and Large Scale

PROVINCE	LQ	DLQ	GVA
West Sumatera	2.48	6.00	166.42
South Sumatera	1.25	2.56	220.69
Riau Island	3.48	0.03	121.52
West Java	1.34	-3.05	-10.94
DI Yogyakarta	1.75	1.19	51.38
East Java	1.07	-1.05	51.19
Banten	1.30	5.35	67.60
East Kalimantan	5.05	8.47	584.59
Central Sulawesi	1.17	15.33	10.02
Maluku	6.56	1.32	36.35

Source: BPS data is processed, 2017

The analysis of the 4 quadrants shown in Figure 5 also shows that the most competitive and competitive sector of handicraft industry is in East Kalimantan Province. This is indicated by the location of the circle representing East Kalimantan Province located in the quadrant 2 area with the position value that is getting away from the zero point. The magnitude of the circle shows the growth rate of added value created by the handicraft sector in each Province, the larger the circle shows the higher the growth of added value generated.



Source: BPS data is processed, 2017

Figure 5. Mapping Analysis 4 Creative Industry Quadrant of

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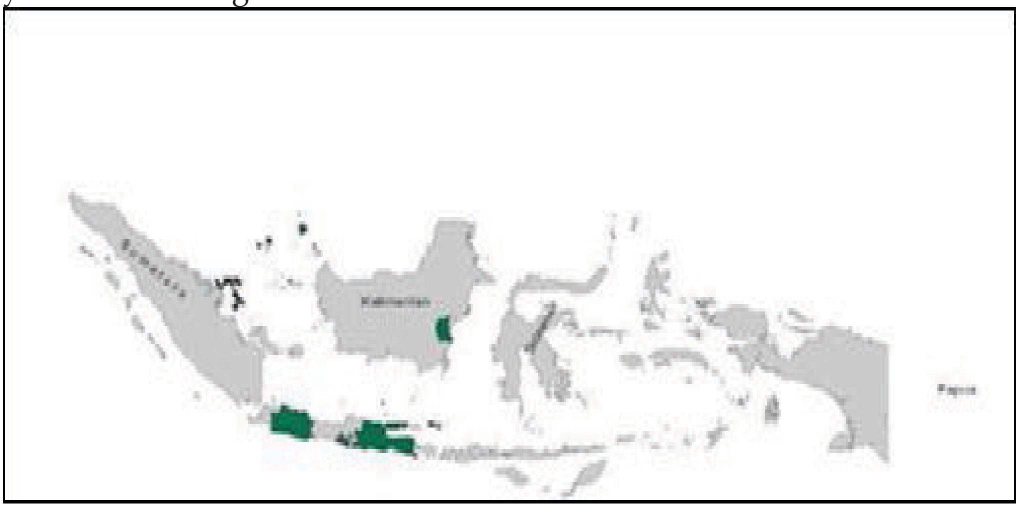
Large Scale and Large Scale Industry Sector

Based on the classification of each creative industry sector that has been done by the Ministry of Trade (2009), the handicraft industry sector consists of several components of industrial sub-sector. Referring to the data obtained from BPS for large and medium scale handicraft industry, it was analyzed that the components of handicraft industry sector which contributed the value of labor productivity and high added value growth were furniture or furniture industry sub-sector (industry code ISIC 31001, 31003, 31004), industrial sub-sector of various handicrafts (ISIC 32903 industry codes), and knitting industry sub-sector (industry code ISIC 13911, 13134). Then, the result of analysis to the distribution of data from the sub-sectors of the handicraft industry shows that the wood-based craft industry, natural fiber, and weaving is the handicraft sector that dominates the large and medium scale handicraft business.

Fashion Industry

Competitive middle and large fashion industry sectors can be found in five Provinces of West Java Province, Special Region of Yogyakarta, East Java, East Kalimantan and Riau Islands. This is as shown in the mapping using GIS analysis shown in Figure 6 below.



Source: BPS data is processed, 2017

Figure 6. Location of Large and Medium Scale Fashion Industry

The results of competitiveness analysis conducted on the large and medium scale fashion industries are shown in Table 4 which explains that labor productivity of the large and medium scale fashion industry sector in Yogyakarta Province is superior compared to other provinces when measured in a period of time, however if Considering the potential to continue to excel in terms of labor productivity then the Riau Islands Province has better competitiveness in the future. The large and medium-sized fashion industry sector in East Java is better able to create added value of production than other provinces. Utilization of technology and innovation in the production process becomes a supporting factor in increasing the added value of production.

Table 4. Competitiveness Analysis of the Fashion Industry Sector Medium and Large Scale

PROVINCE	LQ	DLQ	GVA
West Sumatera	3.52	3.73	-33.67
South Sumatera	0.83	2.02	75.09
Riau Island	1.19	25.34	198.63
West Java	1.12	1.95	93.53
DI Yogyakarta	3.40	2.33	101.67
East Java	1.30	1.23	245.01
Banten	1.09	0.15	35.82
East Kalimantan	1.51	4.74	56.63
Central Sulawesi	0.00	0.00	0.00
Maluku	0.00	0.00	0.00

Source: BPS data is processed, 2017

The result of quadrant analysis shows that the most competitive and large scale industrial sector is located in DI Yogyakarta Province as measured from current labor productivity, this is shown in Figure 7 where the location of the circle representing DI Yogyakarta Province is in quadrant 2 area With the position most distant from the zero point measured from the X axis representing the LQ value. However, if measured by the growth of added value, the most competitive and competitive sector of the large and medium sized fashion industry is in East Java Province, this is shown in Figure 6 where the circle representing East Java Province is larger than Yogyakarta and other provinces. Then there is Riau Islands Province which has fashion industry sector with LQ value smaller than Yogyakarta and East Java Province but has DLQ value which is very high compared to both Province. The main components of the industrial sub-sector that contribute to the competitiveness of the fashion industry group are textile apparel industry sub-sector (ISIC 14111), footwear and footwear industries (ISIC 15202 and 15201).

Source: BPS data is processed, 2017

Figure 7. Mapping Analysis 4 Creative Industries Creative Quadrant Industry Large and Medium Scale Industries

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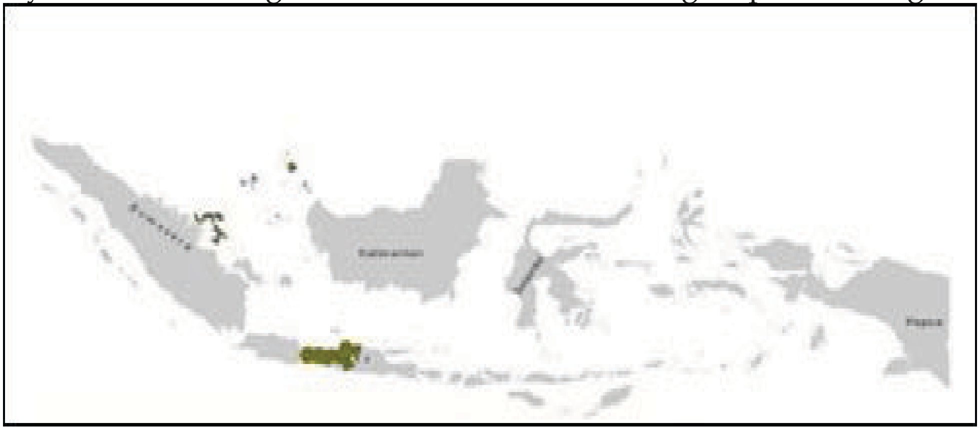
Industrial Design

The competitive large-scale industrial design sector only exists in Riau Province as indicated in the mapping using GIS analysis shown in Figure 8. Further investigation of the results of this data indicates that the packaging industry sector is the largest contributor of industrial groups this design.



Source: BPS data is processed, 2017

Figure 8. Location of Large and Medium Scale Design Industry

The results of the competitiveness analysis for the large and medium sized industrial design sector and the 4 quadrant analysis results as shown in Tables 5 and 8 show that the large and medium sized industrial design sector in the Riau Islands Province has a labor productivity that is not very superior at present Has the potential to excel in the future because it has a fairly high DLQ value (DLQ = 31.45), then the growth of added value of production from this sector is also quite high which is indicated by the large circle size. The main obstacle faced by this industrial sector to develop is the limited workforce that has the expertise and specialized knowledge in the field of product packaging and packaging design.

Table 5. Competitiveness Analysis of Design Industry Sector Medium and Large Scale

PROVINCE	LQ	DLQ	GVA
West Sumatera	0.00	0.00	0.00
South Sumatera	0.00	0.00	0.00
Riau Island	1.41	31.45	128.29
West Java	0.83	-0.32	-43.05
DI Yogyakarta	0.31	16.58	89.75
East Java	1.04	0.52	130.60
Banten	1.12	0.55	25.89
East Kalimantan	0.00	0.00	0.00
Central Sulawesi	0.00	0.00	0.00
Maluku	0.00	0.00	0.00

Source: BPS data is processed, 2017

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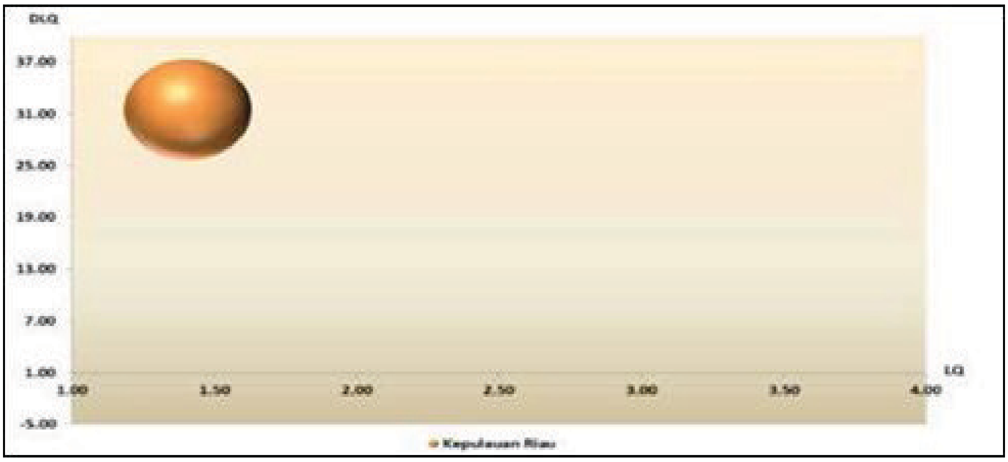
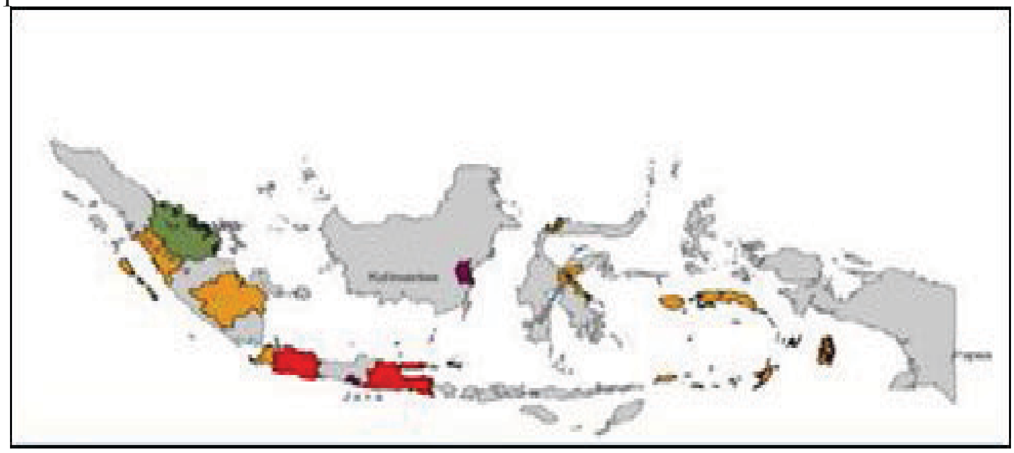


Source: BPS data is processed, 2017

Figure 9. Mapping Analysis 4 Creative Industry Quadrant of Competitive Design of Large and Medium Scale Industries

Overall, the results of GIS mapping analysis of all sectors of the competitive and large-scale creative industries show that the majority of competitive creative industries are concentrated in the islands of Java (Figure 10). The availability of supporting infrastructures and the ease of accessing raw materials sources as well as the factors of closeness to markets in big cities, especially the capital city of Jakarta, seems to be a supporting factor for the competitiveness of creative industries in Indonesia.



Source: BPS data is processed, 2017

Figure 10. Location of Creative Industries of Large and Medium Scale Competitiveness In Indonesia

In an effort to perform descriptive analysis and to identify and analyze the pattern of creative industry competitive in a number of Provinces which have been discussed above, the Classen typology approach is used. The Classen typology approach is actually more commonly used to find out the patterns and economic structures of a region or better known as regional typology analysis (Kuncoro, 2004), but in this study the tool will be used to look at patterns or characteristics of existing industries with little modification of classifications and variables Key used. Table 6 shows the typology of a large, medium-sized industrial sector that is competitive in some Provinces discussed earlier.

East Kalimantan Province handicraft industry sector included in the category fast forward and fast growing. This typology shows that this sector has the potential to develop well because it is supported by the adequacy of productive human resources and the dynamic growth of high output. The same thing happened in West Sumatera, South Sumatera and Banten provinces.

The handicraft industry sector in the Special Region of Yogyakarta is categorized as an advanced but depressed industrial sector. This can happen because the level of labor productivity is relatively lower than the national average due to several factors, namely the supply (supply or availability) of abundant labor and work in the handicraft sector compared with the capacity of the output market served, as well as the production mode Still relatively traditional and very limited in access to more efficient technology resulted in the level of labor productivity to be under pressure. Nevertheless, on the other hand the market still responds quite well to the resulting product, as evidenced by the high output growth. The same condition occurred in Maluku Province.

The fashion industry sector in West Java and East Java provinces falls into the category that needs attention. Although West Java province is famous for the textile industry center but in general, medium and large scale business actors in this industrial sector get considerable pressure. The Indonesian Textile and Textile Industry (TTP) generally faces various problems. Among the problems are expensive energy costs, unfavorable port infrastructure, mostly old textile machinery, and the rise of illegal imported products mainly from China. Those problems caused The Indonesian Textile and Textile Industry to run under unhealthy conditions. Operational costs become relatively expensive, but with relatively low productivity. It needs an ecosystem that supports the creative industries to be competitive.

Table 6. Typology of Creative Industry Sector Competitive Large and Medium Industry Sector

PROVINCE	Labor Productivity	Growth	Typology
West Sumatera	High	High	Industry Cluster Fast forward & Growing Fast
South Sumatera	High	High	Fast & Fast Growing Fast Industry
Riau Island	High	Low	Rapidly Growing Industrial Cluster
West Java	Low	Low	Relatively Reliable Industry Cluster
DI Yogyakarta	Low	High	Industrial Cluster Forward But Depressed
East Java	Low	Low	Relatively Reliable Industry Cluster
Banten	High	High	Fast & Fast Growing Fast Industry
East Kalimantan	High	High	Fast & Fast Growing Fast Industry
Central Sulawesi	Low	Low	Relatively Reliable Industry Cluster
Maluku	Low	High	Industrial Cluster Forward But Depressed

Source: BPS data is processed, 2017

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The results of the mapping analysis of the five sectors of the large-and medium-scale creative industries explained that sector there are three sectors of creative industry that can be categorized as competitive, namely the handicraft, fashion and design industries sector. Furthermore, when comparing the benefits of labor productivity and the ability to create added value of overall production and geographical distribution, the handicraft industry sector has a higher competitiveness than other sectors. The competitive and large-scale handicraft industry sector has a wider geographical distribution than the fashion and design sectors. Furthermore, the fashion industry sector also has LQ, DLQ, and higher value added values than other sectors in almost all provinces.

High LQ and DLQ values show that at present, the handicraft industry sector has superior labor productivity advantages over other sectors and has the potential to continue to excel in the future. However, the characteristics of handicraft industry sectors that still maintain traditional production patterns are still an obstacle to potential productivity gains in the future. This condition is illustrated by the DLQ value of the handicraft sector which is smaller than the fashion and design sectors in some areas such as Riau, D.I Yogyakarta and East Java. The high growth of added value indicates that the productivity created by the workforce in the handicraft sector has been supported by the high and growing market demand for handicraft products. The growth of added value becomes an important factor in determining the competitiveness of an industrial sector and contributes positively to economic growth.

The competitiveness of large and medium scale handicraft industries can be found in some provinces, but the most competitive is in East Kalimantan Province because it has the advantage of high labor productivity and the biggest added value growth among other provinces. Typologically, this province is categorized as a province with a fast-growing and fast-growing creative industry cluster. This can be interpreted that the competitiveness of the handicraft industry sector in East Kalimantan province is supported by productive human resources and high output growth.

5.2 Competitiveness Analysis of Creative and Small Scale Industries Sector

The analysis of the competitiveness of small scale and micro scale of creative industries are small and medium scale industries and small scale industries. Production capacity in Each business tends to be smaller. Creative industries are often associated with small and micro-scale industries or SMEs because the creative industries endeavor to utilize creativity and innovation from a limited number of human resources. Creative industries are also associated with many SMEs because many creative industries are start-up business actors, is business actors who are just starting a business.

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Competitiveness and mapping analysis methods conducted for large and medium industry data are also applied for small and micro data industry. Sector, the results of the analysis data show that from five creative industry sectors analyzed, there are only sectors of creative industry that can be classified as competitive, namely handicraft, fashion, design, and printing and publishing. Geographically, the results of the analysis data show that only 10 provinces, West Sumatra, South Sumatra, Jakarta, West Java, Central Java, DI Yogyakarta, East Java, Banten, Bali , West Nusa Tenggara, and South Sulawesi. The results of the analysis data are summarized in Table 7 below.

Table 7. Competitiveness Analysis 4 Creative Industry Sector Small and Micro Scale

SECTOR	West Sumatera		South Sumatera		Lampung	
	LQ	DLQ	LQ	DLQ	LQ	DLQ
Craft	0.94	1.35	1.30	(0.04)	0.78	0.46
Design					3.13	0.34
Fashion	2.13	1.13	1.81	2.47	1.55	0.55
Publishing & Printing						

SECTOR	Jakarta		West Java		Central Java	
	LQ	DLQ	LQ	DLQ	LQ	DLQ
Craft	1.41	0.66	1.11	0.74	1.23	1.73
Design	2.98		2.13	1.57	0.92	2.70
Fashion	1.26	2.64	1.32	1.57	1.71	0.51
Publishing & Printing	0.06	9.15	3.87	2.02	0.34	2.44

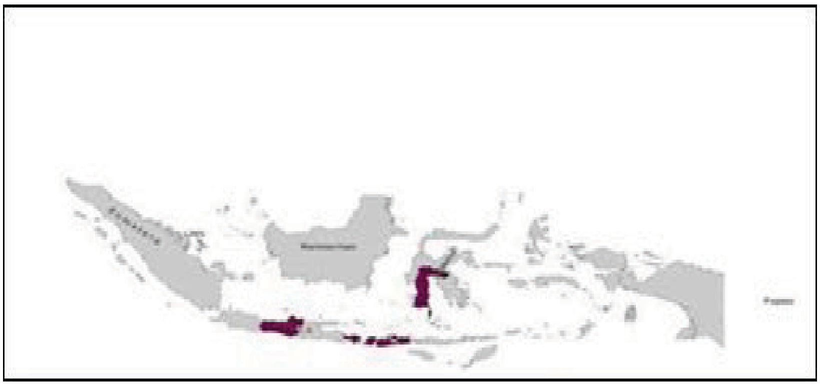
SECTOR	DI Yogyakarta		East Java		Banten	
	LQ	DLQ	LQ	DLQ	LQ	DLQ
Craft	1.45	1.03	0.77	1.18	0.44	0.09
Design	1.97	0.77	3.05	3.24	7.02	0.72
Fashion	1.39	1.01	1.72	1.15	0.83	0.33
Publishing & Printing			0.66		6.93	0.23

SECTOR	Bali		NTB		South Sulawesi	
	LQ	DLQ	LQ	DLQ	LQ	DLQ
Craft	1.66	1.73	1.22	1.53	1.57	1.60
Design						
Fashion	1.54	0.79	0.88	1.23	1.21	1.06
Publishing & Printing			0.18	2.64	4.61	0.60

Source: BPS data is processed, 2017

Handicraft Industry

Competitive micro and small scale handicraft industries can be found in Central Java Province, Yogyakarta, Bali, West Nusa Tenggara and South Sulawesi. This is as shown in the mapping using GIS analysis shown in Figure 11 below.



Source: BPS data is processed, 2017

Figure 11. Location of Small and Micro Scale Competitiveness Industry

The result of competitiveness analysis conducted on small and micro scale handicraft shown in Table 8 shows that the most competitive handicraft industry sector is in Bali Province if it is measured from labor productivity. This is indicated by the higher LQ and DLQ values compared to the handicraft sector in other provinces.

The value of LQ provides an overview of labor productivity advantages in a single point of analysis time. The LQ scores of small and medium scale handicraft industry in Bali Province have higher LQ value than other provinces, it is explained that the productivity of the handicraft workforce in Bali Province is superior compared to other provinces if measured in one period of analysis in year 2013.

Higher DLQ values than other Provinces explain that the potential for the development of labor productivity in the handicraft industry sector in Bali Province is superior compared to the potential for the development of labor productivity in the handicraft industry sector in other regions. If this condition can be maintained or continuously improved with the support of a number of factors such as innovation, technology use, effectiveness and efficiency of production, then the handicraft industry sector in Bali Province will excel in the competition ahead.

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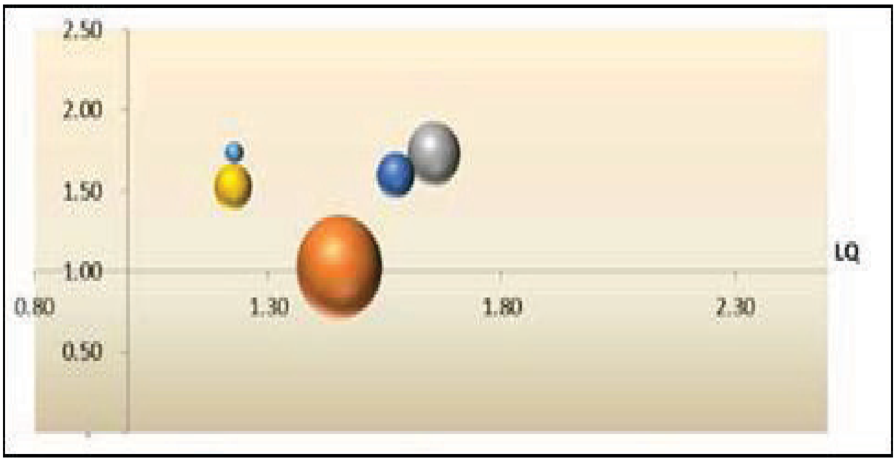
Table 8. Competitiveness Analysis of Handicraft Industry Sector Small and Micro Scale

PROVINCE	LQ	DLQ
West Sumatera	0.94	1.35
South Sumatera	1.30	0.04
Lampung	0.78	0.46
Jakarta	1.41	0.66
West Java	1.11	0.74
Central Java	1.23	1.73
DI Yogyakarta	1.45	1.03
East Java	0.77	1.88
Bali	0.44	0.09
NTB	1.66	1.73
South Sulawesi	1.22	1.53

Source: BPS data is processed, 2017

The analysis of the 4 quadrants shown in Figure 11 also shows that the small and micro handicraft industry sector in Bali Province has a high competitiveness compared to other provinces, seen from the location of the circle representing Bali Province in quadrant 2 area with the position value Further away from the zero point LQ> 1 (1.66) and the value of DLQ> 1 (1.73).



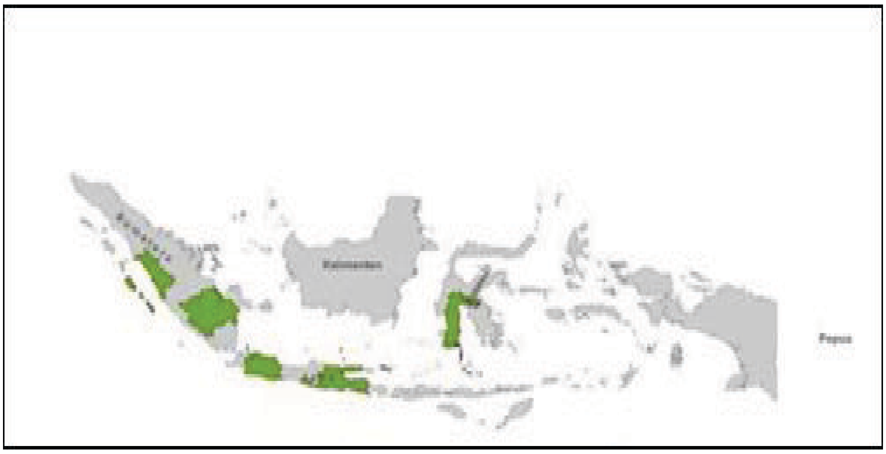
Source: BPS data is processed, 2017

Figure 12. Mapping Analysis 4 Creative Industry Quadrant of Handicrafts Competitive Micro and Small Scale Industries

It can also be seen in Figure 12 that when looking at the growth of value added production, the small and micro handicraft industry sector in Yogyakarta Province seems to have a larger value-added growth compared to other provinces, indicated by the amount of circle representing DI Yogyakarta Province. Although the superiority in terms of labor productivity from the Province is still lower than that of Bali Province, but the handicraft industry sector in Yogyakarta Province is more able to create high added value of production. Creation of the added value of production of an industrial sector is essential to make a positive contribution to the economy in the region as well as nationally

Fashion Industry

Competitive micro and small scale industry sectors can be found in West Sumatera, South Sumatera, Jakarta, West Java, D.I Yogyakarta, East Java, and South Sulawesi. This is as shown in the mapping using GIS analysis shown in Figure 13 below.



Source: BPS data is processed, 2017

Figure 13. Location of Small and Micro Scale Competitive Fashion Industry

The results of competitiveness analysis conducted on the small and micro-scale fashion sectors shown in Table 9 show that the most competitive fashion industry sector is in West Sumatera Province when measured from labor productivity at the moment, as seen from the LQ (LQ = 2 , 13) higher than other provinces. However, in the future the potential advantage of the development of labor productivity of the fashion industry sector in West Sumatera Province is still less than that of Jakarta Province, which is seen from DLQ of Jakarta Province which is higher than DLQ value of other Province (DLQ = 2,64) .

Table 9. Competitiveness Analysis of the Fashion Industry Sector Small and Micro Scale

PROVINCE	LQ	DLQ
West Sumatera	2.13	1.13
South Sumatera	1.81	2.47
Lampung	1.55	0.55
Jakarta	1.26	2.64
West Java	1.32	1.57
Central Java	1.71	0.51
DI Yogyakarta	1.39	1.01

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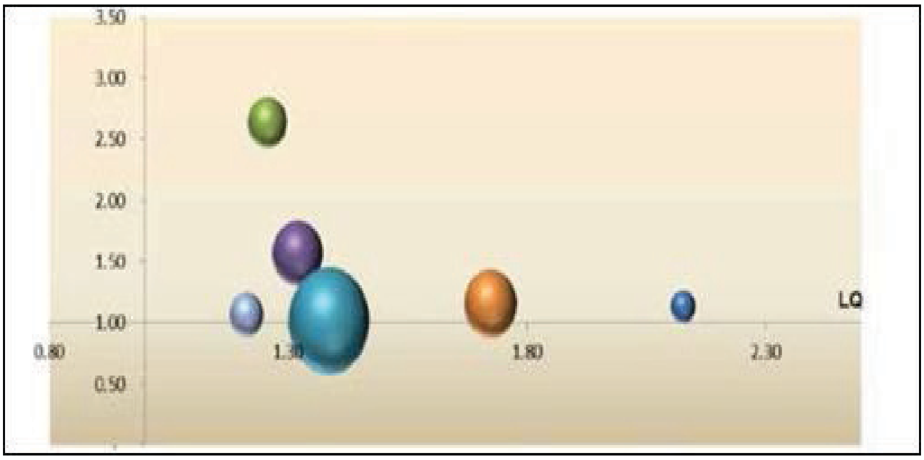
East Java	1.72	1.15
Bali	0.83	0.33
NTB	1.54	0.79
South Sulawesi	0.88	1.23

Source: BPS data is processed, 2017

The analysis of the 4 quadrants shown in Figure 14 also shows that the small and micro scale industry sectors in West Sumatera and Jakarta provinces have a high competitiveness compared to other provinces if measured from LQ and DLQ values, as seen from the location The circle representing the two Provinces is in the quadrant area 2 with the position value increasingly away from the zero point of the x and y axes. However, in Figure 14 also shows that the circle representing Yogyakarta Province is the largest. This shows that if the measure to the growth of added value, the most competitive sector of small and micro scale industry is in DI Yogyakarta Province.



Source: BPS data is processed, 2017
Figure 14. Mapping Analysis 4 Creative Industry Fashion Quadrant Competitive Micro and Small Scale Industries

Industrial Design

Competitive micro and small scale design industries can be found only in two provinces, West Java and East Java. This is as shown in the mapping using GIS analysis shown in Figure 15 below.

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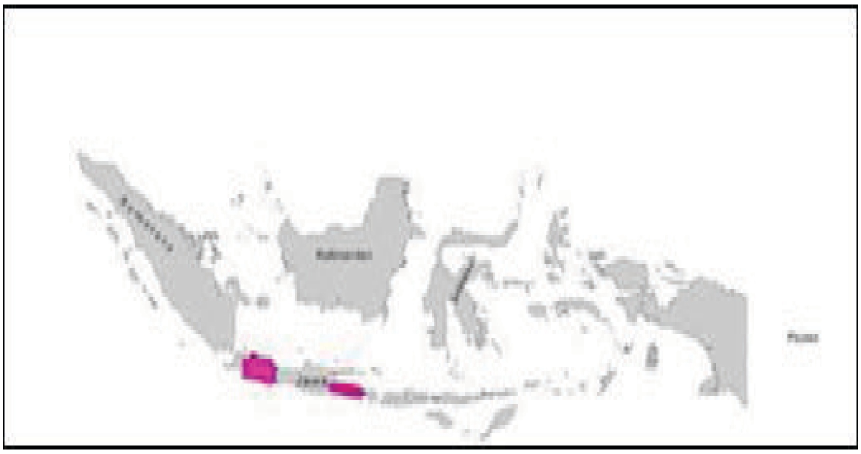

Source: BPS data is processed, 2017
Figure 15. Location of Small and Micro Scale Design Industry

The results of competitiveness analysis conducted on the small and micro design sectors shown in Table 10 show that the design industry sector in East Java Province is superior compared to West Java when viewed from the labor productivity advantage measured at this time (viewed from the value of LQ) And also measured its potential for future time (judging by the value of DLQ).

Table 10. Competitiveness Analysis of Design Industry Sector Small and Micro Scale

PROVINCE	LQ	DLQ
West Sumatera	n/a	n/a
South Sumatera	n/a	n/a
Lampung	3.13	0.34
Jakarta	2.98	n/a
West Java	2.13	1.57
Central Java	0.92	2.70
DI Yogyakarta	1.97	0.77
East Java	3.05	3.24
Bali	7.02	0.72
NTB	n/a	n/a
South Sulawesi	n/a	n/a

Source: BPS data is processed, 2017

The analysis of the 4 quadrants in Fig. 16 shows the circle and circle positions representing the small and micro design industry sectors in West and East Java provinces. The position of the circle representing East Java Province is in quadrant 2 and further away from the zero point measured from the x and y axis compared to the circle representing West Java Province. This shows in the 4 quadrant analysis of the competitiveness of the design industry sector in East Java in terms of labor productivity advantage. Figure 16 also shows that the

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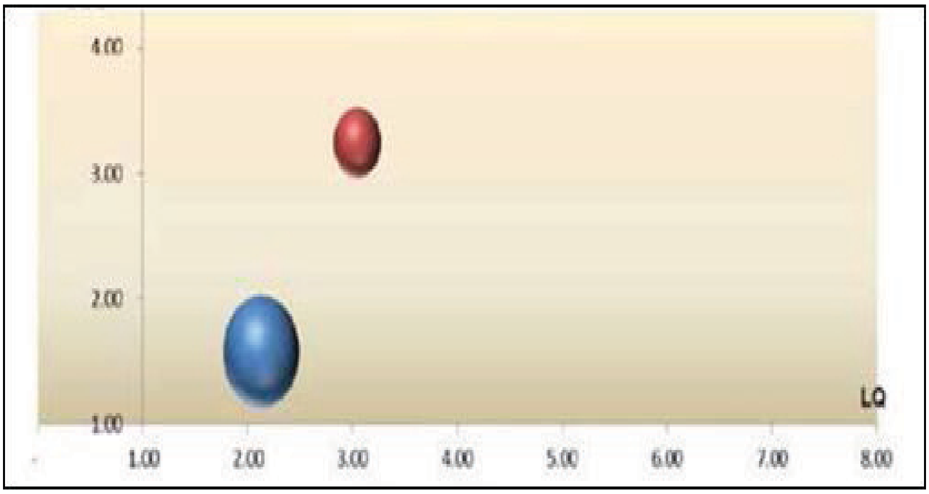
circle representing West Java Province is larger than East Java, thus explaining that the small and medium scale design industry sector in West Java Province is better able to create greater value added growth.



Source: BPS data is processed, 2017
Figure 16. Mapping Analysis 4 Creative Industrial Design Quadrant Competitive Micro and Small Scale Industries

Publishing and Printing Industry

Other sectors that are competitive are the publishing and printing industry sector. Based on secondary data processing, competitive publishing and printing industry sector only found in West Java Province, this is shown by Figure 17.

Source: BPS data is processed, 2017
Figure 17. Location of Small and Micro Scale Publishing and Printing Industry Competitive Micro and Small Scale Industries

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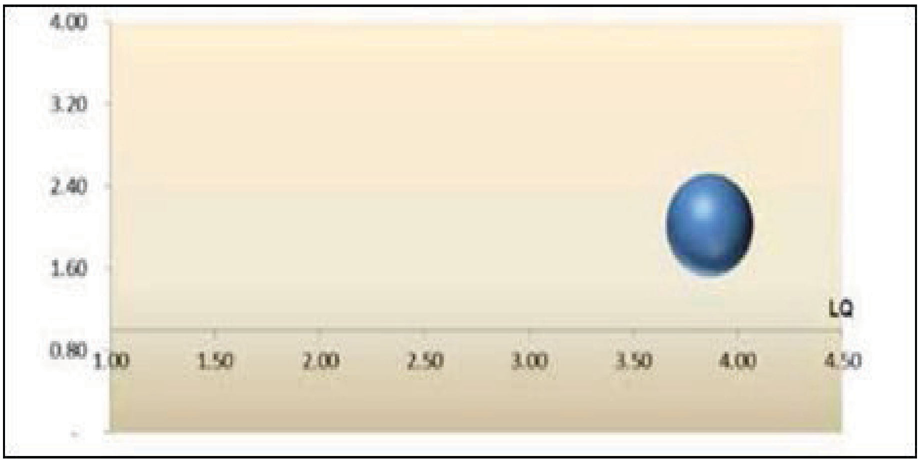
Table 11 below also confirms that the results of competitiveness analysis from the publishing and printing sector of small and micro scale shows that this competitive industry sector is found only in West Java Province seen from LQ and DLQ values of magnitude more than 1. in Table 11 It is also seen that in other provinces such as Jakarta, Central Java, East Java, and NTB only visible potential employment productivity advantages in the future but not at present (DLQ value 1 but LQ <1), thus not meeting the definition accordingly Methodology as a competitive industry sector. And the provinces of South Sulawesi and Banten show the opposite condition, which has a static labor productivity advantage that is measured at one time point (LQ value 1 but DLQ value <1).

Table 11. Analysis of Industry Sector Competitiveness Small and Micro Scale Publishing and Printing

PROVINCE	LQ	DLQ
West Sumatera	n/a	n/a
South Sumatera	n/a	n/a
Lampung	n/a	n/a
Jakarta	0.06	9.15
West Java	3.87	2.02
Central Java	0.34	2.44
DI Yogyakarta	n/a	n/a
East Java	0.66	n/a
Bali	6.93	0.23
NTB	n/a	n/a
South Sulawesi	0.18	2.64

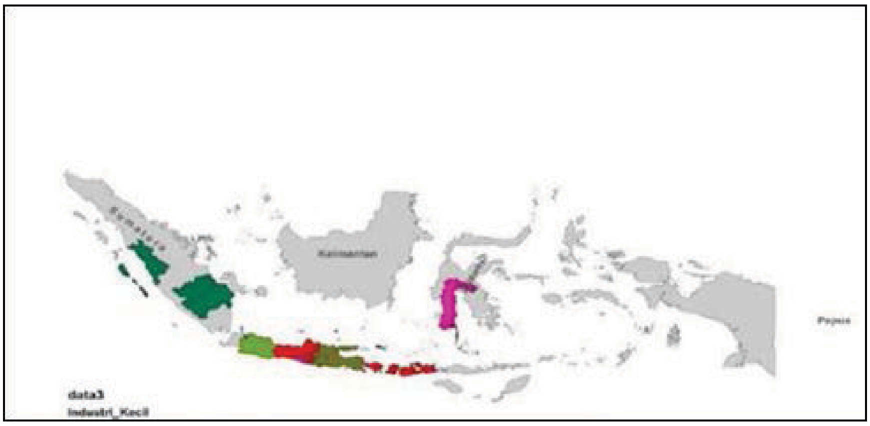
Source: BPS data is processed, 2017

The result of 4 quadrant analysis in Figure 17 for small and micro scale publishing and printing sector in West Java Province also illustrates that besides having competitiveness in terms of labor productivity advantage, this sector also has positive value added production. This condition is illustrated by the position of the circle representing the competitiveness condition of the publishing and printing industry sector in West Java Province located in the second quadrant with the position increasingly becoming zero and X and Y axis lines, and having a large circle.



Source: BPS data is processed, 2017
Figure 18. Mapping Analysis 4 Creative Industry Quadrant
Publishing and Printing Competitiveness of Small and Micro Scale Industries

Overall, Figure 18 shows the results of a mapping analysis of the creative industries of micro and small scale competitiveness, namely that most of the competitive creative industries sector is located in the islands of Java and also the island of Sumatra.



Source: BPS data is processed, 2017
Figure 18. Location of Creative Industry Competitiveness Small and Micro Scale in Indonesia

Table 12 shows the typology of a competitive micro and small scale industrial sector in several Provinces discussed earlier. Typologically, there are two Provinces with small and micro-scale creative industries that can be categorized as fast growing and fast growing industrial category, Central Java and Yogyakarta. It can be interpreted that the creative industries (measured by 4 competitive industrial sectors: craft, fashion, design, printing and publishing) in both provinces have productive human resources and are able to create high value-added growth. The fast-growing and fast-growing industry pattern is an

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ideal industry characteristic. This pattern is shown in the ability of industry players to create added value growth while output growth is also high as one indicator that the industry still has good market prospects. The high growth of added value indicates that the existing industry is quite dynamic in anticipation of existing business competition.

Table 12. Typology of Creative Industry Sector Competitiveness Small and Micro Scale Industries

PROVINCE	Labor Productivity	Growth	Typology
West Sumatera	Low	Low	Relatively Reliable Industry Cluster
South Sumatera	Low	High	Industrial Cluster Forward But Depressed
Jakarta	High	Low	Rapidly Growing Industrial Cluster
West Java	High	Low	Rapidly Growing Industrial Cluster
Central Java	High	High	Fast & Fast Growing Fast Industry
DI Yogyakarta	High	High	Fast & Fast Growing Fast Industry
East Java	Low	High	Industrial Cluster Forward But Depressed
Bali	High	High	Fast & Fast Growing Fast Industry
NTB	Low	Low	Relatively Reliable Industry Cluster
South Sulawesi	High	Low	Rapidly Growing Industrial Cluster

Source: BPS data is processed, 2017

The results of the mapping analysis of the five sectors of the small and micro-creative industries explain that sector, the handicraft and fashion industries are scattered in almost all provinces and these two sectors have high competitiveness compared to other sectors. However, if the benefits of labor productivity are seen not only in one time period of analysis measured based on the LQ value, but also on the potential for labor productivity to remain superior in the future, and to pay attention to the growth of added value that can be produced, the handicraft industry sector Small and micro scale has a higher competitiveness than the fashion industry.

The fashion industry sector is classified as a pre-eminent sector if measured in one analysis period (in 2013) but when considering the trend of labor productivity development, the handicraft sector shows the potential to continue developing in the future dynamically. The small and micro scale handicraft industry that has the highest competitiveness based on the superiority of labor productivity is in Bali Province.

The result of competitiveness analysis also shows that small and micro scale handicraft sector has been able to create higher value-added production growth from other sectors, this condition can reflect that the market demand for Indonesian handicraft product is very high. The small and micro scale handicraft industry with the highest and the highest added value added dynamic is in DI Yogyakarta Province

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6. CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The analysis of the competitiveness of creative industries in this study can only be done on five sectors of the creative industry based on the availability of existing data, such as handicraft, fashion, design, publishing and printing, and music. The results of competitiveness analysis for medium and large scale creative industries as well as micro and small scale creative industries show that the handicraft sector shows higher competitiveness compared to the other four creative industry sectors when viewed from the value of LQ, DLQ and added value growth.

Geographical mapping for large and medium scale handicraft industry shows that the most competitive handicraft sector is located in East Kalimantan Province because it has high productivity of labor productivity (seen from LQ and DLQ values) and the largest growth of added value in Among other Provinces. While geographical mapping for small and medium scale handicraft industry shows that the craft sector that has the highest competitiveness based on labor productivity advantage (seen from LQ and DLQ) is in Bali Province and the most competitive handicraft sector is measured from the growth of value Added the highest in the province of DI Yogyakarta

The total contribution of creative industry production to 15 subsectors nationally in 2011 amounted to 526,999 Billion Rupiah, or only about 7% of national PDB (7,419,187 Billion Rupiah). In particular for the handicraft industry sector, the total national production contribution in 2011 is 79,517 Billion Rupiah, or about 1% of the national GDP. Regionally, the total production of large and middle scale handicraft sector in East Kalimantan Province in 2011 amounted to 288,294,000, or only about 0.07% of East Kalimantan's PDRB (391,761 Billion Rupiah). Meanwhile, the production value of small and micro handicraft sector in Bali and Yogyakarta Province in 2013 is 21.9 Billion Rupiah and 96.5 Billion Rupiah or around 0.02% (94.555 Billion Rupiah) and 0.15% (63,690 Billion Rupiah) Of their respective GDP.

Anecdotally, the above illustrates that, although the handicraft sector is the most competitive creative sub-sector of medium to small scale among the other 4 creative sub-sectors, its contribution compared to other industry sectors is still relatively small. On the side of business creation and employment, this sector on a large and medium scale has 9 businesses with 980 workers, and 128,209,531 of value added in East Kalimantan in 2011. on a small and micro scale, for the Province of Bali in 2013, The sector has 806 businesses, with 2,430 workers, and 10.4 Billion Rupiah of added value, while for DIY province this sector has 524 businesses, with 1,616 labor force, and 7.1 Billion Rupiah added value.

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6.2 Recommendation

Based on the results of regional or provincial mapping for the creative industries of both large and medium scale, small and micro, it is expected that the mapping of creative industries is local and central government can focus more on how to coaching the creative industries in each province that has the dynamics and characteristics of different, So that in coaching and distribution of financing can be adjusted to the characteristics of each region or province in Indonesia. Local and national governments can also review various programs and policies related to the creative industries in Indonesia, particularly in financing aspects and can provide options or recommendations to advance and improve access to financing the creative industries in Indonesia.

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Effect of Implementation of Quality Assurance and Business Incubator on Entrepreneur Quality of SMEs in East Java

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ABSTRACT

This study aims to describe quality assurance, a business incubator, and entrepreneur quality, and analyze the influence of quality assurance and business incubator on entrepreneur quality. This research is explanatory research. Explanatory research is intended to obtain clarity or explain a phenomenon, explain the relationship, test the influence of variables. The analysis technique used multiple regression analysis. Based on the analysis result shows that quality assurance is formed by management system aspect and technical requirement, the main contribution of an establishment of quality assurance is management system aspect. Business incubators are formed by new business growth, job creation, economic turnaround, a failure rate of new business development, and ability to obtain investment funds. The main contribution to the establishment of business incubators is the addition of new business. The entrepreneur quality is made up of a strategic orientation driven by opportunity perceptions, commitment to opportunities, resource commitments, control of resources and a realistic vision. The main contribution of entrepreneur quality is a commitment to opportunities. Quality assurance has a significant effect on entrepreneur quality. Business incubator has a significant effect on the quality of an entrepreneur.

Keywords: business incubator, entrepreneur quality, quality assurance

1. INTRODUCTION

Micro Small and Medium Enterprises (MSMEs) should be recognized as a strategic and vital force to accelerate regional development, as the growth of small and medium-sized Micro Enterprises increases annually (Hasanullah, 2007). Micro, small and medium enterprises (MSMEs) are the most survival groups when the economic crisis hit the country. The growing number of small and medium-sized business units will certainly be able to open large employment opportunities. However, this small business is still seen as a weak business performance. The number of MSMEs in East Java currently reaches 4.2 million MSMEs, of which 85.09% are micro businesses; 14.19% is a small business; 0.57% of medium enterprises and only 0.15% of large-scale enterprises. SME sector business has helped economic growth in East Java by contributing 53.4% of regional gross domestic product (GRDP) or equivalent to Rp 415.7 trillion, therefore MSME sector has a strategic role for the economy in

East Java. The MSME sector has a unique business pattern because it is mostly done in the informal sector, where 30% of MSMEs meet feasible and bankable criteria, while the remaining 70% only meet the feasible but not bankable criteria.

Being an entrepreneur is not easy, the amount of business risk becomes one of the biggest obstacles for people to start a business. Even for fear of risk, many people stop in the middle of the road and worse still many retreats before they try. They prefer the safe zone without thinking about the magnitude of the risk of loss. No wonder our society is more interested in being a civil servant or being an employee of a company than being an entrepreneur. This proves that not everyone has an entrepreneurial spirit.

Basically what a business incubator does is part of a partnership program to develop a business together, with the goal of making the business into a real business and evolving according to the company's vision. One of the ways in which the Government develops and develops small entrepreneurs is through business and technology incubator programs.

In general, incubators in Indonesia were established with the objectives of a) Developing new and potential small businesses into independent businesses, so as to successfully face local and global competition, b) Promote entrepreneurial spirit by including private companies that are expected to contribute to the market economy system, c) The process of technology transfer and the process of commercialization of the results of business and technology development research from experts, inventors, and researchers in universities, d) Opening alternative opportunities through the development of new companies, d) Application of industrial technology commercially through studies and studies that are time-consuming and relatively low cost.

Economists believe that Incubator is one of the most effective rides in developing new technology-based entrepreneurs. In conducting its activities, the Incubator performs the intermediation function while strengthening the new entrepreneurial tenant/products and innovative products/services that will be developed through the provision of services as a means of business development, capital access, training, mentoring, and entrepreneurship guidance. This effort is expected as a step of partisanship to the perpetrators of SME/IKM/ SMEINDONESIA.

Recognizing the importance of continuing to develop and develop business incubator programs in the framework of enhancing economic growth and the nation's competitiveness, it is imperative to realize a national movement with concrete support to more implementation laws and/or government regulations.

This study aims to describe quality assurance, a business incubator, and entrepreneur quality, and analyze the influence of quality assurance and business incubator on entrepreneur quality.

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2. LITERATURE REVIEW

2.1 Quality Assurance

Implementation of quality assurance is a continuous improvement concept that involves all employees at all levels of the organization to achieve excellent quality in all aspects of the organization, through the process of management education (Dipletro, 2003). There are 4 areas of quality assurance application (Hebert J.F. et.al, 2005), the first involves the use of total quality management in improving the functions and administrative universities. This application is related to the perspective of decision making. In this case, both the rector and the university administration manager need to make a decision to support the achievement of long-term strategic goals. This is also to emphasize the managerial role, that is to meet customer demand in the future.

Likewise, for the authority needs to be shared and communicated to the staff of employees and faculty managers so that they are able and willing to realize the view. The second application involves integrating total quality management into the curriculum. This is done by internalizing the total quality management philosophy into the curriculum, by implicitly submitting the philosophy and principle of total quality management by the teaching staff into the core curriculum as well as the local curriculum. The third application is to use total quality management as a method of teaching in the classroom.

Quality assurance is the most powerful tool for improving educational effectiveness. Quality assurance is a key principle in which key education roles, such as teachers, principals and stakeholders: students, parents, school administrators, government/foundations and the community are responsible for improving school performance. For that, the center of school quality assurance is the process of self-evaluation and development planning (Birzea et al, 2005).

Business Incubator

Business incubator is a company / institution that provides a program designed to foster and accelerate the success of business development through a series of capital programs followed by partnership / coaching support of other business elements with the aim of making the business a profitable company, having the right organizational and financial management, and become a sustainable company, to finally have a positive impact on the community.

The incubator program provided is generally for start-up companies or a company that is still in the early stage, which in Indonesia generally is a new business or has been running for less than 2 years. A research study in America, where this concept was born, shows that 87% of business start-up through incubation/coaching programs can survive and run their business well.

In general, the services/assistance provided by the business incubator are: (i) Access and capital assistance; (ii) Opening the associated network and can help the development of the business; (iii) Development of marketing strategy (marketing); (iv) Assist in accounting/financial management; (v) Mentoring and business training; (vi) Enterprise management and corporate culture management; (vii) Giving recognition and emphasis on business ethics; (viii) Provides information about related business industries in general; (ix) Helping matters related to regulation.

Entrepreneur Quality

An entrepreneur is an entrepreneur who has various companies but takes a great risk to become an entrepreneur. Not all entrepreneurs are entrepreneurs and not all entrepreneurs have the same qualities. Entrepreneurs are not fearless people. They create priorities so as to overcome the fear of failure, frustration, boredom, discontent and fear of success.

Entrepreneurs are not superhuman or miraculous human beings. They are only human but they are different from most people. What distinguishes them is that entrepreneurs have a strong vision, determination, persistence in terms of development and change of things. In addition, entrepreneurs have positive characteristics that are not owned by ordinary people.

Entrepreneurs are not extraordinary human beings nor are they miraculous human beings. They are just human beings, but they are different from the average person. What distinguishes them is that they have the entrepreneur quality and have positive characteristics that are not owned by others. The characteristics of the entrepreneur are as follows:

Self Confident

Entrepreneurs have a strong sense of confidence in their abilities. They believe they can be the best, they do not accept something just happens because they believe they can do something better. Belief in the ability that will have increased confidence. Strong self-confidence makes enthusiastic and diligent entrepreneurs in achieving goals. Entrepreneurs not only know about their ability but also know their limitations. Knowing self-limitation is also very important. A person who knows his limitations will not try to finish a job they know they can not finish well.

Discipline

An entrepreneur is nothing but a long journey and it requires a high level of discipline. Entrepreneurship requires focused efforts and it requires discipline with human, physical, financial and time resources. Not only that, knowing when to seek help and who will help is also part of the discipline. Seeking help is not a weakness, but it is a force and a discipline.

Power Initiative

The initiative is measured by the courage of a person doing the first action. Entrepreneurs generally have a high initiative, because without high initiative power entrepreneurs will lose competition in capturing information, losing in seizing the opportunity and will not be able to allocate and utilize resources for the better.

Rational Risk Takers

Entrepreneurs are people who are happy with the challenge, but they remain cautious and take into account all the conditions that exist. Entrepreneurs will avoid the risk that is too large because it will not be achieved Instead they also reject the risk is too low because there is no challenge. However, an Entrepreneur must make a decision, even if the result is uncertain. In making decisions, Entrepreneurs collect complete data about the situation, analyze data and make new decisions. Because they are confident in their abilities and optimistic with the outcome of their decisions, they are not afraid to make difficult decisions.

Hard worker

Success always comes from hard work. Entrepreneurs even though they are hardworking, happy about challenges and difficult tasks and they love their work.

Creative

Entrepreneurs are creative. They do things in new ways or in different ways. They believe without innovation are still primitive people.

3. HYPOTHESIS

Hypothesis in this research are:

H_1 : Quality assurance influences Entrepreneur Quality.

H_2 : Business incubator influences Entrepreneur Quality.

4. RESEARCH METHODS

4.1 Types of research

This research is explanatory research. Explanatory research is intended to obtain clarity or explain a phenomenon, explain the relationship, test the influence of variables.

4.2 Operational Definition of Variables

Quality assurance

Quality Assurance is all planned and systematic action that is implemented and demonstrated in order to give enough confidence that the product will satisfy the need for a certain quality. The quality assurance indicators used in this research are: (i) Management system aspect; (ii) Technical requirements

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Business incubator

The business incubator is a company or institution that provides a program designed to foster and accelerate the success of business development through a series of capital programs followed by partnership support or other business elements development with the aim of making the business into a company. Business incubator indicators used in this research are: (i) Added new business; (ii) Employment creation; (iii) Economic turnaround; (iv) The failure rate of new business development; (v) The ability to obtain investment funds.

Entrepreneur Quality

Entrepreneur Quality is an entrepreneurial activity characterized by clever or talented to recognize new products, determine new production methods, organize operations management for new product procurement, market it, and manage its operating capital. The entrepreneur quality indicators used in this research are: (i) Orientation of strategy driven by opportunity perception; (ii) Commitment to opportunities; (iii) Commitment of resources; (iv) Control of resources; (v) A realistic vision.

4.3 Population and Sample

The population in this study is SMES in East Java amounted to 4.2 million. Based on the calculation of the slovin formula, then the number of samples in the study of 100 people. The sampling technique using simple random sampling.

4.4 Data Analysis

Data analysis in this study using descriptive analysis and multiple regression analysis with the formula as follows:

$Y = b_1X_1 + b_2X_2 + \varepsilon$

Information:

Y = Entrepreneur Quality
X_1 = Quality Assurance
X_2 = Business incubator
b_1, b_2 = Regression coefficient
ε = Error term

5. RESULTS AND DISCUSSION

5.1 Validity and Reliability Test Results

Based on the validity test that has been done on the obtained probability value is smaller than 0.05. This means that the statement items used in the questionnaire are valid or actually measure what should be measured. Based on the results of the test reliabilities indicate that the variable quality assurance, business incubator, and entrepreneur quality has a reliability coefficient greater

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than 0.60, so based on the reliability test, the existing instruments are feasible to be used.

5.2 Classic Assumption Test

In order to obtain an unbiased and efficient estimator value of a multiple regression equations with Ordinary Least Square method, then in the implementation of data analysis must meet the following classical assumptions:

Multicolinearity

A regression model is free of multicollinearity if the VIF (Variance Inflation Factors) value of each independent variable is less than 5 and the tolerance value is close to 1. The VIF results are presented in the following table:

Table 1. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	Quality Assurance	0,860	1,163
	Business incubator	0,860	1,163

Source: Data processed.

Based on the results of VIF calculation shows that the variable quality assurance and business incubator have VIF value <5, thus can be concluded that the regression model there is no multicollinearity problem.

Normality Test Results

The assumption of data has been normal distribution is one of the important assumptions in doing research with regression. This test aims to test whether, in the regression model, independent variables, dependent and moderation are normally distributed or not. Ghozali (2006) to detect the normality of data can be done by looking at the spread of data (points on the diagonal axis of the graph, ie if the data spreads around the diagonal line and follows the direction of the diagonal line, it indicates the data has been normally distributed.

Figure 1
Data Normality

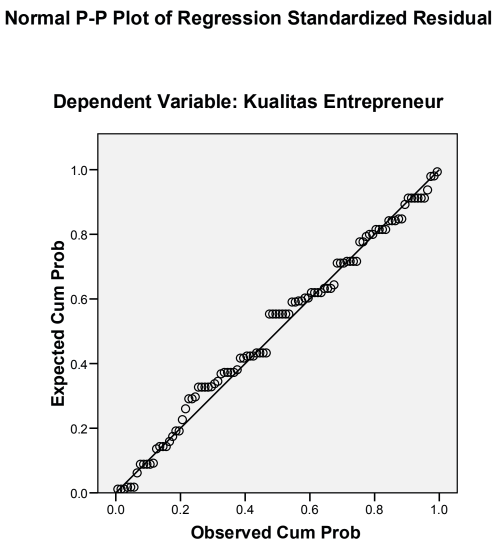

Figure 1 shows that the data (point) spread around and approaches the diagonal line. This indicates that the research data covering variable quality assurance, business incubator and entrepreneur quality are normally distributed.

Heteroscedasticity Test Results

Heteroscedasticity means the presence of unequal residual variation for all observations, or the presence of increasing residual variation in larger numbers of observations. Tests of heteroscedasticity symptoms using scatter plot, heteroscedasticity test results are presented in Figure 2 below.

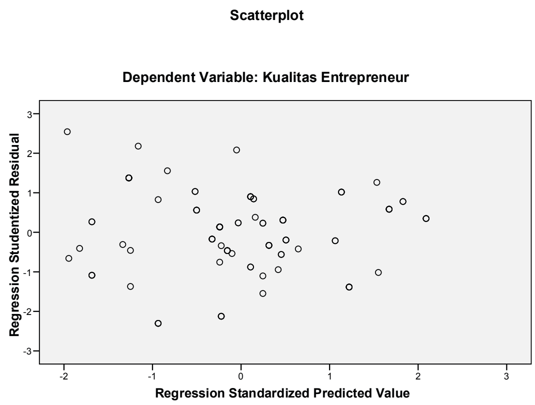

Figure 2. Heteroscedasticity Test

Based on Figure 2, spots appear to be randomly distributed, not forming a specific pattern clearly, and scattered either above or below the number 0 on the Y axis. This means no heteroscedasticity occurs in the regression model.

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5.3 Multiple Regression Analysis

Based on the results of data analysis with the help of statistical application, SPSS 18.00 then obtained important information summarized in table 2.

Table 2. Effects of Quality Assurance and Business Incubator on Entrepreneur Quality

Variable	Regression Coefficients	Standar Error	t value	p value
Quality assurance	0,446	0,048	9,275	0,000*
Business incubator	0,509	0,058	8,748	0,000*

*) Significant at α 5%.

Good fit of Model Test

The results of multiple regression analysis showed that the value of F for regression of 129.808 with significance probability level for the model formulated in this study amounted to 0.000. This shows that the probability value is smaller than 0.05 so that it can be taken the decision that the research model is already fit.

Coefficient of Determination

The coefficient of determination is used to see the ability of the independent variables in explaining the variation of the dependent variable. To know the variation of the dependent variable that can be explained by the variation of independent variables can be known from the value of determination. Based on the analysis results show that the coefficient of determination or R square of 0.728. The coefficient of determination (R squared) of 0.728 means that variation of entrepreneur quality can be explained by quality assurance variable and business incubator 72,8% while 27,2% is explained by other factors outside the model.

t test

Influence of Variable Quality Assurance To Entrepreneur Quality

The effect of Quality assurance on entrepreneur quality is significant with regression coefficient 0,446 and standard error is 0,048 and value t equal to 9,275 and p value 0.000. This means that Quality assurance has a significant effect on the entrepreneur quality, which means the improvement of quality assurance will be followed by improving the quality of entrepreneur.

The Influence of Business Incubator Variable To Entrepreneur Quality

The effect of Business Incubator on entrepreneur quality is significant with regression coefficient 0,509 and standard error of 0,058 and t value equal to

8,748 and p value 0.000. This means that Business Incubator has a significant effect on entrepreneur quality, which means Incubator Business Increase will be followed by improving entrepreneur quality.

Based on table 2, it can be arranged research model as follows:

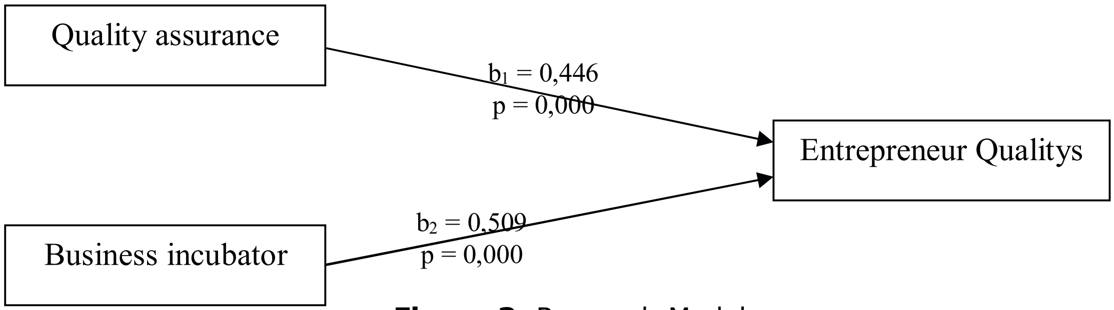

Figure 3. Research Model

6. DISCUSSION

6.1 Effect of Quality Assurance on Entrepreneur Quality

Quality assurance affects the entrepreneur quality, it shows that quality assurance is a factor that plays a role in improving the entrepreneur quality. Quality Assurance as part of the quality system is a quality improvement with prevention and problem-solving. Quality improvement is a process of measuring the degree of perfection of service compared with standard and systematic and continuous improvement action, to achieve optimal service quality in accordance with existing standards and resources. QA usually requires ongoing evaluation and is usually used as a tool for management. As Juran and Gryna (2008) suggest, Quality Assurance is an activity to provide evidence to build trust that quality can function effectively. The form of Quality Assurance consists of 2, namely: Individual based program and team based Activity. Individual based programs are conducted on individuals, through monitoring/monitoring (tools in the form of documents or records), assessment (internal audit) and control (correction). While team-based activity is a quality assessment activity against the team. In addition, the purpose of holding Quality Assurance is to be able to satisfy the various parties involved in it, so as to successfully achieve their respective goals. Quality assurance is an integral part in shaping the quality of products and services of an organization or company. The quality assurance mechanism used should also be able to stop the change if it is assessed that the change leads to a decline or setback. Quality Assurance activities include quality control and quality inspection where both activities are part of a commitment to quality as a whole. Yet the department that holds Quality Assurance has no duty to check the work performed by other departments. But QA helps other parts so as to control the application of properly applicable procedures, so as to achieve improvements in efficiency, productivity, and profitability. Expected through Quality Assurance is to do all the work properly and correctly at all times efficiently related to service processes in accordance with minimum service standards or quality standards (SOPs), and effectively related to the achievement of objectives in the form of outputs and outcomes (securities) Expected or planned. Entrepreneurs face all sorts of obstacles as a shrug so their business grows. The greatest asset of an entrepreneur is his ability to work through obstacles. Successful entrepreneurs are enthusiastic Entrepreneurs looking at opportunities, finding and utilizing resources, creative, innovative, and tolerate uncertainty so Entrepreneurs can grow and quality and compete healthily.

6.2 The Influence Of Business Incubator To The Quality Entrepreneur

Business incubators have a significant effect on the entrepreneur quality, which means that the better business incubator programs can improve the entrepreneur quality. Business Incubator is instrumental in providing business expertise for its tenants (small businesses). An entrepreneur to be successful in the business world must have sufficient knowledge and skills in the business sector. Based on that a Business Incubator must provide knowledge and skills to his tenants. Providing skills and knowledge is very helpful in creating independence of tenants, especially when they have to leave Business Incubator.Business Incubator can be said as a place that provides facilities for the acceleration of entrepreneurial growth through facilities and infrastructure owned in accordance with its base competency. By utilizing the facilities and services provided by the incubator, the service users (tenants) can improve the weak sides of the aspects of entrepreneurship. The development of Business Incubator is closely linked to the development of micro, small and medium enterprises (SME's), as the growth of the economy is generally initiated by the presence of micro and small enterprises. Micro and small entrepreneurs constitute the largest share of business people in Indonesia, so quantitatively this group has a very important and strategic role. The presence of Business Incubator can have 2 (two) roles, namely: accelerate the growth of new entrepreneurs and develop and strengthen the business that has been run by an entrepreneur.

In the incubator, there are three types of programs that can be applied by entrepreneurs or prospective entrepreneurs. First, incubator technical technology incubator, (1) pattern of skill giving knowledge about good production technique from design to finishing, (2) matter concerning business aspect and management of business incubator, in this program the participant will get knowledge of management, financial, and Product marketing strategy and (3) what is called regional development incubator, which is a certain region development program that already has a growing business type. Business

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Incubator strives to assist entrepreneurs in developing business expertise so as to thrive in society by providing services and support- Support that helps perfect their natural talents and abilities so they can develop their potential. BusinessBusiness Incubator thus becomes an important link between entrepreneurs and technologically oriented entrepreneurs (including those with new ideas) with institutions that offer their services and products needed in the coaching effort.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion

This study aims to describe quality assurance, Business Incubator, and entrepreneur quality, and analyze the influence of quality assurance and Business Incubator on entrepreneur quality. Based on the analysis results show that quality assurance is formed by management system aspect and technical requirement, the main contribution of an establishment of quality assurance is management system aspect. Business Incubator is formed by new business growth, job creation, economic turnover, the failure rate of new business development, and ability to obtain Investment funds. The main contribution of the establishment of Business Incubator is the increase of new business. The entrepreneur quality is made up of a strategic orientation driven by opportunity perceptions, commitment to opportunities, resource commitments, control of resources and a realistic vision. The main contribution of entrepreneur quality is a commitment to opportunities. Quality assurance has a significant effect on the quality of an entrepreneur.Business Incubator has a significant effect on the entrepreneur quality.

7.2 Recommendations

Entrepreneurs need to further enhance their creativity and hone their potential by adding insight, experience, and training to expand their business in order to be able to compete and expand the market in order to run the business further.

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The Effect of Electronic Word of Mouth, Trust, Perceived Risk, and Site Quality on Transactions using E-Commerce

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ABSTRACT

This study examines the effect of electronic word of mouth, trust, risk perception, and site quality on transactions using e-commerce. The sampling technique using proportional random sampling method with the sample amount of 100 people. Data analysis techniques used to answer the hypothesis is multiple regression using SPSS 16.00 for Windows. The result of research shows that there is a significant positive effect of electronic word of mouth on the interest of transactions using e-commerce, there is a significant positive effect of trust on the interest of transact using e-commerce, there is a significant negative effect of risk perception on the interest of transact using e-commerce, Positively significant site quality to transact interest using e-commerce.

Keywords: electronic word of mouth, trust, risk perception, site quality, interests, and e-commerce.

1. INTRODUCTION

Trading activities or transactions through internet media known as electronic commerce (e-commerce). E-commerce is divided into two segments namely trade between business actors (business to business e-commerce) and trade between business actors with consumers (business to consumer e-commerce). Business to business e-commerce segment is more dominating the market today because of its high transaction value, but business-to-consumer e-commerce level also has its own market share potential. Online store lately growing, in line with the growing community that has computers and access to the internet and the rapid development of technology. This development encourages conventional products sellers to market their products through the internet (Elwina, 2010).

Table 1. Percentage of internet users by age 2014

Age	Procentage
18 – 25 years	49%
26 – 35 years	33.8%
36 – 45 years	14.6%
46 – 55 years	2.4%
56 – 65 years	0.2%

Source: APJII

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Table 1 describes internet users in Indonesia. The majority of internet users in Indonesia aged 18-25 years, which amounted to almost half of the total number of Internet users in Indonesia (49%). Only 0.2% of users aged 56-65 years.

Table 2. B2C e-commerce estimates in Asia (in millions of dollars)

Negara	years			
	2013	2014	2015	2016
China	$181.62	$274.57	$358.59	$439.72
Japan	$118.59	$127.06	$135.54	$143.13
Korea	$18.52	$20.24	$21.92	$23.71
India	$16.32	$20.74	$25.65	$30.31
Indonesia	$1.79	$2.60	$3.56	$4.89

Sumber :www.startupbisnis.com

Table 2 explains that the number of sales through e-commerce in Indonesia is still low compared to other countries, but seeing Indonesia's rapid development, does not rule out Indonesia will compete with other Asian countries that had previously produced e-commerce sales over Indonesia.

Actually in through transactions the web is one of the very easy and interesting facilities. An entrepreneur, merchant or corporation may display or post advertisements or information about his products through a website or site, either through his or her own website or through other commercial website providers. If interested, consumers can contact through the website available in the site and process it through the website by pressing the accept, agree or order.Payments can also be submitted by writing credit card numbers within the site. Each customer makes a decision to buy an item based on what is needed, where it can be obtained, and how the purchase can be made.

Before making a decision to purchase a product of goods or services, consumers certainly make a selection of these products. Many factors influence consumers in choosing, obtaining, consuming and receiving products and including their experiences. Observation of consumer behavior becomes very important for companies and marketers in the process of corporate strategy. This is because many companies and marketers use the concept of customer-oriented marketing strategies. Consumers are the main factor that the marketers really pay attention to. Market people must be able to understand the wants and needs of consumers as well in shaping purchasing interests and then lead to product purchase decisions. Therefore marketers must understand how the behavior of consumers.

Interest in purchases by Irawan& Pane (2011) is a strong desire and passionate tendency of a very high heart to get something by way of sacrifice, get something by paying money, in this case many ways for consumers to make a purchase, they are offline and on line. Interests of transactions appear when a person has obtained enough information about the desired product. Interests of

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transactions are behaviors that appear in response to objects, or also repeat purchase (Assael, 1998). Interest in online transactions is influenced by technological changes. The current use of the internet changes the way people think to shop for a product. With a touch of technology, people do not have to bother to see the visualization of a product. Pavlou (2003) in Thamizhvanan and Xavier (2012) states that the observation of online buying interest corresponds to the size of using the site when assessing consumer behavior. Online transactions involving variousinformation and purchasing actions will depend on many factors.

Research conducted by Putranti and Pradana (2015) yielded the finding that, there are many factors that influence a person to decide andchoose shopping online. Electronic word of mouth (e-wom), consumer satisfaction, and direct and indirect influence that can provide clear information can attract consumer transactions by utilizing social networking can open opportunities for media campaigns effectively and efficiently and described as online technology and Habits of people who use it to share opinions, insights, experiences and views so that potential customers need an important means through electronic word of mouth message (ewom). Electronic word of mouth (ewom) is a positive or negative statement made by potential customers, actual customers and former customers about a product or company over the internet (Henning-Thurau et al., 2004). Goldsmith (2008) states that electronic word of mouth (ewom) is a social communication in the internet where web browser send each other or receive information related to the product online.

An important factor that can affect the interest of transacting online is the trust factor. Trust is an important factor which, according to Pavlou&Geven (2004), is the basis for the application of business activities that use internet media including doing transactions through online store. Tang and Chi (2005) agree that trust is an important factor in online transaction activity. When someone who wants to transact online, the emergence of the perception that the money sent does not just disappear but get the desired product reply in accordance with what is displayed on the targeted online store. Trust has been considered as a catalyst in various transactions between sellers and buyers in order that customer satisfaction can materialize as expected (Yousafzai et al, 2003).

Consumer perceptions are related to risk perception. Higher Risk Perception causes a person to have a higher fear when transacting online, and vice versa. Various concerns of e-commerce transactions can be psychological, legal, and economical. Fear of being deceived, unsatisfactory, sometimes old delivery and confusing ordering system. Problems that are psychological such as the existence of doubt on the truth of data, information because the parties have never met directly. Therefore, trust issues are important in maintaining the continuity of transactions (Elwina, 2010).

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The quality of sites from a web is a factor that can affect consumer interest to buy internet site (Suhartini, 2011). Website quality according to Barnes and Viggen (2001) consists of; (1) the quality of website information, in this case how the site can provide accurate, reliable information and can be understood by its users; (2) the quality of the website display, including the ability of the web in the settings menus, color arrangement and clarity of the size of writing in the website; (3) the quality of use, that is ease in accessing information in the website.

This research has a purpose to know: (i) effect of Electronic Word of Mouth on the interest of transact using E-Commerce. (ii) Effect of Trust on interest in transactions using E-Commerce. (iii) Effect of Perception Risk of interest in transactions using E-Commerce. (iv) The Impact of Site Quality on transactions using E-Commerce.

2. LITERATURE STUDY

2.1 E-commerce

E-commerce is an activity of selling and purchasing goods or services through internet facility. E-commerce can be done by anyone, without limited space and time. InE-commerce activities actually mean a relationship between sellers and buyers, transactions between business actors, and internal processes that support transactions with companies (Javalgi and Ramsey, 2001). Ecommerce has changed the way companies do business (Darch and Lucas, 2002).

Sellers who use e-commerce among them can make transactions more efficiently and can get closer to the consumer so that efforts to improve customer satisfaction can be done more easily. While on the losing side, the seller should be able to adopt e-commerce technology appropriately so that the losses faced in the use of e-commerce can be minimized (Gaertner and Smith, 2001).

The view on business to consumer (B2C) e-commerce is not only dependent on consumer acceptance of internet technologies such as transaction tools, but consumer understanding on web retailers such as trustworthy merchants. E-commerce describes the process of purchasing, selling, transferring or exchanging goods, services and or information through a computer network covering the internet. Ecommerce can be viewed from various perspectives, such as communications, commercial and trade, business processes, services, learning, collaboration and community (Turban et al., 2006). Based on communication perspective, e-commerce is the delivery of goods, services, information or payment through computer network or through some electronic primacy. From a commercial perspective, e-commerce provides the ability to purchase and sell products, services, and information or the internet through online service.

E-commerce is grouped into two segments, which are business to business (B2B) and business to consumer (B2C). B2B ecommerce is a form of internet commerce transactions conducted by two or more companies, while B2C e-commerce is an internet buying and selling transaction between the seller and the consumer (end user) (Ustadiyanto, 2001). B2B transactions involve relatively fewer people. People involved in B2B transactions are usually people who are trained in using information systems and are familiar with business processes that are affected by transactions. The number of transactions is smaller but has a high transaction value (McLeod and Schell, 2004).

Retailers are intermediary sellers, ie sellers operating as corporate and consumer intermediaries. Companies that sell directly to consumers, increase their sales through wholesalers and retailers. In physical form, retailing is applied in a store or factory outlet, which is directly visited by the consumer before making a purchase decision. Companies use retailers not only to facilitate distribution, for example for companies with a large number of products, but also to reach a large number of consumers.

Online store as a form of e-tailing provides products or services to consumers via the internet. According to Turban et al., (2006), online stores and e-commerce may take several forms depending on the degree of digitalization of the sales of products, processes and sending agents (intermediaries). There are two types of online store, namely pure player and click-and-mortar. Pure players are retailers who direct their business activities solely by way of online, in this case the retailer has only one online outlet. Click-and-mortar is the retailer that directs some e-commerce activities, but they do the main business in the physical world. They have a physical store and an online outlet as an extension of their physical store. The process leads to the purchase of products and services over the internet called online shopping. Online shop, internet shop, web shop or online store cause a physical analogy or purchase of products or services at a traditional retailer or in a shopping center. This is an ecommerce application used for B2B and B2C.

2.2 Interest To trade Using E-commerce

According to Engel (1994), the intention to transact is a measure of the degree of strength of one's interest to perform certain behaviors in this case is transacting, the interest to transact is determined together by the attitude and social norms. Attitude is defined as the evaluative effect of positive or negative feelings that arise when will perform behavior, attitude usually provide an assessment (accept or reject) of the object or product it faces. Attitude is determined by the belief in the consequences of behavior and evaluation. The subjective norm indicates a person's personal perception that many people are influential and relatively important to the person wanting him to do or not to do something. While the interest to transact using e-commerce is a measure of

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the strength of a person's interest to perform certain behaviors in this case is transact using e-commerce, in terms of transacting online.

The behavior of a consumer is very influential on interest, while interest in behaving depends on subjective attitude and subjective norms on behavior. Individual attitudes are formed from a combination of belief and evaluation of a consumer's essential beliefs, while subjective norms are determined by motivation from the opinions of others. Confidence shows the information a person has about an object. Indicators Interest in transactions are as follows: (1) interest in using online shopping, (2) interest in online shopping in the future, and (3) interest in online shopping in the near future (Pavlou, 2003). Interest in using online shopping is no intention to use online shopping but has not been done. While interest in online shopping in the future is planning to make an online purchase in the future. Interest in doing online shopping in the near future that is no intention to use online shopping services in the near future.

2.3. Electronic Word of Mouth (Ewom)

Electronic word of mouth (E-wom) is a positive or negative statement made by potential customers, actual customers and former customers about products or companies via the internet (Henning Thurau et al., 2004). Goldsmith (2008) states that electronic word of mouth (e-wom) is a social communication in the internet where web browsers send and receive information related to products online.

E-wom electronic communications have some of the same characteristics as traditional word-of-mouth (WOM) communication, but there are differences compared to traditional word of mouth (WOM) in several dimensions (Cheung &Thadani, 2010: 330). These dimensions all contribute to the uniqueness of electronic word of mouth communication (E-wom). First, unlike traditional word of mouth (WOM), electronic word of mouth communication (E-wom) has unprecedented scalability and speed of diffusion. In traditional word of mouth (WOM), information sharing occurs between small groups of people in synchronous or interconnected mode. Information in traditional word of mouth (WOM) is usually exchanged in private conversation or dialogue. It is therefore somewhat difficult to convey information to any individual who is not present at the time the information is exchanged. In contrast, electronic word of mouth communication (E-wom) involves the exchange of multi-way information. Information in electronic word of mouth (E-wom) form does not need to be exchanged at the same time when all communicators are present. For example, forum users can read and write other people's comments after the topic of conversation is made.

Second, unlike traditional word of mouth (WOM), electronic word of mouth communication (E-wom) is more fixed and accessible. Most text-based information is presented on the Internet archived and thus will be available indefinitely. Third, electronic word of mouth communication (E-wom) is more measurable than traditional word of mouth (WOM). The presentation format, quantity, and persistence of electronic word of mouth communication (E-wom) have made them easier to observe. The word of mouth information available online is much more productive in numbers compared to information obtained from traditional contacts in the offline world. In other words, researchers can easily pick up a large number of electronic word of mouth messages (E-wom), online and analyze their characteristics such as number of sentimental words used, message positions, message styles, and the like. Finally, the nature of electronic word of mouth (E-wom) where it can not judge the credibility of the sender and its message. One can only judge the credibility of communicators through online reputation systems.

2.4.Trust

Trust is the foundation of business. A business transaction between two or more parties will occur if each trusts each other. This belief can not simply be recognized by other parties / business partners, but must be built from the beginning and can be proven. When someone who wants to do transactions online, then that should have thinking is money that sent not just disappear but get the desired product reply in accordance with what is displayed and described in the targeted online store. Trust has been considered as a catalyst in various transactions between sellers and buyers in order that consumer satisfaction can materialize as expected (Yousafzai et al., 2003).

Trust can be realized if a product has met the expectations and needs of consumers, where they will be satisfied with the product. Trust will arise if the consumer has felt satisfaction for having consumed or used a product with a particular brand. Consumers who feel comfortable and believe in a product, will not easily leave or replace the product with other brand products. Therefore, the brand also plays an important role to be the identity of the product. A brand must be able to give consumers confidence that the brand is truly trustworthy. With the building of a trust by a company, the public will be confident that the products issued by it will be able to meet their needs and desires.

2.5.Risk Perception

Risk perception is defined by Oglethorpe (1994) as a consumer perception of the uncertainty and possible negative consequences of a product or service purchase. Meanwhile, Assael (1998) states that risk perception becomes one of the important components in information processing conducted by consumers. Consumers are increasingly compelled to seek additional information when faced with high-risk product purchases. When risk perceptions become high, there is the motivation of whether to avoid buying and using or minimizing risk through the search and evaluation of pre-purchase alternatives in the decision-making stage. These conditions result in complex decision making.

Consumers may evaluate the brand in detail. Information about the product is needed and consumers try to evaluate different brands. Such decision-making processes illustrate the involvement of consumers with a product. So it can be stated that the perception of risk of thinking about the risks that will be experienced by consumers. A possible uncertainty and negative consequences for the purchase of a product or service.

The perceived risk creates an uncertainty that is naturally shown in online transactions. These uncertainties include the uncertainty of the environment and the uncertainty of consumer behavior in using online transaction activities as one of the elements of e-commerce. Pavlou (2003) concludes behavioral uncertainty in four risks: a) economic risk, due to the lack of funds, b) personal risk, because products and services are potentially unsafe, c) seller performance risk (Seller performance risk), due to incomplete monitoring, and d) private risk (privacy risk), due to the opportunity to demonstrate the freedom of consumers in obtaining information. While the environmental uncertainty includes: a) economic risk, because there is an opportunity for loss of funds, and b) private risk (privacy risk), because of the possibility of the theft of personal information or personal data that eventually revealed illegally or not legitimate.

According to Pavlou (2003), Risk Perceptions are measured by the following indicators: (1) There are certain risks, (2) Experiencing loss, and (3) Thinking that is risky. There are certain risks are obvious risks obtained by online store users. While Experiencing loss is an incident when already using the online store users experience losses. And Thought that the risk that users think of a risk that has not occurred when going to conduct transactions via online store.

2.6. Site Quality

The site or website may also be interpreted as a collection of pages displaying text data, still or motion image data, animation data, sound, video and or all of them, both static and dynamic, forming a series of interconnected buildings, Each linked to a network of pages (hyperlinks). Static if the content of website information remains, rarely changed, and the contents of the information just from the website owner. Dynamic when the contents of the website information is always changing, and the content of the two-way interactive information comes from the owners and users of the website. Examples of static websites are containing company profiles, while dynamic websites are like Friendster, Multiply, etc. In terms of development, static websites can only be updated by the owner only, while dynamic websites can be updated by users and owners.

Sarwono and Prihartono (2012) explains that customer satisfaction on e-commerce depends on three main quality in information quality, system quality and service quality. The quality of the system depends on the needs of the user, defined as the system of analysis and development. Some important factors in user purchasing satisfaction with website include display, technical willingness, delay handling, navigation, security, and privacy.

The quality of the site of a web is a factor that can affect the consumer's intention to buy the site (Suhartini, 2011). Website quality according to Barnes and Vidgen (2001) consists of; (1) the quality of website information, in this case how the site can provide accurate, reliable information and can be understood by its users; (2) the quality of the website display, including the ability of the web in the settings menus, color arrangement and clarity of the size of writing in the website; (3) the quality of use, that is ease in accessing information in the website.

The clues found on the Internet and salesman relationships can not be met well (Gefen, 2002, in Suhartini, 2011). For e-retailers, the website is used as a means of communication with consumers, therefore the look and shape of the website is very important. According to Wingfield (2002 in Suhartini, 2011), displaying the website professionally indicates that the e-retailer company is competent in run its operations. Views a professional website to give consumers a sense of comfort, so that consumers can be more trust and comfortable in doing Consumer (Chen and Dhillon, 2003 in Suhartini, 2011).

Klein's (1998 in Suhartini, 2011) an economist of information search model conveys that consumers will choose cheap plaing way of searching and defending products and services. Search and shopping through one internet channel can be felt cheaper than searching and shopping through various channels. So consumers will choose one channel to reduce the cost of shopping instead of using various channels in getting information and shopping for products. The empirical experiments in the field also support that consumers prefer to seek information over the internet when purchasing products online (Kim and Park, 2005 in Suhartini, 2011). Online buyers claim that they are better able to test product options through online shopping compared to offline shopping (Wolfinbarger and Gilly, 2000 in Suhartini, 2011). Consumers not only compare prices but also compare product quality attributes offered in an online store or compare with other online retail stores.

3. Hypotheses

3.1. The influence of Electronic Word of Mouth (Ewom) on the interest of transacting using E-commerce.

Buying interest arises when a person has obtained enough information about the desired product. Buying interest is a behavior that appears as a response to an object, or a repeat purchase (Henry Assael, 1998). Sciffman and Kanuk (2007) in his research mentions the existence of external influences, the emergence of the need for a product, product introduction and evaluation of information is something that can lead to a consumer buying interest.

In Jalilvand and Samiei's research (2012), e-WOM communications positively affect brand image and e-WOM communications have a positive effect on purchasing interest, and brand image influences consumer buying interest. A review of a consumer-made product on the internet is the most important form of e-WOM communication, consumers are likely to look for online product reviews in order to obtain specific product information that ultimately forms a buying interest.

Research conducted Haekal and Widjajanta (2016) states that the trust and perceptions of risk affect simultaneously to the interest of buying online visitors to website classifieds in Indonesia by 43%. While the partial influence shows that the dimensions of benevolence and performance risk dimensions have greater influence compared with other dimensions. Based on the results of research through multiple linear there is a significant influence of trust and perceptions of risk on interest in buying online visitors classifieds website in Indonesia. The influence of these variables has a significant influence either simultaneously or partially.

H_1: There is influence of Electronic Word of Mouth (Ewom) to Interest of Transaction Using E-commerce.

3.2. The Effect of Trust on Interests Using E-commerce Transactions.

Based on the results of the study found the theory of the influence of trust and interest in buying e-commerce supported by the opinion Heijden et al. (2003: 43), the trust orientation highlights the importance of trust in determining buying interest online and its introduction includes a number of trust controls.Trust in a company negatively affects the perceived risk associated with buying something on the internet.

Harris and Goode (2010) in his research stated online trust of a website positively related to consumer purchase intentions. Purchase online is influenced by the evaluation and interpretation of the site that impact on consumer confidence Based on the research described above can be concluded a hypothesis that is previous research by Aribowo and Nugroho (2013: 2) states that there is a significant influence of trust and perceived of risk on the intention to transact using E-Commerce on the students of the Faculty of Economics, Yogyakarta State University. Based on the description above, it can be proposed as follows hypothesis

H_2: There is an Effect of Trust on Interests Using Trade E-commerce.

3.3. The Effect of Risk Perception on Interaction Interest Using E-commerce.

Based on the results of the study found the theory of the influence of risk perceptions of online buying interest supported by the opinion of Hawkins and Mothersbaugh (2010: 600), can be interpreted that the perception of risk is considered as a characteristic of consumers and the characteristics of the product itself. According to Suhir, Suyadi and Riyadi (2014: 4), risk perception

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is a subjective judgment by a person against the likelihood of an accident event and how concerned the individual is with the consequences or impacts of the event.

Research conducted Haekal and Widjajanta (2016) states that the trust and perceptions of risk affect simultaneously to the interest of buying online visitors to website classifieds in Indonesia by 43%. While the partial influence shows that the dimensions of benevolence and performance risk dimensions have greater influence compared with other dimensions. Based on the results of research through multiple linear there is a significant influence of trust and perceptions of risk on interest in buying online visitors classifieds website in Indonesia. The influence of these variables has a significant influence either simultaneously or partially. Of the severalhypothesis proposed in this study are:

H_3: There is the influence of Risk Perception on the Interest of Transaction Using E-commerce.

3.4. The Effect of Site Quality on Interests Using E-commerce Transactions

Some research on web quality, Chen (2013) found the quality of the system, quality of information and service quality significantly influence the intention to transact on mobile shopping. Sam and Tahir (2009) examine the quality of websites such as usability, design, quality of information, trust, risk perceptions and empathy have a significant influence on consumer intention in purchasing airline tickets. Research Ganguly (2010) found a significant influence between the quality of the site to purchase intentions in online shopping in the United States.

Research conducted by Sujana and Suprapti (2016) states that the quality of the site and consumer confidence have a positive effect on the intention to buy online. In addition, consumer confidence significantly mediates the relationship between site quality against online purchase intentions. This shows that the importance of trust role on site quality will have an impact on consumer intentions to buy on the site. Based on some research, hence can be proposed hypothesis as follows:

H_4: There is Impact of Site Quality on Interaction Interest Using E-commerce.

The theoretical framework in this research can be explained in:

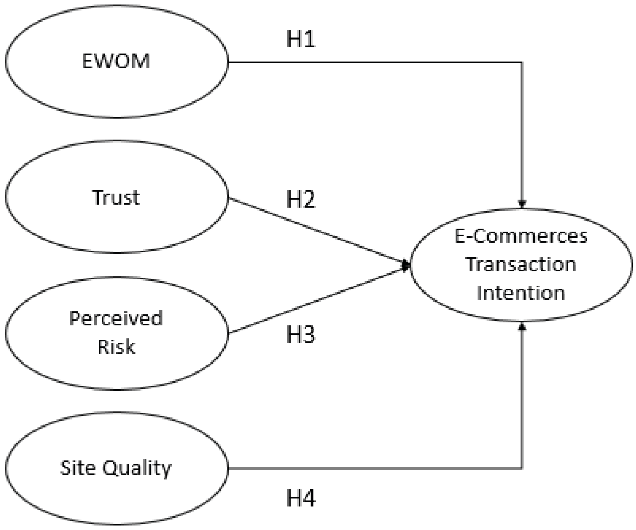

Figure 1. Research Model

4. Methods

The population in this study used all the students scattered in the city of Surakarta from several universities that have the author set as a representative of Other Universities. The writer determines 5 universities spread in Surakarta namely SlametRiyadi University (UNISRI), Setia Budi University (USB), AkademiTeknologiwarga (ATW), InstitutSeni Indonesia (ISI), and SekolahTinggiIlmuEkonomi Surakarta (STIES) Which is active in the period 2016 in each college.

The sampling technique used in this study is proportional random sampling. Research respondents are students who have been interested in transacting using an e-commerce system of 100 people. The sample consists of UNISRI students (41 people), USB (30 respondents), ATW (11respondent), ISI (10 respondents), STIES (8 persons). Data source used is primary data. Primary data obtained from the questionnaire distribution. Data collection and data processing is executed February 23, 2017. Method {data collected by questionnaire or questionnaire and literature study from several journals. Analysis of research data using multiple regression analysis technique using SPSS 16. The analysis stages of the analysis include: (1) Descriptive analysis, (2) validity and reliability test, (3) Multicollinearity and Heteroskedasticity Test, (4) Autocorrelation Test, 5) Partial Regression Coefficient Test.

5. Result and Discussion

Effect of Electronic Word of Mouth (ewom) on Interaction Interest Using E-commerce.

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The results show that there is a positive influence of Electronic Word of Mouth (ewom) on the interest of transactions using e-commerce on students in the city of Surakarta. It is proved by the result of t test statistic for electronic word of mouth (ewom) variable obtained t value 2,441 bigger than t-table 1,661 with significance value equal to 0,017 smaller than 0,05 (0,017 <0,05), and Regression coefficient has a positive value of 0.167; Then this research successfully proves hypothesis stating that "There is positive influence of electronic word of mouth (ewom) to the interest of transactions using e-commerce survey on students in Surakarta city".

Electronic word of mouth (ewom) is a positive or negative statement made by potential customers, actual customers and former customers about a product or company via the internet (Henning Thurau et al., 2004). Goldsmith (2008) states that electronic word of mouth (ewom) is a social communication in the internet where web crawlers send and receive information related to the product online.

The results of this study support previous research conducted by Putranti and Pradana (2015) entitled "Electronic Word of Mouth (ewom), Consumer Satisfaction and Direct and Indirect Direct Influence on Consumer Buying Interest (Study to FEB UNTAG Students in Semarang)". In this research, it is explained that electronic word of mouth (ewom) and consumer satisfaction have positive effect on social media, consumer satisfaction have positive effect on electronic word of mouth (ewom), there is direct and indirect influence of electronic word of mouth (ewom) to buying interest Consumers, and social networks can open opportunities for media campaigns quickly and effectively and efficiently. Another equation is the topic taken in this study is about electronic word of mouth (ewom) affect consumer buying interest.

The Effect of Risk Perception on Interaction Interest Using E-commerce. The results showed that there was a positive influence of trust on the interest of transactions using e-commerce surveys on students in the city of Surakarta. This is proved by the result of t test statistic for the confidence variable obtained t value 2,219 bigger than t-table 1,661 (2,291> 1,661) with significance value equal to 0,029 smaller than 0,05 (0,029 <0,05), and regression coefficient Has a positive value of 0.147; Then this research succeeds to prove hypothesis stating that "There is a positive influence of trust on interest in transactions using e-commerce surveys on students in the city of Surakarta".

Trust is the foundation of business. A business transaction between two or more parties will occur if each trusts each other. This belief cannot simply be recognized by other parties / business partners, but must be built from the beginning and can be proven. When someone who wants to do transactions online, then that should have thinking is money that sent not just disappear but get the desired product reply in accordance with what is displayed and described in the targeted online store. Trust has been considered as a catalyst in various transactions between sellers and buyers in order that consumer satisfaction can materialize as expected (Yousafzai et al., 2003).

Trust can be realized if a product has met the expectations and needs of consumers, where they will be satisfied with the product. Trust will arise if the consumer has felt the satisfaction of having consumed or using a product with a specific brand. Consumers who feel comfortable and believe in a product, will not easily leave or replace the product with other brand products. Therefore, the brand also plays an important role to be the identity of the product. A brand must be able to give consumers confidence that the brand is truly trustworthy. With the building of a trust by a company, the public will be confident that the products issued by it will be able to meet their needs and desires.

Based on the above definition, it can be stated that trust is the belief of a certain party against the other in making a transaction relationship based on a belief that the person who is believed will fulfill all obligations well as expected. According to Pavlou (2003), Trust is measured by the following indicators: a) Trusted online store, b) Online store keeping promises and commitments, and c) Thought to trust online store. Trusted online store that is online store provided by someone or company already many who use. While Online store keep promise and commitment is online store is able to keep promise and commitment in providing services of buying and selling online. And Thought to trust the online store is a user who will make a transaction buy online in positive mindset to the online store to be used.

The results of this study support previous research conducted by Aribowo and Nugroho (2013) entitled "The Influence of Trust and Perceived of Risk Against Intention to Transact Using E-Commerce". In the research note that Trust has a positive effect on the intention to transact using E-commerce Student Faculty of Economics, State University of Yogyakarta, Perceived of Risk negatively affect the Intention to Transaction using E-commerce at Student Faculty of Economics, State University of Yogyakarta, Trust and Perceived of Risk influence Of Intent to Transact using E-commerce to Student Faculty of Economics, State University of Yogyakarta. Another equation is the topic taken in this research that is about the interest to transact using e-commerce.

The results showed that there is a positive effect of risk perception on interest in transactions using e-commerce surveys on students in the city of Surakarta. This is evidenced by the results of t test statistics for the risk perception variable obtained t value -5,448 greater than t-table -1,661 (-5,448> -1,661) with a significance value of 0.000 smaller than 0.05 (0.000 <0.05), Whereas regression coefficient has negative value equal to -0.207 bigger than r table that is 0,196. Based on these results, this study succeeded in proving the second hypothesis that "There is a negative effect of risk perception on interest in transactions using e-commerce surveys on students in the city of Surakarta".

Risk perception is defined by Oglethorpe (1994) as a consumer perception of the uncertainty and possible negative consequences of a product or service purchase. Meanwhile, Assael (1998) states that risk perception becomes one of the important components in information processing conducted by consumers. Consumers are increasingly compelled to seek additional information when faced with high-risk product purchases. When risk perceptions become high, there is the motivation of whether to avoid buying and using or minimizing risk through the search and evaluation of pre-purchase alternatives in the decision-making stage. These conditions result in complex decision making. Consumers may evaluate the brand in detail. Product informationis needed and consumers are trying to evaluate different brands. Such decision-making processes illustrate the involvement of consumers with a product. So it can be stated that the perception of risk of thinking about the risks that will be experienced by consumers. A possible uncertainty and negative consequences for the purchase of a product or service.

According to Suhir, Imam and Riyandi (2014), risk perception is defined as a subjective judgment by a person against the likelihood of an accident event and how worried the individual is with the consequences or impacts of the event. Meanwhile, according to Sciffman and Kanuk (2008: 137), perceived risk is defined as uncertainty faced by consumers if they can not predict the consequences of their purchasing decisions. In this study, risk perception is more inclined to consumers who shop online through internet media.

The results of this study support previous research conducted by Widjajanta (2016) conducted a study entitled "The Influence of Trust and Risk Perceptions on Interest Buying Online At Visitors Website Classifields in Indonesia". It is known that the trust and perception of risk affect simultaneously to the online buying interest in the classifieds website visitors in Indonesia by 43%, partially influence shows that the dimension of benevolence and the dimension of performance risk have greater influence compared with other dimensions, based on the results of research through linear Multiplier there is a significant influence of trust and perceptions of risk on online buying interest in visitor classifieds website in Indonesia, and the influence of these variables has a significant influence either simultaneously or partially.

The Effect of Site Quality on Interest in Transactions Using E-commerce. The results showed that there is a positive effect of site quality on the interest of transactions using e-commerce surveys on students in the city of Surakarta. This is evidenced by the results of t test statistics for site quality variables have a significance level of 0.002. From the result of t test on site quality variable stated that the significance of t test is smaller than 0.05 (0.002 <0.05) and the regression coefficient has a positive value of 0.215. While the value of t-nominal obtained is 3.259 larger than t-table is 1.661. So this research succeeds to prove the fourth hypothesis which states that "There is a positive influence of site quality on the interest of transactions using e-commerce surveys on students in the city of Surakarta".

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The site or website may also be interpreted as a collection of pages displaying text data, still or motion image data, animation data, sound, video and or all of them, both static and dynamic, forming a series of interconnected buildings, Each linked to a network of pages (hyperlinks). Static if the content of website information remains, rarely changed, and the contents of the information just from the website owner. Dynamic when the contents of the website information is always changing, and the content of the two-way interactive information comes from the owners and users of the website. Examples of static websites are containing company profiles, while dynamic websites are like Friendster, Multiply, etc. In terms of development, static websites can only be updated by the owner only, while dynamic websites can be updated by users and owners.

Sarwono and Prihartono (2012) explains that customer satisfaction on e-commerce depends on three main quality ie information quality, system quality and service quality. The quality of the system depends on the needs of the user, defined as the system of analysis and development. Some important factors in satisfactionUser purchases with websites such as display, technical willingness, delay handling, navigation, security, and privacy.

The results of this study support previous research conducted by Sujana and Suprapti (2016) entitled "The Role of Trust In Mediating The Effect Of Site Quality On Consumer's Intention To Shop On Zalora Site". It is known that Site Quality and Consumer Confidence have a positive effect on online purchase intentions, Consumer confidence significantly mediates the relationship between site quality against online purchase intentions, and this research indicates that the importance of trust role on site quality will impact consumer intention to buy in Site.

6. CONCLUSION

This study aims to examine the effect of electronic word of mouth, trust, risk perception, and site quality on the interest of transacting using e-commerce. To increase student interest in using e-commerce, there are some important variables that must be considered by marketers, namely eWOM, customer trust, risk perception, and site quality. These four things should be the focus of marketers so that the segment of students can be increased their interest to use e-commerce

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THE EFFECT OF TRANSFORMATIONAL LEADERSHIP, ORGANIZATIONAL CULTURE AND EMPLOYMENT MOTIVATION ON THE MANAGERIAL PERFORMANCE THROUGH ORGANIZATIONAL CITIZENSHIP BEHAVIOR

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ABSTRACT

The purpose of this study is to analyze the influence of transformational leadership, organizational culture and work motivation on organizational citizenship behavior and managerial performance at PT. Cobra Direct Sale Indonesia. Analyzing the influence of organizational citizenship behavior on managerial performance at PT. Cobra Direct Sale Indonesia and analyzed the influence of transformational leadership, organizational culture and work motivation on managerial performance through organizational citizenship behavior at PT. Cobra Direct Sale Indonesia. Population in this research is manager of PT. Cobra Direct Sale Indonesia in all over 24 provinces that consist of 150 people. Sampling method used in this study using census. The analysis method used is descriptive analysis and Structural Equation Modeling (SEM). The results of the study show that transformational leadership, organizational culture and work motivation influence organizational citizenship behavior. Transformational leadership and work motivation give influence to managerial performance of PT. Cobra Direct Sale Indonesia, while organizational culture has no effect. Organizational citizenship behavior gives influence to managerial performance of PT. Cobra Direct Sale Indonesia. Transformational leadership, organizational culture and work motivation have an effect on managerial performance through organizational citizenship behavior in PT. Cobra Direct Sale Indonesia.

Keywords: Transformational Leadership, Organizational Culture, Work Motivation, Organizational Citizenship Behavior and Managerial Performance

1. INTRODUCTION

The recent economic development in Indonesia has boosted development in all fields, especially in the field of industry and national trade that produce various variations of goods and services. Globalization and free trade supported by advances in telecommunications and informatics technologies have broadened the flow of goods and service transactions across national boundaries, so that the goods and services offered vary, both foreign and domestic. Such conditions on one hand have benefits for consumers because the needs of consumers will need the desired goods and services can be fulfilled, the more open the freedom to choose various types and quality of goods and services in accordance with the desires of the consumer's ability, Sutedi (2008: 1).

One of the ways that is done by business actors in meeting the needs of consumers and simultaneously developing the company's marketing system is to use direct selling system. PT Cobra Direct Sale Indonesia is located at Wisma Aldiron 1st floor suite 107-109 Jl. General Gatot Subroto Kav.72 South Jakarta 12780 that is one of the leading direct selling companies in Indonesia. With more than 20 years of experience and supported by more than 6000 sales force spread all over Indonesia, they would like to continue to prove themselves to be the largest direct selling company in Indonesia. The company moves with the spirit of "Work Smart, Play Hard".

Realizing the spirit of Work Smart, Play Hard, companies must dare to face change and win the competition. The success of PT Cobra Direct Sale Indonesia in achieving its goals largely depends on managerial performance. Managerial performance can be explained as a form of manager's existence (leadership) in completing work as effectively as possible (Soobaroyen and Poorundersing, 2008).

The great responsibility of the profession of a manager depends on the role of the leader in an organization and the leader who is able to motivate and encourage to do the job well is transformational leadership. Luthans (2006: 653) states that transformational leadership leads to high performance in organizations that face reform demands. Mondiani (2012: 87). Stated that transformational leadership, which is an extension of charismatic leadership, is expected to improve employee performance. The results of Bycio (1995), Purvanova (2006), and Ahn and Kwon (2005) show a strong positive relationship between transformational leadership variables and performance. Different results are shown by Awamleh and Dmour (2004); Insan, et al. (2013) suggest that transformational leadership does not affect employee performance.

Organizational culture is able to contribute to the performance of employees. Organizational culture is a 289). Luthans (2006: 278) reveals that organizational culture is the norms and values that direct the behavior of members of the organization. Schein (2009: 27) reveals that organizational culture is a pattern of shared assumptions learned by a group in solving problems through external adaptation and internal integration, which has worked well enough to be considered truthful, therefore, to be taught to new members as a good way to see, think, and feel connected with the problems that exist. Sambasivan and Johari (2003) indicate that organizational culture that develops well and regularly in organization will influence improve employee performance. Koesmono (2005) concluded that the organizational culture affect the performance of employees in sub sector of wood processing industry on intermediate scale in East Java. Nurjanah (2008) concluded that organizational culture has a positive effect on employee performance on the scope of the

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department of agriculture. Different results are shown by Pangestuti (2009) that the organizational culture partially has no effect on employee performance.

Another factor that affects performance is work motivation. Robbins (2006: 213) defined that motivation as a willingness to make a high effort toward organizational goals, conditioned by the ability of the effort to meet an individual's needs. Noegroho (2002: 84) suggested that the motivation of work is something that gives rise to encouragement or morale or in other words motivation is an impulse that someone wants to take action to meet their needs. Koesmono (2005) in his study found evidence that motivation had an effect on the performance of production employees in the wood processing industry sub-sector in East Java. Suprayitno and Sukir (2007) found evidence that there is a positive and significant effect of work motivation on the performance of employees of Sub Department of Hygiene and City Planning DPULLAJ Karanganyar District. Ekaningsih, (2012) indicated that the motivation of work has a significant effect on the performance of personnel of the Police Unit of Surakarta City Civil Service. Different results are indicated by Brahmasari and Suprayetno, (2008) that motivation has no effect on employee performance.

The study result of transformational leadership influence, organizational culture and work motivation on employee performance showed inconsistent result or existence of research gap so it needs to do re-study and add mediation variable that is OCB as intermediary variable of influence of transformational leadership, organizational culture and work motivation toward managerial performance.

Robbins (2006: 31) argued that OCB is an optional behavior that is not part of the employee's obligation but it supports the effective functioning of the organization. OCB is a free individual behavior, not directly or explicitly recognized in the reward system and in promoting the effective functioning of the organization. Or in other words, OCB is an employee behavior that exceeds the required role, which is not directly or explicitly acknowledged by a formal reward system (Bolino, Turnley and Bloodgood, 2002: 505).

The magnitude of a manager's managerial responsibilities makes him possible for a behavior to emerge beyond work. The profession of a manager demands not only mastery of science alone, but also other special skills such as interpersonal skills and good communication. The flexibility of a manager's working hours reinforces the reason for the need for OCB. Robbins and Judge (2008: 40), suggests that organizations with employees with good OCBs will perform better than other organizations. Podsakoff (1997) in his study found evidence that employees who have helpful behavior and sportsmanship will produce optimal work productivity both in quantity and quality. Sudarma and Ketut (2011), Yusuf and Mardiana (2012) conclude that OCB affects employee performance.

A manager with a high OCB is influenced by a leader's model of leadership. A leader must be able to feel what the subordinates feel, understand

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the needs and desires of subordinates that are implemented in everyday attitudes and behaviors. Luthans (2006: 653) stated that transformational leadership leads to high performance in organizations in facing reform demands. Logomarsino and Pablo (2003), Madhu and Krishnan (2005), Shukui and Xiaomin (2008), Asgari (2008) indicate that transformational leadership affects the OCB.

An employee has a high OCB influenced by the organizational culture. Organizational culture is an important element in the company that will determine the behavior of employees within the company. The company's success in implementing organizational culture among employees will affect every employee's positive actions and behaviors, either in-role behavior or extra-role behavior. Mohanty, Rath (2012), Puspita Rini, et al (2013) and Hardaningtyas (2004) stated that organizational culture has a significant positive relationship to organizational citizenship behavior.

OCB which is the behavior of workers who exceed formal tasks and contribute to the effectiveness of the organization will be successful with the work motivation. The results of the study on the effect of work motivation on OCB conducted by David J. Houston (2000) and Adam G. Alotaibi (2001) reveals the positive influence of work motivation on OCB.

Looking at the existing phenomenon and the results of earlier empirical studies, ideally OCB can mediate the influence of transformational leadership, organizational culture and work motivation on managerial performance in PT Cobra Direct Sale Indonesia.

2. THEORITICAL FRAMEWORK

2.1 Managerial Performance

The success of an organization in achieving its goals depends largely on the performance of managers. The manager is someone who is responsible for the organization or unit being led. The manager's job can be described in terms of various "roles" or set of organized behaviors identified by a position (Mitzberg 1988: 295).

Managerial performance according to Mahoney, et al. (1963: 106-107) is the performance of individual members of the organization in managerial activities including planning, investigation, coordination, supervision, staffing, negotiation and representation. Evaluation of the performance performed by multiple managers depends on the culture developed by each company . The performance of this research is manager's perception of managerial activity, consisting of nine activity dimensions, namely planning, investigation, selection of staff, coordination, direction, negotiation, representation, control and evaluation (Mahoney, et al.1963).

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2.2 Transformational leadership

Transformational leadership, which is an extension of charismatic leadership, leaders create a vision and environment that motivates employees to achieve beyond expectations. With transformational leadership, employees will feel trust, admiration, loyalty and respect for the leader so that employees will be motivated to do more than what is expected. In fact, it is not uncommon for employees to go beyond what they expect to do.

Transformational leadership by Bass and Avolio (1994: 84) is a leadership that is able to change the behavior of subordinates into someone who feels capable and highly motivated and strives to achieve high performance and quality in the workplace. Transformational leadership is the antithesis of a leadership model that wants to maintain the status quo, so transformational leadership can be defined as a leadership that includes organizational change efforts. A leader can transform subordinates through four ways Bass and Avolio (1994: 85) that is idealized influence, inspirational motivation, intellectual stimulation and individualized consideration.

2.3 Organizational Culture

Organizational culture is a perception shared by all members or systems of shared meanings. A shared system of meaning is itself a set of key characteristics held by a company (Robbins, 2006: 289). Luthans (2006: 278) that organizational culture is the norms and values that direct the behavior of members of the organization.

Organizational culture is the way of thinking or tradition shared by all members of the company and new members must learn or at least accept it so that they can be accepted as part of the organization. Schein (2009: 27) defined culture as the basic assumptions and beliefs of an organization. These assumptions and beliefs concern the group's view of the world and its position, in the world, the nature of the scope, human nature and human relations.

Robbins (2006: 311) revealed seven main elements or characteristics of organizational culture in the company that is: 1) innovation and risk taking that is: the extent to which employees are encouraged to be innovative and taking a risk; 2) detailed attention: employees are expected to pay attention to the process, analytical and attention to details: 3) orientation of results: the extent to which the management orientation of the results, not the techniques and processes used to achieve these results; 4) the orientation of people: the extent to which management decisions in calculating the effect of results on people within the company; 5) team orientation: the extent to which work activities within the company are coordinated in teams, not individual work activities; 6) aggressiveness: the extent to which the members of the company and their competitiveness, rather than relax and 7) ability: the extent to which the company's activities emphasize the preservation of the status quo as a contrast to growth.

2.4 Work Motivation

Robbins (2006: 213) defined motivation as a willingness to make a high effort toward organizational goals, conditioned by the ability of the effort to meet an individual's needs. Noegroho (2002: 84) Job motivation is something that gives rise to encouragement or morale or in other words motivation is a motivation that a person wants to take action to meet their needs.

Work motivation is a willingness to make a high effort toward the goals of the organization, which is conditioned by the ability of the effort to meet an individual's needs. The measurement of work motivation refers to Maslow's concept of fulfilling physiological needs, security needs, social needs, esteem needs and self actualization needs (Robbins, 2006: 213).

2.5 Organizational Citizenship Behavior

OCB by Organ (1987: 120) is meant to be individual voluntary behavior (in this case an employee) that is not directly related to the advisory system but contributes to the effectiveness of the organization. OCB is a term used to identify individual behavior as a good member (Sloat, 1999: 20). This behavior tends to see a person as a social being (being a member of the organization), rather than as a selfish individual being.

Organ and Konovsky (1989: 298) the OCB is built from five dimensions each of which is unique: Altruism, willingness to help co-workers in completing work in unusual situations. Civic virtue, concerning workers' support for administrative functions within the organization. Conscientiousness, describes workers who perform tasks and responsibilities more than what is expected. Courtesy, the behavior of alleviating the problems associated with the work faced by others. Sportsmanship describes workers who are more focused on looking at positive aspects than negative aspects of the organization, sportsmanship describes a worker's sportsmanship towards the organization.

3. Hypothesis Development

Logomarsino and Pablo (2003), Madhu and Krishnan (2005), Shukui and Xiaomin (2008), Asgari (2008) indicated that transformational leadership affects the OCB. Mohanty, Rath (2012), Puspita Rini, et al (2013) and Hardaningtyas (2004) stated that organizational culture has a significant positive relationship to organizatinal citizenship behavior. David J. Houston (2000) and Adam G. Alotaibi (2001) revealed a positive influence of work motivation on OCB. Based on result of empirical study hence this research hypothesis put forward as follows:

H_1: Transformational leadership, organizational culture and work motivation significantly influence OCB PT Cobra Direct Sale Indonesia

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Bycio (1995), Purvanova (2006), and Ahn and Kwon (2005) showed a strong positive relationship between transformational leadership variables and performance. Sambasivan and Johari (2003), Koesmono (2005) and Nurjanah (2008) indicated that organizational culture that develops well and regularly in organization will influence improve employee performance. Koesmono (2005), Suprayitno and Sukir (2007) and Ekaningsih (2012) in his study found evidence that motivation had an effect on employee performance. Based on the result of empirical study hence this research hypothesis put forward as follows:

H_2: Transformational leadership, organizational culture and work motivation have a significant effect on managerial performance of PT Cobra Direct Sale Indonesia.

Robbins and Judge (2008: 40) suggested that organizations with employees with good OCBs will perform better than other organizations. Podsakoff (1997) in his study found evidence that employees who have helpful behavior and sportsmanship will produce optimal work productivity both in quantity and quality. Sudarma and Ketut (2011), Yusuf and Mardiana (2012) conclude that OCB affects employee performance. Based on the result of empirical study, hence this research hypothesis put forward as follows:

H_3: OCB has significant effect on managerial of PT Cobra Direct Sale Indonesia

H_4: Transformational leadership, organizational culture and work motivation have a significant effect on managerial performance in mediation of COB PT Cobra Direct Sale Indonesia.

4. METHOD

This research falls under the category of explanatory research with a survey approach with the population of this study is the manager of PT Cobra Direct Sale Indonesia scattered in 24 provinces, amounting to 150 people. While the sampling method used in this study using the census that is the technique of determining the sample when all members of the population used as a sample, thus the samples taken in this study amounted to 150 managers of PT Cobra Direct Sale Indonesia.

Managerial performance is measured by indicators: planning, investigation, selection of staff, coordination, direction, negotiation, representation, control and evaluation. Transformational leadership is measured by indicators of idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. Organizational culture is measured by innovation and risk-taking indicators, attention to detail, outcome orientation, people orientation, team orientation, aggressiveness, and ability. Work motivation is measured by the indicators of physiological needs (physical needs), security needs, social needs, esteem needs and self actualization needs. OCB is measured by indicators: altruism, civic virtue, conscientiousness, courtesy and sportsmanship.

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With respect to hypothesis research, the data analysis used in research with Structural Equation Modeling (SEM). Hypothesis testing using coefficient CR (critical ratio) analogous to t-test that is with prob. (P) and If p> 0.05 then H0 is accepted, if p ≤ 0.05 then H0 is rejected. To test the OCB hypothesis mediates the influence of transformational leadership influences, organizational commitment, empowerment of managerial performance by comparing total influence with direct influence. If the total effect is greater than the direct effect, then the hypothesis is accepted, so the OCB variable as a variable mediates the influence of transformational leadership influence, organizational commitment, empowerment of managerial performance.

5. RESULTS AND DISCUSSION

Structural Equation Model (SEM) analysis is done by using AMOS 6.0 in order to test the hypothesis proposed by the researcher. As a basis to test the hypothesis used Critical ratio (Cr) from the output regression weight. The research hypothesis will be accepted if p value <of is significanc;e of 5%, then the null hypothesis is rejected. The results of hypothesis testing are presented in Table 1 below.

Table 1. Analysis Result of *Regression Weight*

Variable			Path Coefficient	C.R.	Sig
OCB	<---	Transformational Leadership	0.277	2.110	0.035
OCB	<---	Organizational Culture	0.247	2.050	0.040
OCB	<---	Work Motivation	0.303	2.201	0.028
Managerial Performance	<---	Transformational Leadership	0.269	3.175	0.001
Managerial Performance	<---	Transformational Leadership	0.029	0.424	0.672
Managerial Performance	<---	Work Motivation	0.475	4.343	0.000
Managerial Performance	<---	OCB	0.279	3.328	0.000

Transformational leadership gives influence to OCB manager of PT Cobra Direct Sale Indonesia with coefficient value of 0.277 and significance at 5% level. It can be explained that the success of PT Cobra Direct Sale Indonesia managers in achieving goals largely depends on the managerial role. The role of leader who is able to make managers of PT Cobra Direct Sale Indonesia has OCB is transformational leadership. Transformational leadership is a leadership model for a leader who tends to motivate subordinates to work better and focuses on behavior to aid the transformation between individuals and organizations, Bass and Avolio (1994: 85). Transformational leadership is expected to make managers of PT Cobra Direct Sale Indonesia have OCB that is a leader who makes managers as a symbol of success and achievement in running the organization, has an innovative in thinking and acting, always learn to discover new things and always find out the wishes and expectations of subordinates . The results of this study reinforce previous research by

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Logomarsino and Pablo (2003), Madhu and Krishnan (2005), Shukui and Xiaomin (2008), Asgari (2008) indicate that transformational leadership influences OCB.

Organizational culture gives influence to OCB manager of PT Cobra Direct Sale Indonesia with coefficient value of 0.247 and significance at level 5%. It can be explained that the organizational culture developed by the manager of PT Cobra Direct Sale Indonesia affects the behavior of workers who exceed formal tasks and contribute to organizational effectiveness by helping others volunteerily, keeping company reputation, always arriving early, Work on schedule, consider criticism used to evaluate improvements and refrain from complaining. The results of the study reinforce the review proposed by Mohanty, Rath (2012), Puspita Rini, et al (2013) and Hardaningtyas (2004) states that organizational culture has a significant positive relationship to organizatinal citizenship behavior.

Work motivation effect on OCB with coefficient value of 0.303 and significance at level 5%. It can be explained that the motivation of PT Cobra Direct Sale Indonesia manager is more emphasized on the fulfillment of physiological needs (physilogical needs), security needs, social needs, esteem needs and self actualization needs (Self actualization needs), at the time the need is fulfilled, the manager has OCB applied to the behavior that exceeds the formal task by assisting colleagues voluntarily, can keep the company's reputation, always arrive early, so do the work on schedule, consider the criticism used for evaluation Repair and refrain from complaining. The study results corroborate the study presented by David J. Houston (2000) and Adam G. Alotaibi (2001) revealed the positive influence of work motivation on OCB.

Transformational leadership gives influence to OCB manager of PT Cobra Direct Sale Indonesia with coefficient value of 0.277 and significance at 5% level. It can be explained that the success of PT Cobra Direct Sale Indonesia managers in achieving goals largely depends on the role of a managerial. The role of leader who is able to make managers of PT Cobra Direct Sale Indonesia has OCB is transformational leadership. Transformational leadership is a leadership model for a leader who tends to motivate subordinates to work better and focuses on behavior to aid the transformation between individuals and organizations, Bass and Avolio (1994: 85). Transformational leadership is expected to make managers of PT Cobra Direct Sale Indonesia have OCB is a leader who makes managers as a symbol of success and achievement in running the organization, has an innovative in thinking and acting, always learn to discover new things and always find out the wishes and expectations of subordinates. The results of this study reinforce previous research by Logomarsino and Pablo (2003), Madhu and Krishnan (2005), Shukui and Xiaomin (2008), Asgari (2008) indicate that transformational leadership influences OCB.

Organizational culture gives influence to OCB manager of PT Cobra Direct Sale Indonesia with coefficient value of 0.247 and significance at level 5%. It can be explained that the organizational culture developed by the manager of PT Cobra Direct Sale Indonesia affects the behavior of workers who exceed formal tasks and contribute to organizational effectiveness by helping volunteers, keeping company reputation, always arriving early, Work on schedule, consider criticism used to evaluate improvements and refrain from complaining. The results of the study reinforce the review proposed by Mohanty, Rath (2012), Puspita Rini, et al (2013) and Hardaningtyas (2004) states that organizational culture has a significant positive relationship to organizatinal citizenship behavior.

Work motivation effect on OCB with coefficient value of 0.303 and significance at level 5%. It can be explained that the motivation of PT Cobra Direct Sale Indonesia manager is more emphasized on the fulfillment of physiological needs, security needs, social needs, esteem needs and self actualization needs (self actualization needs). When the needs are met the manager has an OCB applied to behaviors that exceed formal tasks by assisting co-workers voluntarily, can keep the company's reputation, always arriving early, so doing work on schedule, taking criticisms for evaluation evaluation and refraining from complain. The study results corroborate the study presented by David J. Houston (2000) and Adam G. Alotaibi (2001) revealed the positive influence of work motivation on OCB.

PT Cobra Direct Sale Indonesia will succeed and develop highly depends on the leaders. If the leader is able to perform the function well, it is very possible that the organization will be able to achieve the target. Based on the result of empirical study, transformational leadership significantly influence the performance of manager of PT Cobra Direct Sale Indonesia with coefficient value of 0.269 and significance at level 5% It can be said that managerial PT Cobra Direct Sale Indonesia will have a good performance if the leader is able to run the role as a leader. The results of work activities achieved by a manager of PT Cobra Direct Sale Indonesia in carrying out his duties in accordance with the responsibilities given to him because of leadership factors that use transformational leadership approach that applied as a symbol of success and achievement in running the organization, has an innovative in thinking and acting, always learning to discover new things and always find out desires and expectations of subordinates. The review results corroborate the study conducted by Bycio (1995), Purvanova, et al. (2006), Ahn and Kwon (2005) show a strong positive relationship between transformational leadership variables and performance.

Organizational culture has no influence on the performance of managers of PT Cobra Direct Sale Indonesia with coefficient value of 0.029 and significance at level 5%. This study can be interpreted that the work quality and quantity achieved by the manager of PT Cobra Direct Sale Indonesia in

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performing the task is not due to cultural factors. The condition is due to PT Cobra Direct Sale Indonesia as the largest direct selling company in Indonesia and has a spirit of "Work Smart, Play Hard" in running the job. Cultural dimensions such as innovation and risk-taking, attention to detail, outcome orientation, people orientation, team orientation, aggressiveness, and ability are already part of the manager's morale so managers do not feel overwhelmed by the conditions. The results of this study support the study presented by Pangestuti (2009) that the organizational culture partially has no effect on employee performance.

Work motivation affects the performance of managers PT Cobra Direct Sale Indonesia with coefficient value of 0.475 and significance at level 5%. This study can be interpreted that the attitude and the work achieved by the manager of PT Cobra Direct Sale Indonesia is influenced by work motivation. Managers of PT Cobra Direct Sale Indonesia will perform well if physiological needs, security needs, social needs, esteem needs and self actualization needs, Fulfilled. The results of this study support the study presented by Koesmono (2005), Suprayitno and Sukir (2007) and Ekaningsih, (2012) in his study found evidence that motivation has an effect on employee performance.

OCB effects on the performance of managers of PT Cobra Direct Sale Indonesia with coefficient value of 0.279 and significance at the 5% level. This study can be interpreted that the attitudes and work achieved by the manager of PT Cobra Direct Sale Indonesia are influenced by OCB. The results can be interpreted that the manager of PT Cobra Direct Sale Indonesia will perform better if the manager has a good OCB applied to help co-workers voluntarily, can keep the company's reputation, always arrives early, so do work on schedule, Evaluation of improvements and refrain from complaining. The results corroborate the review put forward by Robbins and Judge (2008: 40), that organizations with employees with good OCBs will perform better than other organizations. Podsakoff (1997) found evidence that employees who have helpful behavior and sportsmanship will produce optimal work productivity both in quantity and quality. Sudarma (2011), Yusuf, et al. (2012) concludes that OCB affects employee performance.

Testing indirect effects is used from some direct impact test results. The complete results of the direct impact test are presented in the table below.

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Table 2. Hypothesis Testing Result of Indirect Effect

The Effect between Variable	Direct Effect	Indirect Effect through Y_1	Total Effect
X_1 on Y_1	0.277	-	0.277
X_2 on Y_1	0.247	-	0.247
X_3 on Y_1	0.303	-	0.208
X_1 on Y_2	0.269	0.277 x 0.279 = 0.077	0.346
X_2 on Y_2	0.029	0.247 x 0.279 = 0.069	0.098
X_3 on Y_2	0.475	0.303 x 0.279 = 0.085	0.560
Y_1 on Y_2	0.279	-	0.279

OCB mediates the influence of transformational leadership on the performance of managers of PT Cobra Direct Sale Indonesia. The manager of PT Cobra Direct Sale Indonesia has a better performance because of the transformational leadership role that can make managers have behaviors that exceed the mandatory role (OCB). The results show that the application of transformational leadership such as leadership as a symbol of success and achievement in running the organization, the leader has an innovative in thinking and acting, leaders always learn to find new things and leaders always find out the wishes and expectations of subordinates can create managers have a better OCB with Assisting colleagues on a voluntary basis, keeping the company's reputation, always arriving early so doing the work on schedule, taking criticism for the evaluation of improvements and refraining from complaining. These conditions have an impact on the performance of managers of PT Cobra Direct Sale Indonesia better.

OCB mediates the influence of organizational culture on the performance of managers of PT Cobra Direct Sale Indonesia. The performance of managers of PT Cobra Direct Sale Indonesia is better if PT Cobra Direct Sale Indonesia implements a strong organizational culture that enables managers to have behaviors that exceed the required role (OCB). The results show that the application of organizational culture such as innovation and risk-taking, attention to detail, outcome orientation, people orientation, team orientation, aggressiveness, and the ability to make managers have mandatory roles (OCB) by assisting co-workers voluntarily, Arrive early so do the work on schedule, consider criticism used to evaluate the improvement and refrain from complaining. The manager has a mandatory role (OCB) will have an impact on the performance of managers of PT Cobra Direct Sale Indonesia better.

OCB mediates the influence of work motivation on the performance of managers of PT Cobra Direct Sale Indonesia. The high motivation in the manager of PT Cobra Direct Sale Indonesia is able to make the manager has behavior that exceeds the obligatory role (OCB) and has an impact on the improvement of manager performance of PT Cobra Direct Sale Indonesia. The results show that the fulfillment of physiological needs (physilogical needs), security needs, social needs, esteem needs and self actualization needs make

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managers have behaviors that exceed the mandatory role (OCB) by assisting colleagues on a voluntary basis, keeping the company's reputation, always arriving early so that it does the work on schedule, considers the criticism used to evaluate improvements and refrain from complaining. The manager has a mandatory role (OCB) will have an impact on the performance of managers of PT Cobra Direct Sale Indonesia better.

6. CONCLUSION

Transformational leadership, organizational culture and work motivation has an effect on OCB. Transformational leadership, and work motivation affect the managerial performance of PT Cobra Direct Sale Indonesia, while organizational culture has no influence on managerial performance. OCB effects on managerial performance of PT Cobra Direct Sale Indonesia. OCB mediates the influence of transformational leadership, organizational culture and work motivation on managerial performance on PT Cobra Direct Sale Indonesia.

The leader of PT Cobra Direct Sale Indonesia, in improving the managerial performance needs to run transformational leadership, able to develop a strong organizational culture and able to motivate the manager's work. In addition, the Leader of PT Cobra Direct Sale Indonesia should pay attention to the OCB's behavior on the courtesy elements of the managers, such as being reluctant to provide explanations regarding tasks to colleagues, always helping to organize togetherness, accept criticism and criticism used to evaluate improvements

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Analysis of Competitiveness Traditional Retail To Modern Retails in Consumer Perspective

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ABSTRACT

Competition in the retail industry can be seen in many ways, there are competition between traditional retail and modern retail, competition between modern retailers fellow and competition among traditional retails. The large presence of modern retailers in the region forced traditional retail to compete with the modern retailers. This study discusses how traditional retail competitiveness with the modern retail focused on consumer preferences aspects. Variables used to measure consumer preferences are Human Resource with indicators Appearance of shopkeeper, Hospitality in service, Speed in service, Shop open time, while Merchandise variable with indicator, Appearance store, Merchandise display, Number of products available, Diversity of product type, Diversity Brands are sold. Method of analysis with descriptive analysis. The research results show that hospitality in service, speed in service and certainty of shop opening time of traditional retail stores need to be improved. As for the number of products available, the diversity of product types and the diversity of brands sold is a problem that stems from the limitations of traditional retail capital. The government already has a solution that with the opening of credit access to financial institutions with the issuance of OJK Regulation no. 76 / POJK.07 / 2016 on Increasing Literacy and Financial Inclusion in the community.

Keywords: Competitiveness, Traditional Retail, Consumer Preference

1. INTRODUCTION

The development of retail business in Indonesia is currently very rapid, especially modern retailers in all of variations type. Several factors supporting the development of modern retail business include the opening of market opportunities, the development of manufacturing business that will supply its products to the retailer, and one way government efforts to boost economic growth is to develop the retail business.

Based on data from the Association of Indonesian Retail Companies (Aprindo) from 2007-2012, average growth the number of modern retail outlets in Indonesia about 17.57% per year. In 2007, the number of retail business in Indonesia is still 10,365 outlets, then in 2011 reached 18,152 outlets almost spread in all cities in Indonesia. The growth of number outlets is followed by sales growth. The amount of retail business growth in Indonesia is between 10%

-15% per year. Retail sales in 2006 stood at Rp 49 trillion, and shot up to Rp120 trillion in 2011. While in 2012, retail growth is projected to remain the same, which is 10% -15%, or reach Rp.138 trillion. The number of players in the retail business makes the competition very tight. Major retailers, especially foreign companies, are intensifying their business expansion in Indonesia. Small modern retailers and traditional retailers become unfavorable parties.

Indonesia with a population of approximately 237 million people with a total consumption about Rp3,600 trillion is a potential market for modern retail business. This is supported by the shifting behavior of the Indonesian population, from shopping in traditional markets to modern retailers. After the opening of entrances for foreign retailers as Presidential Decree no. 118/2000 which has issued retail business from negative list for foreign investment (PMA), foreign retail began to bloom into Indonesia. The entry of foreign retailers in this business shows the business is very profitable. On the other side, foreign hypermarkets expanding become a threat to local retailers.

Traditional retail located in rural areas were affected by dealing directly with modern retailers. Competition between traditional retails and modern was not avoided. Not only that, due to the lack of zoning rules from the modern retail development, the traditional retailers in big cities are affected. Competition head to head due to the proliferation of modern retailers have a negative impact on the existence of traditional retail. One of the real impacts of modern retail presence in the midst of traditional retail is the decrease in the number of small traders and the decline omzet from the small traders, therefore traditional retailers need to be equipped with modern retail management science in order to have competitiveness.

The existence of traditional retailers is still quite necessary in the context of serving the lower economic segment. However, technological advancement and the increasing demands of consumer needs are the driving force behind business-oriented changes in retail business. Initially many retail businesses are fairly traditionally managed, without adequate technological support, without a modern management approach and without focusing on comfort and desire to meet customer needs. The shift in customer behavior patterns detected from a number of studies conducted shows that customer shopping activities not only in an effort to meet the needs of goods for life, but rather lead to the fulfillment of the need for recreation. This condition encourages the traditional retail business to begin to be sensitive to the needs of unmet customers if they are want to survive in a tight competitive retail business environment.

Competition in the retail industry can be seen in many ways, namely competition between traditional retail and modern retail, competition between modern retailers fellow and competition among traditional retailers, (Tambunan, 2004). The incessant presence of modern retailers in the region inevitably forced traditional retail to compete with modern retailers. The scope of traditional retail competition with modern retail includes internal and external factors covering all attributes in performance aspect, regulation aspect and consumer preference aspects including human resource, merchandise, price and location.

In Blitar many modern retailers registered at the Department of Industry and Commerce, there are 52 modern retailers that use commercial trademarks (such as: Indomaret and Alfamart) or use their own trademark (Prasadamart, Supermarkets Lingga Jaya etc). Of the total modern retailers in Blitar, modern retail with commercial trademarks such as Indomaret (PT Indomarko Prismatama) and Alfamart has 41 outlets spread across at 10 districts in Blitar.

The fact retail industry development is very expansive and should be a special attention for the local government, especially in Blitar regulation related to retail as a whole. This means that the emergence of modern retail-retail in Blitar will threaten and kill very small industries and SMEs. If returned to the applicable regulations, fair business competition is regulated in Law no. 5 of 1999; Where in the next stage as a consequence of this law established the Business Competition Supervisory Commission (KPPU) regulated in Presidential Decree no. 75 of 1999. The main task of KPPU is to guard the implementation of Law no. 5 of 1999 concerning fair business competition. On the other side traditional retail is expected to also improve itself to meet the increasing demands of consumers.

Based on the above background, this study discusses how traditional retail competitiveness to modern retail which is focused on consumer preference aspects including human resource, merchandise, price and location.

2. LITERATURE REVIEW

2.1 The Retail Concept

Various terms of retail are as follows: Ma'ruf (2005: 7) defines retail is a business activity about selling goods or services to individuals for the purposes of self, family or household. According to Kotler (2016: 535) retail includes all activities involving the sale of goods or services directly to the end consumer for personal and non-business use. Meanwhile, according to Berman and Ervans (2007: 3) the definition of retail is the last level of the distribution process, in which there is business activity in the sale of goods or services to consumers. And according to Gilbert (2003: 6) retail is all business ventures that direct marketing ability to satisfy the final consumer based on the organization of sales goods and services as the core of the distribution. From the above the definition of retail is any activity of trading of goods or services to end consumers for their own use, not for trading anymore. Retail is one of the chain distribution channels that plays an important role in the delivery of goods and services to the end consumer.

Retail includes all activities that involve the sale of goods or services directly to the end consumer for personal and non-business use. Retail not only sells products in stores, but retail also involves delivery services to homes.

Activities undertaken in the retail business is to sell various products, services or both, to consumers for personal and joint consumption purposes. Manufacturers sell their products to retailers and wholesaler.

The retail industry is constantly changing along with technological changes, the business development, and of course the consumers needs. Retail is the entire business activity associated with the sale and delivery of services to consumers for the use of an individual nature as a person or family. In order to succeed in a competitive retail market, retailers must be able to offer the right product, at the right price, at the right place, and at the right time. Therefore, understanding of retailers target market characteristics or consumers to be served is very important. In its operations retailers perform several functions, among others, assist consumers in providing various products and services, perform bulk breaking function, or add product value. Overall, the management of retail business requires the implementation of integrated management functions of financial, marketing, human resources, and operational functions. The basic concept of retail management according to Thoyib (1998: 15) includes: 1) Orientation in Consumers, retailers must determine the attributes and needs of consumers and willing to meet the consumers needs, 2) Retailers must integrate all Plans and activities to maximize efficiency, and 3) Orientation In Purpose that retailers must set goals and determine strategies to achieve those goals.

2.2 The Scope of Traditional Retailing and Modern Retailing Competition

Indef (2007) in his study of the impact of hypermarket presence on traditional retail using internal factors consisting of performance aspects (assets, omset, merchandise turnover, and price margin) and external factors consisting of consumer regulation and consumer preferences which include 1) human resource Related to services, 2) merchandise related to the number of products available, the diversity of product types, the diversity of brands sold and 3) the price.

The results of Levy and Barton research (1995) show some of the things evaluated by consumers related to services are: (i) Aspects of Tangibles (Store appearance, Merchandise display and Appearance of shop employees). (ii) Understanding of the Customer (Give attention, and Understanding the subscription / regular customer). (iii) Security (Feelings secure in the parking area and Make of transaction secrets). (iv) Credibility (Reputation in commitments, Trusted employees, Warranty provided and Returns policy). (v) Reliability (Accurate purchase receipt, Serve quickly and Accuracy in sales transaction). (vi) Good Behavior (Friendly, Respected and Attentive Personnel). (vii) Access (Easy of transaction, certainty of shop opening and presence of manager to resolve issues). (viii) Competence / Skills (Knowledge and skills of employees and Answered every customer question). (ix) Responsiveness

(Fulfilling customer calls and Providing timely service). (x) Information Provided To Customer (Describes service and cost as well as problem solving guarantee).

The research results show that business conditions and traditional retail performance have declined after the operation of hypermarkets, which include assets, omset, merchandise turnover, and price margins.

3. RESEARCH METHODS

This research is a descriptive research in which to know the competitiveness of traditional retail seen from the external side especially from consumer preferences which refers to Indef result of research (2007) and Levy and Barton (1995). The variables used to measure consumer preferences are as follows: (i) Human Resource with indicators: shopkeeper appearance, hospitality in service, speed in service, shop opening time; (ii) Merchandise: shop appearance, merchandise display, number of products available, the diversity of product types, the diversity of brands sold; (iii) Price.

The population of this study is consumers from traditional retail. The sampling technique is incidental sampling. The number of samples is 66 people. Data analysis technique is descriptive.

4. DISCUSSION

4.1 Research Results

The results showed that 57.5% of respondents came to traditional retail for reasons of near and cheap, 30.3% for cheap and 12.2% for near reasons. With these results it appears that where consumers buying goods is influenced by price and distance. For shopkeepers' performance 81.8% of respondents thought that the appearance of shopkeepers who visited was good enough, and 18.2% thought that the appearance of shopkeepers was good, meaning that generally respondents thought that the appearance of shopkeepers was feasible to serve the consumers.

Hospitality in service is 75.8% of the respondents thinks good, 15.2% is good enough and 9% is less good. For the indicator of service speed of 34.9% respondents answered good, 53% good enough and 12.1% answered less good. The last indicator of the human resource variable is the shop open time received response from consumers as follows, 94% said good enough, and 6% less good.

The first indicator of the merchandise variables is the appearance of shop by 16.7% of the respondents answered good, 78.8% answered good enough and by 4.5% less good. For display merchandise indicator of 48.5% respondents answered good enough and 51.5% answered less good. From the number of available products of 9.1% respondents answered good, 68.2% good enough and 22.7% responded less good. And for the indicator of the diversity of products type of 10.6% respondents answered good, 71.2% responded good enough and 18.2% responded less good. The last indicator of merchandise variables is the diversity of brands sold, from 66 respondents about 13.6% respondents answered good, 63.7% responded good enough and 22.7% responded less good.

4.2 Analysis of Research Results

From the results of the research shows that most consumers from traditional retailers are residents who live in the vicinity of the shop, and if there is more than one shop that is the main thing that will be considered which store will be the price lower. For human resource variables that need to be noticed by traditional retailers are about hospitality in service, speed in service and shop open time.

As in general, shopkeepers from traditional retailers are the shopkeepers themselves and between sellers and consumers are well acquainted with each other, so if the seller is having a problem and must serve the consumer it will affect the hospitality of the services provided, such as those who are usually familiar with Just talking as necessary or even becoming unfriendly. Or the seller is finishing the household chores, it will serve the consumer in a hurry, so it can make consumers disappointed at the time.

Another thing to note in terms of speed of service is because merchandise display is not good, sometimes sellers difficulty or forget where the goods needed by consumers so that service becomes longer. The opening time of the store should also be a concern for the traditional retailers, because sometimes the shop closes at any time according to the owner's interest, thus making consumers disappointed to already come to a shop in the hope of getting the required goods but the shop is closed and this can cause consumers to switch To another shop. While the shopkeeper's performance indicator has got a decent assessment of the consumer, although the appearance here is not intended as the appearance of a modern shopkeeper because usually the appearance of shopkeepers is as usual when at home.

For all indicators of merchandise variables: shop appearance, merchandise dispaly, quantity of product available, diversity of product type and brand diversity need improvement. Shop appearance needs to be repaired for example from the cleanliness side, paint dull wall painted again so that the shop become better and consumer interested and comfortable to come to the shop, although this does not happen at all traditional retailer.

Merchandise dispaly is a weakness of traditional retailers, this is due to, among others, by the limitations of space owned and the placement of goods that are not in accordance with the type so that in addition to impressed store shambles also make it difficult for sellers to find items consumer needed that can lead to the speed of service becomes longer.

The scope of traditional retail competition with modern retail include internal and external factors, one indicator of internal factor is the amount of capital held by traditional retailers. Limitations of capital owned by traditional retailers will affect the number of available products, diversity of products and the diversity of the brand. To overcome the limitations of capital owned by traditional retailers have the necessary access to credit to financial institutions.

The Government through the Financial Services Authority (OJK) continues to seek and find the best solution to help solve the problem of capital of traditional retailers that are part of MSMEs, one of them is the issuance of Regulation of the Financial Services Authority. 76 / POJK.07 / 2016 on Increasing Literacy and Financial Inclusion in the community. Increased literacy and financial inclusion is believed to be able to develop SMEs because SMEs actors can better understand the basic concepts of financial products, perform better financial planning and management.

5. CONCLUSIONS AND SUGGESTIONS

5.1 Conclusions

Human resource variables consisting of hospitality in service, speed in service and store opening times need to be upgraded by traditional retailers to compete with modern retailers, because even though prices are a major consideration for consumers to make choices, hospitality in service, speed in service and time Open shop can consumers always using traditional retail.

Variable merchandise consisting of the number of products available, the diversity of product types and the diversity of brands sold is a problem faced by traditional retailers sourced from limited capital owned. The solution of this problem is the granting of the widest possible access to credit to financial institutions in accordance with the Government's policy through the Financial Services Authority Regulation no. 76 / POJK.07 / 2016 on Increasing Literacy and Financial Inclusion in the community.

5.2 Suggestion

Traditional retailers should be able to improve human resources consisting of hospitality in service, speed in service and the certainty of open shop time to compete with modern retailers.

To increase the amount of capital held, traditional retailers can take advantage of Government policy through the Financial Services Authority Regulation no. 76 / POJK.07 / 2016.

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The Application of Sustainable Development Concept for Tourism Development in Indonesia

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ABSTRACT
Tourism is a leading economic sector that generates the growth of world economy. Accelerating tourism development is one of the main priority of the government of Indonesia because tourism is expected to be one of the main sector to increase the GDP of Indonesia by generating jobs for millions of people that still live below the poverty line. The purpose of this article is to determine on how to implement the concept of sustainable development for tourism development in Indonesia effectively. Butler (1999) mentioned that to ensure the implementation of sustainable development in tourism, the concept must be accepted by all the stakeholders (Butler, 1999). How can the stakeholders accept the concept if they do not even understand the meaning of sustainable development in tourism? Before commencing the tourism development in an area, the concept of sustainable development in tourism must be introduced to all stakeholders. The next thing that has to be done by the government is to plan on how to socialize the concept of sustainable tourism development through education, campaign, and seminar. Further research needs to be conducted to identify how to introduce sustainable development concept in tourism through education in Indonesia.

Keywords: Sustainable development, Sustainable development in tourism, Tourism development in Indonesia, Stakeholders

1. INTRODUCTION

The purpose of this article is to determine on how to implement the concept of sustainable development for tourism development in Indonesia effectively. Firstly, the article briefly explains about tourism as the leading economic sector in the world with positive and negative impact of tourism. Secondly, the different meaning of sustainability, sustainable development, and sustainable tourism are presented with the examination of the critiques of sustainability concept from various researcher despite its wide acceptance. Thirdly, the article explains about the tourism condition in the world and in Indonesia. Finally, this article concludes with some recommendation on how sustainability concept can be adopted and practiced in tourism development in Indonesia.

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1.1. Tourism as the Leading Economic Sector

Tourism is a leading economic sector that generates the growth of world economy. Based from the data from WTTC, the growth of tourism and travel sector at the year of 2016 was 3.3%, it was higher than the growth of global economy which was 2.5%. Tourism and travel sector was able to contribute US$ 7.6 trillion (10.2%) from the total of the world GDP. 1 of the 10 job in the world is in the tourism sector (World Travel & Tourism Council, 2017).

This year is the 6th consecutive year that the tourism sector growth able to pass the growth of the global economy. This is serve as an indicator that tourists are still willing to travel and visiting new places despite of the unstable condition of world economic and global politics that is still not conducive (World Travel & Tourism Council, 2017).

From the total of the growth of tourism globally, the most aggressive growth is coming from South East Asia which was about 8.3%. The growth of the tourist market from China and South East Asia: 7.9%, Sri Lanka: 10.7%, Thailand and Vietnam: 10.7%, Philippines: 8.9% Singapore: 8.7% and Indonesia: 5.8%.

Table 1. Tourism Arrivals and Forecasts by Type of Economy (IMF Definition),
Retrieved From (Cooper, 2016)

Type of economy	1980	1995	2014	2020 forecast	2030 forecast
Advanced	194.000.000	334.000.000	619.000.000	643.000.000	772.000.000
Emerging	83.000.000	193.000.000	513.000.000	717.000.000	1037.000.000
World	277.000.000	528.000.000	1133.000.000	1360.000.000	1809.000.000

From the table above, it can be seen that the number of tourist visit in the emerging countries at the year of 2020 and 2030 is forecasted to be more than the number of tourist visit in the advanced countries. Indonesia as one of the emerging countries have to be prepared to anticipate the increasing number of tourist visit. To prepare for these growth, Indonesia needs to build the infrastructure to support the development of tourism industry. The growing number of International tourist arrival will bring positive impact especially in the economic sector if the government and the stakeholders in the tourism destination able to manage it properly.

1.2. Positive and Negative Impacts of Tourism

Unavoidably, tourism development will bring positive and negative impact to the local communities and environment. It is like a "double edge sword" (Mitchell, 2008, p. 178). To put it briefly, the positive impact of tourism is to bring economic value by creating employment for local communities, becoming source of income in a country through the stimulation of economic activity to increase the GDP (Gross Domestic Product), and tourism also used as a tool for regional development (Cooper, 2016). Meanwhile the negative effect that comes with it is the increase of pollution level and exploitation in host communities and environment which will lead to degradation of traditional values and ecosystem (UNEP & WTO, 2005). The positive and negative impact of tourism that affecting the tourist destination and local communities in economic, social, and environment can be seen in the table below which is adapted from (Mason, 2008)

Table 2. Positive and Negative Impact of Tourism

Positive Impact of Tourism	Negative Impact of Tourism
Create jobs and increase employment rate for the local communities.	Tourism can escalate the land, houses, and food price in the tourist destination.
Higher salary and better job prospect which will lead to better quality of life.	Increase of pollution level from higher number of vehicles in tourism destination.
Contribute to government revenue and as a source of foreign exchange earnings.	Disturbance to local habitat and ecosystem.
Poverty alleviation for country or region that still live in poverty.	Lost of cultural identity in the tourist destination.
Preserving the traditional cultural activities such as local arts and crafts that can be sold as tourism product.	Lost of authenticity in the traditional performances.
Source of income to encourage the establishment of national parks and preserving building and monument which have historical value.	Local community depends too much on tourism; this is bad because tourism is seasonal.
Promoting the need to conserve the environment, landscape and wildlife.	Can cause overcrowding which can lead to traffic congestion.

2. SUSTAINABLE DEVELOPMENT IN TOURISM DEFINITION

2.1. Sustainable Development Definition

The discussion about sustainability has been around for 3 decades since the publication by World Commission on Environment and Development in 1987 called the Brundlant Report. Since then, sustainable development has become the topic of research and debate in various industries in general and tourism industry in particular. It serves as the basic platform on various summit and agenda that focusing on how to reduce negative impact for the environment while improving the economic condition in the area being developed. In the Brundlant Report, sustainable development was defined as "development that meets the needs of the present without compromising the ability of the future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 8). In other word sustainable development can be defined as development that able to preserve the environment and the social condition when at the same time gaining the economic benefit for the communities.

Table 3. Milestone of Sustainable Tourism Development, Retrieved from (Cooper, 2016)

Year	Initiative
1987	Publication of The Brundlandt Report, Our Common Future
1992	Rio Earth Summit-focus on environment
	Agenda 21
	UN Commission on Sustainable Development
1993	Establishment of the journal of Sustainable Tourism
2000	Tour Operators initiative for Sustainable Tourism Development
	Millennium Development Goals
2002	Johannesburg World Summit on Sustainable Development developed idea of Agenda 21- shifting emphasis from environment to people
	International Year of Ecotourism
	Quebec Declaration on Ecotourism
2003	European Commission Tourism Sustainability Group established
2006	Marrakech Task Force on Tourism Sustainable Development
2007	UNESCO/UNWTO Collaboration for World Heritage
	Davos Processes on Climate Change
	Publication of European Union's Action for a More Sustainable European Tourism
2008	Sustainable Tourism Stewardship Council
2009	Copenhagen Climate Conference aiming to deliver a holistic framework to stabilize global warming by 2050
2010	UN Framework Convention on Climate Change, Cancun, Mexico
2012	Rio+20, Rio, Brazil, shifting the emphasis from MDG to Sustainable Development Goals (SDG) to readdress environmental concerns
	UN Climate Change Conference, Qatar

Initially tourism was never really discussed in the sustainable development when the concept was brought up in the publication of the Brundlant report in 1987. 5 years after publication of the Brundlandt report, Rio Earth Summit was held in 1992 by the UN which initiate Agenda 21 that served as a landmark of sustainable development that focused on environment (Niedziolka, 2012). Tourism was becoming part of the topic in sustainable development in Johannesburg World Summit in 2002. (Cooper, 2016).

2.2. Sustainable Tourism

Sustainable tourism may carry various meaning when seen from different angles depend on what people are trying to sustain which can be defined by three type of definitions (McCool & Moisey, 2008): (i) Sustaining tourism: focuses more on tourism as a business and continue getting benefit from tourism by making sure the business running over long period of time. From this description it is towards gaining the economic benefit for the stakeholders in the tourism destination. (ii) Sustainable tourism: a better form of tourism that has better impact for local community and environment. This definition is putting emphasize on better impact on social and environment condition. What should tourism sustain?: (iii) Tourism is seen as a device that can be used to enhance social economic development. Using tourism as a tool to become source of income to gain economic benefit to increase the prosperity level of the local community around tourism destination.

According to World Trade Organizations, the term sustainable tourism can be defined as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the need of visitors, the industry, the environment and host communities" (UNEP & WTO, 2005). Wild (1994) explain that sustainable tourism is "a tourism that produces economic advantages, in addition to maintaining environmental diversity and quality thus 'combining conservation with economic development' (Wild, 1994)" cited in (Wearing & Neil, 2009). Alternatively, Butler (1991) defines environmentally sustainable tourism as "tourism which is developed and maintain in an area (community, environment) in such a manner and at such a scale that it remains viable over an infinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and well being of other activities and processes" cited in (Wearing & Neil, 2009).

Therefore, sustainable tourism definition can be sum up as a tourism that has a responsibility to maintain and to preserve the natural environment and at the same time to gain economic advantage for local community and its various stakeholders. The development in the sustainable tourism must be done responsibly, while it must bring economic benefit to local community, it must be done in such a way able to minimize the negative impacts for the social and environment condition which is inline with the guidance by UNWTO about the principle of sustainable tourism.

The UNWTO (2005) stated that sustainable tourism consists of two elements: (i) the ability of tourism to continue as an activity in the future, ensuring that the conditions are right for this; and (ii) The ability of society and the environment to absorb and benefit from the impacts of tourism in a positive way (UNEP & WTO, 2005).

2.3. Sustainable Development in Tourism

Despite some cases of success around the world, there is general agreement among researchers that sustainable development of tourism is complex and problematic and it is still far from achieving the desired key principle and aims into practice (Borges, Eusébio, & Carvalho, 2014). The concept of sustainable tourism remains unclear even though it's been well research, different people have different understanding of the concept (Niedziolka, 2012; D'Mello, et al., 2016). These confusions also come from the complex nature of tourism industry that serves as an umbrella for various industry such as travel and hospitality. Confusion comes from the use of the terms sustainability, sustainable development, and sustainable tourism were used interchangeably in the literature with the lack of agreement on how to

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conceptualize and to define (Cooper, 2016). Sustainable development in tourism is perceive as an ambiguous concept and unrelated to real market (Jovicic, 2014; Burghelea, Uzlâu, & Ene, 2016). Although the term is widely used, Jenkins and Schroder (2013) mentioned that the promised harmonization of ecological, social, and economic goals associated with sustainability is still questionable whether it is achievable or not (Conaghan, Hanrahan, & McLoughlin, 2015). Although the notion of sustainable tourism is at the forefront of public and private sector policy statements, the more that is written about sustainable tourism the less sustainable it potentially appears to be (Bramwell & Lane, 2012; Hall, 2011). International development agencies is more interested in tourism project that just started compare to sustaining the one that has been running (Hall, Scott, & Gössling, 2013).

Liu (2003) explain about the different meaning of these three terms in his paper, "sustainability is a state focused which implies steady life condition for generation to come; sustainable development is more process oriented and associated with managed changes that bring about improvement in conditions for those involved in such development; sustainable tourism is conveniently defined as all types of tourism (conventional or alternative forms) that are compatible with or contribute to sustainable development" (Liu, 2003, p. 460).

Definition of sustainable development by The World Tourism Organization (WTO) (1998) cited from (unesco.org, 2005): " sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for future. It is envisaged as leading to management of all resources in such a way that economic, social, and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems"

Three pillars of sustainable development by (UNEP & WTO, 2005) can be summed up as: (i) economic sustainability which means generating profit for all levels of society and addressing the cost effectiveness of all economic activity. (ii) social sustainability means everyone in the society is deserved for equal opportunities and human rights. (iii) environmental sustainability means preserving and managing resources, especially non-renewable resources and precious for life support.

To achieve sustainable tourism development there are three aspects that need to get attention and carry out simultaneously which are economic, social, and environment. Sustainable tourism ideally must consist of balance mix of "sustaining local economies, local cultures, and local environments with acceptable and desirable level of impacts" (Mitchell, 2008). So sustainable development in tourism must be evolving around three aspects: economic, social, and environment.

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2.4. Stakeholders

One of the most essential things of becoming sustainable destination is to make all the stakeholders satisfied with all the action taken in the tourism destination for long term (Cooper, 2016).

Five key dimensions of strategy for long-term destination competitiveness (Cooper, 2016): (i) Implementation of planning design control, building codes, and planning regulation to control the location and form of tourism development. (ii) Giving empowerment to local communities by ensuring participation in decision making process and develop local tourism expertise through training and giving financial assistance when necessary to ensure the economic viability. (iii) Proper management of destination elements such as safety, access, information, and interpretation to ensure a high quality tourist experience. (iv) Using site and visitor management techniques to conserve and manage destination heritage site. (v) Integration of environmental management in the tourism facilities to minimize carbon emissions that should be based on the 'reduce, reuse, recycle' policy.

Freeman (1984) defined stakeholders as "all that affected by the achievement of the organization's objectives" (Lund-Durlacher, Hergesell, & Mentil, 2013). "Stakeholders include customers, employees, suppliers, and the communities where their business is located and other people or organizations that have an interest in the success of the business" (Kotler, Bowen, Makens, & Baloglu, 2017).

Sustainable tourism can bring benefit to various stakeholders (UNEP & WTO, 2005) such as: (i) Tourism enterprises: will gain long-term profit by conserving the tourist attraction. (ii) Local communities: economic benefit without sacrificing their quality of life. (iii) Environmentalist: source of income for conservation. (iv) Tourist: high quality and environment friendly tourist attraction that worth seeing.

2.5. Tourism in Indonesia

Indonesia's tourism sector condition can be seen from two indicators: macro and micro indicator. From macro indicator tourism sector in Indonesia at the year of 2015 shows significant growth by giving contribution to the national GDP around 4.23% or about Rp. 461.36 trillion, with the increment of the national income from foreign currency US$ 11.9 billion. The tourism sector able to absorb employment for 12.16 million people (Kemenpar.go.id, 2015).

In micro condition, the growth of the tourism sector can be seen from the increasing number of international tourists: 10.4 million people, and the domestic travel by domestic tourists around 255.20 million of travel. Travel and competitiveness index serves as an important indicator for tourism globally. Indonesia was able to climb 20 points up from ranked #70 in 2014 to rank #50 in 2015. The growth of tourism sector in Indonesia was beyond the growth of the world tourism sector which was 10.63%. These condition gives confident to the

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government to increase the target of International tourist arrival to Indonesia for the year of 2019 (www.kemenpar.go.id, 2015).

Table 4. Tourism in Indonesia in the Year 2015 and Target for Tourism In Indonesia for the Year 2019: (Kemenpar.go.id, 2015)

Indicator	2015	Target (2019)
Macro		
a. contribution to GDP	4.23% (Rp.461.36 trillion)	15%
b. Contribution to employment	12.16 million	13 million
c. Foreign currency	US$ 11.9 billion (Rp158.12 trillion)	Rp. 280 trillion
Micro		
a. travel and competitiveness index	#50	#30
b. International tourists' arrivals	10.4 million	20 million
c. c. domestic tourists	255.20 million	275 million

Accelerating tourism development is one of the main priority of the government of Indonesia because tourism is expected to be one of the main sector to increase the GDP of Indonesia by generating jobs for millions of people that still live below the poverty line. The number of Indonesian that still live below poverty line is more than 28 million people, with 40% of the entire population still vulnerable of falling into poverty, as their income is slightly above the national poverty line (The World Bank Group, 2017). Tourism is chosen by many countries as an employment generator because it is providing option for wider range of people from different educational background from unskilled worker to highly trained (Cooper, 2016).

Below is the map of top 10 Priority Tourism Destinations. From the picture it can be seen that the development plan of tourism destination in Indonesia is scattered from east part of Indonesia to West part of Indonesia. Indonesia has 88 Strategic Area of National Tourism (KSPN/ Kawasan Strategis Pariwisata Nasional), 222 Development Area of Tourism (KPPN/ Kawasan Pengembangan Pariwisata Nasional) (www.kemenpar.go.id, 2016). Now the government still focusing in developing the top 10 priority tourism destination, a long the way the development of other strategic and development area will be conducted as well. In order to become a tourism destination that able to compete with other tourism destinations in the world, sustainable development concept must be adopted to plan and manage tourism destination properly.

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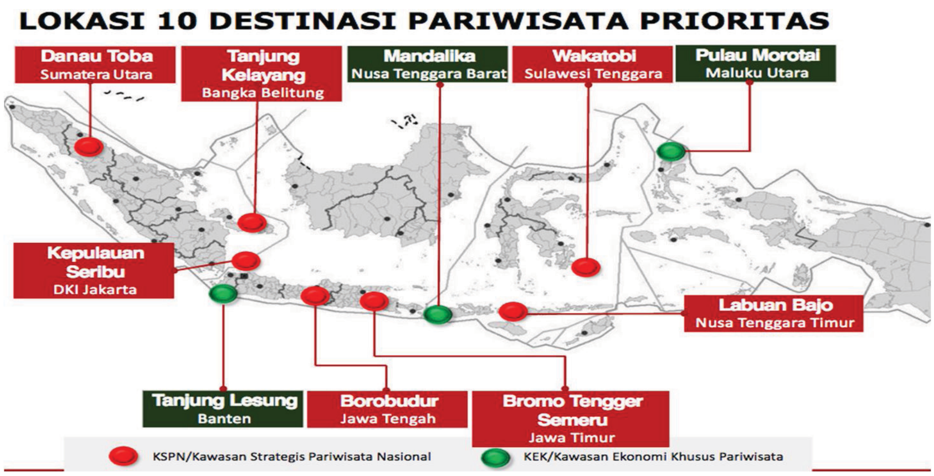

Figure 1. Location of the Top 10 Priority Tourism Destination, picture retrieved from (www.kemenpar.go.id, 2016)

The president of Indonesia has been giving instruction regarding tourism development for the top ten priority tourism destinations (Cabinet Secretary Letter Number: B-652/Seskab/Maritim/11/2015, date: November 6th 2015. The content can be sum up as the instructions for all the minister from various departments to give their full support to accelerate tourism development in Indonesia which include: (i) the construction and development of infrastructure to support development of tourism destination such as road, railway, airport, health care, and security. (ii) Encourage the increasing number of International tourists' arrival with no visa requirement policy for more countries. (iii) Giving permission for direct flight policy for International airlines. (iv) To make sure that the tourism destination will have access to electricity and clean water. (v) To make sure that local population aware of tourism activity. (vi) The improvement of management of local tourism promotion. (vii) To accelerate the establishment of institution in tourism destination to solve the problems that might prevent the accelerating process of the development in that particular area (www.kemenpar.go.id, 2016).

The instruction from government in tourism development through the planning of construction and development of infrastructure in tourism destinations will bring benefit to the local communities especially in improving life quality of local community with access to clean water and electricity. Tourism development in Indonesia is also a tool for regional development that will give opportunity for local community to have better living standards (Cooper, 2016). The advancement of tourism development in Indonesia will bring economic benefit to local communities. To reduce the negative impact in social and environment, sustainable tourism development must be adopted.

3. CONCLUSION

Sustainable tourism development has been criticized for no uniformity in understanding and different meaning of the concept. However, despite all the critiques, sustainable development in tourism has been served as a framework that able to give contribution towards better development in tourism. Beside that there are no two destinations are exactly the same, each destination is uniquely different. The most important thing is to understand the basic concept of sustainable development and then implement it in the tourism destination based on its geographical, economic, and social condition.

As has been pointed out, one of the most challenging aspect of implementing sustainability in tourism is to have the same understanding and perception of the concept and the indicator to measure sustainability development among all the stakeholders. Sustainable tourism development indicators can be seen and chosen from Sustainable Tourism Indicators and Destination Management Report (unwto.org, 2007). The crucial part is the socialization and the initiative to ask the local community to participate in the sustainable development. To be able to make all the elements of communities to plan and work together in the development of the area might be long and tedious process which will involve many meetings, hearings, discussion that will takes time, there is no short cut on it (Joppe, 1996). All members of the communities must put in efforts to allocate their time to sit together and talk about the tourism development that will bring benefit for everyone that's involved in it. The only way to achieve sustainability in tourism industry is by having discussion with all the fragmented character in the industry which involve government agent, tourist agency, small businesses owner, local community with different interest within the shared agreement of how to achieved sustainability. In the process it will involve political action that can be tedious, challenging and complicated (Moisey & McCool, 2008)

If the participants have the same shared meanings that will lead to the same goal, they can work together towards environment and economic sustainability in tourism industry by articulating connection among various sectors and finding solution for the negative effect during the implementation so sustainability can be put into action (Moisey & McCool, 2008). Some of the key things to put sustainable development in tourism into action: (i) all the stakeholders must work together towards sustainable development in tourism. (ii) They must come into agreement about the same understanding regarding the meaning of sustainable development in tourism. (iii) They must understand the meaning of sustainable development in tourism which is the balance between three aspects in development, economy, social, and environment. (iv) In line with government goal and target in increasing the number of international tourists' arrivals, the infrastructure (air, road, and tourism services infrastructure) must be built based on the sustainability development concept.

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Butler (1999) mentioned that to ensure the sustainable development in tourism, the concept must be accepted by all the stakeholders (Butler, 1999). How can the stakeholders accept the concept if they do not even understand the meaning of sustainable development in tourism? Before commencing the tourism development in an area, the concept of sustainable development in tourism must be introduced to all stakeholders. The next thing that has to be done by the government is to plan on how to socialize the concept of sustainable tourism development through education, campaign, and seminar. Further research needs to be conducted to identify how to introduce sustainable development concept in tourism through education in Indonesia.

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The Influence of Social Media and Service Quality on Satisfaction and Loyalty

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ABSTRACT

Loyalty is an important for tourists' destination. This research aims to know the influence of social media and the quality of service either directly or indirectly against loyalty through the satisfaction of tourists at nature tourism destination in Blitar District. The population in this study amounted to 202,990 people. The sample in this research totaled 123 respondents and purposive sampling method using the samples. The data analysis in this study using analysis of Structural Equation Modeling (SEM) method.

Keywords: social media, service quality, satisfaction, loyalty

I. INTRODUCTION

Tourism consists of exhibition quality, place to learn something new, a place to relax, the cleanliness of the facility, the condition of the facilities, personnel safety, auxiliary visitor behavior, quality of information for visitors, shopping and restaurants. Loyalty is an important goal for tourists' destinations. Loyal tourists represent more than just a source of income but also one of the potential sources of information for the company not only to his relatives, his friends as well as other potential tourists. Satisfaction/ dissatisfaction is the response of the customer against a perceived mismatch between the evaluation expectations and actual performance of the product after use. Quality of service is an attempt the fulfillment of customer needs and desires as well as the timeliness of the delivery of services to offset customer expectations. Social media is an internet-based medium that facilitates or enables its users can easily participate, create and share experiences and information. Internet and media, especially social media has introduced a significant change and expand communication between organizations, communities and individual.

Blitar District is one of the tourist destinations in East Java because it has an interesting history of the trail, cultural uniqueness and natural beauty as tourist assets who are capable of attracting tourists to visit. The development of the tourism sector is expected to bring up the multiplier effect against the supporting sectors such as tourism trade, hospitality services, and other industries. Therefore, it needs to be optimizing the efforts to

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develop the tourism sector which will contribute to the economy at various parties. One of the efforts to develop the tourism sector in the District of Blitar is utilizing social media at this point widely used and known by the public at large. Data tables and foreign tourists Visit the archipelago on nature tourism in Blitar District Years 2011-2015:

Table 1. Data of Nature Tourism in Blitar District 2011-2015

No	Tourist	2011		2012		2013		2014		2015		Total Number
		International	Domestic	International	Domestic	International	Domestic	International	Domestic	International	Domestic	
1	Jolosutro Beach	14	6.108	2	12.004	0	6.094	0	10.975	0	1.419	36.616
2	Tambak rejo Beach	85	12.385	25	14.063	71	12.371	63	11.045	0	27.602	77.710
3	Serang Beach	14	9.146	1	7.524	0	9.132	2	10.595	0	18.469	54.883
4	Rambut Monte	208	3.433	0	2.291	194	3.419	0	1.210	83	14.390	25.148
5	Embultug Cave	19	1.652	0	957	5	1.638	5	2.303	0	1.974	8.553
	TOTAL	202.990										

Source: Disporbudpar Blitar District, 2016

From the data table 1 above, visitors of nature tourism in Blitar District showed that from 2011–2015 and foreign tourists visit the archipelago experience fluctuations, where foreign tourists for the year 2011 amounted to 19 people, then in 2012 be no person, year 2013 there were 5 people and the year 2014 remains 5, 2015 years back there were no foreign tourists visit. While tourists visit the archipelago by the year 2012 has decreased where tourists visit the archipelago only 957 people, the years 2013 and 2014 have elevated, but year 2015 has decreased again from 2,303 to 1,974 becoming people

Based on the phenomenon of tourism conditions in the management of nature tourism in the District of Blitar, it is necessary to do the assessments associated with aspects of social media, service quality, satisfaction and loyalty of travelers. The research development of the potential of social media, the service quality of tourist satisfaction and loyalty towards the tourists could be developed on a natural tourism area in the District of Blitar in accordance with an existing phenomenon in the tourism area. Formulation of the problem: (i) How does social media description, service quality, satisfaction of tourists and travelers in Blitar District loyalty? (ii) How social media influence and the quality of service towards the satisfaction of tourists in Blitar District? (iii) How social media influence and the quality of service against the loyalty of travelers in the District of Blitar? (iv) How to influence satisfaction of travellers against the loyalty of travelers in the District of Blitar? (v) How social

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media influence and loyalty towards quality of service through the satisfaction of tourists in Blitar District?

2. LITERATURE REVIEW

Zeithaml and Bitner (2003) States that service marketing is about broken promises, promises made to customers and should be kept. Strategic framework known as the service triangle that reinforces the importance of the people in the company keep their promise and success in building customer relationship. Kotler and Keller (2006) suggested the sense is any act or performance offered by one party to the other party that are intangible principle and does not lead to the transfer of ownership. Production services can be bound or not bound to a physical product). Stanton and Pires (2005) suggests the definition of services as follows: "Services are identifiable, intangible activities that are the main object of a transaction designed to provide want-satisfaction to customers. By this definition we exclude supplementary services that support the sale of goods or other services. "Zeithaml and Bitner (2003:3) renders the definition of services as follows: Include all economic activities whose output is not a physical product or construction, is generally consumed at the time it is produced, and provided added value in forms (such as convenience, amusement, timeliness, comfort, or health) that are essentially intangible concerns of its first purchaser. The service is basically something that has the following characteristics: (i) An intangible, but can meet the needs of consumers. (ii) The production process of the service may use or not use the help of a physical product. (iii) The service does not result in a transition right or ownership. (iv) There is an interaction between the service providers with service users.

Tourism marketing is the all activities to meet demand and supply, so buyers get satisfaction and the seller gets the maximum benefit with minimal risk of possible Yoeti, 1985). Tourism marketing is an effort to identify the needs and desires of tourists, and offers the tourist product in accordance with the wishes and needs of the tourists with the intent of enabling business tourism can give you maximum service to tourists (Moeljadi, 2009). The success of the development of tourism in Indonesia who felt now is determined by three main pillars (Thamrin, 2002), namely: (i) Success in marketing; (ii) Success in product development; (iii) The success of creating a human resources (HR) tourism

Global tourism is undergoing a transition that move quickly and radically towards new tourism industry primed and can meet the demands of the needs of the industry itself. Changes in consumer behavior and values encourage the birth of new tourism. New mensal with tourism based as a flexible holiday, segmented, and environmentally conscious. Tourism is a new phenomenon in large scale packaging of a nonstandard holiday

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service at competitive price levels more in line with the demands of the tourist demand as well as the demands of the economic and social environment needs.

The concept of customer loyalty has long been there and became an important thing to be aware of any company in their endeavor to achieve the goals that have been set. Create strong relationships and closely with customers is the dream of all marketers. This is often the key to marketing success long term. Lovelock and Wright (2005:22) describes the customer loyalty is the willingness of customers to continue to subscribe at a company in the long run, by buying and using the service repeatedly, as well as with voluntary service the company recommends to others. The emotional nature of the experience and satisfaction of underlying attitudes of high bidding against someone, then in addition to repeated as the buyer will also give praise. Refer to this experience and a good emotional is a customer perception. A good perception can increase loyalty which has indicators on the purchase.

Kotler and Keller (2009:175) define loyalty held strong as a commitment to purchase again or subscribe to a specific product or service again in the future despite the influence of the situation and marketing efforts that could potentially cause the transition behaviors. While according to Griffin (2005:5) loyalty shows the condition of the duration of a particular time and requires that the Act of purchasing occurs no less than two times. William (2003:72), put forward the aspects that influence customer loyalty: (i) Satisfaction is a comparison between the expectations before making a purchase with the perceived performance. (ii) Emotional Bonding is the customers feel strong ties with other customers who use the same product or service. (iii) Trust is willing of someone to trust company to perform a function. (iv) Production choice and habit is the purchase of products on a regular basis as the accumulated experience at any moment or repetition. (v) History with company is the experience of a person against the company can shape behavior. Good service from the company will lead to occurrence of a repetition of the behavior in the company.

In a general sense concerning the satisfaction or dissatisfaction of customers is the result of the existence of differences between the expectations of customers with performance that perceived by the customers. According to Kotler (2006) satisfaction is feeling happy or upset someone who comes after comparing between the perceptions or impressions on performance or results of a product and the hopes. So, satisfaction is a function of perception or impression upon the performance and expectations. If the performance is below expectations then the customer is not satisfied. If the performance meets expectations then the customers will be satisfied. If the performance exceeded expectations then the customers will be very satisfied or pleased. The key to producing loyalty customers is to provide high value customers. Zeithaml et al (1996) defines contentment as a response or feedback about meeting customer needs. Satisfaction is an assessment regarding the

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characteristics or the specialty products or services, or the product itself, providing a level of customer pleasure related to the fulfillment of the needs of the customer's consumption.

Customer satisfaction according to Andreassen and Lindestad (1997) customer satisfaction/dissatisfaction requires experience with the service, and is influenced by the perceived quality and the value of the service. It means that the satisfaction/dissatisfaction shows customers in customer experience and affects the quality of service received and the value of the service. It can be said if customer satisfaction is a consequence of a comparison between the levels of perceived benefits against the benefits expected by the customer. In order to create customer satisfaction according to the Guiltanan company should be able to offer the quality of a product and also his Ministry. While according to Zeithaml et al (1996) suggests that customer satisfaction is a feeling towards one type of customer service that he obtained. According to Walker, et al. (2001:35) customer satisfaction can be defined as a situation where the needs, desires, and expectations of customers can be met through products that are consumed. In General, customer satisfaction can be said to be feeling happy or upset person from comparison between products purchased in compliance or not with the expectation. Customer satisfaction is extremely important to maintain customer loyalty, to remain loyal customers buy our product or service. Further there are several customer satisfaction according to other experts as in Oliver, research tells us that customer satisfaction is part of the marketing and played an important role in the market (Oliver, 1997:31).

Service quality as a guarantee for the services provided will provide for the company, cost savings and even the expansion of the market (Parasuraman et al, 1992). There is a definition of quality of service expressed the experts. Definition of quality of service expressed as quoted by Parasuraman Setiawan and Ukudi (2007) as a concept that appropriately represent the core of the performance of a service, namely the comparison against reliability (excellence) in the service encounter is done by the customer. Lewis and Booms (2011:152) describes the service quality is a measure of how good a given service level capable in accordance with customer expectations. Kotler (2002:83) explained that the quality of service is any activity undertaken by the company in order to meet the expectations of consumers. The five principal dimensions of quality of service, namely: (i) Tangible namely the ability of the company to provide the physical facilities such as buildings, equipment, supplies or other facilities as well as the appearance of its employees. Physical evidence includes the physical facilities, equipment, employees and means of communication as well as vehicle operations. (ii) Reliability that is the company's ability to provide service in accordance with the promised accurately and reliably. According to Lovelock, reliability to perform the promised service dependably, this means doing it right, over a period of time. That is, reliability is the ability of the company to

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show the promised services accurately and consistently. Reliability can be interpreted properly exercised until a certain period of time. (iii) Responsiveness namely the company's ability to help and provide fast service and directly to customers, with delivery information. Responsiveness shows a response officer in providing services that are needed and can be completed quickly. Speed of service provided is responsive attitude of the officers in granting the required services. The attitude of this response is a result of the intellect and the mind are shown to customers. (iv) Assurance that the knowledge and ability of its employees to foster a sense of trust of our customers to the company. This includes several components, namely communication, security and competence. Can be expressed if assurance includes the knowledge, ability, civility and reliable nature of employee-owned, free of hazards, risks and doubts. The guarantee is the protective measures that are presented to the community for its citizens against the risk that if the risk of that happening will can lead to the disorder in the structure of a normal life. (v) Empathy that provide a genuine attention and individual or personal nature given to customers by working to understand the desires of customers, for example, employees of the company have the friendliness and knowledge of customers, understand customer needs are specifically and has a convenient service hours for customers. Thus empathy includes ease in relations, good communication and understanding the customer's needs. Empathy is the individualized attention to customer Empathy is the attention that implemented the individual personally or against customers by placing herself in the situation of the customer.

Social media is an online media, with its users could easily participate, share, and create content includes blogs, social networking, wikis, forums and a virtual world. Blog, wiki, and social networking are a form of social media is the most commonly used by people around the world. Other accounts say that social media is an online media that supports social interaction and social media using web-based technology that transforms communication became interactive dialogue. According to Brogan (2010:11) defines social media as follows: "Social media is a set of communication and collaboration tools that enable many types of interactions that were previously not available to the common person" (social media is a set of communication and collaboration tool that allows many types of interactions that were previously not available to ordinary people). Social media according to Dailey (2009:3) is created using online content publishing technology highly accessible and measurable. Most important of these technologies is the occurrence of a shift in the way people found out, read and share news, as well as the search for information and content. Some examples of frequently used social media according to Tamburaka (2013:79): (i) Facebook. Founded by Mark Zukerberg which was launched in February 2004 and have had users until they reach 600 million active users. Users can create a personal profile, request and

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add other users as friends, Exchange messages via chat or mail box, making the latest status and the receipt of the notification. Besides, it can also create and join a group with certain characteristics. Facebook has a number of features that can interact with the user. (ii) Twitter is a website owned and operated by Twitter Inc., a kind of social networking in the form of microblogging that allows users to send and receive messages called Tweets (tweets). Twitter can be seen in the outside, but the sender can restrict delivery of messages to their friends list only. The user can see other writers Twitter known as followers. (iii) You Tube is a web site video sharing (share videos) popular where the users can load, watch and share video clips for free. General videos on You Tube are music clips (music videos), film, TV and video-made its users themselves. You Tube allows anyone with an internet connection to upload the video and audience from all over the world can enjoy it in just a few minutes. The diversity of topics that are in the You Tube video sharing makes became one of the important part in the culture of the Internet. (iv) Instagram is a word derived from "Insta" or "instant". Insta means how to take pictures and share photos easily to friends or instant. The word "Gram" has the meaning of words derived from "Telegram". So Instagram itself has the meaning of asocial network that aims to help its users share photos to other users easily and quickly.

3. CONCEPTUAL FRAMEWORK AND RESEARCH METHOD

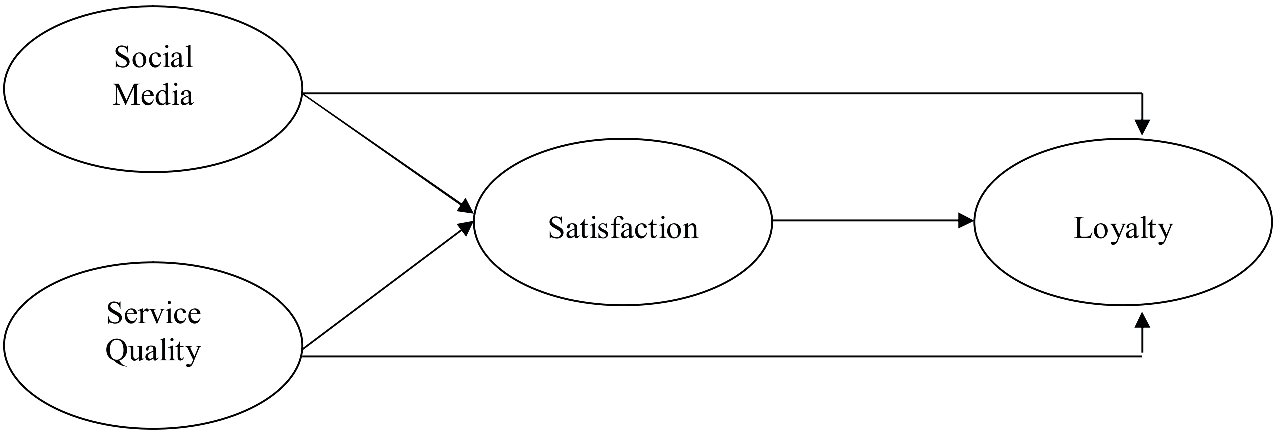

Figure 1. Research Framework

H_1: Social Media and influential service quality significantly to the satisfaction of tourists in Blitar District.

H_2: Social Media and influential service quality significantly to the loyalty of travelersin Blitar.

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H_3: The satisfaction of tourists of influential significantly to the loyalty of travelers in Blitar.

H_4: Social Media and influential service quality significantly to Blitar District tourist loyalty through the satisfaction of tourists.

This research is a survey research, by taking a sample from a population by using a list of questions as a means of data collection. Based on the research objectives have been formulated, then the research is done with explanatory approach to research. This research led to the discipline of marketing management, which in this study wanted to find social media influence and the quality of services towards customer satisfaction and loyalty of tourists visitors natural attractions in the District of Blitar. The data type used is a data subject and primary data source i.e. data obtained directly from the field that is the opinion of the respondents which is the tourist visitor attractions in Blitar District nature of social media, service quality, satisfaction and loyalty of travelers.

Descriptive statistical analysis was performed by giving the description or the description of the characteristics of respondents and crafting a frequency distribution by using question form or questionnaire data and research that has been given tothe respondent so that retrieved the frequency, percentage and the average scoreof the answers of the respondents for each of the item variable that describes the response or responses respondents against each item of the statement given on each variable. Based on the scores, obtained on each item of that variable, then analyzed to reveal phenomena that exists in every variable in accordance with the perception of the respondent.

The pattern of relationships between variables that will be scrutinized is the causal relationships of one or more independent variables to one or more of the dependent variable. Structural Equation Modeling (SEM) is a statistical technique that performs testing of a series of relatively complicated relationship and simultaneously. That relationship can be built between one or several variables subject to one or more independent variables. That can be shaped or construction factors, built from some variable indicators. Variables that may take the form of a single variable are observed or measured directly.

Goodness of fit are used to look at the suitability of the model, by evaluating whether the data used meet the assumptions of SEM. Evaluation of the goodness of fit are used to find out the test parameters, test results with model overall structural model, test, and test the model measurement (measurement model) with test validity and reliability. At this stage of the testing against the suitability of the model through an examination of the criteria and goodness of fit. As for the structural model (regression weight):

A Model that explains the influence of Social Media, and direct service quality towards the satisfaction of Tourists:

MSKL = β1MS + β2KL + Z1

A Model that explains the influence of Social Media, and direct service quality against the loyalty of travelers through the satisfaction of Tourists:

KEP β3PW = + β4KP + β5PN + Z2

A Model that explains the influence of tourist satisfaction against the loyalty of travelers:

KEP = β5PN + Z2

The populations in this study are tourists visiting throughout the five natural attractions in the District of Blitar (Jolosutro Beach, Serang beach, Tambakrejo beach, Rambut Monte, Cave Embultug) totalling 202,990 tourists. The amount earned is based on the number of tourists visiting the Blitar District nature tourism for 5 years, starting in 2011-2015. Based on calculation using the formula, the number of samples used in the study amounted to 123 people respondents. The amount taken already meets the requirements of the SEM analysis of the use of sampling Techniques. Are purposive sampling technique, sampling with certain criteria are tailored to the needs of the research. The selection of respondents is carried out by sampling.

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Optimizing Development in Research-Based Villages by Utilizing ADD

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ABSTRACT

The village which is the smallest government territory in the Unitary State of the Republic of Indonesia, in the current era of government becomes one of the priorities of acceleration of development, with funds disbursed from APBN and combined with APBD which is channeled through Village Funds Fund (ADD) program, Will accelerate the process of development in the village, and indirectly will occur even distribution of development which would have an impact on improving the welfare of rural communities. Can we imagine when the development is done in every village simultaneously throughout Indonesia, of course, the process of economic cycle is high enough, and accelerate the process of development implementation needed by the village community, unlike the previous system which if a village wants to propose the development must go through Stage Musrembang in the village until the center of the center, of course, a very long journey process. But with the current central government program will make it easier for the community to build their village. The establishment of a government in the village is of course based on interregional regulation is the Village Law which is a set of rules concerning the administration of village government, with consideration has evolved in various forms so it needs to be protected and empowered to be strong, advanced, independent and democratic so as to create a foundation Strong in implementing governance and development towards a just, prosperous and prosperous society. The Act also regulates material on the Principles of Arrangement, Status and Types of Villages, Village Arrangements, Village Authorities, Village Governance, Village Villagers' Rights and Obligations, Village Regulations, Village Finance and Village Assets, Rural Development and Rural Area Development, Village Owned Enterprises, Village Cooperation, Village Community Institutions and Village Customary Institutions, as well as Guidance and Supervision. In addition, the Act also regulates with special provisions that apply only to "Desa Adat" as set forth in Chapter XIII. One of the most crucial points in the discussion of the Village Bill is related to the budget allocation for the village, in the elucidation of Article 72 Paragraph 2 on Village Finance. The amount of direct budget allocations to villages is set at 10 per cent from and outside of regional transfers. Then considered the population, poverty, area, geography difficulties. This is in order to improve the village community because it is estimated that each village will get funding of about 1.4 billion based on the calculation in the explanation of the village law that is, 10 percent of the regional transfer funds according to APBN for the

village apparatus of Rp. 59, 2 trillion, coupled with funds from the APBD of 10 percent about Rp. 45.4 trillion. The total funding for the village is Rp. 104, 6 trillion to be divided into 72 thousand villages in Indonesia. It is conceivable that such funds can be utilized properly in the right way and the right target, then the distribution of development will be quickly realized so that the impact on improving the welfare of the community.

1. INTRODUCTION

In the general provisions of Law No. 32 of 2004 on regional government states, village or other named, hereinafter referred to as the village is a legal community unity that has the territorial boundaries to regulate and manage the interests of local communities, based on the origin and local customs recognized And respected in the system of government of the unitary state of the Republic of Indonesia. The law also stipulates that the village is a legal community unit with a territorial boundary that is authorized to regulate and administer government affairs, the interests of the local community based on community initiatives, traditional rights and / or rights recognized and respected within the system of government of the unitary state of the Republic of Indonesia.

Furthermore, in Government Regulation No. 72 of 2005, the formation of villages is based only on indicators of population numbers differentiated by island and directly into definitive villages. In the new Village Law, the indicator of population is no longer only by island, but more detailed as the requirement of population is greater than before. If previously enough with a population of 2,500 people, the Village Law is mandatory 4,500 people and in the legislation the village preparation for 1-3 years.

In addition there is also a general provision relating to customary villages, namely as a unitary customary law community and its traditional rights are still alive, whether they are territorial, genealogical or functional. Intended as a unity of indigenous and tribal peoples and their traditional rights is seen In accordance with the development of society and a union of indigenous and tribal peoples and their traditional rights in accordance with the principle of the Unitary State of the Republic of Indonesia. Of course there are special provisions that define the existence of desa.Pemerintahan Negara Republik Indonesia was formed to protect the entire nation of Indonesia and the entire blood of Indonesia, advancing the general welfare, educating the life of the nation and participate in implementing the world order based on freedom, eternal peace, and social justice. Law Number 25 Year 2004 regarding National Development Planning System has stipulated the National Long Term Development Plan which is the elaboration of the objective of the establishment of Indonesian state government. Villages that have the right of origin and traditional rights to regulate and manage the interests of the community play a role in realizing the ideals of independence under the 1945 Constitution of the

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State of the Republic of Indonesia need to be protected and empowered to be strong, advanced, independent and democratic so as to create a foundation Firm in implementing governance and development towards a just, prosperous, and prosperous society. Therefore, the objective of stipulation of village arrangements in this Law is further elaboration of the provisions as meant in Article 18 paragraph (7) and Article 18B paragraph (2) of the 1945 Constitution of the State of the Republic of Indonesia, namely: to give recognition and respect On existing Villages with their diversity before and after the formation of the Unitary State of the Republic of Indonesia; To provide clarity on the status and legal certainty of the Village in the constitutional system of the Republic of Indonesia in order to bring about justice for all Indonesian people; Preserve and promote the customs, traditions and culture of the village community; Encourage initiatives, movements, and participation of village communities for the development of village potentials and assets for mutual prosperity; Establishing a professional, efficient and effective, open and accountable Village Government; Improving public services for villagers to accelerate the realization of general welfare; Improve socio-cultural resilience of village communities in order to realize village communities that are able to maintain social unity as part of national security; Promote the economy of rural communities and overcome the national development gap; And strengthening the village community as the subject of development • The law also regulates the mandate and authority of the village, among others, authority based on the right of origin, local authority of the village scale, authority assigned by the Government, Provincial Government, or Regency / City Government. As well as other authorities assigned by the Government, Provincial Government, or Regency / City Government in accordance with the provisions of legislation. In addition, if in Law No. 32 of 2004, the tenure of the village head is 6 years and may be re-elected for 1 term of office. However, in the 6-year village tenure law, it can serve at most 3 consecutive terms or not consecutively. In Law No. 32 of 2004, indigenous villages only mentioned customary law communities, not explicitly calling adat villages. Meanwhile, in the Village Law, there are special provisions on adat villages, custom village setting, custom village authority, custom village government and custom village regulations. This means that in the Law of this Village, respected the peculiarities of each region where in the previous rule it is not regulated explicitly · rural children affected by the Tsunami · Furthermore, in the previous regulation the authority of the government which becomes the authority of the village includes the affairs of the existing government Based on the right of village origin, government affairs which are the districts / municipal authorities assigned to the village, co-administration duties from the government, provincial and / or district / village governments, other governmental affairs which the legislation provides for the village head. In the Village Law, village authority includes authority based on the right of origin, local authority periodically of the village, authority

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assigned by the provincial government, city / district government and other authorities assigned by the district / city government in accordance with legislation. Also granted the authority to establish a Village Owned Enterprise managed by the spirit of kinship and mutual cooperation. BUMD that can move in the field of economy, trade, services and other public services in accordance with general provisions of legislation. In the explanation, it is mentioned that this village BUM specifically can not be equated with legal entity such as limited liability company, CV or cooperative because the purpose of the establishment is to utilize all economic potential, natural resources and human resources for the welfare maIn other words, the village BUM orientation is not only oriented towards financial gain. But it also supports improving the welfare of rural communities. [3] Funding sources of BUM Desa are also assisted by the government, provincial government, district / municipal government, and village government. The government encourages BUM Desa by providing grants and / or access to capital, providing technical assistance and access to markets, and prioritizing BUM Desa in managing natural resources in the village. Then, with the issuance of Government Regulation No. 43 of 2014 on the Implementation of Law Number 6 Year 2014 on the Village, finally after half a year since the beginning of 2014 the Village Law was passed, to be implemented in the next year precisely in 2015. Various things Regulated in Government Regulation No. 43 of 2014 on the Implementation of Law Number 6 of 2014 on this Village. Clear socialization and how the village will be easier to implement the Village Law is the duty of every citizen, as well as to keep a number of funds that are only a segituas can be used as much as possible for the greatest prosperity of the villagers. President Susilo Bambang Yudhoyono on May 30, 2014 has signed Government Regulation Number 43 Year 2014 on the Implementation of Law Number 6 Year 2014 on Village. The exit of the Implementation of Law on Village Law is based on the consideration to implement a number of provisions in Law Number 6 Year 2014 on the Village, as well as to optimize the implementation of village governance.Government Regulation No. 43 of 2014 on the Implementation of Act No. 6 of 2014 on Villages containing 91 pages including annotations. The Rules of Implementation of the Village Law herein governs the Arrangement of Villages, Authorities, Village Governments, Procedures for the Preparation of Village Rules, Finance and Wealth of Villages, Rural Development and Rural Area Development, Village Owned Enterprises, Village Cooperation, Village Community Institutions and Customary Villages, And Village Development and Supervision by the Camat or other designations. Authority of the Village Authority possessed by the village administration In Government Regulation No. 43 of 2014 on the Implementation of Law Number 6 of 2014 on Villages states that the authority of the Village includes: 1. Authority based on the right of origin; 2. Local-scale village authority; 3. Authority assigned by the Government, provincial government, or district / city government; And 4.

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Other authorities assigned by the Government, provincial government, or district / city government in accordance with the provisions of legislation. The authority of the Village in the Village PP consists of at least: 1. Indigenous peoples' organizational systems; 2. Community institutional development; 3. Development of customary law institutions; 4. Village cash management; And 5. Development of the role of the village community. Local-scale village authorities include at least the following: 1. Mooring boat management; 2. Village Market Management; 3. Management of public baths; 4. Management of irrigation networks; 5. Management of rural community settlement environment; 6. Community health promotion and management of integrated service post; 7. Village Embung Management; 8. Village scale drinking water management; And9. Village road construction between settlements to agricultural areas. In addition to the authority as mentioned above. The Minister may determine the type of authority of the Village according to local circumstances, conditions and needs. (According to Article 34 Paragraph 3 of Village Rule). According to Article 91 of PP 43 of 2014 states that all village revenues are received and distributed through village cash accounts and their use is fixed in village APB. The implementation of village authority is based on the right of origin and local authority of the village scale Funded by APB Desa, and can also be funded by APBN and APBD from provinces and districts / cities through ADD for example. The budget for administering village authorities obtained or assigned by the Central Government will be funded by APBN through allocations from the Ministry / Institution budget section and channeled through SKPD - District or City Regional Device Work Unit. In addition, the implementation of village authority obtained through the Regional Government will be funded by APBD from Provincial and Regency or Municipality. With the authority possessed by the village government mandated by the law, it is the strength of the Village in building on its own territory, this will certainly facilitate the central government In creating equitable development in Indonesia.Untuk it should have done village government or prepare itself to do development. So the intention of the central government is also the dream of the community in Indonesia to accelerate the development and improvement of welfare. Peditribusian ADD that comes from the State Budget

The Government shall allocate the Village Fund in the state budget of revenues and expenditures for each fiscal year designated for the Village transferred through the district's revenue and expenditure budget. Article 95 paragraph 1 PP 43/2014. Affirmed in PP 43 of 2014 that the government will allocate village funds in APBN every fiscal year devoted to villages transferred through APBD Kabupaten / Kota. In addition, district / municipality governments allocate in DA / DA budgets every fiscal year, at least 10 percent of balancing funds received by districts / municipalities within the APBD after deducting special allocation funds (DAK). 43 year 2014 such as the district /

municipality governments shall allocate part of the district tax and retribution proceeds to the village at least 10 percent of the realization of district taxes and levies. As for the calculation formula is 60 percent of the 10 percent share is equally distributed to all villages, and the remaining 40 percent is proportionally divided according to the realization of tax revenue and retribution revenue from each village.With the authority of the Village is so great in doing development and supported with Adequate budgets, should the challenges and problems and obstacles of village government getting smaller or less in the development. However, for the development undertaken at the village level is not appropriate target, because the implementation of development in the village is expected not based on desire, but is a very basic requirement. Since the two things between desire and need are contradictory, not necessarily what we want something "very" needed. Therefore, for the development of villages more targeted and targeted, one of the efforts is to conduct development planning based on the results of Research. Research-based development aimed at supporting or advocating policy formation is expected to build synergies with the Ministry of Village in producing knowledge, knowledge management, and encouraging evidence-based village development policies. It is hoped that village-based research development can encourage development Villages not only focus on economic development, but also integrate rights and justice issues for rural communities. To ensure village development policies, village development based on knowledge of research results is important. There is a need to establish a Village Development Knowledge Management (MPPD), as one of the containers of production, management, and utilization of knowledge for the progress of village development. That research-based policy making in village development will make the village development run in a planned, conceptual, and accountable manner. So as to accelerate prosperity and justice in the villages in Indonesia. Planning and implementation of development in research-based villages is believed to be more targeted and targeted, as well as accelerate the central government's goal in equitable development and improving the welfare of its people. Thus the community is also involved in the implementation of such development. If it can be analyzed that at the disbursement of ADD funds in the first period of maximum utilization of kuranag, can be seen around the author's residence, that is a number of villages in Tanjung Morawa sub-district, the construction is less significant, because it looks like a uniform pembanagunan (imitate the neighboring village) , This is seen from the procurement of signboards or gang signboards in a number of villages looks the same. It can be said to barely see a program that is typical of the village. It can not even be said to improve the welfare of society in general, which is the aspiration of the Indonesian nation in accordance with the Constitution of the Republic of Indonesia. For that it is needed academic institutions or research and research institutions to be involved or involved themselves in programming, planning and carrying out development in the village. And the implementation of the Research is also inseparable from the existence of operational financing, which can be charged in ADD through RAPBDes, so there is a synchronization in the development process is fundamental and based on the needs really needed by the villagers themselves in general, not the implementation of development based solely Desire rather than a part of society. But it is unfortunate that government agencies in the village have not much knowledge or have insight in managing ADD funds are considered large enough, so that the management system is done from the stage of budget preparation, ignoring sources of information that can strengthen the program to be plan.

Where information sources can be obtained by doing research or research, so that in the programming of the ADD will have a strong and scientific and accountable basis.

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BUILDING SYSTEM OF PERSONNEL MOVEMENT USING GLOBAL POSITIONING SYSTEM (GPS) DESIGN

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Abstract

Supervision process is an important phase performed by a leader in implementing activities so that the activities can run accordingly to the plan. The implementation of task done by Military personnel need supervision continuously by a leader. The development of advanced technology of electronics and communications in equipment and weapons and implementing navigation system using satellites. By designing a supervisory system to monitor personnel movements using Global Positioning System (GPS) will facilitate leaders to supervise personnel. GPS as a data receiver from satellites in the form of latitude, longitude of position coordinates. Wavecom modem as a data receiver from GPS Module. Delphi 7 Program will process data, then will display Google Maps showing position of the personnel, coordinates, and time of place movement done by the personnel. The network of GSM is needed as a data sender media. Coordinate data displayed in Google Maps in real time corresponds to the personnel position coordinate in reality.

Keywords: Coordinate, Global Positioning System, Wavecom Modem

1. Introduction

In the implementation of its duties in the area of operation that is migratory personnel TNI often requires supervision from the leadership. With good supervision the implementation of the task will run well. Currently to know the position of personnel still use the map and compass in most units of the Army. Because the tool used is still manual then the process and the steps of activity and supervision of the operation becomes limited. By using the map and compass the process of determining the position of the calculation is still manually and has a precise accuracy, it will take a longer time.

One of the utilization of electronics and communication technology is to make a monitoring tool of personnel movement equipped using GPS that displays map of location with position point which can be known coordinate of troop position. So the results of positioning and position will be visualized on the laptop, which will facilitate the leadership to conduct supervision of personnel.

By the problems above, we make the title **"BUILDING SYSTEM OF PERSONNEL MOVEMENT USING GLOBAL POSITIONING SYSTEM (GPS) DESIGN "**, which is expected later will be used easily to help determine the position of personnel. In the surveillance tool personnel movement there are

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some parts that need to sync between the data from the GPS sent using Global System for Mobile Communication (GSM) network and then displayed with Delphi 7 program on the laptop.

2. Methode

2.1. *Delphi7*

Borland Delphi is the next generation of Turbo Pascal, launched in 1983 designed to run on the operating system Disc Operating System (DOS), which is the most widely used operating system at that time. While Delphi was first launched in 1995 is designed to operate under the Windows operating system.

2.2. Global Positioning System (GPS)

Global Positioning System (GPS) is a navigation radio and satellite positioning system, with the official name of NAVSTAR GPS (Navigation Satellite Timing and Ranging Global Positioning System) [5]. GPS consists of three major segments of space segment consisting of GPS satellites, control system segment consisting of monitoring stations and satellite controllers, as well as user segment consisting of GPS users include receivers and signal processing and GPS data. The GPS system segment is shown in Figure 2.1.

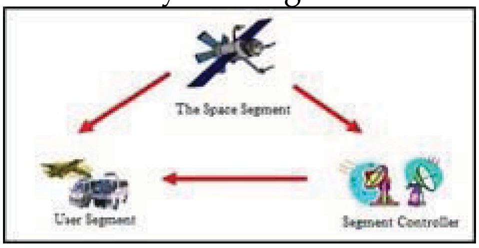

Figure 2.1. Segment GPS System

To determine the position on the surface of the earth, the GPS receiver will compare the time on the signal transmitted by the satellite with the time at which the signal is received by the GPS receiver. The time difference will tell how far the satellite is from the GPS receiver. If using a distance calculation of multiple satellites, a position can be determined from the triangular shape obtained by satellite position. With three or more satellites, the GPS receiver can determine the latitude / longitude position, which is called a 2D fixed position. Whereas with four or more satellites, the GPS receiver can determine the 3D position consisting of latitude, longitude, altitude [7].

2.2.1 How GPS Works

Every area above the earth's surface is minimally affordable by 3-4 satellites. In practice, every new GPS can receive up to 12 satellite chan- nels at a time. The condition of the sky is clear and free from obstacles make GPS can easily capture the signal sent by satellite. The more satellites received by GPS, the higher the accuracy will be given.

How GPS works logically there are 5 steps:

1. Using the satellite triangulation calculations.
2. For "triangulation" calculation, GPS measures distance using travel time radio signals.
3. To measure travel time, GPS requires require high time accuracy.
4. For the calculation of distance, we must know with certainty the position of the satellite and the desire in its orbit.
5. Finally must correct the signal delay travel time in the atmosphere until receiver received.The GPS satellite working scheme sends the signal shown in Figure 2.2.
6.

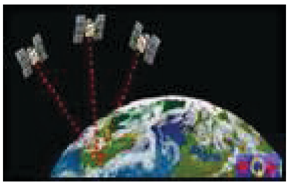

Figure 2.2. GPS Satellite Work Scheme Sending Signals

2.3. *Wavecom* Modem

The Wavecom modem is a special type of modem that uses a SIM card, and to operate using a service provider, such as a mobile phone. When a GSM modem is connected to a computer, the computer can use a GSM modem to communicate over a cellular network, while a frequently used GSM modem to provide mobile internet connectivity, many of the modem types used to send and receive SMS. The Wavecom modem is easily controlled using AT commands and also the facility can quickly connect to the serial port of a desktop computer, laptop or notebook. The Wavecom modem becomes the perfect solution for heavy applications like telemetry or Wireless Local Loop (PLN metering & Public Telephone). Small size makes it easy to put in various areas, indoor / outdoor. This modem is built from the well-known and fast-paced, efficient, and stable M1306B chipset platform with RS232 Serial connection support at baudrate 115200 [10]. An example of a Wavecom modem model is shown in Figure 2.3.

Figure 2.3. Wavecom Modem

2.4. Google Maps

Google Maps can be used as directions. Google Maps uses NASA satellites and to date all of the photos on the surface of the earth can be viewed through the Google Earth program. Unlike Google Earth, Google Maps is a Web-based app. For simplified Google Maps, because of its WEB-based features and easier use as a directional, the Google Maps app uses an Earth surface view system with Terain or contours, satellite imagery and walkthroughs. Google maps not only provide a map view that can be explored, but also has a search facility that allows to go to a particular location based on address and parameters entered. By entering the address of coordinates longitude and latitude, can find interesting locations, such as monuments, tourist attraction, by typing a certain name [15]. The Google Maps view is shown in Figure 2.4.

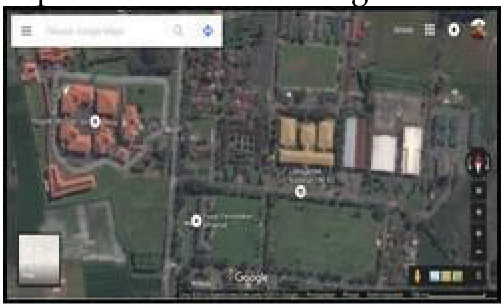

Figure 2.4. Google Maps Views

2.5. *Delay*

Delay is a delay in the transmission of data from the sender and receiver so that a response can occur in the receiver. The delay test is divided into different time conditions, the unit of delay is second (seconds). Delay in the design of the supervisory system of personnel movement is one of the parameters ~~to be studied~~. In this research will be done several times the experiment to get the delay of each type of delay testing so that will produce the difference between the shortest delay time, longest delay and average delay of the whole. In determining the value or number of delay it will use equation 2.1.

$$\bar{x} = \frac{x_1 + x_2 + x_3 + x_4 + x_5 + \ldots\ldots\ldots\ldots x_n}{n} \qquad (2.1)$$

Information:

$\bar{x}$ = Average count

Xn = the i-th sample value

N = number of samples

2.6. Accuracy and Precision

Accuracy as a difference or closeness (closeness) between the coordinates read from the tool with the coordinates on the actual field. Precision is a measure of how close a series of measurements are to each other. With the hope of several experiments at one point of location to obtain precise results, then done with different location points can be analyzed and taken a conclusion. In the determination of the value or number of Accuracy and Precision it will use equation 2.1.

$$\bar{x} = \frac{x_1 + x_2 + x_3 + x_4 + x_5 + \ldots\ldots\ldots\ldots x_n}{n} \qquad (2.1)$$

Information:

$\bar{x}$ = Average count
Xn = the i-th sample value
N = number of samples

3. Result and discussion

3.1.1. Flowchart and explanations

Flowchart design is intended for the making of data processing system GPS display coordinate personnel running well, then the program must receive data from GPS. Flowchart of Program for Display GPS coordinate personnel shown in Figure 3.1.

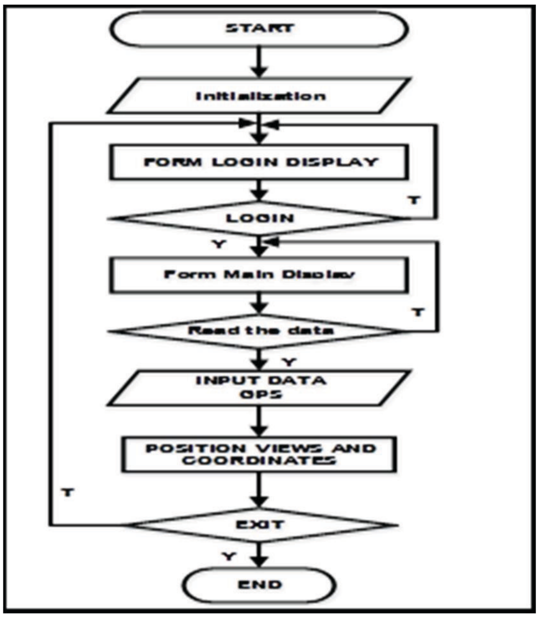

Figure 3.1. Flowchart of Program for Display GPS

In Figure 3.1. Flowchart GPS display program is to describe the movement between units.

Flowchart explanation in Figure 3.1.

1. Start To start the program.
2. Initialization is to provide the initial data at the start of the program.
3. Show the login form is the process to open the program start screen.
4. Login to open the new form. If it is wrong then the program will return to the login form.
5. Show main form that is to open main form after login correct.
6. Read data is for comparison of a statement, to proceed to the next process.
7. Input GPS data is to provide initial data for the process.
8. Display position and coordinates is the process of display position and coordinates on the program.
9. Exit is to end the program in progress.
10. End is stop the program.

3.1.2. Block Diagram

Monitoring equipment personnel movement has a working system from the delivery of data transmission orders, data processing, and appearance of the program position of the coordinates of personnel. To simplify a tool design it is necessary to design a block diagram of the system globally. The block diagram in question can be seen in Figure 3.2.

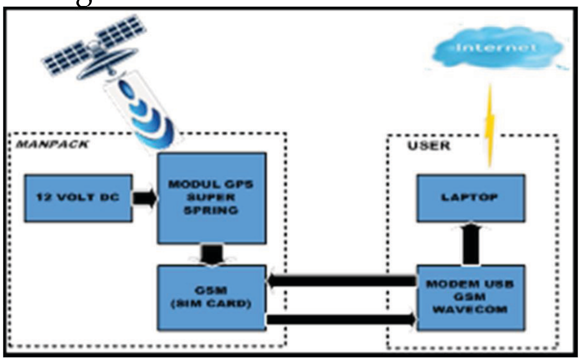

Figure 3.2. Tool Diagram Block

3.1.3. Work System Tools

1. Delphi7 installed laptop is programmed to be connected with Wavecom modem, then given command to request coordinate data to GPS.
2. Wavecom Modem will send a message with AT-Command AT + CMGS format = "GOAL NUMBER" (Sim Card on GPS) CTRL + Z WHERE #
3. The GPS module placed on the man pack acts as a data receiving device where the coordinates of the satellite position are latitude, longitude. Upon receiving a message sent by Wavecom Modem, the GPS module will provide sms reply messages containing the latitude, longitude, time and speed data received from the satellite.
4. Wavecom Modems that have received further data messages will be forwarded to Delphi 7 program by using Com Port on Delphi 7.
5. The received data message will then be processed, the data to be retrieved is the value of latitud and longitude to be input on Google Maps.
6. To Display Google Maps on Delphi 7 using Web Browser.
7. Laptop will display Google Maps on the Delphi 7 display program which position, coordinates, and time of movement or displacement of personnel equipped with real-time man packs.

3.1.4. GPS Module Testing

GPS testing aims to determine the position or coordinates of an area using GPS (Global Positioning System) installed on the tool. GPS is to monitor the position of personnel when it has moved from position position.

1. Tools used
A. Computer.
B. USB cable.
C. Wavecom Modem.
D. Super Spring GPS Module.
2. Testing Procedure
A. Construct the test circuit as in Figure 3.5 block.
B. Connecting the Wavecom Mode to a computer or laptop via a USB cable.
C. Turn on the Super Spring GPS Module.
D. On a computer or laptop open the Hyperterminal app.

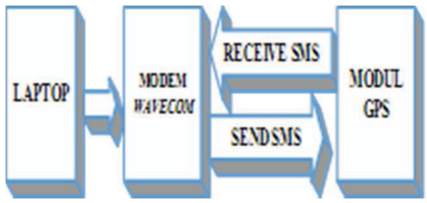

Figure 3.5. GPS Tracking Chart Diagram block

The first step of testing this tool is data from satellites received by GPS in the form of coordinate data. Wavecom Modem will send sms to Superspring GPS module, then Superspring GPS module will reply to sms which contain message coordinate from GPS. Received sms data will be displayed and read on Hyperterminal.

3. Testing results are shown in Figure 3.6.

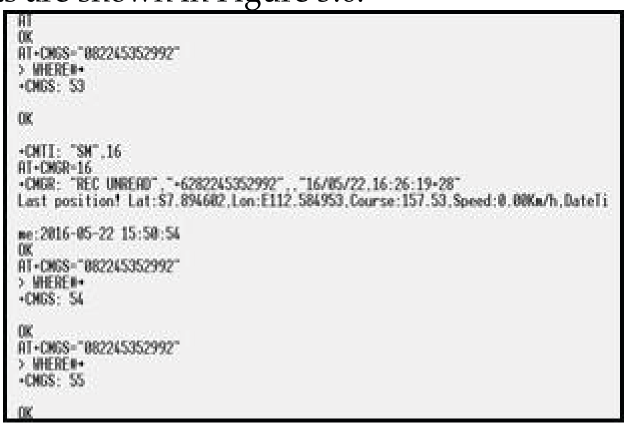

Figure 3.6. Results of GPS Testing On Hyperterminal

3.1.5. Wavecom Modem Testing

Wavecom Modem Testing aims to determine whether the Wavecom Modem used can display character data in accordance with the program created.

1. Tools used
A. Computer or Laptop
B. USB cable
C. Wavecom Modem
2. Testing Procedure
A. Structure the test chapters as shown in Figure 3.3.
B. Connecting the Wavecom Modem
C. On a computer or laptop open the Hyperterminal app

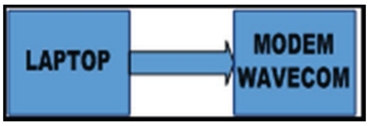

Figure 3.3. Wavecom Modem Testing Series

The first step of testing this tool is to send sms to the desired telephone number using AT COMMAND written on Hyperterminal. Replies received will be displayed on Hyperterminal, for sms reading using AT COMMAND format. As shown in Figure 3.3. Using baudrate 115200 bps and flow control selected none.

3. Testing results

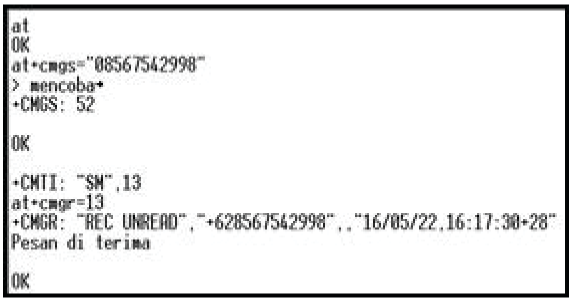

Figure 3.4. Testing Results On Hyperterminal

3.1.6. Coordinate View Test

Display coordinates on the application is a display that serves as a place to perform the process of displaying the coordinates of personnel. The coordinate position display of personnel is shown in Figure 3.5.

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3.1.7. Testing Against Delay

After performing some tests on the delay it can be calculated the average value generated by using the test results data in Table 1.1.

Table 1.1. Delay Test Results

NO	TESTING	TIME (s)				
		I (06.00WIB)	II (10.00WIB)	III (13.00WIB)	IV (17.00WIB)	V (21.00WIB)
1	Move 1	17.4	20.8	19.7	17.2	20.7
2	Move 2	18.2	19.7	19.4	19.1	18.2
3	Move 3	20.3	23.4	21.5	19.8	22.8
4	Move 4	18.7	23.8	20.3	19.2	19.5
5	Move 5	18.8	22.4	21.8	21.5	23.7
6	Move 6	19.1	19.9	18.6	20.9	23.9
7	Move 7	16.7	23.1	20.4	21.2	27.2
8	Move 8	20.4	19.7	21.6	18.7	19.8
9	Move 9	20.6	20.9	17.3	19.3	19.6
10	Move10	18.2	17.3	19.8	22.5	21.3

From the data table above then each test can be calculated the average value of delay obtained is as follows:

1. Time 06.00 WIB

$$\overline{x}1 = \frac{188.4}{10} = 18.84\ Second$$

2. Time 10.00 WIB

$$\overline{x}2 = \frac{211}{10} = 21.1\ Second$$

3. Time 13.00 WIB

$$\overline{x}2 = \frac{200.4}{10} = 20.04\ Second$$

4. Time 17.00 WIB

$$\overline{x}2 = \frac{199.4}{10} = 19.94\ Second$$

5. Time 21.00 WIB

$$\overline{x}2 = \frac{216.7}{10} = 21.67\ Second$$

From the above calculation, then will be searched average value as follows:

$$\bar{x} = \frac{101.59}{5} = 20.318\ Second$$

3.1.8. Testing Against Accuracy and Precision

After performing some tests on the moving location then it can be calculated the average value generated using the test result data in Table 1.2.

Table 1.2. Testing Results Accuracy and Precision in Silent Condition

NO	LOCATION	TESTING	TIME (WIB)	DISTANCE (m)
1	A	1	06.04	3.6
		2	13.01	2.4
		3	16.02	4.8
		4	20.09	3.6
2	B	1	06.09	2.4
		2	13.04	3.6
		3	16.06	2.4
		4	20.11	3.6
3	C	1	06.13	2.4
		2	13.07	2.4
		3	16.10	3.6
		4	20.15	2.4
4	D	1	06.17	4.8
		2	13.11	2.4
		3	16.12	2.4
		4	20.18	3.6
5	E	1	06.21	3.6
		2	13.13	2.4
		3	16.16	3.6
		4	20.21	2.4

NO	LOCATION	TESTING	TIME (WIB)	DISTANCE (m)
6	F	1	06.26	3.6
		2	13.16	4.8
		3	16.19	3.6
		4	20.24	4.8
7	G	1	06.30	2.4
		2	13.19	3.6
		3	16.24	2.4
		4	20.28	3.6
8	H	1	06.33	2.4
		2	13.24	2.4
		3	16.27	2.4
		4	20.32	4.8
9	I	1	06.37	3.6

		2	13.29	2.4
		3	16.31	2.4
		4	20.35	2.4
10	J	1	06.40	2.4
		2	13.32	3.6
		3	16.33	2.4
		4	20.38	4.8
11	K	1	06.43	3.6
		2	13.37	3.6
		3	16.37	3.6
		4	20.40	4.8
12	L	1	06.47	3.6
		2	13.41	2.4
		3	16.39	3.6
		4	20.44	3.6
NO	**LOCATION**	**TESTING**	**TIME (WIB)**	**DISTANCE (m)**
13	M	1	06.51	2.4
		2	13.44	2.4
		3	16.45	2.4
		4	20.47	3.6
14	N	1	06.55	2.4
		2	13.48	3.6
		3	16.49	2.4
		4	20.50	2.4
15	O	1	06.58	2.4
		2	13.52	2.4
		3	16.56	3.6
		4	20.55	3.6

From the data table above then each test can be calculated the average value of distance accuracy and precision obtained are as follows:

1. Experiment on Location A

$$\bar{x}\,1 = \frac{3.6 + 2.4 + 4.8 + 3.6}{4} = \frac{13.2}{4} = 3.6\ meters$$

2. Experiment on Location B

$$\bar{x}\,2 = \frac{2.4 + 3.6 + 2.4 + 3.6}{4} = \frac{12}{4} = 3\ meters$$

3. Experiment on Location C

$$\bar{x}\,3 = \frac{2.4 + 2.4 + 3.6 + 2.4}{4} = \frac{10.8}{4} = 2.7\ meters$$

4. Experiment on Location D

$$\bar{x}\,4 = \frac{4.8 + 2.4 + 2.4 + 3.6}{4} = \frac{9.6}{4} = 3.3\ meters$$

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5. Experiment on Location E

$$\bar{x}\,5 = \frac{3.6 + 2.4 + 3.6 + 2.4}{4} = \frac{10.8}{4} = 3\ meters$$

6. Experiment on Location F

$$\bar{x}\,6 = \frac{3.6 + 4.8 + 3.6 + 4.8}{4} = \frac{15.6}{4} = 4.2\ meters$$

7. Experiment on Location G

$$\bar{x}\,7 = \frac{2.4 + 3.6 + 2.4 + 3.6}{4} = \frac{10.8}{4} = 3\ meters$$

8. Experiment on Location H

$$\bar{x}\,8 = \frac{2.4 + 2.4 + 2.4 + 4.8}{4} = \frac{9.6}{4} = 3\ meters$$

9. Experiment on Location I

$$\bar{x}\,9 = \frac{3.6 + 2.4 + 2.4 + 2.4}{4} = \frac{10.8}{4} = 2.7\ meters$$

10. Experiment on Location J

$$\bar{x}\,10 = \frac{2.4 + 3.6 + 2.4 + 4.8}{4} = \frac{10.8}{4} = 3.3\ meters$$

11. Experiment on Location K

$$\bar{x}\,11 = \frac{3.6 + 3.6 + 3.6 + 4.8}{4} = \frac{15.6}{4} = 3.9\ meters$$

12. Experiment on Location L

$$\bar{x}\,12 = \frac{3.6 + 2.4 + 3.6 + 3.6}{4} = \frac{12}{4} = 3.3\ meters$$

13. Experiment on Location M

$$\bar{x}\,13 = \frac{2.4 + 2.4 + 2.4 + 3.6}{4} = \frac{10.8}{4} = 2.7\ meters$$

14. Experiment on Location N

$$\bar{x}\,14 = \frac{2.4 + 3.6 + 2.4 + 2.4}{4} = \frac{9.6}{4} = 2.7\ meters$$

15. Experiment on Location O

$$\bar{x}\,15 = \frac{2.4 + 2.4 + 3.6 + 3.6}{4} = \frac{12}{4} = 3\ meters$$

From the above calculation, then will be searched average value as follows:

$$\bar{x} = \frac{47.4}{15} = 3.16\ meter$$

3.1.9. Analysis

After testing the tools that have been made in accordance with the design, then will be analyzed based on test results data obtained.

3.1.10. *Wavecom* GSM Modem Analisist

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In the test there is an AT-COMMAND format in the process of sending messages and message readings, as follows:

1. AT is used to early check whether the modem and laptop are connected.
2. AT + CMGS = "destination number", then to send a message that has been written press CTRL + Z.
3. AT + CMGR is used to read incoming messages.
4. CMTI as a sign of incoming messages.

By writing the correct AT-COMMAND format, then there will be no error, otherwise if writing wrong format will occur error.

3.1.11. Modul GPS Analysis

To be able to send a gps message must first get the command with the format WHERE #, after getting the next command gps will send a message containing the data:

1. Latitude and longitude coordinates darin last position of gps.
2. Moving speed of gps.
3. Time of last position of gps containing date, month, year, and hour.

3.1.12. Coordinate View Analysis

Coordinate view is the appearance of the coordinates of the GPS on google maps after the coordinates that have been given GPS, to show the location of the GPS location on google maps given a sign with a small brown icon, a sign or icon of the location of the location on google maps can be changed in accordance with the change program.

3.1.13. Analysis Against Delay

After carrying out the test and calculation of delay 10 times test with value 5 different time condition got result of lowest value 18.84 second at test time at 06.00 WIB, highest value 21.67 second at test time at 21.00 WIB, then overall average value obtained Is 20,318 seconds. Factors that affect the delay difference due to the transmission of data communications dependent on the sms operator to send via the nearest BTS and peak communications or dense use of the provider by the provider provider. In testing this tool provider used by the tester is a provider of SimPati owned by Telkomsel.

3.1.14. Analysis of Accuracy and Precision

After carrying out the tests and calculations of accuracy and precision in silent conditions, the tests at locations C, I, M and N have the nearest accuracy and precision value of 15 tests with a value of 2.7 meters and testing at location F has the greatest accuracy and precision with a value of 3.9 Meters. Thus proves that the average accuracy and precision value of 3.16 meters. Differences of accuracy and precision distance values occur due to two factors: the first factor of difference of test time affecting atmospheric state, the second factor

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geographical position around the location, thus affecting the GPS signal received from the satellite.

After performing tests and calculations of accuracy and precision in mobile conditions, the test was performed 15 times with the lowest value of 18.95 meters in test 11, the highest score of 23.6 meters in test 14, the overall average score of 21.24 meters. The difference in deviation value is because it is influenced by the time and speed values in the testing tool.

4. Conclusions

Based on the results of planning, making, testing and research of supervisory system of personnel movement using Global Positioning System (GPS), it is concluded as follows:

1. With parameter delay, accuracy and precision of tool testing process and data retrieval can be executed with result of delay test the overall average value obtained is 20.318 seconds. The value of delay is influenced by provider (Telkomsel), if data transmission occurs during peak hours communication delay value will be high, because there queued of sms delivery. Tests of accuracy and precision in a stationary condition obtained an average yield of 2.86 meters. Tests of accuracy and precision in moving conditions obtained results average aberration distance of 21.24 meters. The value obtained is much different from the test on the stationary condition, this is due to the effect of the value of displacement velocity on the testing tool.
2. Data communication from Wavecom modem with GPS module transmitted through GSM signal with SMS format using AT Command command. AT + CMGS = "destination number", then to send a message that has been written press CTRL + Z.
3. Wavecom Modem sends messages with WHERE format #, GPS module as data receiving tool coordinate the position of the satellite in the form of latitude, longitude. Messages sent by Wavecom Modem, GPS module provide sms reply messages that contain data latitude, longitude, time and speed received from satellites. The Wavecom modem that has received the data message and then received data messages will then be processed and displayed on Google Maps.

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Design of Room Lighting Electric Power Savings Using PIR Sensor

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Abstract

The current lighting system is one of the big electricity usage. With the lights, human activities can last 24 hours non-stop. The higher the intensity of activities that require lighting, the energy used is also getting higher and higher. For that we need to try to save energy in lighting system. In general, lighting arrangements only use the principle on or off regardless of activity in the room. This leads to inefficient use of electrical energy. From that thought then designed to build room power saving lamps by using PIR sensor is more efficient because the igniter lights the room is controlled automatically. The existence of the subject will be detected using a Passive Infra Red sensor (PIR) applied by the microcontroller. The MOSFET driver is used as a switch. So the lights will light up brightly as long as there are subjects in the room, and the lights will dim back when the subject leaves the room. The subject is focused on humans. With the creation of this system is expected to save electrical energy.

Keywords: ATMega 16 Microcontroller, MOSFET, PIR Sensor (Passive Infra Red).

1. Introduction

The need for electrical energy in Indonesia continues to increase as the population growth and development of the industrial world. The increase in demand is even more than twice that of economic growth. The use of electrical energy in Indonesia is still not well managed. Indonesia is the most wasteful country in electricity usage in ASEAN. Waste in electricity usage generally occurs in offices or public buildings.

Waste is one of them from energy in the lighting sector on the lights. Lighting in our region consumes enormous energy and costs but not all of the lighting in the region can work efficiently. Using energy efficiently does not mean the use of energy should sacrifice comfort such as reading a book in a dark room does not use lights just to save on lights or turn off all air conditioners in the building to save electricity costs. Examples of actions that use energy efficiently are using compact fluorescent lamp type lamps instead of incandescent lamps that can save energy usage by up to 40 percent to produce the same light intensity, or multiply the windows in the skylights, so as to avoid using lights in daytime. The successful use of energy efficiently is strongly influenced by behavior, habits, and awareness of energy saving. Along with the rapid economic growth and increasing building in Indonesia, the implementation of energy efficiency in buildings in accordance with the Indonesian National Standard becomes very important. According to some sources, in general, buildings in tropical countries such as Indonesia use the most energy for the air system (45-70 percent), lighting systems (10-20 percent), elevators and escalators (2-7 percent) Office equipment and electronics (2-10 percent). Energy-intensive buildings and homes are not only costly but also produce greenhouse gas emissions that damage the environment.

Therefore it is necessary to rebuild to utilize such energy, especially on the use of electrical energy. Electrical energy in lighting lights in buildings or on public roads is sometimes very inefficient in its use in because when the lights are brightly lit but the lack of running activity is done by humans causing waste in the sector of the use of light and electrical energy.

So the design of the automatically controls system is dim light automatically in the room by detecting the presence of the person in the room with the PIR (Passive Infra-Red) detector module so that the data generated by this sensor is sent to the microcontroller ATMega 16, and the microcontroller then sends the processed data to the MOSFET To switch the voltage on the lamp. The intensity of light emitted from the lights will light up dim and bright depending on whether or not people who move in the room. Light if there are people, and otherwise dim if there is no people with a vertical distance of 5 meters and horizontally 4 meters with each to the left 2 meters and to the right 2 meters. With this equipment can be used as a means to reduce excessive energy wastage in this country.

2. Research Method

In the design of room saving lamps power using this PIR sensor, where all the performance of the system is controlled by the microcontroller ATmega16 as a manager of programmed data with software (programming) microcontroller based Bascom AVR language and hardware so that in completion of the equipment obtained a result that is as expected. The hardware used consists of:

1. Power Supply Adapter
2. Minimum system of ATMega 16
3. PIR sensor
4. MOSFET driver
5. LED
6. LCD

2.1 Adapter Power Supply

Power supply adapter is an electronic device that serves to reduce and change the voltage AC (Alternating Current) into DC voltage (Dirrect Current) which can be used as a source of electronic equipment. Power supply as power source can come from: battery, batteries, solar cell and adapter. This component

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will supply voltage according to the voltage required by the electronic circuit. The Adapter Power Supply image is shown in Figure 2.1.

Figure 2.1. Adapter Power Supply

2.2. ATMega Microcontroller 16

In a simple microcontroller is an IC which contains CPU, ROM, RAM and Port I / O which is the completeness as a minimum microcomputer system so that a microcontroller can be said as a microcomputer in single chip (single chip microcomputer) that can stand alone. So the function of the microcontroller is to run commands that have been programmed using the Basic programming language. The microcontroller leg of ATMega 16 consists of 40 pins, shown in Figure 2.2.

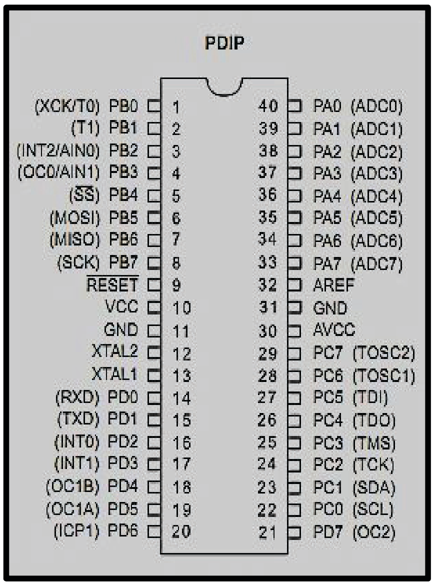

Figure 2.2. ATMega Pin Configuration 16

Figure 2.2 shows the functional configuration of ATMega 16 pins as follows:

1. VCC is the input power supply pin, connected to +5 Vdc voltage
2. GND is a ground pin

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3. Port A (PA0..PA7) is a two way I / O pin and ADC input pin
4. Port B (PB0..PB7) is a two-way I / O pin and special function pin, ie timer, analog comparator, and SPI
5. Port C (PC0..PC7) is a two-way I / O pin and special function pin, namely TWI, analog comparator, and timer oscillator
6. Port D (PD0..PD7) is a two-way I / O pin and special function pin, that is analog comparator, external interrupt and serial communication
7. RESET is a pin that is used to reset the microcontroller
8. XTAL1 is an external clock input pin, connected to XTAL2
9. XTAL2 is an external clock input pin, connected to XTAL1
10. AVCC is a pin enter voltage for ADC
11. AREF is the pin enter the ADC reference voltage

2.3. PIR (Passive Infra Red)

PIR is an infrared-based sensor. However, unlike most infrared sensors that consist of an IR LED. In accordance with its name 'Passive', this sensor only responds to the energy of the passive infrared beam that each object has. Objects that can be detected by these sensors are usually the human body. Motion sensor with PIR module is very simple and easy to apply because PIR module requires 5V DC input voltage effective enough to detect movement up to 5 meter and angle 60^0. The PIR sensor image is shown in Figure 2.5.

Figure 2.3. PIR Sensor

How PIR sensor readings work is incoming infrared through the Fresnel lens and pyroelectric sensor, because infrared rays contain heat energy pyroelectric sensor will produce an electric current. The pyroelectric sensor is made of gallium nitride (GaN), cesium nitrate (CsNo3) and lithium tantalate (LiTaO3). This electric current will cause voltage and read by analog sensor.

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Then this signal will be amplified by the amplifier and compared by a comparator with a certain reference voltage (output is a 1-bit signal). So the PIR sensor only outputs logic 0 (Low) and 1 (High), 0 when the sensor does not detect infrared and 1 when the sensor detects infrared.

In general, PIR sensors are designed to detect humans caused by an IR filter that filters the wavelength of passive infrared light. The IR filter module PIR sensor is capable of filtering the wavelength of passive infrared light between 8 to 14 micrometers. Outside the wavelength the sensor will not detect it. Wavelengths generated from the human body ranging from 9 to 10 micrometers are only detectable by the sensor. So, as one walks past the sensor, the sensor will capture the emission of a passive infrared beam emitted by the human body that has a different temperature than the environment. This infrared ray is then captured by Pyroelectric sensor which is the core of this PIR sensor that causes Pyroelectic sensors consisting of gallium nitride, cesium nitrate and litium tantalate to generate electric current. Then an amplifier circuit that amplifies the current which is then compared by the comparator to produce the output.

2.4. LED (Light Emitting Diode)

The LED lamp is an indicator light in an electronic device that usually has a function to indicate the status of the electronic device. For example on a computer, there are LED power lights and LED indicators for the processor, or in the monitor there is also a power saving lamp. Led as a model of future light is considered to suppress global warming because of its efficiency. LED as a lightbulb and fluorescent competitors, the current application began to expand. LED lights are now used for lighting for homes, street lighting, traffic and interior / exterior buildings. LED lamps are made of mica plastic and semi-conductor diode that can be lit when powered by low voltage (about 1.5 volts DC or equivalent to the flow of the battery on the flashlight). The LED image can be seen in Figure 2.4

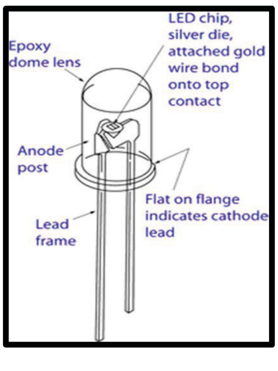

Figure 2.4. LED

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2.5. Liquid Crystal Display (LCD)

Is a liquid crystal form that will emulsify when given voltage. The LCD used is a 16 X 2 LCD with each character formed by 8 pixel rows and 5 pixel columns. The shape of the 16 X 2 LCD can be seen in Figure 2.5

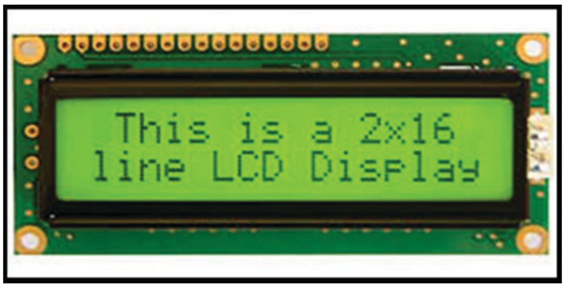

Figure 2.5. LCD (Liquid Crystal Display)

2.6. MOSFET Driver

MOSFET (Metal Oxide Semiconductor Field Effect Transistor) is one type of transistor that has a very high input impedance (gate) so by using MOSFET as an electronic switch, it is possible to connect it with all types of logic gates. By making the MOSFET as a switch, it can be used to control loads with high currents and lower cost than using bipolar transistors. To make a MOSFET as a switch then only use MOSFET in saturation condition (ON) and cut-off condition (OFF) [12]. The type of MOSFET used in this project is IRFZ44N. The MOSFET driver form is shown in Figure 2.6.

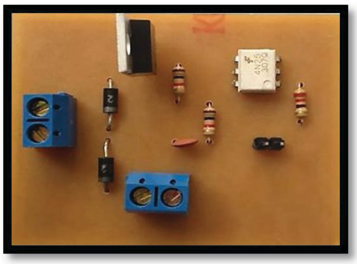

Figure 2.6. MOSFET Driver

3. Result and discussion

In the design and making equipment there are several variables that are tested and measured for data retrieval as well as know the working system of equipment made. These variables include:

3.1.1 Power

Electrical power is the level of energy consumption in a circuit or electrical circuit. Energy sources such as power supply will generate electrical power while the loads connected to it such as the lamp will absorb the electrical power. The higher the wattage the lamp used will be the higher the power consumed. Therefore, the ignition of the lights automatically according to the presence of people using the PIR sensor as a detector is very helpful in electric power saving.

Based on these definitions, the formulation of electric power is as below:

$P = V. I.$

Where :

P = Electricity with unit Watt (W)

V = Voltage with Unit Volt (V)

I = Electric current with Ampere unit (A)

3.1.2. PIR Sensor Detection Distance

Research on the distance of this sensor is aimed to know the distance of detection of PIR sensor to object, either vertically or horizontally.

3.2 Block Diagram

To facilitate the design of equipment in need of the block diagram, the control system bright dim lights in the room automatically based on the subject has the block diagram shown in Figure 3.1.

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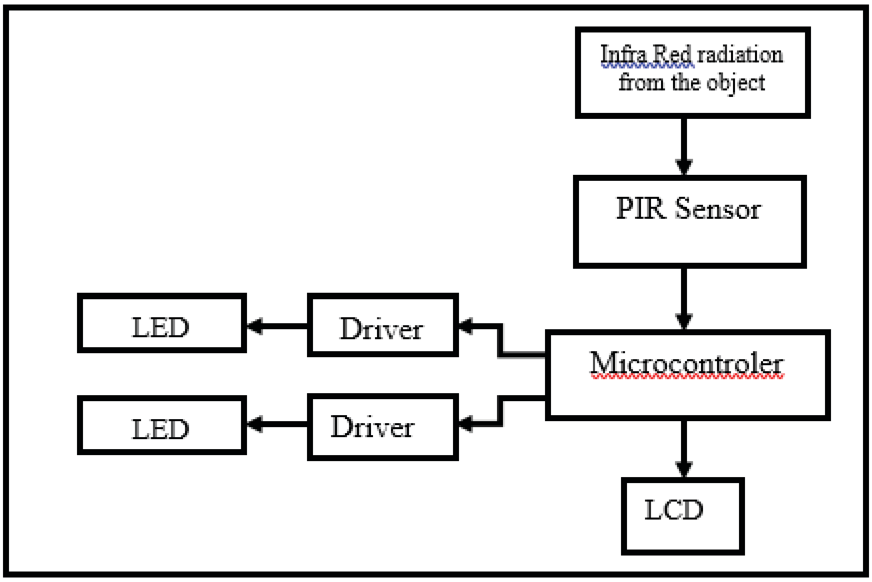

Figure 3.2 Block Diagram

3.2.1 The Working Principle of the equipment

The bright dim system in the room light automatically based on the presence or absence of human activity in the room serves to save the power of lights in order to reduce the waste of electrical energy. equipment work based on a system as a whole and integrated from each circuit where the working principle of the equipment circuit as follows:

1. The adapter power supply reduces and changes the AC (Alternating Current) voltage to DC voltage (Dirrect Current) which can be used as a power source of electronic equipment.
2. The function of the PIR sensor as a detector of the human body as a human being moves, the human body will generate a passive infrared beam with varying wavelengths to produce different heat which causes the sensor to respond, so that the output coming out of the PIR sensor is data transmitted to the microcontroller.
3. The MOSFET driver function is as a switch to connect and disconnect the voltage on the lamp when the ATMega 16 microcontroller receives data from the PIR sensor as a detector of human presence in the area.
4. The main function of the LCD is to display the messages or data that we have program through the microcontroller, so it can facilitate humans in operating the equipment that can be used.
5. The main function of ATMega 16 microcontroller is to store programmed program and as controller or controller of all components and circuit

connected with ATMega 16 microcontroller such as PIR sensor, MOSFET driver, LCD.

3.3 Software Planning

Software design is needed to support hardware that has been made, to facilitate the preparation of software, it is necessary to create a flowchart as in Figure 3.3

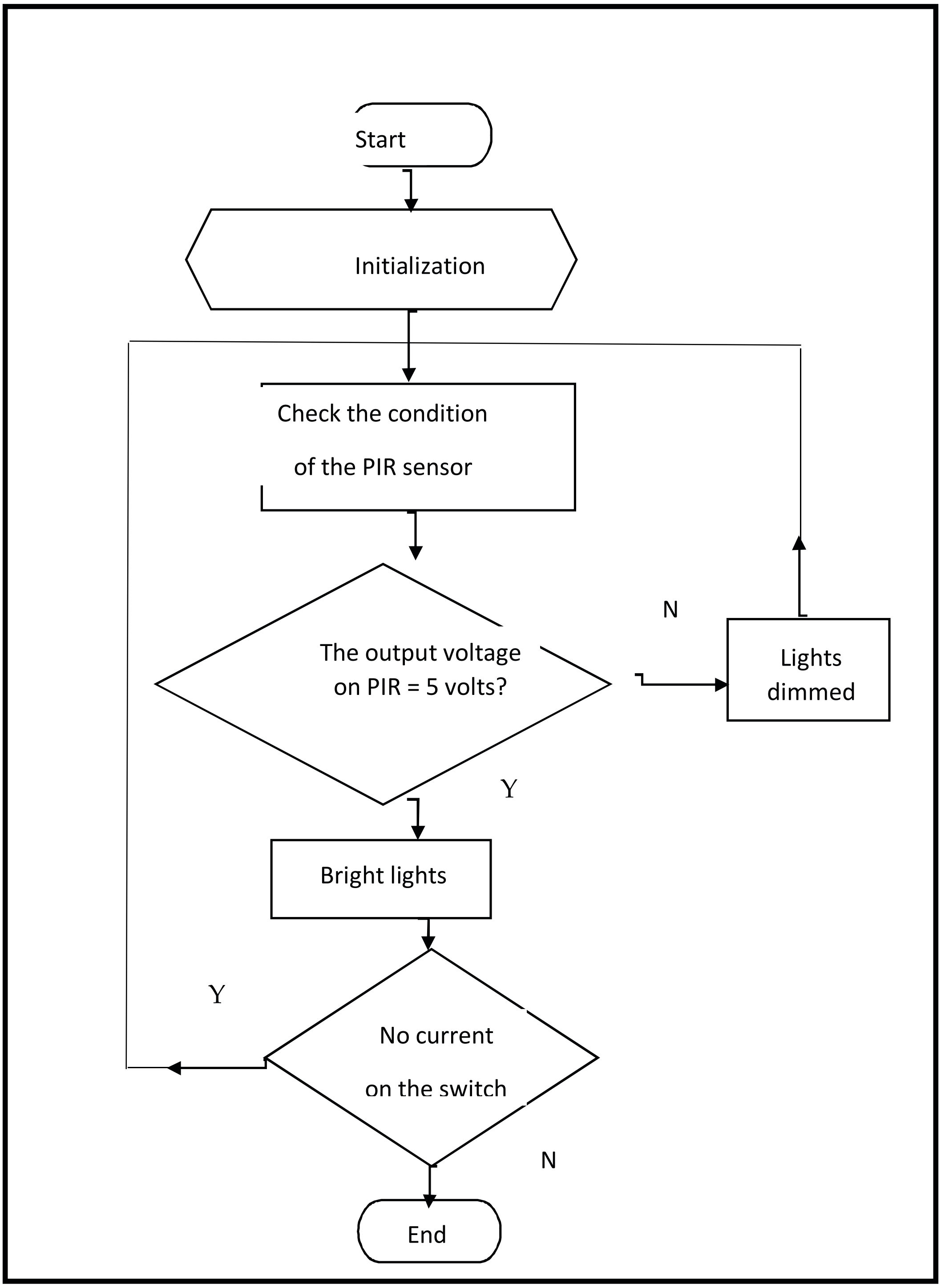

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Figure 3.3. Flowchart Control System

3.4. Minimum Test Result of ATmega 16 System As Output

After testing, it can be seen that the microcontroller can function as Output. The test results are shown in Figure 3.4

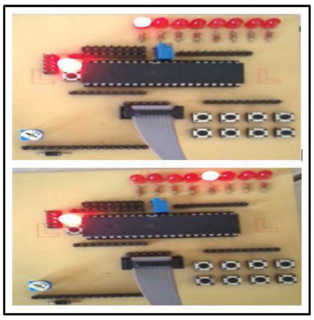

Figure 3.4. Output Test Results Minimum ATmega System 16

To more clearly know the results of microcontroller testing as Output in show in Table 3.1.

Table 3.4 Table Testing Microcontroller As Output

No.	Logic at B port	*LED* at *Port* 0							
		L7	L6	L5	L4	L3	L2	L1	L0
1	11111110	H	H	H	H	H	H	H	**L**
2	11111101	H	H	H	H	H	H	**L**	H
3	11111011	H	H	H	H	H	**L**	H	H
4	11110111	H	H	H	H	**L**	H	H	H
5	11101111	H	H	H	**L**	H	H	H	H
6	11011111	H	H	**L**	H	H	H	H	H
7	10111111	H	**L**	H	H	H	H	H	H
8	01111111	**L**	H	H	H	H	H	H	H

Description: L = Low (On)

H = High (Off)

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At the minimum test the ATmega 16 system as the output where for logic 1 (high) states the light goes out while the logic 0 (low) states the light is on.

3.5 Atmega 16 Minimum System Test Results As Input

After doing the testing, it can be seen that the microcontroller can function as Input. The test results are shown in Figure 3.5.

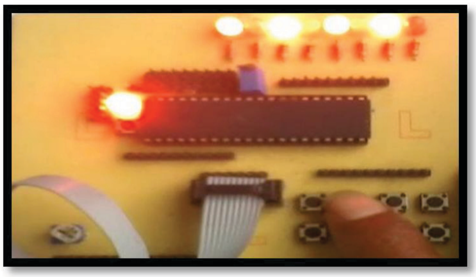

Figure 3.5. Minimum Input Test Result of AT Mega System 16

To more clearly know the results of microcontroller testing as Input in show in Table 3.5

Table 3.5. Table Testing Microcontroller As intput

CONDITION SWITCH (SW)	LED							
	Pc.7	Pc.6	Pc.5	Pc.4	Pc.3	Pc.2	Pc.1	Pc.0
Portd.0 pushed	1	1	1	1	0	0	0	**0**
Portd .1 pushed	0	0	0	0	1	1	**1**	1
Portd .2 pushed	0	1	0	1	0	**1**	0	1
Portd .3 pushed	1	0	1	0	**1**	0	1	0
Portd .4 pushed	0	0	1	**1**	0	0	1	1
Portd .5 pushed	0	0	**0**	1	1	1	0	0
Portd .6 pushed	1	**1**	1	0	0	1	1	1
Portd .7 pushed	**0**	0	0	1	1	1	0	0

Description: Logic 1 LED Lights Off

Logic 0 The LED light is on

AT Mega 16 minimum system testing as input where for logic 1 (high) states lights out while logic 0 (low) states the light is on.

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3.6 LCD Test Results

After doing the testing, it can be seen that LCD can function to display the command. The test results are shown in Figure 3.6.

Figure 3.6. LCD Test Results

3.7 MOSFET Driver Test Results

After performing the test, it can be seen that the MOSFET can act as a switch. The test results are shown in Figure 3.7.

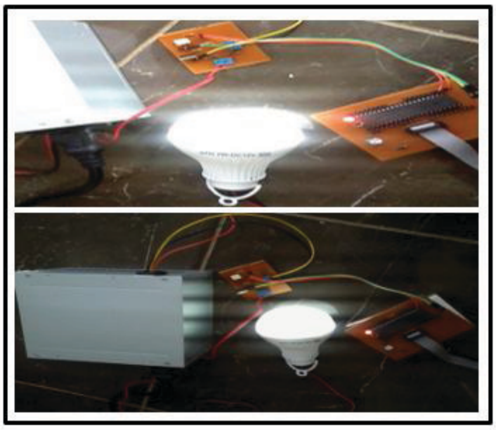

Figure 3.7 MOSFET Test Results

Table 3.7 MOSFET Test Results as a switch

Port.	Logika	Kondisi Lampu
Portc.0	1	On
	0	Off
Portc.1	1	On
	0	Off
Portc.2	1	On
	0	Off
Portc.3	1	On
	0	Off
Portc.4	1	On
	0	Off
Portc.5	1	On
	0	Off

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Portc.6	1	On
	0	Off
Portc.7	1	On
	0	Off

3.8 Sensor and LCD Test Results

After performing the test, the sensor can work as a detector of the subject and its data in the LCD mirror. The test results are shown in Figure 3.8.

Figure 3.8. Sensor And LCD Test Results When Detected

Figure 3.9. Sensor And LCD Test Results When Not Detected

To more clearly know the results of detection testing PIR sensors are shown in Table 3.8

Table 3.8. Sensor And LCD Test Results

Port D. PIR Sensor	Room condition	PIR Sensor *Output* Respon
Port D.0.	human present	1
	No human	0
Port D.1.	human present	1
	No human	0
Port D.2.	human present	1
	No human	0
Port D.3.	human present	1
	No human	0
Port D.4.	human present	1
	No human	0

Port D.5.	human present	1
	No human	0
Port D.6.	human present	1
	No human	0
Port D.7.	human present	1
	No human	0

3.9 Sensor Detection Distance Detection Results

Results of this equipment research prove that this pear sensor is able to detect people with a vertical distance of 5 meters and a horizontal distance of 4 meters. The test is shown in Figure 3.9.

Figure 3.9. Vertical Distance Measurement Results

Figure 3.10. Results of Horizontal Distance Measurement

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Table 3.9. Results of PIR Sensor Distance Detection Test

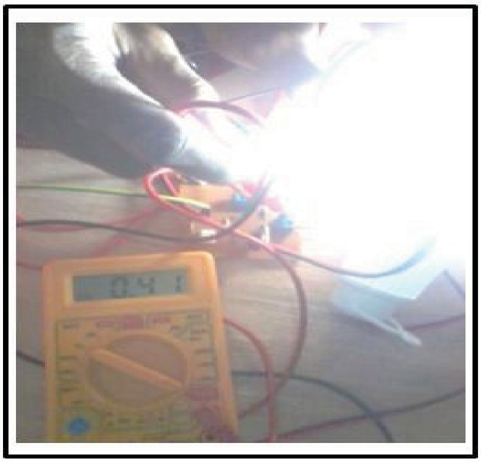
Vertikal	Respon Sensor	Horizontal	Respon Sensor
6 meter	Not detected	6 meter	Not detected
5 meter	detected	5 meter	Not detected
4 meter	detected	4 meter	detected
3 meter	detected	3 meter	detected
2 meter	detected	2 meter	detected
1 meter	detected	1 meter	detected

3.10 Electrical Power Measurements

In testing, this test aims to determine the power consumed by the lights when illuminated bright and when dimmed dim. This test is done in stages as follows:

3.10.1 Power Measurement Results On Each Lamp

Testing is done to know that the intensity of light emitted from the lamp used with a voltage of 12 volts when the light conditions are 0.41 Ampere and at the time dim conditions are 0.04 amperes. This condition is measured using AVO meter. For more clearly shown in Figures 4.9 and 4.10.



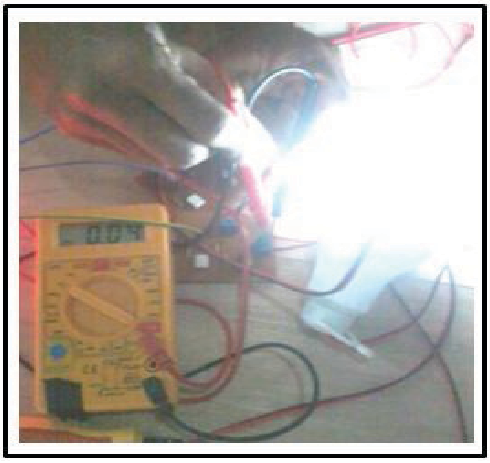


Figure 3.11. Measurement Results **Figure 3.12.** Measurement results

Light condition light The light conditions are dim

The higher value of this Watt higher power consumed. Based on these definitions, the formulation of electric power during light and dim is as below:

Bright Condition: **P = V. I.**

P = 12 x 0.41

P = 4.92 Watts

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Converted to rupiah, Light = 4.92 x 12 hours / 1000 x Rp 1.300

Rp = 59.04 / 1000 x Rp 1.300

Rp = 0.05904 x Rp 1.300

Rp = 76.752

Dim Condition: P = V. I

P = 12 x (0,04 x 11)
P = 12 x 0,44
P = 5,28 Watts

Converted to rupiah, Dimmed = 5.28 x 12 hours / 1000 x Rp 1.300

Rp = 63.36 / 1000 x Rp 1.300

Rp = 0,06336 x Rp 1,300

Rp = 82,368

3.10.2 Power Measurement Results On Control System

Testing is done to know that the use of power consumption in the control system on this equipment. This condition is measured using AVO meter. For more clearly shown in Figure 4.11.

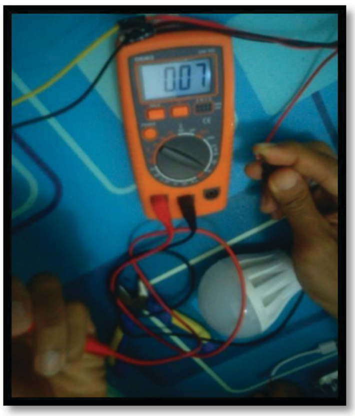

Figure 3.12. Power Measurement Results On Control System

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Based on these definitions, the formulation of electric power as below:

P = V . I
P = 5 x 0,07
P = 0,35 Watts

3.10.3. Total Power Measurement Results

Testing in doing this aims to determine the use of total power in consumption in this equipment. This condition is measured using the AVO meter when the light is on. For more clearly the measurement results are shown in Figure 3.13.

Figure 3.13. Total Power Measurement Results

Based on these definitions, the formulation of electric power as below:

P = V . I
P = 220 x 0,26
P = 57,2 Watts

Converted to rupiah = 57,2 x 12 hours / 1000 x Rp 1.300

Rp = 686,4 / 1000 x Rp 1.300

Rp = 0,6864 x Rp 1.300

Rp = 892.32

3.10.4. Power Comparison With Conventional Lamp

The test is done to know the percentage of saving lamp usage in this equipment with conventional lamp.

Known light power on this equipment 57.2 Watt and conventional lamp 18 x 11 = 198 Watt. Percentage savings as follows:

57,2 / 198 x 100 %
= 0,28 x 100 %
= 28 %

4 Conclusion

Based on the design, testing, analysis and objectives of the research, it can be concluded as follows:

1. Power consumption on each lamp in bright condition = 4.92 Watt and if converted to rupiah = 76.752 rupiah.
2. Power consumption on each lamp when dim condition = 0.48 Watt and if converted to rupiah = 7,488 rupiah.
3. Power consumption on overall lamp when bright condition = 54,12 Watt and if converted to rupiah = 844.272 rupiah.
4. Power consumption on overall lamp when dim condition = 5.28 Watt and if converted to rupiah = 82.368 rupiah.
5. Power consumption on control system = 0.35 Watt
6. Total power consumption = 57.2 Watt and if rupiah = 892.32
7. Save 28% savings from conventional lamps
8. The PIR sensor is capable of detecting people in the area with a horizontal distance of 4 meters, each left 2 meters and a 2 meter and 5 meter vertical with an angle of $\mathbf{60^0}$.
9. PIR sensors can only detect the presence of people when the person is doing the activity (move). When the person is not doing the activity (immovable) even though it is within the detection range of the sensor then the PIR sensor can not detect because in that condition the PIR sensor will regard it as the ambient temperature.

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This entry was posted on 15 February 2012, in Electronic Engineering and tagged ATmega8535, CV AVR, LCD 2x16, LCD Karakter, Mikrokontroler, Pemrograman Bahasa C.

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IMPLEMENTATION OF ACCELEROMETER SENSOR AND GPS MODULE FOR SMART BIKE DESIGN

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Abstract

Bicycles are one vehicle that is quite popular for exercise. The lack of parking space for bicycles made bicycles vulnerable to theft. This equipment is able to provide a security system and provide the location of the bike when the bike had been stolen. This device consists of an Android application and the application of two modules, namely accelerometer and GPS to be processed in the microcontroller Arduino UNO. This bike is able to provide information such as SMS when the bicycle displaced and also sends the coordinates of the location on google maps to be displayed to the smartphone applications created using MIT App Inventor 2.

Keywords: GPS, Arduino UNO, *Accelerometer*.

1. Introduction

1.1 Background

With more and more vehicles on the highway such as cars and motorcycles, making the highway becomes jammed and crowded so that sometimes there are many accidents. Generally, people prefer motorcycles and cars as vehicles to travel to a place because quickly and also practical, the increase in the number of vehicles will continue to increase in line with the increase in population growth in the world. Most of the vehicles used are motorcycles and cars. The availability of buses and other public transport in the value has not been able to provide the needs of the community as a vehicle to travel somewhere because it is less convenient. The need for alternative vehicles that can be used to replace the role of motorcycles and cars. Higher pollution rates result from emissions of emissions from vehicles. Therefore, bicycles can be an alternative vehicle that can overcome potential congestion and air pollution for use in Indonesia, especially in developing areas, densely populated areas, and areas with high congestion levels by using bicycles as a vehicle for traveling. Bicycles have not been in great demand in Indonesia because of their unsecured safety but the bikes do not pollute as well and can make healthy as it can be a means to exercise while traveling to a place. From these problems, it is necessary to make a hardware in the form of equipment or designs to build and increase public interest to use the bike. The system that will keep his bike safe from thieves. This bike will also be equipped GPS to track the coordinates of the bike when it has been stolen by displaying on google maps the bike owner's smartphone.

From here the author thinks to complement or refine the innovation by going to research and manufacture the equipment entitled **"IMPLEMENTATION OF ACCELEROMETER SENSOR AND GPS MODULE FOR SMART BIKE DESIGN"**

1.2 Problem Formulation

Problems faced in writing this project can be formulated as follows:

1. How to design a smart bike that can detect vibration as an indicator to move position?
2. How to design the smart bike that can give a warning if the smart bike in the move?

1.3 Research Objectives

The purpose of writing this thesis are:

1. Can use and create a system that can be likened to the bike.
2. Can use and create a system that can transmit coordinate position information when there is burglary.
3. Can design and create a system that can display coordinates on Google maps with the interface on the Smartphone.

1.4 Problem Limitation

To avoid the widespread problem, the problem is limited only to the following:

1. GPS coordinate readings using MIT Apps Inventor software
2. Not discussing the absence of GPS signal.
3. Control system that be used is Arduino UNO

2. Method

The equipment will be made is a smart bicycle-based microcontroller, this smart bike can overcome the security for bicycles and cyclists. Planning and research is done by looking at the deficiencies in previous research. As for previous research about smart bike are :

1. Fahraini Bacharruddin, Department of Electrical Engineering, University of Merchu buana, with the title: smart helmet system for cyclists.
2. Tobar, Department of Electrical Engineering, Politeknik negri semarang, with the title: Design of microcontroller motorcycle security system via SMS

2.1 Accelerometer

The accelerometer is a sensor used to measure the acceleration of an object. Dynamic accelerometer and statistics accelerometer. Dynamic measurement is the measurement of acceleration on moving objects, while statistical measurements are measurements of Earth's gravity.

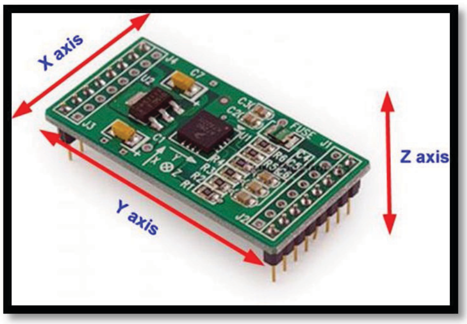

Image 2.1 Accelerometer Sensors

The working principle of the accelerometer is the working principle of acceleration per burden that is released, the load moves with an acceleration until certain conditions will stop. If something shakes it then the load will swing back.

2.2 *Global Position System (GPS)*

Understanding GPS is a navigation that uses satellites to be able to provide position instantly. Speed and timing information are almost anywhere in the world, under any weather conditions. While the equipment receive satellite signals that can be used by users is generally called GPS tracker, using this equipment allows users to track the position of a vehicle, fleet or car in real time

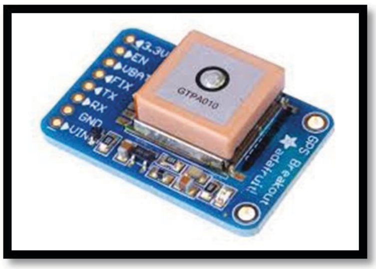

Image 2.2 *Global Position System (GPS)*

2.3 800L GSM SIM Module

Usability of 800L GSM SIM module ,for SMS gateway and pulse server. GSM Module is a device that can replace the function of the phone. This module supports dual band communication at 900/1800 MHz (GSM900 and GSM1800) frequencies, making it flexible for use with SIM cards from various mobile phone operators in Indonesia. The advantages of GSM Module are as follows.

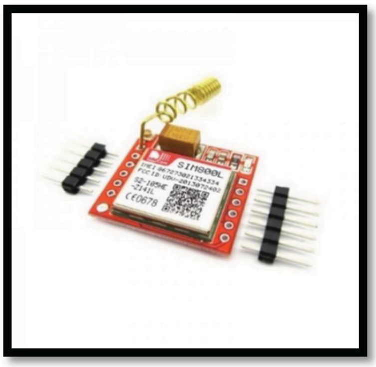

Image 2.3 800L GSM SIM Module

2.4 Arduino UNO

Arduino UNO is a microcontroller board based on Atmega 328. Arduino Uno has 14 input/output pins which 6 pins can be used as PWM output (Pulse Width Modulation), 6 analog inputs, 16 MHz crystal insulator, USB jack power connection, head ICSP, and the reset button. The Arduino Uno is built from the same basic elements.

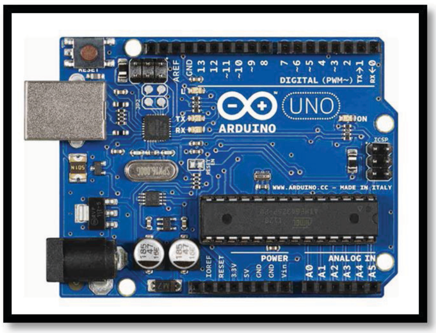

Image 2.4 Arduino UNO

3. Result and Discussion

3.1 Research Variables

The research variables used in writing and research on this project, among others

3.1.1 Vibration

Examination of vibration value using Accelerometer sensor is only done in the event of a shift resulting in an unacceptable value received by the sensor.

3.1.2 Coordinate

Coordinate is a result point of intersection between latitude and longitude indicating an object be it a person, location or building in a location in field or earth with on the map.

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3.2 Model architecture scheme

In this chapter will be discussed about the block diagram and the working principle of the equipment in implementing Accelerometer Sensor and GPS module.

3.2.1 Block diagram

To facilitate the design of the equipment in need of block diagram, accelerometer system and GPS module to design the block diagram of the bike shown in Image 3.1.

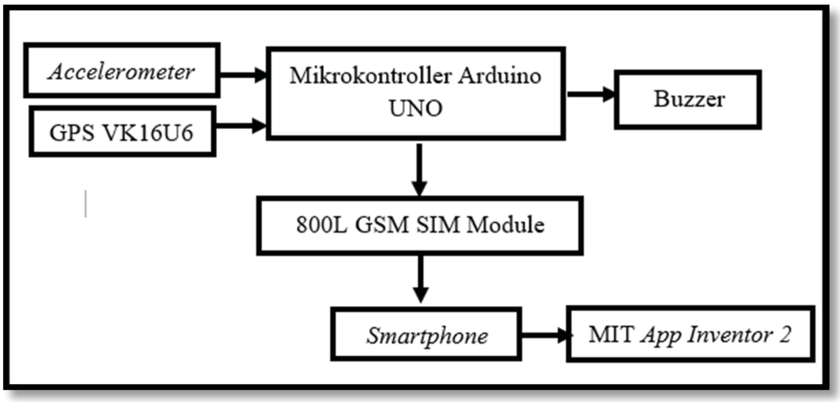

Image 3.1 Block Digram

3.3 The working principle of the Device

The accelerometer sensor acts as a sensor to detect the movement of the bicycle which be programmed in the microcontroller and then the buzzer will sound, Microcontroller will also send a message to the GSM modem then GSM modem will send the message automatically to the smartphone in the form of an automatic message or short message.

MIT App Inventor is used to forward data from GSM and GPS modules in the form of coordinate data that will be displayed on the Smartphone.

3.4 Testing and Analys

After the design and manufacture of the equipment is completed, then the system tested to determine whether the equipment has been designed and made working properly as planned. The tests include hardware and software testing. The tests were conducted to compare the theoretical design results with experimental or test results. From the test results can be known whether the equipment has worked in accordance with the desired specifications such as in equipment planning.

3.4.1 Accelerometer Sensor Testing

The ADXL335 accelerometer sensor acts as a sensor to detect a vibration or movement occurring in a vehicle. This sensor has a parameter of gravity (g).

3.4.1.1 Determining the value of gravity Accelerometer Sensors

The MMA7361 accelerometer sensor test is done by viewing the output from the sensor in the form of ADC (Analog To Digital Converter) value which has been converted to voltage and then converted again into gravity unit (g) on each X, Y, and Z axis.

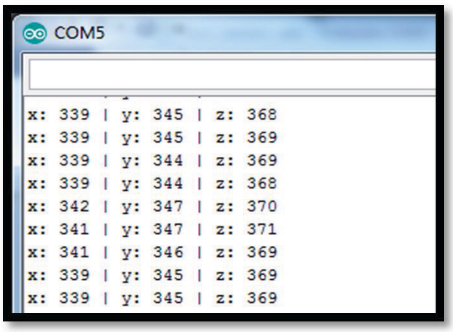

Image 3.2 Condition The value of the ADC axis x, y and z

The value of ADC will be converted to g value by first modified to a voltage value by using the formula:

$$Vout = \frac{value\ ADC\ X\ Vref}{1023}$$

The Vref value is the reference voltage at the AREF pin of Arduino UNO of 5V. Then the voltage value will be converted to millivolt (mV) multiplied by 1000 and converted to g value by dividing by 206. According to the MMA7361 Accelerometer sensor datasheet, that sensor sensitivity is 206 mv / g. The calculation results are as follows:

X axis value is 340

$$\text{Vout}=\frac{340 \text{ X } 5}{1023} = 1{,}66 \text{ V}$$

$$\text{g}=\frac{1{,}66 \text{ X } 1000}{206} = 8{,}05 \text{ g}$$

Thus the value of g on the X-axis at rest is 8.05 g
Y axis value is 344

$$\text{Vout}=\frac{344 \text{ X } 5}{1023} = 1{,}68 \text{ V}$$

$$\text{g}=\frac{1{,}68 \text{ X } 1000}{206} = 8{,}15 \text{ g}$$

So the value of g on the Y axis at rest is 8.15 g
Z axis value is 369

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$$Vout=\frac{369 \text{ X } 5}{1023}=1{,}80 \text{ V}$$
$$g=\frac{1{,}80 \text{ X } 1000}{206}=8{,}73 \text{ g}$$

So the value of g on the Z axis when silent is 8.73 g

3.4.2 Testing of the 800L GSM SIM Module

800L GSM SIM Module Test can be done when it has Installed with the SIM card and there should be a signal. Test results as shown below:

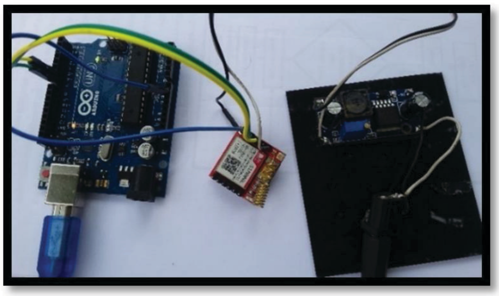

Image 3.3 Test 800L SIM GSM Module

After the program is Installed then 800L GSM SIM Module will send a message to the number that has been put. The programming language used in testing GSM Module is the C language shown in Image 3.4

```
void setup() {
  Serial1.begin(9600);
  Serial1.println("AT+CMGF=1");
                              delay(1000);
  Serial1.println("AT+CMGS=\"No tujuan Pengiriman SMS\"\r");
  delay(1000);
  Serial1.println("Sepeda Terpindah");
  delay(1000);
  Serial1.println((char)26);
  delay(1000);
}

void loop() {
}
```

Image 3.4 Program Code to Test GSM module

After the program is uploaded and then the message received by the no destination in accordance with the message written in the program code and uploaded into the Arduino as shown in Image 3.5

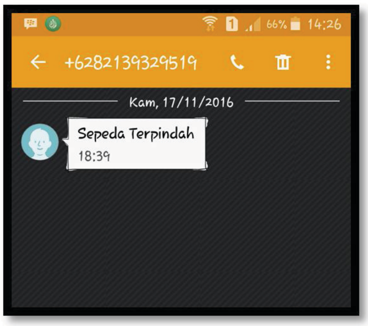

Image 3.5 Text message From GSM Module

3.4.3 Testing of VK16U6 GPS Module

To know that the GPS module can receive coordinate signals and display longitude and latitude

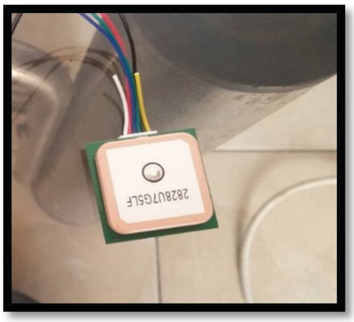

Image 3.6 GPS Module

Image 3.6 is a circuit used during testing. When the Arduino monitor series receives data from the GPS module it will appear raw GPS data which is still a degree minute that must be processed first before it can be used as in Image

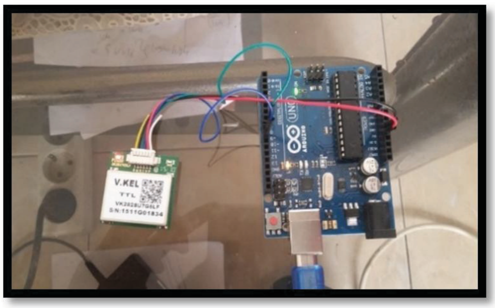

Image 3.7 Installation of VK16U6 GPS Module with arduino UNO

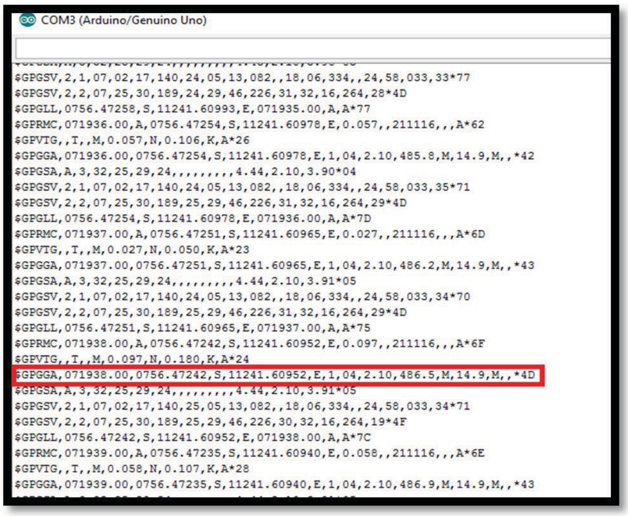

Image 3.8 Results of testing the GPS module with Arduino UNO serial monitor

From the above test results to get the coordinates obtained raw GPS data which will have to be processed to get the actual latitude and longitude so get the position more accurately, for example:

$GPRMC,091932.00,0754.47146,S,11241.60579,E,1.05,1.50,505.M,14.9,M,,*46

Tabel 3.1 Testing Results of GPS Module

	GPS Data	explanation (dd,mmm)
Latitude	0756.47146	756.47146 LB
Longitude	11241.60579	11241.60579 LS

For Latitude Longitude (dd, mmmm) change it by:

$$\frac{56.47146}{60} = 0.94119 \text{ LB}$$

So the change is in dd form, dddd becomes 7.94119
For South Latitude (dd, mmmm) the same way:

$$\frac{4160579}{60} = 0.69342 \text{ LS}$$

So the change is in dd form, dddd becomes 112. 69342

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Tabel 3.2 Data Change Result dd, mmm To dd, dddd

	dd,mmm	dd,dddd
Latitude	7 54.94626	7.94119 LB
Longitude	112 37.91291	112.69342 LS

After obtained the value of latitude and longitude in Table 3.2 then matched with the coordinates on Google maps as in Image 3.10

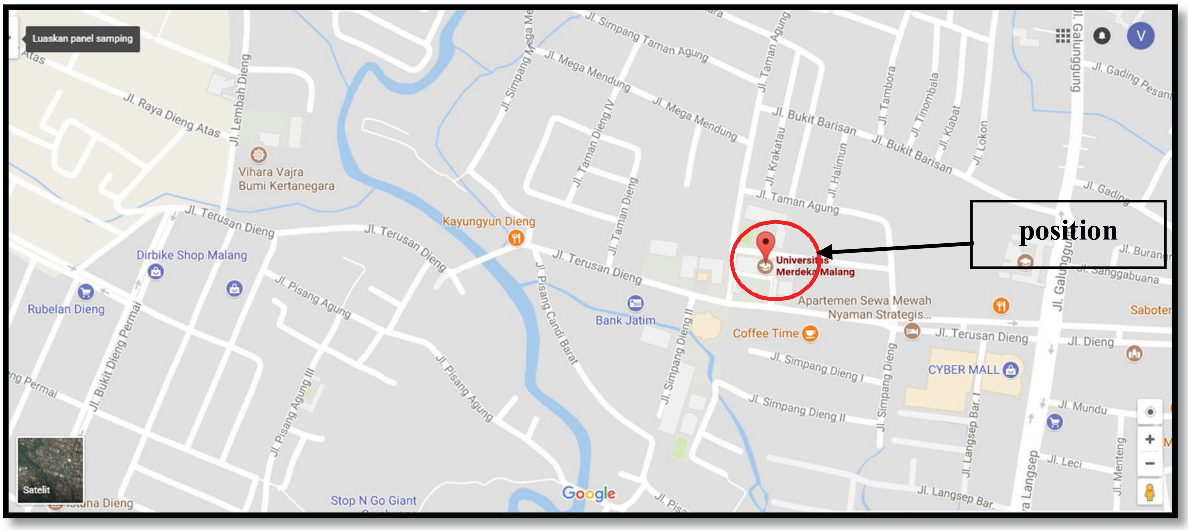

Image 3.10 Image On Google Maps

3.4.4 Application Testing MIT App Inventor 2

The process of sending messages from Arduino via GSM Module to Android smartphone. On the Android smartphone, the message will be displayed on an app. Creation of Android app using app inventor 2 is an online application to create Android applications with the program as follows:

Image 3.11 MIT *App Inventor 2* Program

Image 3.13 is a continuation of the program shown in Image 3.12

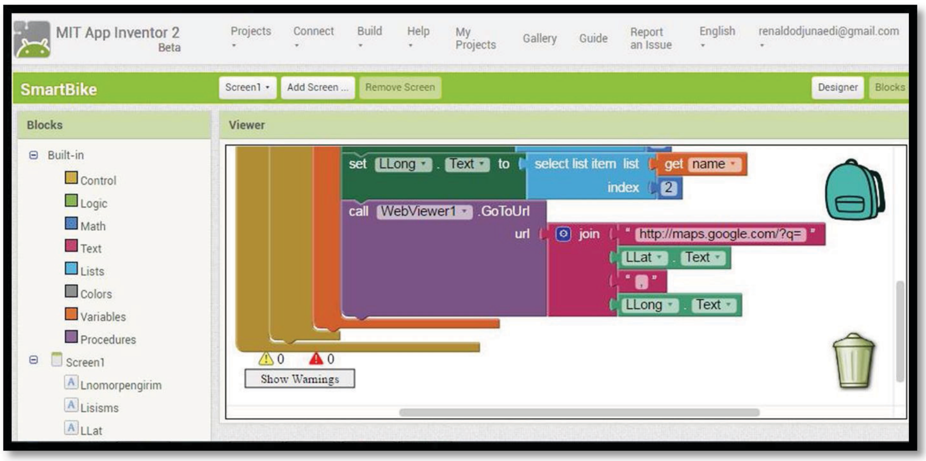

Image 3.12 MIT *App Inventor 2* Program

Next In Image 3.12 is the interface display on the Smartphone

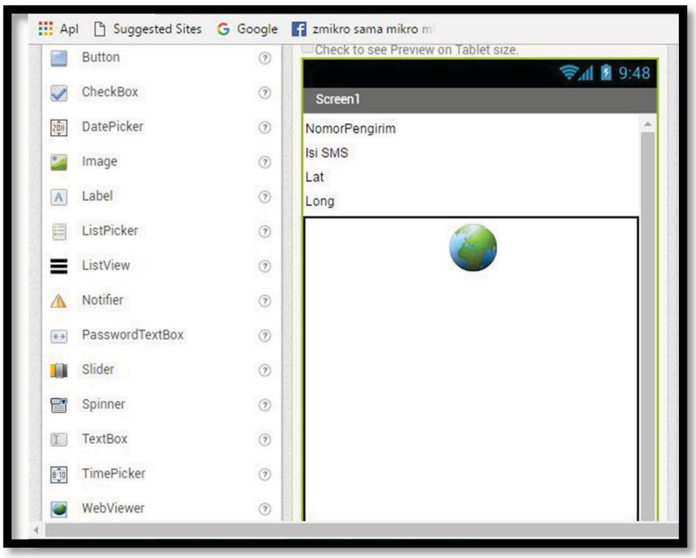

Image 3.13 MIT App Inventor 2 interface display for SmartPhone

After the application is completed then downloaded to the smartphone and image 3.13 is the image when the application has been run on the smartphone.

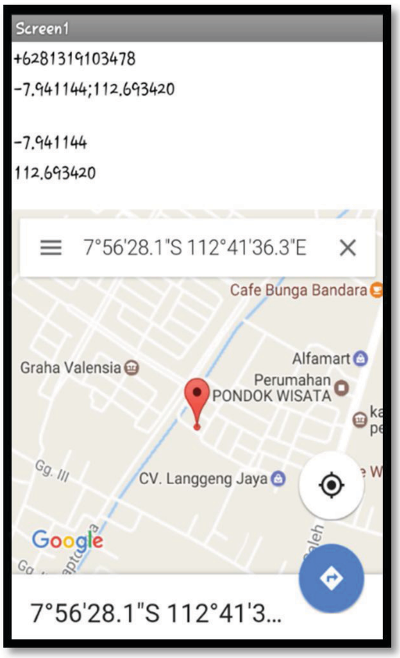

Image 3.14 Results from MIT App Inventor 2

4. Conclusion

Based on the design, testing, analysis of the purpose of the research then concluded as follows:

1. Smartbike can detect vibration as a sign of switching position using accelerometer sensor with the value of vibration limit on X axis = 8,05 g, Y = 8.15 g, Z = 8.73 g

2. Smartbike can give the warning if vibration value on X, Y and Z axis exceeds boundary value. A warning of Buzzer and SMS that contains the location coordinates of the GPS module data

3. Android app created using MIT App Inventor 2 with web view object to show the location of smart bike on google map

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Hafzah Halidah, Reza Narindra, Kalam Ilham," Vehicle Security And Locator (Very-Lo) Sebagai Aplikasi Sms Center Dan Global Positioning System (Gps) Untuk Alternatif Alat Pengaman Kendaraan Yang Murah Dan Efektif Dengan Handphone Bekas". PKM K-C,ITB, September 2010

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Spatial Patterns on Traditional Houses in Java as an Effort to Preserve Historic Buildings

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Abstract

Java Island can be divided into several cultural areas of Banten and Sunda in West Java, while in Central Java and East Java there are Pesisir Kilen, Pesisir Wetan, Banyumas, Bagelen, Negarigung, Mancanegari, Surabaya, Tanah Sabrang Wetan and Madura (Koentjaraningrat 1994: 27). Traditional buildings have been a silent witness to how life in the past was run and its influence on the life order of society at that time and has the original building characteristics of Indonesian society in that era and functionally have special purpose and purpose which influence the process of the establishment of the building. This study is expected to provide a benefit form of development of science related to traditional houses in general that can be applied in building architecture. The method used in this paper is the study description descriptions, namely exposing and analyzing spatial patterns in some traditional houses in Java. The method of data collection is done by looking for literature studies on the issues to be discussed, namely the literature of several studies that have been done and has been published in the form of scientific papers. From the discussion of the pattern of space to some traditional houses on the island of Java, there are similar patterns, although in the arrangement of space there is in one mass of buildings and mass plural.

Keywords: Spatial, Spatial Patterns, Traditional House

1. Introduction

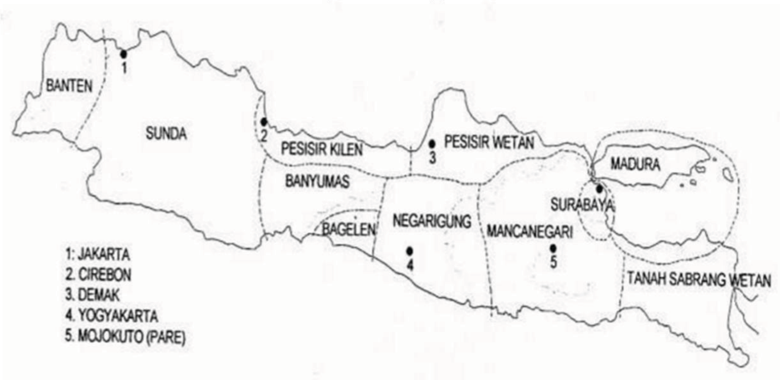
The development of architecture in the world will always change based on the dimension of time that influence it, either in terms of building style, building arrangement pattern, or from functional aspect of building. However, the essence of the works of the architecture is still taking the example or duplicate of the application of architecture on ancient or ancient building works. It can't be denied that in the past, the architecture of the building appeared as a masterpiece designed with full dedication and able to influence the condition of architecture in the surrounding area. In addition, there is a special characteristic of the condition of this ancient building to be more appreciated of its existence, that is from the historical aspect of the building, where the longer the age of the building stands, the higher the historical value contained in it. The traditional building has been a silent witness to how life in the past was run and its influence on the life order of society at that time and has the original building characteristic of Indonesian society in that era and functionally have special purpose and purpose which influence the process of the establishment of the building. According to Tutuko & Shen (2014), dwellers build onto their own houses gradually, reflecting the behavioral occupancy of the dwellers. The adaptability of dwellers arranged their house, while still maintaining their tradition and dwellers tend to adjust their spatial setting in order to accommodate domestic activities. Moreover, for instance, the Javanese community appreciates and tolerates changes and developments that come from both inside and outside Javanese culture. Even so, the characteristics of Javanese culture remain virtually unchanged (Tutuko & Shen, 2014). Spatial arrangement of traditional house should be studied to other types of house. The type of house is not limited in popular traditional house in Indonesia only. In addition, it is necessary for making the guideline for better understanding for local government and planner about spatial arrangement of traditional house to achieve sustainable urban form.

In Indonesia, one of the three indicators linked to the SDGs document as a continuation of the MDGs, is a small-scale environment or socio-economic development in which one of the goals is set forth in the 11th goal's of making cities and human settlements inclusive, secure, resilient and sustainable, Point 11.4, namely: strengthening efforts to protect and preserve the world cultural and natural heritage. In line with this, the targets and indicators of Indonesia's National Development 2014-2019 based on the Vision-Mission of President Joko Widodo (NAWACITA) on NAWACITA 9: We will strengthen the Unity and strengthen social restoration of Indonesia, target: develop special incentives to introduce and Promoting local culture with indicators: 5. preserving and revitalizing 100% (from baseline) cultural preserve, museums and cultural parks throughout districts / cities by 2019; 6. Increasing the number of cultural heritages recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to 2 per year starting in 2016; And 8. 100% of districts perform preservation and data collection of cultural and ancestral heritage in their areas by 2019. It is also contained in the Government Regulation of the Republic of Indonesia Number 26 Year 2008 on National Spatial Plan Chapter II Purpose, Policy and Strategy Arrangement of National Territory Spaces Part One Objectives of National Spatial Planning Article 9 (1) The policy on the development of a national strategic area as referred to in Article 6 letter c covers: a. Conservation and enhancement of the function and carrying capacity of the environment to maintain and enhance ecosystem balance, conserve biodiversity, maintain and enhance the function of area protection, preserve the uniqueness of the landscape, and preserve the national cultural heritage; E. Preservation and social and cultural improvement of the nation; F. Preservation and enhancement of the value of protected areas designated as world heritage, biosphere reserves, and ramsar.

The government's attention, especially the conservation activities in the national scope, as contained in the Act on Heritage Reserves No. 11 of 2010

Article 5 which contains "belonging to the category of cultural heritage classification shall be any man-made, mobile, or immovable object in the form of a unit or group, or its parts or residues, which are at least 50 years of age, And is considered to have important value for the development of history, science and culture." Various conservation or conservation efforts quite often get attention especially in the national and international scope, but there are still some factors that hamper the progress of the conservation. This is a consideration that must be resolved considering it is hampering the government's performance in seeking the preservation of buildings and areas. These barriers are: cost factors, political factors, and social factors.

Java Island can be divided into several cultural areas of Banten and Sunda in West Java, while in Central Java and East Java there are Pesisir Kilen, Pesisir Wetan, Banyumas, Bagelen, Negarigung, Mancanegari, Surabaya, Tanah Sabrang Wetan and Madura (Koentjaraningrat, 1994:27).



Picture 1. The Cultural Area of Java
(Source: Koentjaraningrat, 1994: 27)

Based on the background, then the problem to be in the study is how the formation of spatial patterns in traditional homes in Java. This study is expected to provide a benefit form of development of science related to traditional houses in general that could be applied in building architecture.

2. Methodology

The method used in this paper is the study description descriptions, namely exposing and analyzing spatial patterns in some traditional houses in Java. Stages include the Determination Aspect Discussion, Data Collection, and Data Processing to generate a conclusion.

The method of data collection is done by looking for literature studies on the issues to be discussed, namely the literature of several studies that have been done and has been published in the form of scientific papers.

3. Discussion

3.1. Traditional village house Dukuh in Garut, West Java

Sundanese people divide the space by their respective functions based on their beliefs and beliefs, this division is based on gender and family order. In one house in Kampung Dukuh this shows the division of the area of men and women. The male area has an edge or *golodog* on the front while the female area is behind (Kustianingrum, Sonjaya, & Ginanjar, 2013).

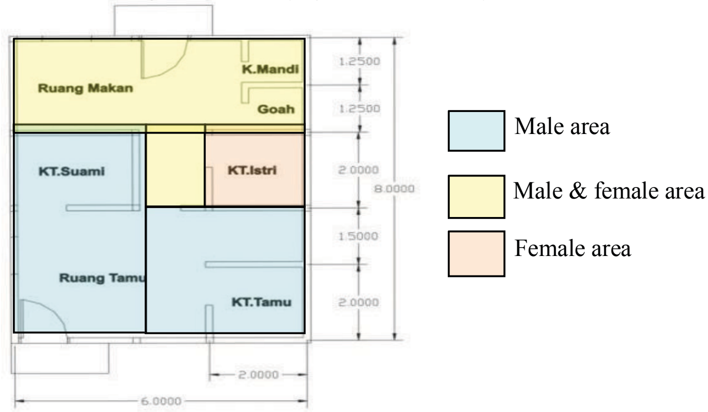


Figure 2. Plan of Dukuh village building
(Source: Kustianingrum, Sonjaya, & Ginanjar, 2013)

3.2 The House of Indigenous Peoples Kasepuhan Ciptarasa in Sukabumi, West Java

The organization of space on the stage house consists of 3 (three): *tepas imah*, *tengah imah* and *pawon*. *Tepas imah* (front) is a male area, because its activities tend to be done by men, middle (middle) becomes a common area, because men and women can do activities together, while *pawon* (rear), because all activities are done by women (Nuryanto & Widaningsih, n.d.).

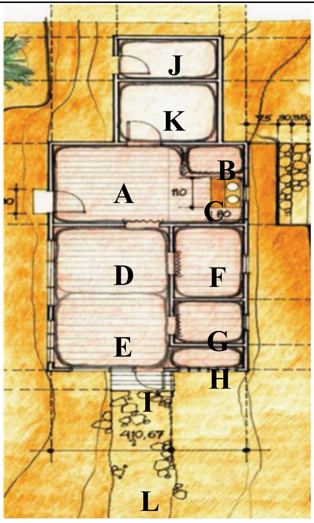
	*Pawon* Section	• Kitchen (A) • Tungku Hawu (C) • *Padaringan* (B) • Bathroom (K) • *Panggulaan* (J)
	Tengah Imah Section	• Living room (E) • *Masamoan* room (D) • Master bedroom (F) • Child's bedroom (G) • *Wawarungan* (H)
	Tepas Imah Section	• *Buruan Imah* (L) • *Golodog* (I)

Figure 3. Organizational space on the stage house
(Source: Nuryanto, & Widaningsih, n.d.)

3.3 Kaliwungu Traditional House, Central Java (Pesisir Kilen)

Kaliwungu traditional house has a single mass, but topped by three *limasan maligi* row to the rear which meet on the side length. With the shape of the mass extends backward, it is not topped with a single saddle / saddle stretching from front to back, but instead with the *limasan* whose axis extends across the front-back axis of the house. The shape of the roof is indeed one of the vocabulary form of Javanese house (Wahyudi, 2015).

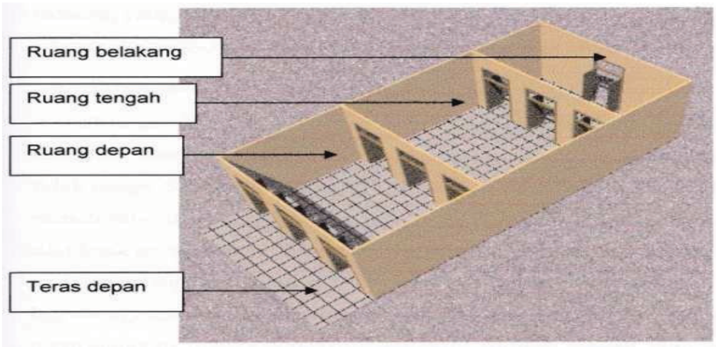
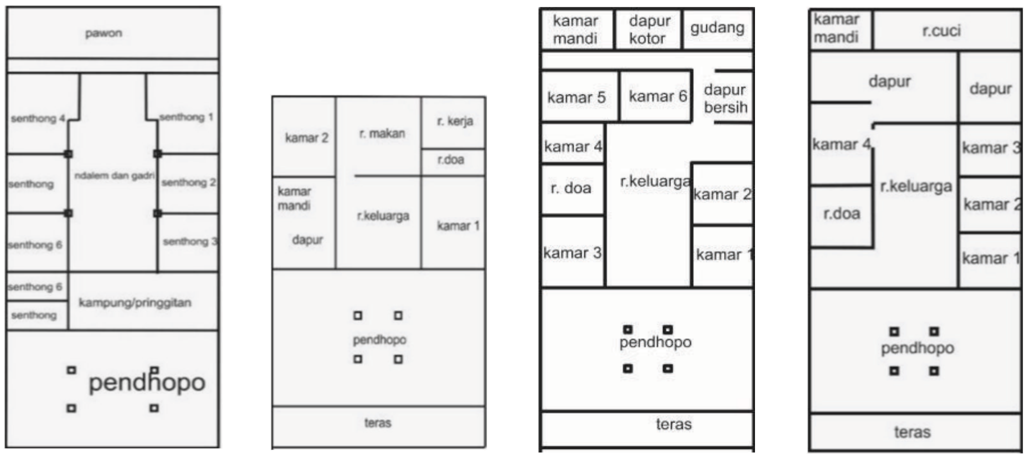


Figure 4. Traditional house space organization of Kaliwungu
(Source: Wahyudi, 2015)

3.4 *Kenthol* House in Bagelen, Purworejo, Central Java

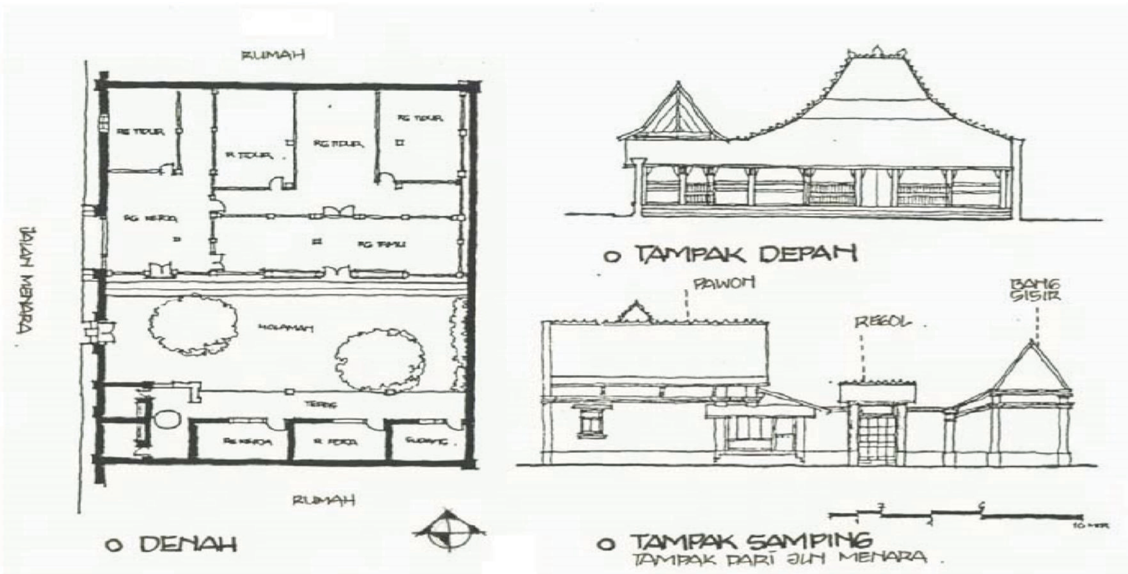
Kenthol house has a central spatial structure with its center space is *dalem* while its secondary room is *pendopo, senthong*, and *pawon*. In this case, dalem is considered as a central space because many activities occur in this area. Specialized activities and interactions with family members. The division of the hierarchy of space based on the nature of public space, semi-public, semi private, private and sacred space can still be seen and still applied to every home. Space formation according to nature of space (sorted from public area to private) that is *pendopo, pringgitan, dalem / gadri, senthong*, and *pawon*. It has a formation similar to traditional Javanese house in general (Pratama, 2016).



Picture 5. House of *Kenthol* Plan at Bagelen
(Source: Pratama, 2016)

3.5 Traditional Kudus Houses

The traditional house Kudus is not a single building but the unity of some building period that serves for the residence and perform daily activities at home. The pattern of building arrangement in the footprint consists of main building, open yard and complementary building. The main building faces to the south, the position of the building on the north side of the tread. The complementary building usually occupies a position on the South of the site opposite to the main building and separated by an open courtyard in the middle of the tread. The tread limit is a high fence of brick pairs. Access to the site via the *regol* on the side or front of the site. *Regol* shaped roofed gate with double doors. Often this *regol* is the only achievement into the site (Sardjono, 1997).



Picture 6. Floor Plan, and Looks of Traditional House in Kudus
(Source: Sardjono, 1997)

3.6 Ponorogo's Traditional House Building

The simplest building cluster in Ponorogo's traditional house is for front grille, headdress and kitchen. The type of building used for *griyo ngajeng* and posterior brick can use a type of vertex, *sinom* or *dorogepak*. For most kitchen utensils use a type of suction. From here it appears that the selection of the type of building has no definite layout, the homeowner is left to decide on his choice. The front of the front grille was added to the emperor sector, which proceeded to the side to pull up with the kitchen or booth. The structure of the north-facing traditional Ponorogo's home, from ten types of buildings used in a wide variety of grooms, the kitchen is positioned all east, while when the building is facing south, all the samples indicate that the kitchen position is always located in the east of the *griyo wingking*, or to the right of the main building (Susilo, 2015).

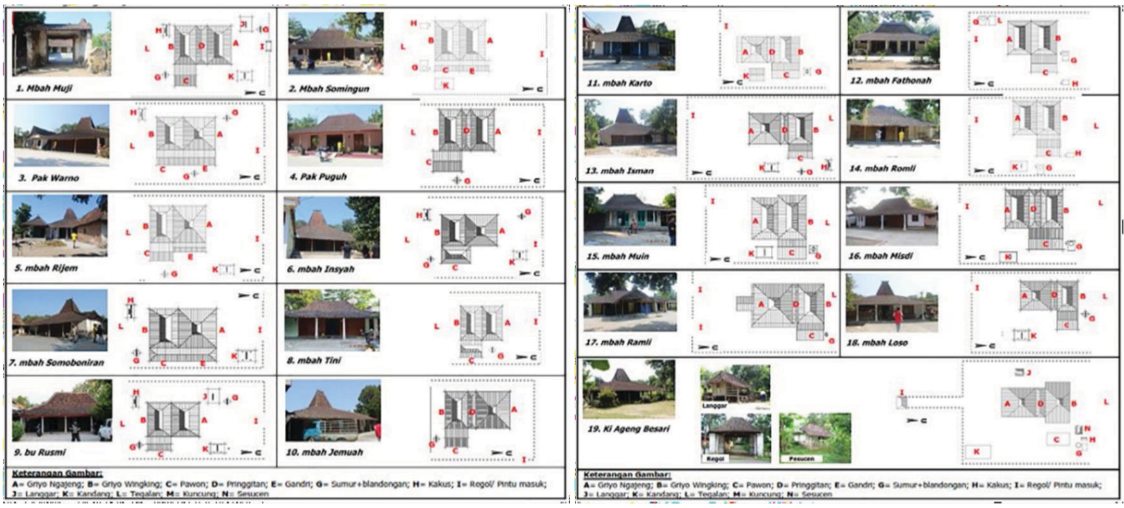


Table 1. The order of the traditional Ponorogo house period facing North and South
(Source: Susilo, 2015)

3.7 Tengger Residents of Wonokitri Village of Pasuruan Regency

The structure of residential / residence in Wonokitri Village based on Tengger custom is called seven po, consisting of yard, courtyard, *patamon* (living room), *paturon* (bedroom), *pagenen* (kitchen), *pedaringan* (storage room), and *pakiwan* (bathroom).

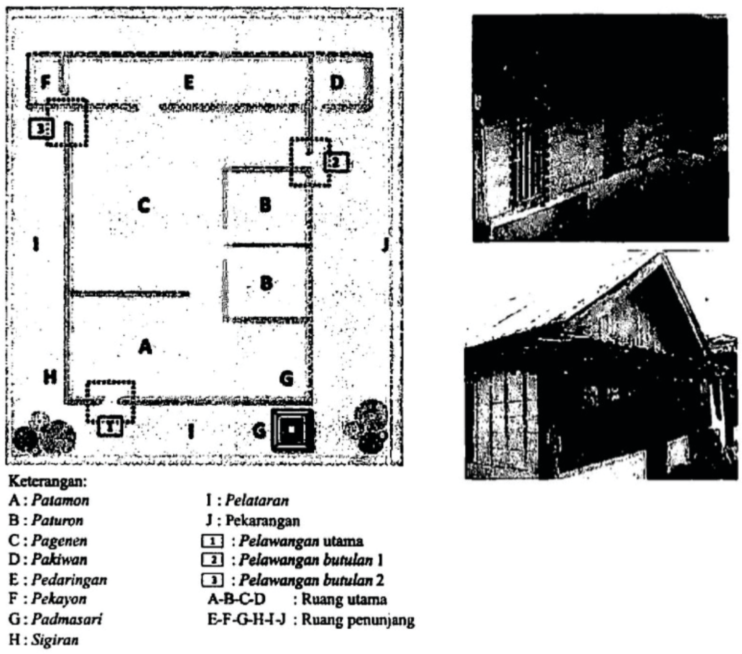


Figure 7. Lay out the spatial division and look at the traditional houses of the Tengger Village of Wonokitri Village
(Source: Ayuninggar, Antariksa, & Wardhani, 2012)

Characteristics of each space and component in traditional house of Tengger Village of Wonokitri Village, are as follows: 1. The main room, consists of *patamon* (living room), located on the front of the house, which is directly behind the entrance of the main door, *paturon* (bedroom), should be on the right side of the main door, *pagenen* (kitchen), originally became the first room built in addition to the main room. Placed behind a *patamon*, serves as a kitchen for cooking as well as dining room and functionally used for family gathering (family room), *pakiwan* (bathroom), should be placed in the back of the house (the outermost) and separated from the house building, 2. Supporting space, consists of *pedaringan* (storage space), space to store crops and equipment items, *pekayon,* a room for storing firewood, is placed in the back of the house and is generally adjacent to the *pagenen, padmasari,* a special means of worship for the family that is located in the area of the courtyard of the house, *sigiran,* space to hang and store unpeeled corn. Laying is on the side of the front of the house (Ayuninggar, Antariksa, & Wardhani, 2012).

3.8 Traditional Osing House

The type of space can be distinguished over the main space, that is *bale-jrumah-pawon* (always there); Supporting space, that is *ampers, ampok, pendopo* and barn (not always there); *kiling* as a marker of Osing territory. *Bale* is located in front of the living room, family room and ceremonial activity room; *jrumah* is located in the center of functioning as a private room and bedroom; and *pawon* is located behind as though it is separate from the *jrumah*, which serves as a kitchen, an informal living room and living room. Characteristics of each space is adapted to the functions and activities as a container of fulfillment of everyday life, where each space is influenced by the assessment of the meaning of the activities undertaken as well as who inhabit or perform activities in that section. The composition of the main room is the composition of space *bale, jrumah* and *pawon* sequentially from front to back in 1, 2 or 3 parts of the house. This arrangement of spaces has various combinations that can be categorized in 7 groups, namely B- (P + J) -P; (B + P) -J-P; B-J-P; B- (J + P); (B + J) - (P + L); (B + J) -P; and (B + J + P). The categorization is based on the connection of the composition of the space with the composition of the house, where the first 4 arrangement is the most complete composition while the last 3 is the adjustment of space arrangement as a result of changes in the composition of the house form. Spatial relations pattern embraces the principle of closed ended plan, where the axis of balance symmetry that divides the composition of the space to the left and right stops in a space, namely *jrumah.* The principle of closed ended plan is only seen in the composition of *bale* space, *pendopo* (if any), *jrumah* and *pawon* sequentially backward (Suprijanto, 2002).

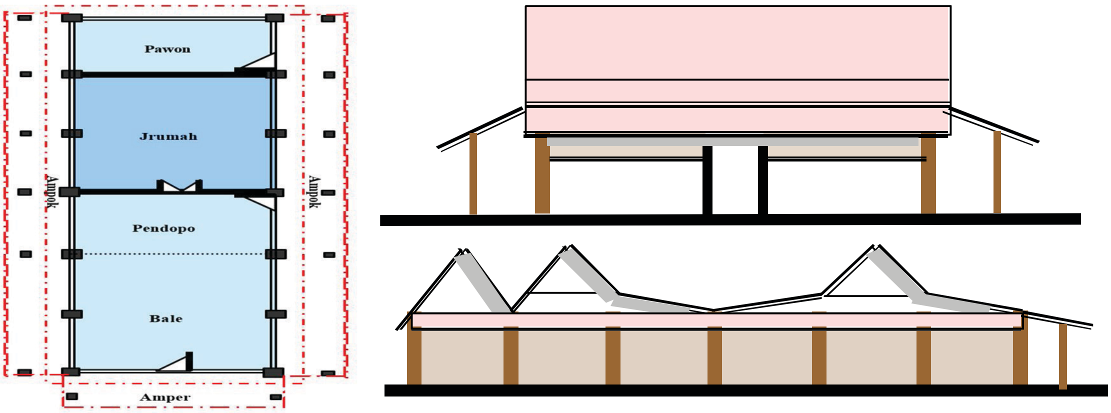


Figure 9. Plan and Look Osing's traditional house
(Source: Suprijanto, 2002)

3.9 Tanean Lanjang in Madura

The formation of Madura traditional settlements begins with a main house called *tonghuh*. *Tonghuh* is the home of an ancestor or an ancestor of a family. *Tonghuh* equipped with *langgar, kandang,* and kitchen. If a family has a married child, especially a girl, then the parents will or even have to make a home for girls. The placement of a house for girls is in the position to the east. Such a settlement group is called *pamengkang*, as well as if the next generation has occupied it will form *coren* and up to *tanean lanjang*. Such an arrangement continues to evolve from time to time. If the arrangement is too long then the arrangement changes to face. The order of the house arrangement still starts from the western end then ends at the eastern end. This consideration is attributed to the limited area of cultivated land, so as not to reduce the existing land as much as possible.

So, to trace a single lineage trace can be traced through the composition of the inhabitants of his house. The longest generation can be seen up to 5 generations that is on *tanean lanjang*. The position of *tonghuh* is always on the western edge after the break. *Langgar* is always located in the west end as the end of the existing building. The composition of the house is always oriented north-south. Page in the middle is called *tanean lanjang*. This very long generation can still be found due to underage marriage, even many of them are married before menstruation.

The arrangement of space lined with the binding space in the middle shows that *tanean* is the center of activity as well as a very important space binder. The east-west axis is imaginatively seen separating the group of houses and outer space. *Langgar* as the ending gives more importance and main of the composition of space. The elevation of the building floor also provides an increasingly clear value of the hierarchy of space. The ending suffix ends at the *langgar* at the end or end of the west-east axis. The *tanean lanjang* pattern provides an overview of zoning space according to its function. Residence, kitchen and *kandang* in the east, at the western end is broken. *Langgar* has the highest value, is spiritual compared with other buildings that are worldly. *Langgar* reflects the main functions in religious life, sacred to perform prayers, performing rituals of life and at the same time as the center of everyday activities. In everyday life, *Langgar* plays its role as a workplace, as well as a place for men to oversee the produce of the earth, livestock, wife and children. Another function is to receive guests and guest bedrooms of men who stay overnight, also warehouse (Tulistyantoro, 2005).

Figure 9. Tanean Length Layout Model, in Torjun District, Sampang Regency, Madura, Has a North-South Building Direction
(Source: Tulistyantoro, 2005)

3.10 Traditional House of Jeron Beteng, Kraton, Yogyakarta

The system of inheritance distribution using the principle of testament or will, which by means of the will allows the role of parents still have full rights in dividing the inheritance and possible no disputes arising due to different calculations. In the system of inheritance distribution, do not use the pure benchmark of the three inheritance law (Islamic Law, Customary Law and State Law), but adapted to local conditions. Distribution of inheritance resulted in the ownership of traditional dwellings into a compound, in the sense that traditional homes have changed the meaning of traditional living room *Jeron Beteng*, Kraton Yogyakarta. Inheritance distribution pattern of land does not follow the division of land measured and based on the price of land, but based on the position and boundary of space and traditional building form. The division pattern begins with a separate division between *dalem, pendhopo* and *gandhok* (Tarigan, 2013).

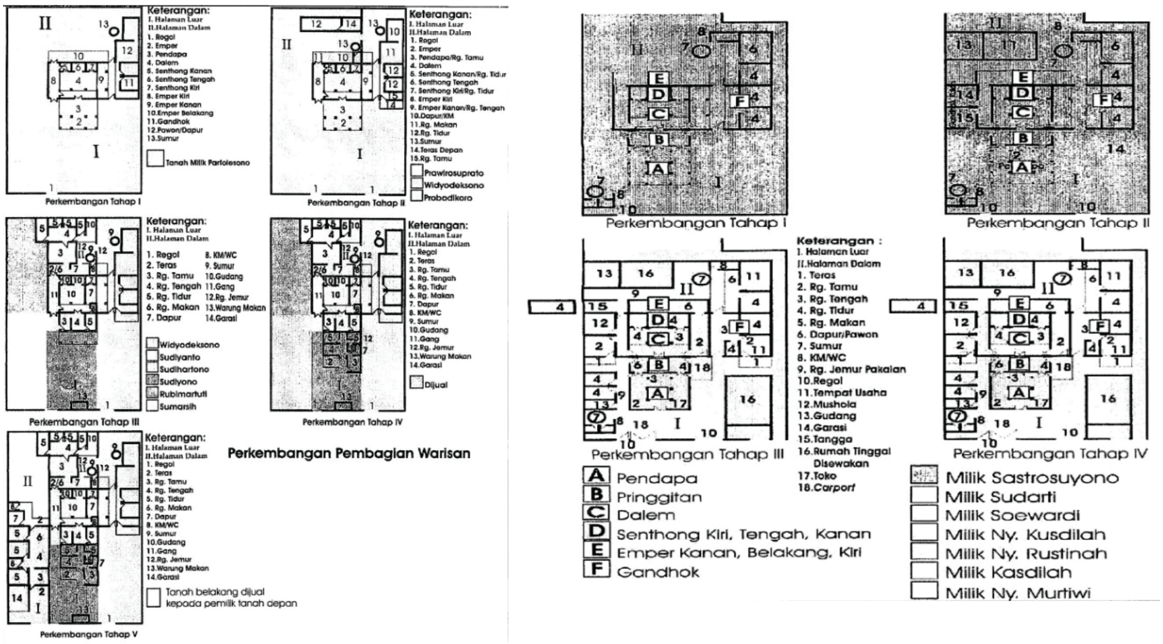


Figure 10. The development of space changes
(Source: Tarigan, 2013)

4. Conclusion

From the discussion of the pattern of space to some traditional houses on the island of Java above obtained the following results:

1. Building in Dukuh village in West Java, is a single mass building with one roof. It is synonymous with indigenous houses Kasepuhan Ciptarasa in West Java, Tengger residential community in Wonokitri Pasuruan.
2. Kaliwungu traditional house in Central Java, is a single mass building with more than one roof. It is synonymous with Kenthol Bagelen's home in Central Java, and identical to the traditional Osing house in Banyuwangi.
3. Kudus Traditional House in Central Java, is a multi-massed building with more than one roof and is identical with traditional Ponorogo house building, Tanean Lanjang residence in Madura, and Jeron Beteng traditional house, Kraton in Yogyakarta.

With the increasing development of the city, understanding of the relationship between space requirements and cultural phenomena is needed. By understanding the spatial arrangement of traditional house and population growth, solutions to significant housing problem can be found, a direct understanding of the various parts of traditional houses are considered essential. Understanding the spatial arrangement of traditional houses will be helpful to support housing construction.

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JAMMING DESIGNING OF GSM AND CDMA SIGNAL

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Abstract

Jammer is a tool used to transmit signals at the same frequency, so the noise completely submerges the original signal in it. This system works when the device is placed in the jam's area which wants to be. Thus the device will disturb the transport of information from the sender to the recipient. This device is also useful on facing the war of electronic devices if it is developed in the military environment. The rate enhancement of mobile user can issue some problems at certain place, for insrance worship, lecture halls, libraries, concert halls, conference rooms, etc in daily life. Hence it need to be disabled as mobile phone rings will annoy those places. Jammer is used to interfere with GSM and CDMA operator signals by using square waves and triangular waves, then VCO combines them to produce the interference signals. Then RF transmitters will amplify it to jam the cell phone signals latter.

Keywords : Jammer, GSM, CDMA, Square Wave, Triangle Wave, VCO.

1. Introduction

1.1 Background

The development telecommunication's technology especially mobile phone has provided many benefits for human beings. However, if it is not used with proper time and place, it will harm the other side. Those places are, Hospitals, worship, etc. While the less appropiate time that is during a meeting and doing teaching learning.

Therefore, a Jammer system is developed to transmit signals at the same frequency, so that the signal captured by mobile phone will be interfered and it will disturb the communication system.

1.2 Research Question

Based on this background, the formulation of problems that arise in the designing and establishment of Jamming GSM and CDMA signals is: How to design a Jamming tool which can work and block the frequency on the phone with the allocation 900 - 1800 MHz for GSM and 800 - 1900 MHz for CDMA by using square and triangle wave which will be coupled VCO to be amplified on RF amplifier?

1.3 Reserach Purpose

The purpose of this research is able to develop the design of jammer device which can work and block the frequency on the phone with the allocation of 900 - 1800 MHz for GSM and 800 - 1900 MHz for CDMA by using square waves and triangles that will combine VCO to be amplified on the RF amplifier.

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2. Literature Review

2.1 GSM (*Global System for Mobile Communication*)

GSM is a digital cellular technology by utilizing microwaves. The delivery signal is divided a part of time, so that the signal information will reach the destination. In the beginning of its operation, GSM has anticipated the rapid number of users and the direction of service at each high area, so that the development direction of GSM technology is DCS or Digital Cellular System at 1800 MHz frequency allocation.

2.1.1 GSM Network Architecture

A GSM network is built from several functional components that have their own specific functions and interfaces, those Switching Sub System (SSS), Radio Sub System (RSS), and Operation and Maintenance Sub System (OMS).

Switching Sub System (SSS)

Switching Sub System or abbreviated SSS is a combination of interconnected devices to support the switching function of communication among each customers, customers with other networks, and customer databases. SSS consists of several parts, namely:

- MSC (Mobile Switching Center)
- HLR (Home Location Register)
- VLR (Visitor Location Register)
- AuC (Authentification)
- EIR (Equipment Identity Register)
- IWF (Inter Working Function)
- EC (Echo Canceller)

Radio Sub System (RSS)

Radio Sub System or abbreviated RSS is a hardware device that aims to support the function of communication systems, so there is a close relationship between SSS and RSS. RSS's equipment include:

- Mobile Station (MS)

MS is the equipment used by the users to access the mobile network. MS is divided into two parts, namely SIM (Subscriber Identity Module) and ME (Mobile Equipment) which refers to the physical telopon itself. A ME also has Transceiver (Tx) and Receiver (Rx).

- Base Station Sub System (BSS)

BSS is an important device which regulates Base Transceiver Station with Radio Controllter for customer traffic (voice traffic, signaling, data) up to core network or commonly called NSS (Network Sub System). BSS is divided into three parts, as below:

- **Base Station Controller (BSC)**

BSC serves as interfacing to MSC, Base Tranceiver Station (BTS), and Operation and Maintenance Subsystem (OMS), and it also controls base stations under its control, radio management, handover process, and BMS OMS functions adjusting.

- **Base Transceiver Station (BTS)**

It can directly interact with MS through a radio interface which consist of Tx and Rx and performing physical layer management in the radio interface.

- **Transcending and Adaption Unit (TRAU)**

TRAU functions to encode speech (Speech transcoding) from BSC to MSC and vice versa, and also adjust the rate of voice data from 64 kbps out of MSC to 16 kbps to BSC for transmission channel efficiency.

Operation and Maintenance Subsystem (OMS)

The OMS is GSM network element that performs various purposes which is related with network operation and maintenance, such as monitors the functions of various network elements, performs interference management, network configuration, and performance.

2.1.2 GSM Modulation

The technique in GSM modulation is GMSK (Gaussian Minimum Shift Keying). This technique works by passing the data to be modulated via Gaussian Filter. The way to generate GSMK is by passing NRZ (non return-to-zero) data via Gaussian Filter which has an impulse response. This system releases the information signal contained in the carrier signal for GSMK, generally outputting a 900 MHz carrier signal.

2.2 CDMA (*Code Division Multiple Access*)

CDMA (Code Division Multiple Access) uses spread-spectrum technology to distribute information signals over a wide bandwidth of 1.25 MHz. CDMA is also a form of multiplexing (not a modulation scheme) and a shared access method that divides the channel by encoding data with a special code associated with each channel. CDMA technology is designed not to be sensitive towards interference, and some subscribers in one cell can access the frequency spectrum band together since they use certain coding techniques. There are two types of CDMA phones, without a card so that the call number must be programmed by the dispatcher and the CDMA phone with RUIM (Removal User Identification Module) or in GSM is known as the SIM card.

2.2.1 CDMA Components

Physical Components of CDMA consists of : User CDMA Mobile device in the form of mobile phone, computer, etc .; BTS; CDMA operators in charge of management traffic from the flow of information traffic; Dash Satellite as a link between sending signals from Earth to satellites; And Satellite as a liaison between remote and unreachable areas by BTS and earth transmitting stations.

In other hand the technical components of the spreading and despreading grooves on the CDMA system, namely: Data source which is a signal information to be sent and spreading code which is the process of expanding the information media by coding a signal information with a particular password at the same time and frequency.

2.3 Square Wave Circuit

To generate a square wave in this circuit is used IC NE566 which is combined with resistor with capacitor.

2.4 Triangle Wave Circuit

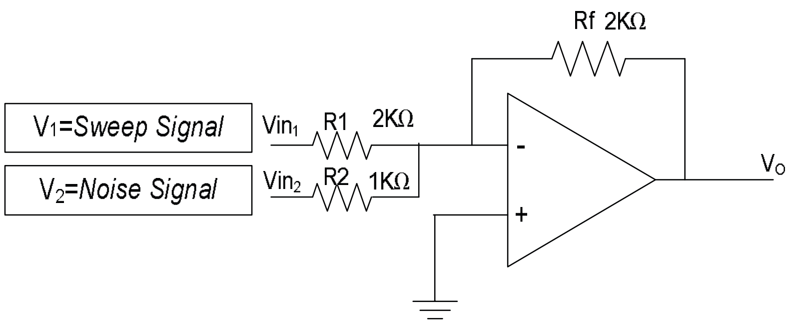
The triangle wave generator is an exponential shape which close the triangular shape, in order to near the linier, the capacitor C must be charged or discharged with a constant current. Therefore the Vcc changes linear (Subekti, 2012). Then the triangle waveform can generate by using NE556 IC circuit.

2.5 Noise Generator

Noise is defined as unwanted electrical signals with a broadband spectrum less than 200KHz that rides on the voltage or current of the electrical power system. Basically, the noise consists of unwanted distortions of signals, electrical power, where the signal can not be classified as harmonic or transient distortion. Noise will help for dismissing the jamming transmission, so the output signal looks like random noise. The noise generator circuit also consists of a standard zener diode with a little reverse current, a buffer transistor and an audio amplifier that serves as a band-pass filter and a signal amplifier. Noise generator has important function in the jamming system because it works to produce random electronic output at certain frequency to cut off the cell phone signal network (Subekti, 2012).

2.6 Mixer Circuit

The mixer circuit is an amplifier or summing circuit. The outlet waveform, Tringular Wave Generator, and Noise generator will be mixed and processed in the mixer before enter the VCO (Volt Control Oscillator) on the radio frequency section section.



Picture 2.1 Amplifier Circuit.
(Source : Ahmed Jisrawi, "GSM 900 Mobile Jammer", undergrad project, 2006)

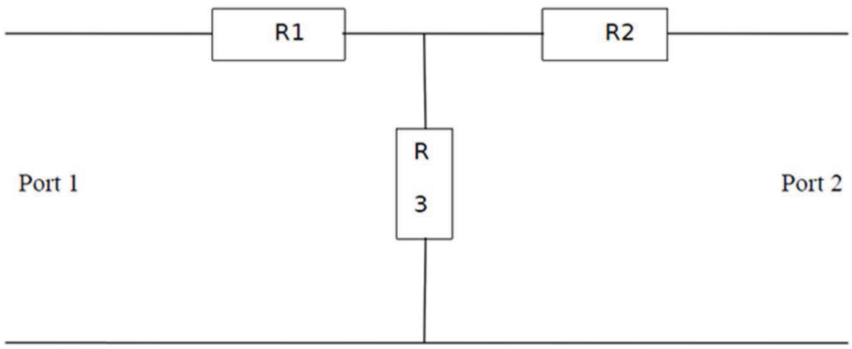
In the above amplifier circuit is the summing amplifier, where the current (I) flowing through the parallel resistance Rf is equal to the number of currents passed by the series resistors R1 and R2 (Jiswari, 2006).

2.7 DC Offset Circuit

DC offset is a state of a DC current in an alternating electric power system which is caused by geomagnetic charge and the use of a single wave rectifier device. These components containt Clamper Diodes and potentiometers as control bias voltage.

2.8 Radio Frequency Section

Radio Frequency Section is the most important component circuit in the jammer system because the phone will interact with this component. RF section consists of VCO, RF Amplifier, and antenna. VCO is a circuit that produces an insulated output voltage. In the jammer system, the VCO part produces an RF signal that will jam mobile signal phone, as for strengthening the transmitter power of a transmitter used RF amplifier. The first amplifier is called the predriver, the next amplifier is called the driver, and the final amplifier is called the final. Here's a picture of the amplifier circuit.



Picture 2.2 T-Network Attenuator
(Source : Ahmed Jisrawi, "GSM 900 Mobile Jammer", undergrad project, 2006)

Before needing RF amplifier (1 - 5 dBm), used 4dB T-network attenuator as shown in figure.

3. System Designing

3.1 Designing Variable

In the design and manufacture of jamming tools, GSM and CDMA is focused for a radius of the wide range of tools with a distance of 1 - 21 meters. Some basic circuit that will be used is, power supply, circuit wave box, triangle wave circuit, mixer circuit, VCO, and RF amplifier.

3.2 Modeling Scheme

In this modeling scheme that is necessarily concerned in the experiment is the specification of jammer devices, and mobile phones that will be used in jammer tool.

Jammer Device Specification

- Frequency : 930 – 960/1805 – 1850 MHz (GSM) and 870 – 880/1975-1980 MHz (CDMA).

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- Radius : 20 meters
- Antenna : 4 external

Cell Phone Specification

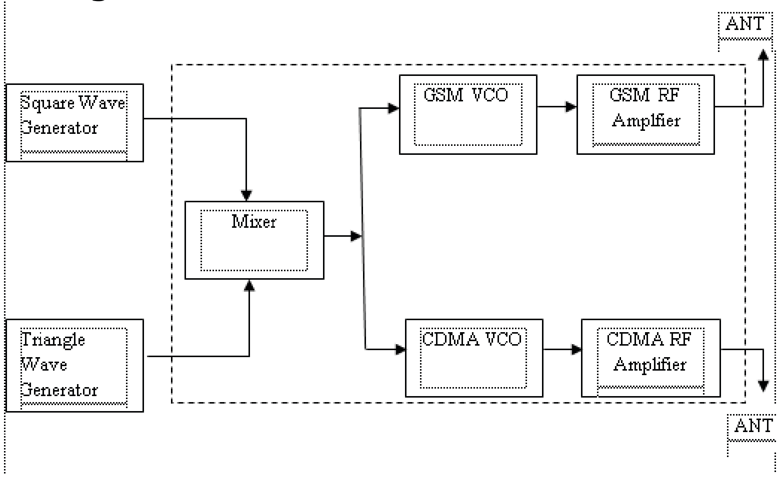
a. Mito 212

- Network : GSM 900/ 1800 MHz
- Color : Hitam
- Antenna : Fixed Internal
- Dimension :107 x 44.8 x 14.3 mm

b. ZTE C261

- Network : CDMA 1x 1900 MHz
- Color : Silver
- Antenna : Fixed Internal
- Dimension : 107 x 45 x 14,5 mm

3.3 Block Diagram



Picture 3.1 Block Diagram

Based on the block diagram above, there is an intermediate frequency section consisting of square triangular wave generation, and GSM and CDMA module to emit jammig signals.

The second part, there is a radio drequency section consisting of VCO, RF amplifier, and antenna jamming where the mixer output goes to the VCO. There are two kinds of VCO, namely VCO GSM and VCO CDMA. Before transmitted through the antenna, the frequency signal is reinforced via a radio frequency amplifier. Then, the output RF amplifier circuit is connected to the antenna.

3.4 Flowchart Diagram

Here is a flowchart designing a jamming tool as below:

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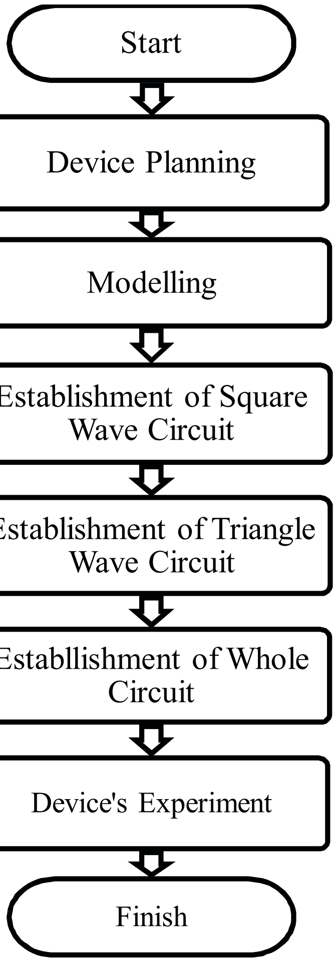
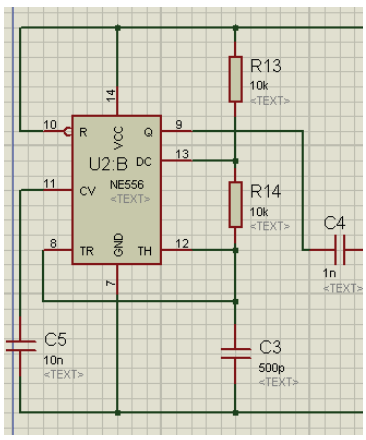


Picture 3.2 Device Flowchart

3.5 Planning Square Wave Generator

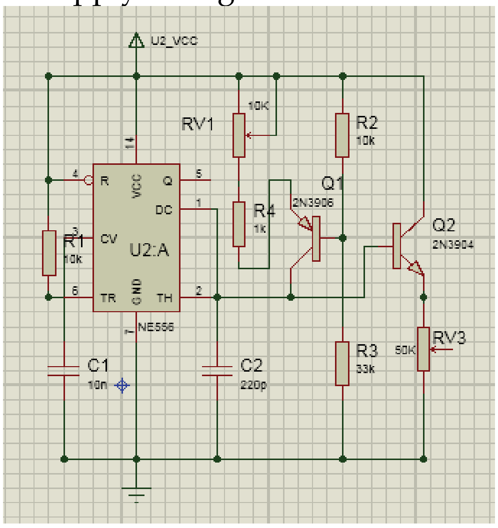
There are two pieces of 10 kΩ of resistors, 1 nf, 10 nf, and 500 pf of capacitors, and Vcc of 5 V (DC). In the waveform generator circuit as shown in the figure.



Picture 3.3 Square Wave Circuit
(source: support@innovativeelectronics.com)

3.6 Planning Triangle Wave Generator

To get the triangle wave, it is planned an external circuit with RV1 and R1 of 10K **Ω**, R2 of 10K **Ω**, R3 of 33 K **Ω**, RV3 of 50 K **Ω**, C1 10 nf, C2 220 pf, and Vcc of 5 V. IC NE556 can supply voltage of 4 - 12 Volt.



Picture 3.4 Triangle Wave Circuit
(Source: *support@innovativeelectronics.com*)

3.7 VCO Modul and RF Amplifier

Output power generated power of 3 Watt and VCO 1900 - 1990 MHz for CDMA. While the output power of GSM 5 Watt and VCO 880 - 915.

3.8 Working Tool System

When the device is on, the NE556 IC will generate a triangle and square wave. Then they are mixed to be amplified through an RF amplifier and forwarded to the VCO where this process takes place inside the module. VCO will produce GSM and CDMA frequency oscillations. Furthermore, the frequency will be reinforced by the RF amplifier, then will be transmitted by Tx.

3.9 Experiment Planning

In this experimental planning used experimental steps that use several mobile operators, namely Mito 212, Esia One Touch 220C and ZTE C261. While opertor - operator to be used are:

- GSM Indosat (IM3), Telkomsel (As), XL, dan NTS Axis.
- CDMA Smart dan Esia.

4. RESEARCH RESULT

4.1 Analyzing Experiment Result

When the power button is on, the signal jamming process starts. After a while the cell phone signal gradually disappears and eventually nothing exists at all.

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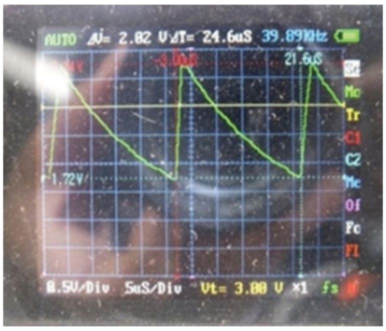
4.2 Reseach Result

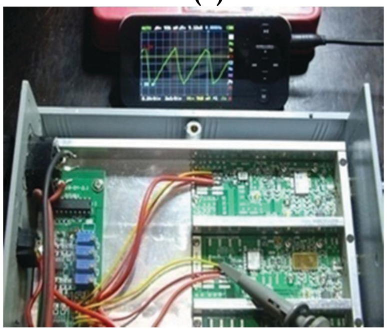
Measurement's Result of Jammer's Device by Using Oscilloscopes

This measurement is performed to determine the input and output signals of the square, triangle, and module waves. The results of the measurement

(a)



(b)



(c)

(d)

Picture 4.1 Measurement's Result of Triangle (a and b) and Square (c and d) Wave of Output Signal

In measurement of triangle wave input circuit is done on pin 9 IC NE556 (U2: B), while box wave input is done on pin 2 IC NE556 (U2: A), where the measurement of input signal can be seen in the pictures a and b.

Measurement of Output Signal in GSM and CDMA Module

The measurement result of GSM module in VCO + RF Amplifier module are:

- Vmin = 2.00 V, producing F = 935 MHz
- Vmax = 2.70 V, producing F = 960 MHz and f = 73.74 KHz (disturbing the communication 73.74 thousand times per second)

For CDMA module, it is :

- Vmin = 0.28 V, producing F = 1900 MHz
- Vmax = 1.22 V, producing F = 1990 MHz and f = 109 KHz.

In the following picture can be seen the measurement results signal output module GSM and CDMA.

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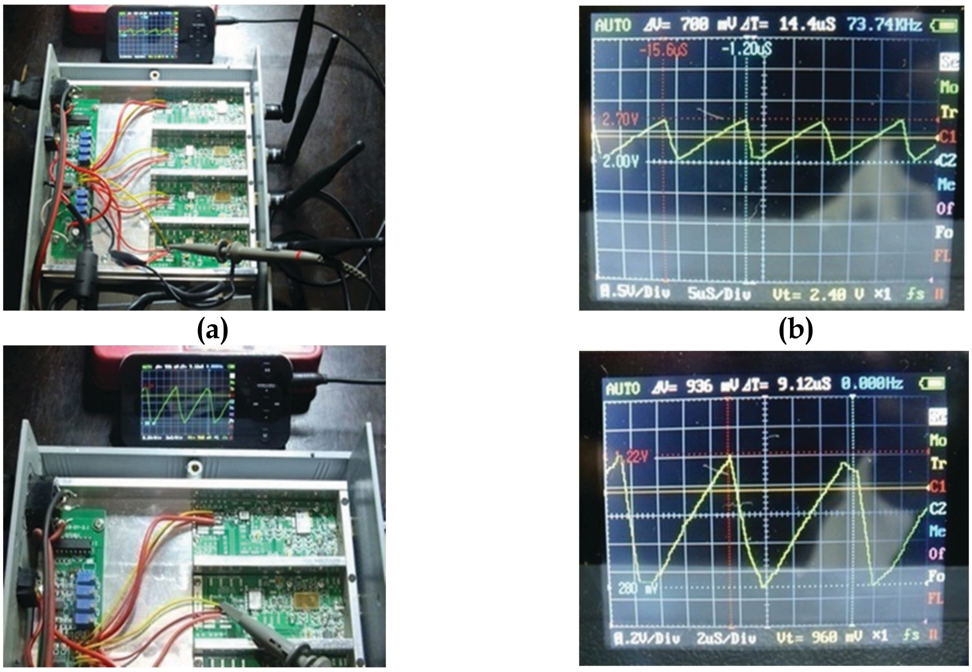

(a) (b)

(c) (d)

Picture 4.2 Input Signal Measurement Module VCO + RF GSM Amplifier and Display measurement results.

Measurement of input signal in VCO module and RF amplifier for GSM network is done on RV9 and RV8 circuit to set Vmin and Vmax. RV8 and RV9 produce 935 and 960 MHz frequencies. There are also DCS1800 and 3G modules integrated into a module with GSM and CDMA.

Results of Jammer Range Testing

Based on the test results, it appears that GSM operators at a distance of 1 - 17 meters average jamming signal successfully with the category of no service (-), while the distance 18 - 19 meters emergency (x), and mobie can communicate (o) 20 - 21 meters. The following table below:

No	Provider / Distance (m)	Indosat (IM3)	Telkomsel (As)	XL	NTS Axis
1	1	-	-	-	-
2	2	-	-	-	-
3	3	-	-	-	-
4	4	-	-	-	-
5	5	-	-	-	-
6	6	-	-	-	-
7	7	-	-	-	-
8	8	-	-	-	-
9	9	-	-	-	-
10	10	-	-	-	-
11	11	-	-	-	-
12	12	-	-	-	-

13	13	-	-	-	-
14	14	-	-	-	-
15	15	-	-	-	-
16	16	-	-	-	-
17	17	-	-	-	-
18	18	x	x	x	x
19	19	x	x	x	x
20	20	o	o	o	o
21	21	o	o	o	o

Table 4.1. Range of Jamming GSM signal using HP Mito 212

While CDMA operators which use Esia One Touch mobile there is no service (-) at a distance of 1 - 13 meters and there is service (o) at a distance of 14 - 21 meters. However, mobile ZTE C261 service is available at a distance of 1 - 21 meters. This is due to the lack of design tools, so the frequency of 1900 MHz communication is passed so that operators can communicate. The following table below:

No	Provider / Distance (m)	Smart ZTE C261	Flexi Esia
1	1	o	-
2	2	o	-
3	3	o	-
4	4	o	-
5	5	o	-
6	6	o	-
7	7	o	-
8	8	o	-
9	9	o	-
10	10	o	-
11	11	o	-
12	12	o	-
13	13	o	-
14	14	o	o
15	15	o	o
16	16	o	o
17	17	o	o
18	18	o	o
19	19	o	o
20	20	o	o
21	21	o	o

Table 4.2 Range of Jamming CDMA signal using Smart ZTE C261 and Flexi Esia Mobile Phone

5. Conclusion

Based on the design, testing, and analysis tools, it can be concluded that:

- Jamming tools that have been created can produce the same frequency with the existing frequency on Mobile Phone.

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- The greater the power be, the wider distance of the jamming radius covered will be
- Jamming tool that has been made able to jam GSM network in an area with a radius of 20 meters, CDMA flexi at a radius of 16 meters, and CDMA esia at a radius of 15 meters.

Suggestion

In the planning and manufacture that has been done it is suggested that in the next creation added the emitting power. It is intended that the range can be jammed further. It is also suggested that subsequent developments should pay attention to the selection of good antennas for the effectiveness of the jamming range.

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Sustainability in Architecture of traditional Sasak settlements in Lombok

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Abstract

Sasak is one of the Indonesian indigenous tribes who live in the island of Lombok. Until now, they still maintain the customs and culture as well as settling in Sembalun, Senaru, Segenter, and Sade. The Large of *Sasak* traditional settlement area in Lombok is not increased so that it feared the carrying capacity will be exceeded and could lead to a shift of customs and culture. This paper (1) to formulate the concept of a traditional *Sasak* sustainability settlement, (2) reconstruct the conception and typology of layout, mass configuration, space-organization, structure and building construction homes custom of *Sasak*, to analyze the sustainability level of *Sasak* traditional settlement used questionnaires Community Sustainability Analysis. The results obtained in this study is the traditional settlement of the *Sasak* people - PTSDS is in conformity with the ecovillage concept of Global Ecovillage Network. It is evident from the analysis of data by CSA which finds the total in 1226; with the value of the ecological aspect, the social aspect and the spiritual aspect, respectively 432, 373 and 421, which means the *Sasak* people - PTSDS shows very good progress on sustainability.

Keywords: Ecohouse, ecoliving, settlements, Sasak, Senaru, PTSDS (Permukiman Tradisional Sasak Dusun Senaru)

1. Introduction

Conditions traditional settlements that exist in Indonesia explored the values and the principles of excellence and compliance with ecological design. Until now, most of these communities still maintain the customs and culture and modernization have not been affected. With their traditional settlement site conditions are not increased, and the population continues to grow, feared to tread carrying capacity will be exceeded. Therefore, the conceptual model is needed to maintain the sustainability of *Sasak* traditional settlements. Cultural treasures such as Sasak traditional settlement should be stabilized its sustainability that based on the concept Ecohouse and ecoliving so it can be passed on to future generations. Research on ecological home communities and ecological life has never been done in the *Sasak* traditional settlement. With this study will determine the level of sustainability of *Sasak* traditional settlements in ecological aspects, social and cultural / spiritual. In addition it will be known local values and compliance to ecological design concept in terms of aspects of thermal comfort and illumination. The existence and sustainability are important for the stabilization of the design model formulated for *Sasak* traditional settlement, this one of the nation's property assets which are invaluable

1.1 *Sasak* Settlement and Its Space Layout

The formation of a traditional Sasak village on the island of Lombok usually starts from a group of people (tribe) which form a small village then more and more perfect (Subadyo, 2003). The existence of the traditional village tends to spread up the hills or even at the foot of the mountain, which occurs because of the inter-tribal clashes, beliefs, etc., so as to escape from the pursuit of the enemy, they had to look for places that are difficult to reach (Sulistianto, 2005). *Sasak* traditional village on the island of Lombok is composed of a number of custom homes, buildings berugak, rice container buildings (barn), cattle pens and the surrounding environment. Spatial Sasak village is basically a miniature sort of arrangement that is larger than the spatial Regions (Subadyo, 2003; Auliya, 2009).

In the Sasak tradisioanal settlement on Lombok island, there are several function rooms or buildings. Research Auliya (2009) on Sasak settlement in Senaru confirm that the concept of seniority in settlement patterns, and the formation of the spatial structure based cultural ritual are still deeply rooted in the indigenous Sasak. The difference of space and building function are implemented in the regional arrangement, settlements as well as the arrangement of buildings, including homes. Arrangement of buildings on the traditional Sasak settlement, also known as the land and building use for personal, social and coupled with a sacred function (Sulistianto, 2005; Auliya, 2009). Study Sabrina (2010) on the preservation of settlement patterns traditional Sasak strengthening the existence of spatial structure traditional settlement Sasak formed based on the concept of the philosophy of the trajectory of the sun, the concept of the Mount Rinjani, the orientation direction toward and layout of the topography of terraces and the concept of home form uniform stood in a row (Suteran) . Based on the configuration of the masses, the pattern and shape of the whole building oriented towards Mount Rinjani which is a manifestation of the imaginary cosmic line based on the belief system of the Sasak people against where the ancestral spirits reside as well as the symbol of the interaction of the society with its cosmological environment is interpreted through the traditional house (Subadyo , 2003; Sabrina, 2010). Similarly, the results of Fitriya (2010) study in Bayan - North Lombok, explained that the pattern of settlements in Indigenous Village

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Bayan there is a division of areas based on social stratification societal. In addition there is a division of space in the environment where living, and the formation of spatial patterns based on traditional activities that are still implemented by the community of Bayan traditional Village.

1.2. Sasak Traditional Architecture

Technology owned by the Sasak tribe on the island of Lombok is still relatively simple, but highly uphold the wisdom of the environment. Sasak traditional building structure is a frame system made of wood in the form of a beam and a rectangular pole. While the wall coverings made of woven bamboo (chamber), which is left on the original color and character. Building construction is connected using a bonding system, pedestal, pegs, interlocking pedestal and linked joints. In addition to the above mentioned system it is prohibited for use (Subadyo, 2003). Building materials used to tie a connection are rattan and bamboo materials. Construction of roof coverings used Rumbia, which is supported by bamboo construction and is tied with the use of fibers or bamboo. For Sasak indigenous communities to build houses or other buildings, it must start with the intention and this is considered as a sacred act, meaning that it must be taken into account the necessary conditions (Subadyo, 2003; Sulistianto, 2005). Usually these conditions include: how to choose building materials, requirements and restrictions on building a house, facing the house, choosing a good day and doing *selamatan*. In addition to the architecture of traditional house buildings, *berugak* is one of the traditional buildings that became a means of socialization conducted by the community of Sasak tribe with others or also function as a place of gathering, discusion or in the implementation of traditional ceremonies. *Berugak* is a stage-shaped building without any partitions except on the south side (Subadyo, 2003; Sulistianto, 2005). While the barn is a traditional building Sasak tribe that is also widely found in many villages on the island of Lombok. The existence of barns is not only used as a place to store rice during harvest, but the barns is also used as a sign of the level of one's caste (Subadyo, 2003; Sulistianto, 2005). The highest form of barns is only for the nobility. Establishment of settlement patterns based on Sasak customary rules passed down from generation to generation becomes something that attracts the attention of outsiders. In arranging Sasak traditional house and its elements have a pattern of lined (bale, berugak, barns, cages, all lined in a straight line). Overall residential buildings have the same direction facing, ie facing East / West (Sasongko, 2005). This is in line with the study conducted by Subadyo (2003), which stated that the traditional house of Sasak is one of the cultural forms of the community that has special characteristics and is not less unique to the traditional houses of other regions. Sasak traditional house vertically is a

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reflection of the division of the universe. The legs or poles symbolize the underworld (the dark world, hell), the body or the walls and the spaces within them symbolize the middle world (the world of the universe's life) and the roof symbolizes the world above (eternal world, heaven).

1.3. Ecological House, Ecological Life and Ecological village

Environmentally friendly and efficient development systems in resource use, called ecological homes (Frick & Darmawan, 2008; Widyarti, 2011). Achievement of the build can be done through an integrated approach in design. Home building (sustainable building) interpreted also as an ecological house. The benefits achieved from the application of the concept of ecological house is a reduction in operating costs (energy and water), improving occupant health by improving air quality inside buildings, and reduce environmental impacts (minimizing the impact of waste and heating in the building). 'Ecological life' (ecoliving) is the life to commit to a better way of life by taking account of and responsible for the environment in order to create ecologically sustainable living (Seo, 2001; The UNSW Ecoliving Center, 2006). This concept is a derivative of 'ecovillage' developed as a lifestyle choice in either rural or urban societies by integrating the overall environmental sustainability of society. Looking at aspects of ecological design, permacuiture, ecological building, alternative energy, water efficiency, and so on (GEN, 2000). Indonesia traditionally has had a philosophy regarding the protection of natural resources so that they can live in a sustainable ecosystem (Arifin et al. 2003). "'Ecological life' (ecoliving) can also be realized in the form of lifestyle because with a healthy lifestyle and attention to human wisdom and policy in applying the results of existing technology to harvest the potential of natural resources and the environment that can produce an environmentally sustainable life. The definition of the 'ecological village' used by the Global Eco-villages Network (GEN) (2000); Widyarti, (2011) is; Quality full-featured settlement where the inhabitants' activities are integrated with nature and support the development of human health and can last indefinitely. This approach to achieve this dream is what is then called 'ecological village' (Gilman, 1991). Further, Widyarti, (2011) states that ecological dimensionless development principles in ecological village are: (1) land use in accordance with its carrying capacity; (2) efficient utilization of natural resources; (3) a healthy environment; (4) the use of non-toxic local building materials; (5) preservation of critical vegetation and fauna and natural habitats; (6) optimization of natural energy harvesting; (7) eco-friendly economic structure system; And (8) application of recycling system to all products used.

This principle of ecological development as the basis for thinking about sustainability with a deep understanding that all natural resources, both

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renewable and non-limited, therefore human activity must not exceed the ecosystem support capacity of the earth (Randia, 2002). White & Masset (2003), states that the high level of sustainability of the community is determined by the degree of community to be able to affluent and independent.

In order to gain a measure of the sustainability of a community, GEN (2000) developed a concept of how to audit a sustainability as a basis for assessing individuals, and communities to compare their current status with the ideal goal of ecological, social and spiritual / quasi-ecological sustainability (Widyarti, 2011). The instruments and analytical units used as action-taking for individuals and communities to become more sustainable are called Community Sustainability Assessments (CSAs).

Research studies that aims to produce a residential building (house-residential-settlement) is more environmentally friendly (Widyarti, 2011), among others, research is conducted Kim (2005), Gaitani (2007) and Mahdavi (2008). Nowadays modern architecture does not have the capacity to control the micro-environment inside a building without the use of technology that consumes a lot of energy and this will have an impact on environmental issues. The statement is the conclusion of Kim's (2005) research, about the comparison of environmental controls in buildings on traditional Korean architecture with modern architecture.

Furthermore, Gaitani (2007) research in Great Athens on the importance of applying architectural bioclimatic criteria and passive cooling systems and energy conservation principles in order to improve the thermal comfort conditions on the outside of a building. The background of this research is dissatisfaction with the sensation of climatic conditions outside the building. The results of the analysis of this study resulted in comparison of conventional structures with other designs that improve the bioclimatic principle.

Meanwhile Mahdavi (2008) conducted research on occupant activity to control the main climate conditions thermal inside the building. Roles and functions of building elements such as windows, shade, lighting and heat sources and fans are usually done to condition the room to achieve the conditions in the building in accordance with the desired. The results of Mahdavi's (2008) study reinforce that conditioning of microclimate behavior in buildings and energy savings, through this control, has a very significant impact.

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2. Purpose and Research Benefits

Research purposes

This study aims to assess the sustainable level of Sasak Traditional Settlements in Dusun Senaru (PTSDS), Bayan District. North Lombok Regency, West Nusa Tenggara Province. In the next stage, the basic concepts and typology of mass configuration, layout, spatial organization, plan, view, piece, structure and construction of custom house on PTSDS are used.

Benefits of research

While the benefits of the research results in this first year is to know the level of sustainability of traditional Sasak settlements in Dusun Senaru in ecological, social and kuitural / spiritual aspects (eco-house and eco-village concept). Besides it can be used to obtain the sustainability driven factor of Sasak traditional village management in Dusun Senaru as traditional architecture artifact sustainably.

3. Research Method

Research design

The research to uncover the phenomenon of un sustainability of residential community and traditional architecture in Indonesia which is characterized in two forms that is physical and non physical require specific method of research that must be able to reveal physical aspect as well as non physical aspect so that in this research used combination of quantitative and qualitative method.

Data collection

In this first year research, secondary data were collected based on a number of representative sources and relevant to this research topic, while the primary data will be taken directly in the field. Primary data collection will be conducted through interviews using a questionnaire from CSA (Community Sustainability Assessment).

Data Analysis Method

The Sustainability Analysis used the CSA questionnaire in this first year study to analyze and assess the sustainability of the Sasak community - PTSDS, in Senaru Village, Bayan District, North Lombok District. The data was collected through interviews through Focus Group Discussion (FGD) technique with sample of key respondents (adat leaders, village elders, and Sasak community leaders in Dusun Senaru). Respondents were determined by purposive sampling strategy of 30 respondents consisting of 19 heads of households in PTSDS, and 3 elders of sasak, 3 government bureaucrats, and 5 community observers of traditional Sasak settlements. Also observed the location with tools that will be used is a compass, anemometer, Global Positioning System (GPS).

Overview of Traditional Settlements of Sasak Senaru Village (PTSDS)
The research titled: Implementation of Ecohouse and Ecoliving Concept on Sasak Traditional Settlement Architecture was conducted in PTSDS community, in Senaru Village Bayan District, North Lombok Regency, West Nusa Tenggara Province. Geographically, the PTSDS village is located at 115 ° 46 'BT - 116 ° 28' east and between 8 ° 112 '- 8 ° 55' LS. Dusun Senaru is in the administrative area of Senaru Village. The village located at the foot of Mount Rinjani has advantages when compared with other villages in North Lombok regency. Because it serves as a climbing gateway to Mount Rinjani, also has some beautiful and charming attractions. The area of the village of Senaru is 41.62 km2 consisting of 11 hamlets *Dasan Baro, Sembilan Batu Dusun, Dusun Telaga Lenggundi, Dusun Kebaloan, Dusun Bon Gontor, Dusun Oma Segoar, Dusun Lokaq Klungkung, Dusun Tumpangsari, Dusun Pawang Kreok, Dusun Lendang Cempaka,* and *Dusun Senaru*.

Indigenous village of PTSDS located at the foot of Mount Rinjani, in this PTSDS live mostly Sasak indigenous people. This village has an area of about 5,500 m2 consisting of 19 traditional houses. PTSDS village is about 90 km away. To reach the location of PTSDS from the city of Mataram can pass through 2 lanes, namely the west and east lanes. The western route is also divided into 2, namely the path through the coast of Senggigi and the path through the Pusuk protected forest. East line through Labuhan Lombok.
Physical conditions, PTSDS is part of the slopes of Mount Rinjani located at an altitude of 600 mdpl and with a hilly landscape or mountain slopes and rainfall 2379 mm / year. In general, land use is land for wetland, dry land, yard, and others. Most of the area is used for dry land that is 3,524 hectares. The designation of the yard in Senaru Village has an area of 36.6 hectares. The environment in PTSDS when viewed from the conditions of rainfall, hydrological and commodities shows that environmental conditions support the efforts of the preservation of Senaru village which has an agricultural base. Soil types and climate support for sustainability of agriculture on site. Land use in PTSDS, consisting of settlement, yard, and cattle pen. Types of land use are small and limited in addition to the small size of the village and there are customary regulations that bind. The dominance of land use in PTSDS is a residential area consisting of Sasak traditional houses. In the area of PTSDS the pattern and layout of the building and its structure is a customary provision that can not be changed because it contains good intentions and goals. Meanwhile, the use of land outside the PTSDS area, more diverse and dynamic but still associated with local cultural order.

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Land use within the area or PTSDS fence and outside the village gate has a difference. Inside the PTSDS footprint is used for community social activities, while outside the fence is used for agricultural land.

Settlement Patterns PTSDS

According to the beliefs of the Sasak tribe, the higher the position of the village means the inhabitants in it have high caste levels as well. PTSDS is one of the traditional villages that has the highest geographical position among other traditional Sasak villages in Sub district of Bayan. PTSDS has a historical background as the oldest traditional village in Bayan district with its inhabitants having the highest caste levels among other residents of the township. Until now the institutional structure of adat is still maintained as a form of local wisdom that is binding for all residents of the village. Layout. The village of PTSDS which is maintained for generations is a great potential in the development of the area as a cultural tourism area.

The typical settlement pattern of the Sasak tribe in the PTSDS region forms a chessboard pattern (grid) that is limited by the fence around the village. The orientation of the PTSDS village layout facing west with its philosophy is the direction of the Qibla praying that faces west. Similarly, the orientation of traditional houses that all face to the west and east. The formation of the orientation is a legacy of tradition and culture that has become the custom of the Sasak tribe in the hamlet of Senaru. The pattern of traditional settlement layout in PTSDS as well as traditional architectural styles that exist is one form of cultural heritage rich in the history, philosophy, art, and culture of the local community. Therefore, as one of the customary villages that have a unique spatial settlement pattern that is full of cultural values, the area of PTSDS needs to get special attention by still paying attention to the existence and balance of the traditional principles of the standard, that is the spatial pattern that has been realized in space Traditional area.

In the village of PTSDS in it there are buildings such as custom homes, berugak and barns and agricultural land outside the village gate is a unity of landscapes with typical architectural layout patterns of the Sasak tribe. The absence of construction or addition of buildings (in the footprint) aims to not damage the pattern of layout of the traditional architecture in addition to the binding customary law. The main components that form the PTSDS area consist of custom house, berugak and granary. While other components that are supporters are guardrail fence, yard and public and social facilities. From these various components form a unified landscape that is PTSDS with uniqueness and distinctive characteristics that have the potential to be developed into a cultural tourism area.

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Existing Site Plan of PTSDS Villages
(Source: Researcher, 2016)

In this PTSDS region the elements of the formation also have the same layout that is with the presence of customary head house at the forefront of the village (on the east) and then another custom house with residents who have lower caste levels to the west. The overall orientation of the building faces west and east. Thus the unified landscape that has an identity that reflects the culture of the Sasak tribe is expressed in the layout of the village of PTSDS with its components both within and outside the settlement.

The existence of PTSDS is characterized by the presence of a fence around its tread. The fence is made of plants, bamboo or wood arranged in parallel with a height of ± 2 meters. The fence on PTSDS has the main function as a territorial divider of traditional village area. Since the size of the village can not increase or decrease, then plotting. The fence can not be changed. The hedgerows in the PTSDS area also serve for security and barriers to prevent criminal acts such as livestock theft.

Energy

The energy that people use comes from renewable energy sources. They use oil and porous building designs for lighting and for cooking using biomass derived from wood, branch, or twig. It is set and taught in their custom. The rules of planting and harvesting trees are already regulated by custom. For cooking they harvest the dry branch of the tree from within the PTSDS region bioregion.

Energy conservation is implemented in the construction of community houses such as:

• Orientation and location of buildings designed to make the building comfortable.

• Using a good passive air conditioning method and porous material

• Communities use methods that conserve and energy efficiency in building design. The use of energy at home is minimized by conserving

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practices such as using natural lighting from the pore holes in the gedeg wall (porous).

Building material
Building materials are taken, among others, from forest cover, fields and they must ask for permission first to Tua loka, where the use of building materials are:
A.Natural/recycable
B. Can be reused / reusable
C. Comes from within bioregion
Customary rules have successfully conserved their environments and forest cover so that both building and preservation techniques in Sasak - Senaru use environmentally friendly techniques. Development of materials used and construction methods are naturally sourced from nearby areas and do not use a mixture of chemicals. Wood construction can last up to 35 years and the durability of bamboo construction is more than 15 years without preserved with chemicals. The use of construction materials such as wood and bamboo is in line with the recommended use of environmentally friendly materials because wood and bamboo are renewable building materials. Especially bamboo which includes fast growing plants (Environment Protection Agency, 2010).

Build system
The process of establishing a house is done on a month when on the farm (fields) there is no activity.
Land is forbidden to be dug to build a house and this is due to the density of the soil will decrease its carrying capacity if the soil is *urugan*/heap so that the possibility of the decline of the building.
Elements of building construction is made where the building materials are located and taken to the location is already a component. Constructing of Sasak house - PTSDS uses pre-fabrication system. Before a house is constructed. Parts and components of the house such as roof coverings, wall coverings, floor coverings have been prepared homeowners into parts that are ready to be installed. If wood is not available in the garden around the village, it can be taken in the forest cover land with the permission of *Tua Loka.*
The system of implementation of constructing is mutual assistance between citizens (*gotong royong*). The Sasak area development system - PTSDS is in line with the eco-friendly development initiatives developed today in the framework of environmental protection.

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Environmentally friendly construction system

Construction element	Material	Origin of Materials	Place of Manufacture	Method
Roof				
Roof covering	*Rumbia*	Field Forest cover	Village	Mutual cooperation (Gotong royong)
Roof frame	Bamboo	Field Forest cover	Village	Mutual cooperation
Roof structure	Wood	Field Forest cover	Village	Mutual cooperation
Colomn	Wood	Field Forest cover	Village	Mutual cooperation
beam	Wood	Field Forest cover	Village	Mutual cooperation
wall	Bamboo	Field Forest cover	Village	Mutual cooperation
floor	Soil	Fields and Rice Fields	Village	Mutual cooperation
foundation	*Umpak* mountain rock	River	Village	Mutual cooperation

(Source: Researchers, 2016)

The Environmental Protection Agency (EPA) in 2010 suggested that the building materials being used are processed in place and the building elements installed off-site. Elements brought to the site are already components to minimize waste and do not pollute the location with noise and dust (EPA, 2010).

Results obtained from the questionnaires obtained.

Table 1. Value sustainability PTSDS communities from ecological aspects

No	Ecological Aspects Scores	Scores
1	Meaning of residence	53
2	The availability of food (production and distribution)	54
3	Infrastructure (buildings and	65

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	transportation)	
4	Patterns (consumption and solid waste management)	75
5	Water (source, quality and usage patterns)	61
6	Management (wastewater & water pollution)	64
7	Energy, (source and use)	74
	Total	446

Table 2. Value sustainibilitas PTSDS communities of the sociological aspect

No.	Social Aspects Scores	Scores
1	Openness, (trust and security; a common room)	57
2	Communication (flow of ideas and information)	50
3	Network (achievement & services)	50
4	social Sustainibilitas	57
5	Education	50
6	Medical services	54
7	Sustainibilitas economy; (Health of the local economy)	55
	Total	373

Table 3. Value sustainibilitas communities PTSDS from spiritual

No	Spiritual Aspect Score	Value
1	Sustainibilitas culture	75
2	Arts and recreation	46
3	spiritual Sustainibilitas	51
4	Entanglement society	68
5	Resilience community	72
6	new Holographic; (Worldview / global)	67
7	Peace and global thinking	63
	Total	421

Conclusion

Based on the results of the analysis and discussion above it can be concluded that the traditional settlements of the Sasak community - PTSDS is in accordance with the ecovillage concept of the Global Ecovillage Network. This is evident from the results of data analysis based on CSA that get a total value of 1240; With the values of ecological, social, and spiritual aspects of each 446, 373, and 421. The magnitude of these values has meaning that the Sasak community - PTSDS has shown excellent progress on the sustainability of its community

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Suggestion

In order to follow up the findings of this research in the first year it is necessary to conduct further studies or research related to the technological of traditional architectural reconstruction in Sasak Village - PTSDS which is made in an iconic manner to be studied and simulated with CFD (Computing Fluid Dynamic).

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OPTIMIZING THE ROLE OF ARTIFICIAL LIGHTING IN COMMERCIAL BUILDINGS

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ABSTRACT

Interior is the most important part in a commercial building because most of the human activity (visitors) happens inside. The interaction between the interior elements with the activity, the behavior, the mood of the visitor takes place in it. Lighting as one of the elements of the interior serves for vision (vision) and create an atmosphere of the interior (aesthetic), in addition to the conditions of a safe and comfortable environment. This paper examines how an artificial lighting system, with the aim of getting an idea of how to optimize the role of artificial lighting in some commercial buildings. The method used is literature study, consisting of lighting theories and the results of research in several commercial buildings.

Keywords: Commercial Building, Interior, Lighting.

1. Introduction

Along with the rate of economic growth in Indonesia, businesses in various commercial fields are experiencing rapid growth with good prospects. Various commercial buildings such as hotels, restaurants, cafes, boutique / clothing stores, art galleries and others grow rapidly. With the development of these commercial buildings, the competition between the functions is also more stringent, so it takes the distinctive characteristics of each - each to try to look more attractive, which among other things is the protrusion on the interior design.

The interior is the most important part in a commercial building, because most of the human activity (visitors) happens inside. The interaction between the elements of the interior with the activity, behavior, mood of visitors occurs inside. The interior elements include floor, wall, roof, furniture, including a variety of material choices, textures, colors and lighting.

Interior design as a unified whole of design elements and principles will create an atmosphere, which is an expression of the desired concept to be perceived by its inhabitants (Hidjaz in Nabella Alatas, Anwar Subkiman, 2014).

Such perceptions within a commercial building will lead to visitors' mood and behavior.

The mood of the visitor is the goal of interior design to be achieved, which provides comfort, satisfaction and experience that imprint so it will encourage to come back or recommend to others to visit. Lighting as one of the elements of the interior serves for vision and create an interior atmosphere (aesthetic), in addition to getting a safe and comfortable environment.

This paper examines how artificial lighting systems in several commercial buildings with the literature study methods of lighting theories as well as research results in several commercial buildings, including restaurants, cafes, clothing / boutique shops, hotels and galleries. The goal is to get an idea how to optimize the role of artificial lighting in commercial buildings.

2. Lighting

Lighting is one of the main parts in an interior. Light gives a huge influence on the performance of human work. Without light, humans can not see, work and feel the atmosphere/atmosphere of space. Poor quality of light will affect the atmosphere of space. Well-planned lighting will be able to support the visual needs inside and outside the room according to the type of human activity.

Darmasetiawan, Christian, et.al (in Nurintan, 2014: 3-4) classifies the lighting as follows:

A. Natural lighting is a source of illumination that comes from sunlight.

B. Artificial lighting is the lighting produced by a light source other than natural light.

Artificial lighting has several types based on light source, intensity, placement, direction of light, function and appearance. Luigina de Grands (in Rianto, 2014: 3-4) classifies artificial light as follows:

A. Based on the light source, it is divided into 3 incandescent, fluorescent light, and light containing phosphorus (fluorescent)
B. Based on the intensity, divided into 3 ie full irradiance, medium light, and low light or low light,
C. Based on its placement, it is divided into 5, namely the ceiling (celling lamp), hanging from the ceiling (pendant lamp), attached to the wall (wall lamp), on the table (table lamp), and standing with the foot (standing lamp)

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Figure 2.1 Celling Lamp Brussels Spring Resto and Café (Mitha Nurintan, Enung Rostika,2014)

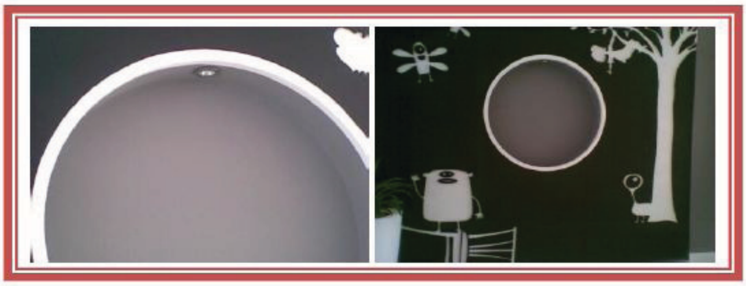

Figure 2.2. Wall Lamp Brussels Spring Resto and Café (Mitha Nurintan, Enung Rostika, 2014)

D. Based on the direction of light, is divided into 3, ie light upwards (uplights), downlights, and spotlight,

E. Based on the function or needs, divided into 3, namely general lighting (general lighting), special lighting (task lighting), and accent lighting (accent lighting).

F. Based on the appearance, divided into 2, namely direct lighting (direct lights) and indirect lights (indirect lights).

In planning a lighting system there are things - things that need to be considered to get good lighting, in the sense of fulfilling function so that eyes can see clearly and comfortably.

Darmasetiawan, Christian.et.al (in Nugraha Saputra, Edwin Widia, 2014: 4) said there are 6 criteria that influence each other in producing optimal lighting quality, namely:

A. The quantity or amount of light on a particular surface (lighting level) or the strong level of illumination

B. Light density distribution (luminance distribution)

C. Limitations for light not to dazzle the eye (limitation of glare)

D. Lighting and shadow direction (light directionality and shadows)

E. Light color and reflection color (light color and color rendering)

F. Condition and climate of space

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3. OPTIMIZING THE ROLE OF ARTIFICIAL LIGHTING IN COMMERCIAL BUILDINGS

Until now natural lighting is still needed by humans because it is a source of very much, cheap, and humans can enjoy the quality of natural light.
In the modern era today after the invention of modern lighting (electrical energy) many facilities such as offices, industries, shops and other commercial buildings, get quality light through electrical/artificial lighting. Research on the role of lighting, especially in commercial buildings has been done. This is partly due to the development of commercial buildings as a means of meeting the needs of the community.

The increasingly intense competition due to the development of commercial buildings encourages the owners to attract visitors to its commercial area which one way is to optimize the role of artificial lighting.
There are several factors that need to be considered to get the optimal lighting, among others:

3.1 Good lighting systems and designs

Lighting is an important element in interior design, especially in relation to the role of light as the viewer of form, color, shape, texture, and material objects around it. Good lighting will always be a consideration for a commercial building design to be both functionally and aesthetically, making it an attraction for consumers to purchase products.

Mitha Nurintan and Enung Rustika (2014) through their research at restaurant Brussel Springs Bandung concluded that "Good lighting, comfortable atmosphere, can be created so that the consumer consideration to buy the product". While Steffi Julia Soegandhi, Hedy C Indrani, et al (2014) who conducted research at Budget Hotel Surabaya, concluded optimization of artificial lighting system as follows: The optimization result shows that the most optimal lighting design on:

A. The lobby area is by combining general lighting system, accent, and task lighting. The interaction between functional and decorative lights can create a comfortable and inviting atmosphere.
B. Restaurant is by combining general lighting system, accent, and task lighting.
C. In the desk area, the most suitable lighting is to use task lighting as it can create a private area on each seat and provide more focused lighting.
D. At the meeting room that is by using general lighting system. The general lighting system provides good enough light spreading to illuminate the reading and writing areas above the workbench.
E. In the bedroom is by using a combination of direct lighting in the form of general, task, and accent lighting. Lighting in the bedroom should be able to create an atmosphere as comfortable as possible without any disturbance of lighting such as glare

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While Nur Laela Latifah, et.al (2013) through their research at Sunaryo Selasar Gallery concluded Localize lighting system, task lighting task lighting, and direct light distribution in accordance with the function of space as a showroom so that objects can be seen clearly as well as the texture of the work can be captured in the eye Optimal and visual comfort in space can be achieved.

3.2 Space conditions and atmosphere

In principle, interior design can not be separated from the role of lighting systems that are applied, especially artificial lighting that is easily manipulated as desired. One important part of lighting is the armature, which houses a lamp that embodies the light source. The function of the armature is to manipulate the light produced by the lamp as desired. Besides the armature design can also be used as an aesthetic element as an amplifier atmosphere / atmosphere space and design theme.

Some research results prove that the armature design can be the attraction of visitors to commercial buildings. Here are the results of research in some commercial buildings:

A. Armature design can attract visitors to come enjoy (Mitha Nurintan, Enung Rustika, 2014)

Figure 3.1. Armatur Lamp Brussels Spring Resto and Café (Mitha Nurintan, Enung Rostika, 2014)

B. Unique armature design, eyecathing. The establishment of this room (center) is a point of interest, a hanging lamp mounted using a custom made design, made of woven rattan that extends into its own beauty and adds a traditional touch (Nabella Alatas, Anwar Subkiman, 2014)

Figure 3.2. Armatur Lamp at the restaurant of Sambara Bandung restaurant (Nabella Alatas, Anwar Subkiman, 2014)

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C. General Lighting in section d implements a decorative armature of Japanese culture-shaped paper ball, as well as adequate lighting, good for eye health, as well as the element of romantic atmosphere by showing the aesthetics of the lamp (Nugraha Saputra, Edwin Widia, 2014)

Figure 3.3. Armatur Lamp in section d Café Cocorico Bandung (Nugraha Saputra, Edwin Widia, 2014)

D. Lighting decorative lighting is able to create a warm atmosphere and dramatic shadow effect so that more visitors are interested (Anastasha Oktavia et.al, 2014)

Figure 3.4. Wall treatment resembles a bird cage parlor Café Hummingbird Eatery Bandung

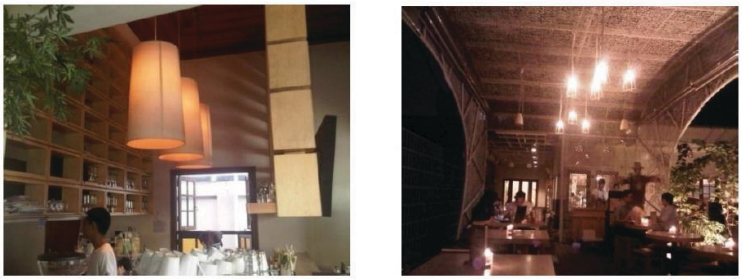

Figure 3.5. Armatur in mini bar area and outdoor area of Café Hummingbird Eatery Bandung (Anastasha Oktavia et.al, 2014)

E. Artificial lighting has the effect of making a product look more memorable. The use of spotlight lights with moderate lighting is able to provide visitors with a comfortable atmosphere; With such psychological circumstances will invite interest to buy the product (Mohamad Putra Rianto Effendy, Abraham Seno, 2014)

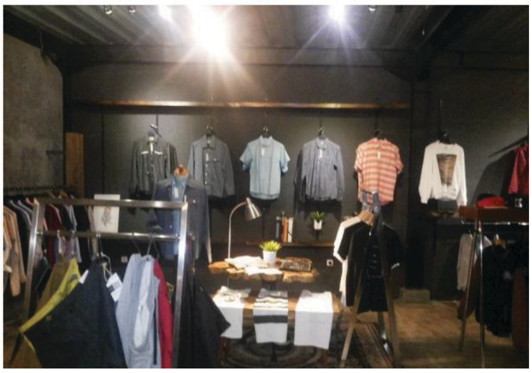

Figure 3.6. Spotlight at the Apparel Store Store Altos Kemang
(Mohamad Putra Rianto Effendy et.al, 2014)

F. Spotlight illumination (the effect of the lighting focus on the object) and wallwash (the lighting that is highlighted on the wall, the effect is evenly on the collection object) as a space shaper. Artificial lighting is not only to illuminate collectibles, but also affect the atmosphere of the room and its appearance, it implies that lighting will affect the appreciation of the gallery visitors (Muhammad Fauzi, 2015)

3.3 Color of light and reflection of color

In general, the design elements that can form the atmosphere and image in commercial buildings is divided into 2, namely the part that is not intangible (intangible) and teraga (tangible). The elements included in the category include interior lighting, walls, floors, ceilings and colors. From various studies proves that the color of light raises the perception of visitors to commercial buildings. One of the results of research conducted to see the role of artificial lighting in the formation of atmosphere and image of commercial space (case study on the interior of some thematic restorant in Bandung) concluded that: "Selection of yellowish light color will create a warm atmosphere, the use of white color from the source Neon or fluorescent light will produce a clean and bright atmosphere, while the use of light blue, red, or green will produce a fresh atmosphere (Mila Andria Savitri, 2007).

The same thing was also conveyed by Nabella Alatas and Anwar Subkiman (2014) based on their research at Sambara Bandung restaurant that "color halogen lamps create a warm and inviting impression". Research on other commercial building objects also yields the same conclusion. Jocelyn Hadianto, et.al (2013) examines the effect of artificial lighting on the visual comfort of visitors to the interior Boutiqe Banana Republic in Surabaya concludes that:

A. Lighting as an atmosphere builder can help in influencing the visitor's desire to buy the products sold

B. The predominantly yellow artificial lighting creates a pleasant, intimate atmosphere and makes the room feel more cramped.

A review of the lighting system that affects visual comfort is also performed by Nur Laela Latifah, et.al of the Sunaryo Selasar Gallery room. The study was conducted with the aim to know the visual comfort that is formed so as to know the worth and not the showroom. The visual quality review by researchers is limited to strong elements of illumination / lighting levels, color quality, and glare levels. Special color of light and reflection of the color, concluded that: "The application of artificial lighting system is good enough, because the use of white light color neutral light, so the color on the object looks like the original".

The study of artificial lighting effects for commercial buildings was also carried out by Muhammad Fauzi (2015), he observed the Jakarta textile museum and Pekalongan batik museum as the object of his research. Artificial lighting analysis described as follows: for special lighting (task lighting), the type of lights in the Jakarta textile museum using spotlight and downlight, while the Pekalongan batik museum using spotlight lamps. As for general lighting (general lighting) type of lights in the museum textile Jakarta is ideal, while the Pekalongan batik museum using the ideal light but not maximal.

From the observation and assessment of the researchers concluded that "Jakarta Textile Museum and Pekalongan Batik Museum has not been ideal on all elements - interior elements and lighting". The important researcher's recommendation is "Lighting using LEDs makes the light clearer and focuses gently on visibly improved artwork, color and depth and no harmful UV rays emitted."

Based on the results of the research - the above research, reinforces that the color of light and color reflection into one method to produce optimal lighting quality for commercial buildings.

3.4 Lighting and Shadow (Light Directionality and Shadow) Direction

Good interior design in principle can not be separated from the role of lighting systems that are applied, especially artificial lighting that is easy to manipulate. Artificial lighting properties that can be manipulated, in addition to strong light and light colors, as well as direct, indirect light direction.

In a study titled lighting review at Sambara Bandung Restaurant, Nabeela Alatas and Anwar Subkiman observed lighting system in several areas such as reception area and reservation. In this area the applied lighting is the arrangement of the recessed lights on the ceiling. The researchers concluded

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that "The warm colored downlight that is directed to the wall and sky area refracts the room light evenly and is warm and inviting".
Based on the results of the research, it can be understood that the directed lighting becomes one of the ways to produce optimum lighting quality.

3.5 Limitations for light not to dazzle the eye (Limitation of Glare)

One of the possible lighting problems in a commercial function, both technically and non-technically, is the inappropriate selection of intensity (light strength) for a type of commercial function that causes glare, and can not optimize the function of a room in a commercial area.
Research conducted by Nur Laela Latifah, et.al, 2013 at Sunaryo Selasar Gallery is less able to provide definite results because the level of glare is measured qualitatively because of the limitations of measuring instruments. The result of research is only based on the opinion and observation of the researcher, so the value of subjectivity is quite high. Based on these observations, the researchers concluded that "the glare that occurs in this gallery is not dazzled, so it does not interfere with visual comfort to visitors". Although the results of the research are less accurate, it is understood that the limitation of light is not blinding the eye into one of the lighting factors that simultaneously influence each other in producing optimal lighting quality.

4. Conclusion

4.1 Accumulation of research results in the application of artificial lighting in commercial buildings, concluded that the factors that need to be considered for optimizing the role of lighting there are 4 factors, namely:
A. Good lighting system and design
B. Spatial conditions and atmosphere
C. Light color and color reflection
D. Limitations for light not to dazzle the eye

4.2 Theoretically the factors influencing the optimization of the role of lighting are 6 factors that affect each other and can not stand alone separately because each factor depends on each other in producing optimal lighting quality. (Darmasetiawan, Christian, et.al, 1991). Factors that have not been subject to study by researchers include:
A. Light density distribution (luminance distribution)
B. The quantity or amount of light on a particular surface (lighting level)

4.3 The role of artificial lighting systems studied by each researcher focuses on different, and limited, factors that theoretically all factors affecting the optimization of the role of lighting should be assessed as a whole

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5. SUGGESTIONS

To obtain the role of artificial lighting in optimal commercial buildings, comprehensive research is needed for future researchers, including the following factors;

A. Artificial lighting systems and design are good
B. Spatial conditions and atmosphere
C. Light color and color reflection
D. Limitations for light not to dazzle the eye
E. Light density distribution
F. Quantity or amount of light on a particular surface
G. Other factors that may affect the optimization of the role of artificial lighting in commercial buildings. With comprehensive research it is possible to strengthen or even the occurrence of anomalies of existing theories.

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Study of Residential Development in Urban Fairies

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Abstract

The suburban area (pheri-urban) is a transition from the urban and rural areas that have different characteristics and attributes. This area is naturally formed due to developments and congestion that occur from the core city. One of the developmental factors is the interaction between the core cities and the peri peri urban areas. The greater the interaction that occurs the greater the development that occurs in the pheri pheri urban area. Interaction between urban and rural areas will naturally be bridged by the presence of urban pheri-urban areas. Population growth in the city center resulted in an increase in settlement requirements (serlin 2012) and that in the center of the city the developers have been unable to provide the need for settlement due to the high price of land in the city center and the limited land in the centers (Septanaya, 2012). This prompted the development of housing and settlement needs around the hinterland of the city center. With this sprinkling it will generate a snowballs effect, where with the existence of housing and settlement activities will arise ativitas and other needs such as social facilities needs, economic facilities needs, educational facilities, health facilities, office facilities etc. But in some locations there are also several factors that influence the growth of the pheri pheri, not only caused by the settlement of settlement needs from the city center but due to other factors, such as in Malang, the development of suburbs in Kedungkandang and Lowokwaru influenced by the existence of industrial activity. While the growth of suburbs in Banda Aceh (Ulee Kareng sub-district) is caused by the construction of new transportation line (Prof. Ali Hasyimi Street) thus the facilities and infrastructures or connectivity also influence the development of the periphery. In addition to the above matters more due to the activity that grows by itself there are important factors associated with the development of the periphery of government policy through Spatial Planning, where in each RTRW will be planned areas for residential areas for expansion of urban areas, in the area plan Strategic and spatial pattern will be directed towards the development of the city over the next 25 years, so that with the spatial is expected the development of the city will be directed, and easily controlled.

Keywords: Space Patterns, Settlement Areas, Pheri-Urban Zone

1. Introduction

According to Tutuko and Shen (2016), the housing development supports the needs of the community as a manifestation of the city's economic progress, while the existing housing also needs to be maintained in order to preserve the characteristics of rural and agricultural lands as a natural resource. Related to Mark and Goldberg (1986), the land use plan is a tool of urban planning to control the provision of land and buildings and also Borges, Fragoso, et al. (2010) stated that land use is the key for human activity that drives socio-economic development in rural regions.

Urban urbanization growth extends to the periphery. This is seen with the changes of land uses which occurring in two geographically distinct countries. Some areas have experienced the phenomenon of space consumption by urban development that triggered urban sprawl such as at Kecamatan Mlati in Indonesia, Vertou City, Carquefou Town and Sainte Luce Sur Loire City in France (Nurazizah, 2016).

Development of the city can also be seen from the physical appearance of the city is shown by the formation of a small suburb that has properties similar to a town called urban fringe(Bintarto, 1983). Urban fringe is the transition of land use, which is characterized by a fixed transition from agriculture to non-agriculture (Louise, 2010).

The changes of Land use is caused by the development of population and economy, and influenced by activity system, development system, and environment system (Mayasari, 2014). Population growth in urban areas has an impact on increasing the land needs. Due to limited land in urban areas, development will expand in the periphery (Baiquni, 2014). Limited land in the center of the city will certainly make the population began to choose to settle in the suburbs as an alternative settled which certainly causes spatial transformation also in the region. Spatial transformation that occurred in urban periwilly will certainly change the pattern of space utilization in the area (Mahendra, 2016).

This population increase will then lead to an increase in the community's need for the provision of housing facilities. But if the pattern of housing that was formed was not directed or random (sprawl) and the construction of housing that is less in accordance with the characteristics of the community, it will lead to the formation of unsustainable housing space (Serlin, 2012).

Currently the development of urban peri-urban areas in various metropolitan areas indicates the presence of large-scale settlements in real estate or commonly categorized as invasive formative processes. The tendency of some peri-urban areas to show the rapid growth of housing was not fully happening (Septanaya, 2012).

As we know that every development is essentially based on economic considerations, similarly, the housing development in urban fringe. Economic development in the city is rapidly increasing by the industrial sector. This development was also influenced by the urban development and housing in the surrounding area. Home owner-based housing built by the resident itself will have an impact because of unplanned by professional planners, but by owner itself. It led to be uncontrolled in terms of design and building quality. In addition, in a formal estate planning does not include planning for home owner-based housing. Various types and styles used to build their homes. They adopted the style of a residential building next to their areas. The project-based housing development and home owner-based housing are influenced by the city development. To achieving sustainable development in this area should be planned well.

2. Discussion

The implementation of Nantes Métropole and Mlati land use regulations had been exists. There is no obstacle in the implementation of the policy in Nantes Métropole, but on the contrary at Kecamatan Mlati there were still some obstacles. The implementation of urban sprawl policy control in Nantes Métropole were automatically follows what had been stipulated in the PLU. (Nurazizah, 2015).

In France spatial policy were much affect to the pattern of space and its developments, but not in Indonesia. The changes of land use in Kabupaten Aceh at Kecamatan Ulee Kareng occurred to along the new transportation route which Prof. Ali Hasyimi Street were crossed at Gampong Lambhuk, Lamteh, Ilie and Pango Raya. At the Kecamatan Banda Raya, the changes of land use were clearly visible in Gampong Mibo, Lhong Raya and Lampuot. In Kecamatan Lueng Bata the changes of land use were occurred at Gampong Batoh and Lamdom. The policy directives of suburban development in Kecamatan Lueng Bata have been touched to the fastest grown region of Gampong Batoh. However, Gampong Mibo in the Kecamatan Banda Raya and Gampong Ceurih in the Kecamatan Ulee Kareng which not included in the fringe development policy were developed rapidly, so that the development of suburbs in Kecamatan Banda Raya and Ulee Kareng runs naturally, without the direction of the policy of Banda Aceh City Government. The Changes of land uses Spatial patterns that happend now were tend to radically follows the existing road pattern (Mayasari, 2014).

Differently to the development in Magetan, the structure of town urban space has not changed much despite the construction of the ring road. Magetan District Government has built a northern ring road to reduce jamming traffics at center of the city . The existence of the ring road also attracted many parties to take some advantages of the surrounding land. Utilization of this land is estimates affecting to the shape and structure of the Magetan City space. The shape of the Magetan city is a compact city modeled with square which some parts of the city extending along the main city road. The structure of the Magetan City spaces in the form of sectoral were characterized by the city's main activities which being in the center of the city as well as following the main city road. The development area on the edge of the city were caused by an

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activities increasing in center of the city. The development that occurred did not change the shape and structure of urban space but only increased the shape of the city. The construction of the northern ring road only affects the development of some surrounding villages so that it does not directly change the shape and structure of the Magetan City space (Setiono, 2016).

Similarly at the control of land uses that happened in Kelurahan Mlati, where this region has lost 301.9 acre of agricultural area in the period 1996-2010. From the result of the image overlay, and the input-output analysis that 10.32% of the land uses in Mlati were changed over that period, resulting in the loss of 290.67 acres of agricultural area with 13.12% of which turned into settlements. However, 65.9% of the land use is still in accordance with the planning documents. This area lacks at legal aspects in the implementations of the land uses policy because the planning documents have not yet been ratified. The institutional aspect shows the consistency and availability of resources, but there are weaknesses in the implementation which related to the control and law enforcement. Investments, tax policies and illegal practice on the changes of land use are a threat to policy implementation (Eko, 2012).

The development of periphery area in Mayasari article; 2014, is influenced by the opening of new transportation line, differently with the change of city development that happened in Malang City, where the population growth rate of Malang city about 0,86% higher than East Java population growth (0,75%). Population growth in Malang city is high happening unevenly in all parts of the city. Based on the analysis that has been done, founded the difference of spatial transformation that happened in the northern peri urban area of Malang City with the area that is in the south of the city. Kecamatan Kedung kandang in the south of the city undergoes a low transformation and has a tendency to develop linear land pattern, while Kecamatan Lowokwaru undergoes a high transformation and has a concentrated at the land pattern. The differences are caused by population factors such as high population growth, activity center, accessibility, developer role and policy factor related to the pattern of spatial pattern of the area. The pattern of settlements in Kecamatan Lowokwaru has a pattern that tends to be concentric, while in Kecamatan Kedung kandang tend to be linear and spread. The existence of universities and industry became the center of growth that affected the development of spatial transformation in each area or Kecamatan (Mahendra, 2016).

There are 5 (five) factors that had influences to the growth of marginal area in Kecamatan Karanganyar as the capital of district/Kabupaten, it is about the availability of social facility factor, service factor, economic and environment factor, amenity factor, and comfort factor. According to theory, the biggest factor that affecting to the growth is the accessibility factor, not the availability factor of social facilities. This differences happens because, in

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previous theories were founded that the background of the research location is in the big cities. While this research is conducted with the location in the capital city of Karanganyar which is the third city or small urban area. In addition, the means of transportation in big cities in the previous study were cars, and the means of transportation at this research site (suburb area of Kecamatan Karanganyar) were mostly motorcycles. So it can be concluded that the factor of availability of social facilities is the biggest factor affecting the growth of peripheral areas in the third city or in small urban areas, where the means of motorcycle transportation is more widely used by its citizens (Baiquni, 2014).

Based on research from (Medina, 2013), there are 9 formulation Factors that influence the selection of residential location characteristics in Kecamatan Waru and Kecamatan Taman in accordance with the characteristics of the citizens, namely: Accessibilities (the easyness for going to the Shopping Center); Availability of Clean Water Infrastructure; Availability of Shopping Facilities (Shops); Availability of Worship Facilities (Mosque); Beautyness (cleanliness); Accessibilities (Ease Into Public Transport), Accessibilities (the easyness for going to Schooling), Availability of Electricity Network and Land / House Price.

Overall, the factors which hamper the decrease in the number of housing procurement are high land prices, the availability of vacant land for an increasingly limited housing designation and the distance from Lumpur Lapindo. While other factors such as conditions of availability of public facilities, environmental quality, spatial or government policies, the availability of public utilities and market demand does not preclude housing investment in the region in the period 2006-2010. But on the other side, were founded that non-spatial factors that significantly affect the decrease of housing procurement in Sidoarjo regency are the stability of economic conditions, the amount of the transactional cost, the long time and expensive licenses, the development impact fees And the rules or regulations in land acquisition activities that are non-binding or impartially entirely for residential developers who have a location permit (Septanaya, 2012).

3. Conclusion

Nantes Métropole and Mlati both have a set of rules governing the urban sprawl control mechanism. The planning rules for controlling urban sprawl in Nantes Métropole are SCOT and PLU. While the implementation of the policy of PLH (Local Housing Plan) is done to balance the supply of rental housing. Nantes Métropole planning rules are very effective in their area. While at Mlati, and RTRW and RDTR are planning regulations to control urban sprawl. However, in practice in the field, both areas face different obstacles and weaknesses. Mlati sub-district tended to experience greater obstacles than Nantes Métropole (Nurazizah, 2016). Land use change in Ulee sub-district, Banda Raya sub-district, Lueng Bata Kareng sub-district, Gampong Ceurih subdistrict not entirely influenced by Aceh's spatial planning policy, but more influenced by new transportation path, Prof. Ali Hasyimi Street (Mayasari, 2014).

Land use change and spatial transformation or urban development that occurred in Malang City (Kedungkandang Subdistrict and Lowokwaru Subdistrict) is more influenced by the existence of economic activity that is the activity of universities and industrial area (Mahendra, 2016). In terms of land use change and space utilization plan it is found that the percentage of land use change in accordance with plan is greater than unsuitable that is equal to 65.91% versus 34.09%. The magnitude of this percentage of nonconformity indicates a problem in the implementation of the space utilization plan. From the SWOT analysis on the implementation of the spatial plan policy, it is known that the weakness lies in the regulatory factor / aspect that is not yet approved RDTR APY of Mlati District become the Regional Regulation, so the legality of micro spatial document (RDTRK) is needed in controlling the utilization of space (Eko, 2012) .

The construction of the northern ring road only has an impact on the development of several villages around it so as not to change the shape and structure of the Magetan City space. The development of Sidorejo Village, Cepoko Village, Milangasri Village and Purwosari Village as the center of environmental activities for the surrounding villages have been in accordance with the planning, while the Village of Kentangan has not been the center of environmental services as planned (Setiono, 2016).

Commercial approach on project-based housing development emerged due to the opportunities of economic that exist in the area where the business interest has. A change was designated originally for residential. In the term of Sustainable Development, so there are several aspects that will keep the harmony between project-based housing development and home owner-based housing. To achieve harmony, it takes good coordination between the private sector, public sector, and society.

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PLANNING PREFABRICATED HOMES USING THE FASTER, BETTER, CHEAPER CONCEPT

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ABSTRACT

Prefabrication as a technology that has long been used in Europe, have a big potential to help fulfill the housing backlog in Indonesia. Project time and cost efficiency along with multiple other benefits have proven that prefabrication system is a valid alternative to the conventional construction system. One of the biggest problem delaying the implementation was the perception of construction practitioners and home buyers about the structural and visual quality, and a prefabricated home owners'satisfaction when compared to a conventionally built home owners'. Faster, Better, Cheaper concept may be the guide to planning a house building project that can be finished faster, be more cost efficient, while achieving higher user satisfaction.

Keywords: prefabrikasi, faster, better, cheaper

1. Introduction

A prefabricated home is defined as the production of the entire or parts of the house's component in another area before being transported to the project site to be assembled (Steinhardt et al., 2013). Prefabrication system in building quality, affordable homes has been widely implemented since the end of the Second World War in affected countries. (Thanoon et al., 2002).

Table 1 Median prices of conventional-built homes compared to median annual incomes
(Source: Luther, 2009; Demographia International Housing Affordability Survey, 2009)

Country (city size considered)	Affordability Index*	Median House Price	Median Household Income
Australia (Population 50,000+)	6.3	A $357,407	A $57,078
Canada (Population 100,000+)	3.7	CAN $212,398	CAN $57,682
Ireland (Population 50,000+)	5.3	£306,220	£57,960
New Zealand (Population 75,000+)	5.7	NZ $316,113	NZ $55,125
United Kingdom (Population 150,000+)	5.5	£145,300	£26,181
United States (Population 400,000+)	3.6	US $188,699	US $52,706

Affordability Index* – 'slightly unaffordable' >3.0, 'seriously unaffordable' >4.51, 'severely unaffordable' >5.1

The definition of prefabrication as discussed in this paper is a house building project with relatively high content of prefabricated using Panel, Pod, Modular or Complete (Volumetric) systems that allows executing the project with high time and cost efficiency.

Table 2 Types of prefabricated building systems
(Source: Steinhardt et al., 2013; Bell, 2010; Gibb & Isack, 2003)

Prefab. level	Type	Definition
High	**Complete**	Box-form, volumetric, completed buildings delivered to a building site
	Modular	Structural, volumetric, potentially fitted-out units delivered to site and joined together
	Pods	Volumetric pre-assembly. Fully fitted-out units connected to an existing structural frame such as bathroom or kitchen pods
	Panels	Structural, non-volumetric frame elements which can be used to create space, such as Structural Insulated Panels (SIPs), precast concrete panels and structural wooden panels
	Component sub-assembly	Precut, preassembled components such as doors, and trusses not feasible to produce on site
Low	**Materials**	Standard building materials used in onsite construction

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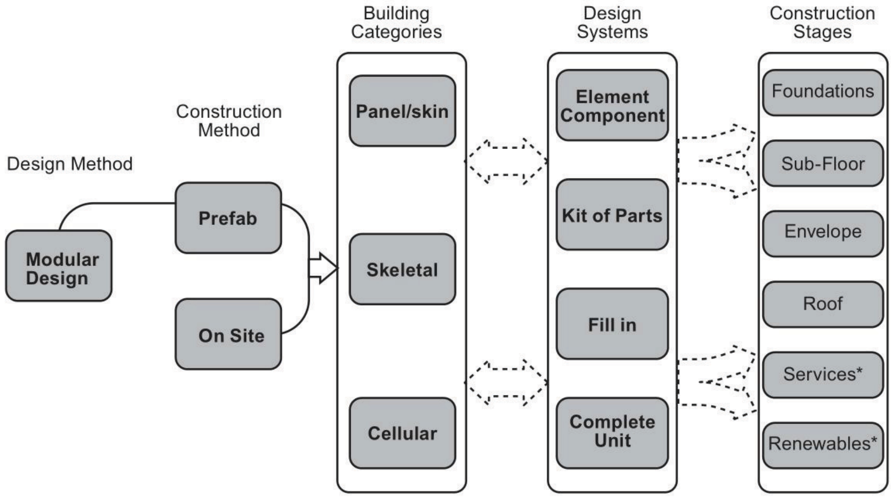

Figure 1 Categorization of prefabricated sytems
(Sumber: Luther, 2009; Luther, Morechini, and Pallot, 2007)

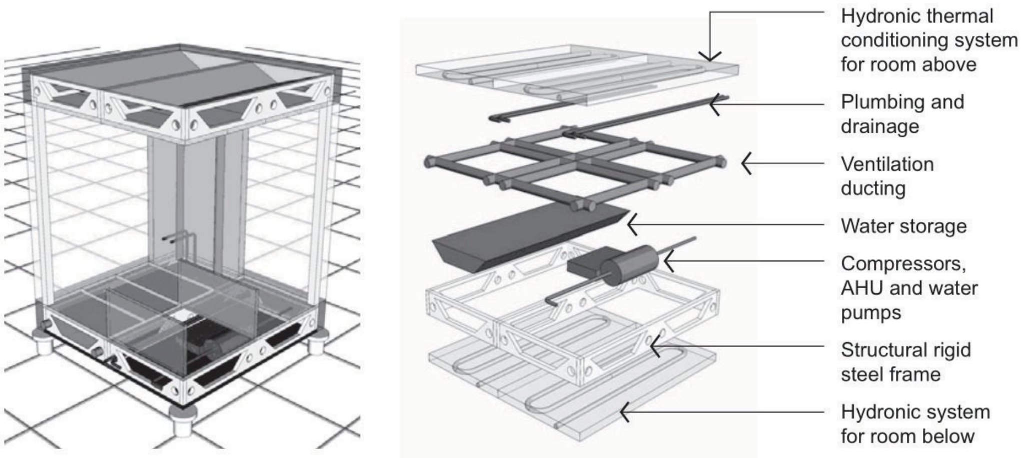

Figure 2 Volumetric prefabricated material example
(Source: Luther, 2009; Multihouse and Digitales Bauen, 2009)

Prefabrication technology in a building construction project is judged to be effective in finishing the project faster, better and cheaper in comparison to conventional construction projects (Wong et al., 2003).

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Table 3 Prefabricated system benefits when compared to the conventional system (Source: Wong et al., 2003)

Factor	Prefabrication	On-site
Quality	In a climate-controlled environment using efficient equipment operated by well-trained people.	Uncertain weather can result in less-than expected construction.
Speed	Speedy process (up to 70% less)	Time consuming. The process can be delayed by weather or scheduling conflicts.
Cost	Greater control over manufacturing results dramatically reduces the chance of cost overruns.	Uncontrollable variables such as weather and scheduling can increase the construction cost
Versatility	Less	More
Site space	Panels arrive on a flat-bed trailer and are installed with sufficient listing plants.	Bigger space is needed. In addition costly scaffolding is often necessary for installation.
Site refuse	Less waste is generated at the site.	A significant amount of waste produced and removed from the site, which often adds to cost.

Table 4 Benefit in implementing prefabrication system to the stakeholders (Source: Luther, 2009; Multihouse©)

Owner	Architect/ Engineer	Manufacturer	Government	University & TAFE	Builders
affordability fast delivery improved quality lower energy bills improved IEQ (Indoor Environmental Quality) sustainable materials integrated renewable energy systems superior fire protection increased guarantees reduced environmental impact reduced air leakage (increased thermal efficiency) greater piece-of-mind	organised building services modularisation engineered building envelope manufactured quality lightweight system improved strength to weight ratio minimised waste better environmental & energy rating greater repetition of components superior fire rating improved acoustics reduced air leakage	material optimisation structural integrity labour efficiency reduced material handling 24 hour operation less assembly time lean manufacturing improved quality quick and easy change over inventory control flexibility of manufacturing greater output component repetitions flexible labour use	meeting housing demands providing affordability regional employment showing leadership in a new industry exportability of product & skills workforce skill development spin-off industry replication of factories provides employment innovation meeting GHG environmental targets	engagement with local industry manufacturing process R&D product innovation & development develop research potential of Higher Degree Research students skills and training Aust. Research Council research grants product design innovation materials research modular design research construction innovation automation research national recognition	greater simplification of assembly cost benefits speed of assembly lightweight handling compatibility of components reduced source supplier reliability of construction quality predictability of delivery reduced environment al impacts improved OH&S traceable products offer greater quality assurance reduced air leakage improved energy performance

Although prefabrication have lots of benefit to offer, the system's popularity in UK can not be compared to the conventional house building system (Lovell, H. & Smith, S., 2010). Japan, US, Australia and other countries in Europe and Asia also experienced challenges in trying to implement prefabrication (Thanoon et al., 2002). Some challenges facing the

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implementation of prefabrication system in Malaysia have been identified by Thanoon et al. (2002) as follows:

a) Drastic fluctuations in the housing makes large initial investment unattractive to investors
b) Lack of trained workers capable of doing high precision constriction work
c) Plurality of the.construction industry made it difficult for homeowners, contractors and engineers to make informed decisions on prefabrications system at the planning stage
d) Lack of research and development of prefabrication systems that incorporate local material content.
e) Benefits of implementing prefabrication in house building projects is not well documented enough to compete with the conventional building system
f) Many projects implementing prefabrication ended up producing lower quality but higher costing buildings when compared to the conventional system.
g) Lack of government support in socializing the prefabrication system

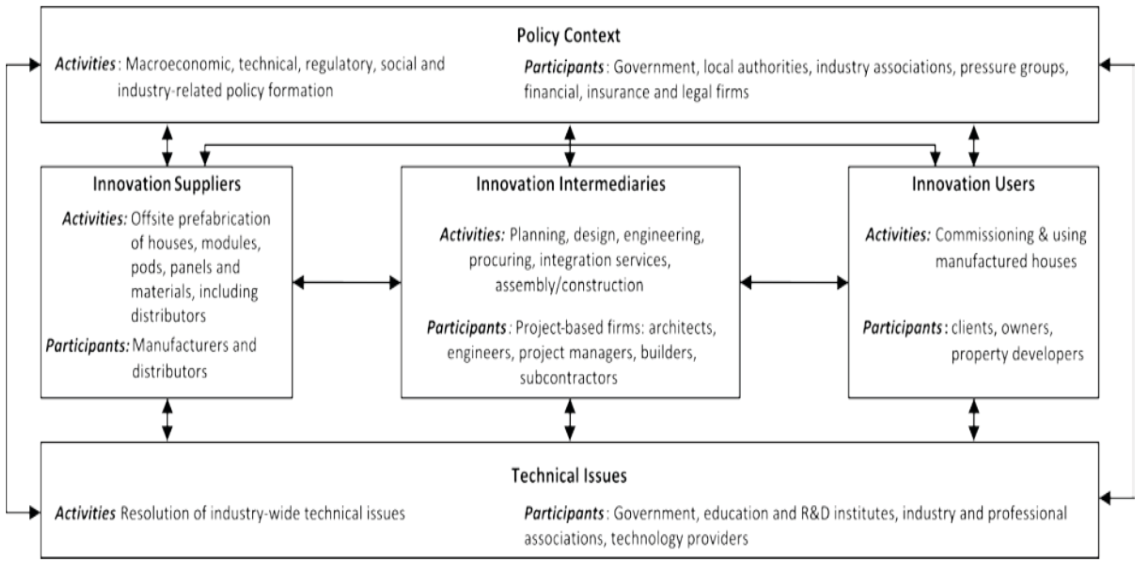

Figure 3 Innovation system of prefabricated housing
(Source: Steinhardt et al., 2013; based on Gann and Salter, 2000)

Indonesia as one of the most populous countries in the world is also facing problems in fulfilling the housing needs of its people.

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Table 5 Housing backlog in Indonesia
(Source: Website PPDPP.id, 4 Agustus 2017)

TAHUN	JUMLAH PENDUDUK (orang)	JUMLAH RUMAH TANGGA (ruta)	PERSENTASE RUMAH TANGGA MILIK (%)	JUMLAH RUMAH TANGGA MILIIK (ruta)	JUMLAH RUMAH TANGGA NON MILIK/ BACKLOG KEPEMILIKAN RUMAH (ruta)
(1)	(2) = BPS	(3) = BPS	(4) = BPS	(5) = (3) X (4)	(6) = (3) – (5)
2010	237.641.326	61.390.300	78.00	47.884.434	13.505.866
2015	255.461.700	65.503.000	82,63	54.125.129	11.377.871

The prefabrication system is one of the ways implemented in other countries to give the people good quality, affordable homes (Thanoon et al., 2002). That's why the planning criterias to maximize the potential and minimize the risk of implementing prefabrication in home building projects in Indonesia need to be researched

2. Discussion

Construction project success is usually measured in three criterias. Time, quality and cost, more commonly known as the Iron Triangle. All three criterias is considered so closely connected that it is impossible to change one without affecting the other (Atkinson, 1999).

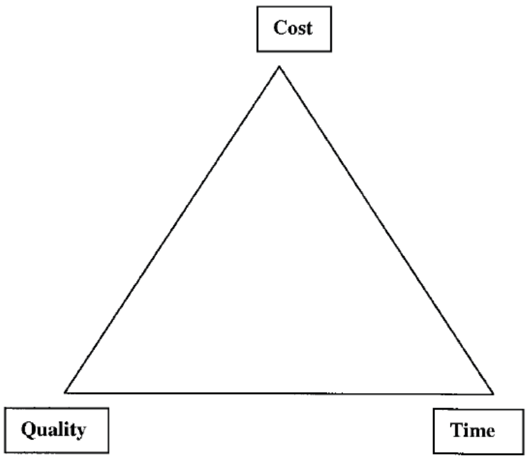

Figure 4 Iron Triangle
(Source: Atkinson, 1999)

In the 90's NASA implemented a concept very similar to Iron Triangle called "Faster, Better, Cheaper" that in essence is the attempt to gain improvements in all the above criterias. The early implementations were successful, but were followed by failures, so many expert thought that only two of the three parts of FBC can be optimized at once (El-Rawas and Menzies, 2010).

Research of NASA implementation of FBC (El-Rawas and Menzies, 2010) described FBC as follows:

- Faster is the optimization of time duration needed to finish projects.
- Better is the optimization of quality by reducing work defects.
- Cheaper is optimization of cost which is done by reducing the manhours or mandays needed to complete projects.

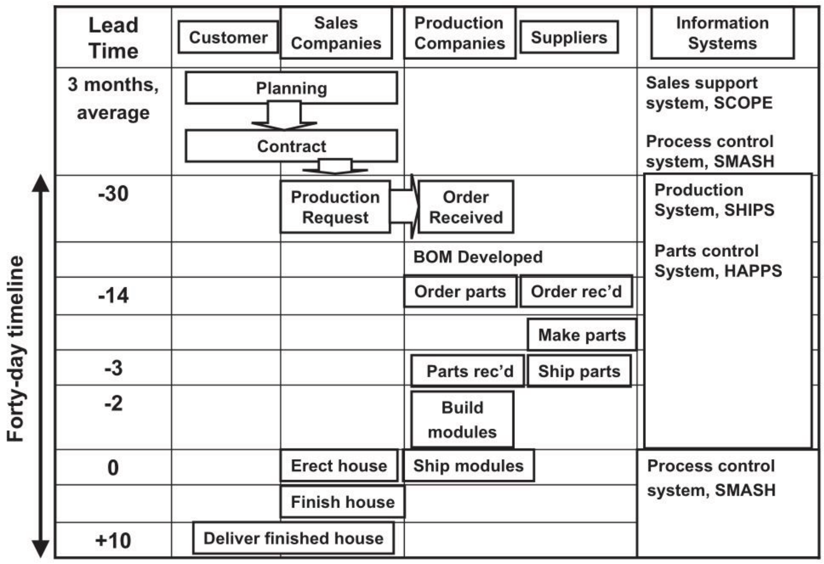

Figure 5 Typical prefabrication schedule of Sekisui House
(Source: Atkinson, 1999)

Prefabrication system as an effort to optimize a project's duration has been proven to be able to fufill the "Faster" criteria. When compared to equal conventional projects, well planned and well controlled prefabrication projects can save up to 70% of duration (Wong et al., 2003). To reach such savings, effects of the material supply chain on the project duration must be considered. Good coordination and communication between all the parties involved to keep the supply chain working efficiently, is a vital requirement in implementing the prefabrication system in a project (Steinhardt et al., 2013).

Prefabrication system as an effort to optimize a project's budget has also been proven to be able to fufill the "Cheaper" criteria. With good planning and control, the cost to finish the project can be more accurately predicted and cost overrun can be minimized (Wong et al., 2003). One of the main financial challenges facing prefabrication housing projects is the relatively large initial investment, limiting small and medium sized businesses ability to compete with larger companies (Steinhardt et al., 2013).

Some common problems affecting the project process and preventing the effort to reach time and cost efficiency (Steinhardt et al., 2013) areas follows:

a) Project planning that is too flexible and disorderly, preventing the implementation of prefabrication system
b) Difficulty in modifying parts of the building already installed at the project site and lack of design choices
c) Disruption of project flow due to the lack of financial and knowledge capital. This problem is especially troublesome to small and medium business.
d) More complex process, bigger design load, error correcting process that is more time consuming and smaller construction tolerance. Pioneer companies in prefabrication are especially vulnerable to these problems.
e) Difficulty in coordinating with subcontractors that are unknowledgable and untrained in prefabrication system.
f) Management problems arising from conflicts between traditional and prefabrication methods.

Table 6 SWOT analysis on implementing modern construction systems in Australia (Source: Luther, 2009)

Modular Industrialisation & Automation in Housing	
Strength	Affordability, quality, energy, waste reduction, environmental reduction. Quantity of product, on-time delivery
Weakness	Perception of singular non-flexible product, minimal diversity, selective material & tooling for it.
Opportunity	Spin-off business, skill training, exportability, innovation in products, designs & manufacturing
Threat	Non-flexibility in machine use and tooling. Mono use of material selection and cost increases. Government regulations and codes to new innovations and systems.

Unlike "Faster" and "Cheaper" which are quantitative concepts, the performance of prefabrication system to fulfill "Better" as a qualitative concept is much harder to prove. Some things that affect the market's perception to prefabricated housing quality (Steinhardt et al., 2013) are as follows:

a) The decision to buy a home is very tightly connected to the consumer's feeling
b) In the US, Europe, Australia and Asia, prefabricated housing bear a stigma as cheap and low quality products due to similarities to semipermanent housing.
c) Prefabricated housing is perceived to lower the image of the occupants

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d) The effect on the house's resale value
e) The homeowners does not want to be restricted in their choice to renovate their own homes.

Figure 6 dan 7 Volumetric prefabricated houses
(Source: Luther, 2009; Modscape®, Prebuilt®)

To anticipate the homeowners' wishes to modify the homes' design to their own specifications, housing contractor companies in Japan (Barlow, J., Ozaki, R., 2005) have implemented the following steps:

a) Every company on average have up to 300 standard design alternatives for the buyers to choose throughout the price ranges. In comparison. UK companies in average only have 30 unmodifiable standard design alternatives. Sekisui House company even offered 22 building models, each allowing over 50 alternative plans. The buyers may choose between timber or steel frame, numerous external finishes, and 3 interior finishing style (Japanese, Western, and hybrid). Buyers can also choose multiple types of interior fittings and fixtures. There is very little possibility of Sekisui House producing two 100% identical houses.

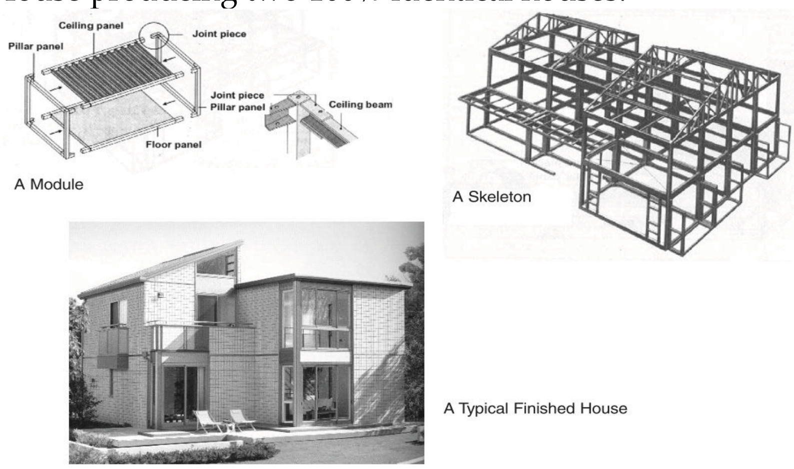

Figure 8 A Sekisui House home
(Source: Hall, Target Magazine, Second Issue 2008, www.ame.org)

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Figure 9 and 10 Volumetric module's production line in Sekisui House
(Source: Hall, Target Magazine, Second Issue 2008, www.ame.org)

Figure 11 Volumetric module stock in Sekisui House
(Source: Hall, Target Magazine, Second Issue 2008, www.ame.org)

Figure 12 Transporting a volumetric module of Sekisui House
(Source: Hall, Target Magazine, Second Issue 2008, www.ame.org)

b) The companies worked with suppliers of bathroom, storage and lighting fixtures to offer various models of standard interior designs. The catalogs are usually updated every 6 months. Some standard fittings like

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ventilation systems can also be replaced by the buyers' choice at a premium.

c) Some companies offer renovating services and repair services for damaged housing after natural disaster like hurricanes, floodings and earthquakes.
d) Big companies conduct thorough post-occupancy evaluations regularly to gauge and keep customers' satisfaction.

3. Conclusion

By referring to the success of the companies that used prefabrication system in housing construction projects, we can surmise that the meaning of "Better" that has the biggest influence on the successful implementation of prefabrication system, is the buyers' satisfaction of their purchases. Some actions that can be undertaken to ensure that are:

a) Providing plenty of alternatives of building and plan design
b) Regular updates to anticipate public trends
c) Providing well trained people to help buyers in mixing and matching the numerous alternatives of building, interior and fittings/fixtures design
d) Providing show houses to convince buyers of the quality and esthetics of prefabricated buildings
e) Providng after sales services such as renovation, modification and repair services.

Other than that, the project initiation stage needs to include feasibility studies to identify the characteristics that affect the buyers' perception of the esthetics value and building quality of homes, since the concept "Better" may hold different meanings to construction practitioners and home buyers. An effective quality planning may then be undertaken, helping to popularize the usage of prefabrication system in housing construction projects.

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Challenges of Green Open Space (Its Roles, Forms and Functions) in the Era of Sustainable Development Goals

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Abstract

The acceleration of urban development in Indonesia is faced on increasingly diverse problems, especially with the conversion of land and Green Open Space (GOS) into built areas. Sustainable Development Goals (SDGs) in point 11 state about Sustainable Cities And Communities (City and Community Sustainability that build inclusive, quality, secure, resilient and sustainable cities and settlements). Therefore, affordability of access to green open space and the aspect of environmental damage is important to be observed together. Indonesian Law no. 26 of 2007 mandates 30% of the urban area tangible green space. The high intensity of changes in the use of green open space and urban land also inhibits the fulfillment of the mandate of the Act. It turns into bad implications for the environment and decreased quality of life. The integration of GOS in Urban Planning and Design in SDGs era in national scale, Government Regulation, Ministerial Regulation, provincial scale, as well as City/County Town scale in a comprehensive and sustainable manner is required, in order to maintain and improve the quality of the environment through the provision of adequate green open space. This paper is aimed to identify the roles, forms and functions of GOS in order to describe its implementation challenges.

Keywords: Green Open Space, Integrated Design of Green Open Space, Sustainable City

1. INTRODUCTION

Physical urban development tends to consume the Green Open Space (GOS) and make it as built area (Frankie Chiarly R., 2015). Urban development should incorporate environmental elements as a basis for consideration in the development of natural resources and the environment as a strategy of Sustainable Development Goals (SDGs) (Margareta MS., 2015). The quantity and quality of green open space is currently experiencing a very significant decrease and resulted in decreasing urban environmental quality affecting the various joints of urban life such as frequent flooding, increasing air pollution, and decreasing of people's productivity due to the limited space available for social interaction (Regulation of Public Works/Permen PU Number .05 Year 2008). In harmony with this (Minister of Home Affairs Regulation/Permendagri Number .01 Year 2007) that urban and urban development and growth accompanied by rapid land conversion, has created environmental damage that can degrade the carrying capacity of land in sustaining community life in urban areas, so efforts are needed to maintain and improve environmental quality through adequate provision of green open space.

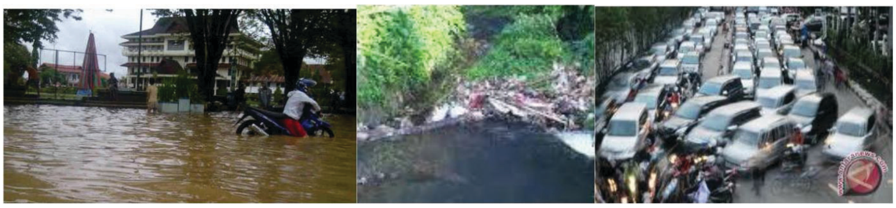

Figure 1: Flooding, Air Pollution, Water Pollution, Congestion is a classic urban problem. Urban improves the quality of the environment through adequate GOS provision.
Source : (Hendra R,2015)

(Law no. 26 Year 2007) on Spatial Planning emphatically mandates 30% of the city area of Green Open Space (GOS), 20% public GOS and 10% private GOS. The allocation of 30% of GOS is stipulated in the Regional Regulations (Regulation of Regions) on Spatial Plans of City and Spatial Plan of Regency. In the application comes the concept of 8 green city attributes, one of them, namely point No.3. Availability of Green Open Space (P2KH Activity Manual, 2017). These attributes to overcome environmental problems and global warming that have implications for urban settlement issues. This is in line with Margaret MS. (2015) the need to formulate policies for the management and development of green space to be able to improve the quality of urban life.

2. DISCUSSION

In this article discuss the journals on Implementation of GOS provision include: Integrated concepts of watershed development, accuracy of GOS location selection, Integrated GOS pedestrian system, green/ecological infrastructure development concept, basic concept of road corridor arrangement, basic concept of arrangement Vacant land within the city and the basic concept of arrangement of green open space in high-density settlements, as well as the concept of Decent City Children (KLA).

2.1. DEFINITION, FUNCTION AND THE RTH OF THE GOS

Definition of green open space (Regulation of Minister of Public Works No. 05 of 2008) GOS Urban area is part of open space or urban area filled with plants and plants to support ecological, social, cultural, economic and aesthetic benefits. Meanwhile, according to Dwi Suryadi N. and Ernady S. (2013) is a city with equilibrium ecosystem conditions so that its functions and benefits are sustainable. Similarly, Ingeried L.M. and Esli D.T. (2015) mentions the ongoing arrangement of green open space is a city that maintains the character of nature, the availability of clean water, fresh air, a comfortable microclimate, a place of recreation for the people, and diverse biodiversity. Similarly, Natalia Tanan and

Gede Budi S. (2015) conception of GOS development is interpreted as an effort to preserve the environment by developing a part of the city's environment into natural green fields in order to create cohesiveness between the natural living environment itself Human and artificial environment.

GOS, as revealed by Nadia Imansari and Parfi Khadiyanta (2015) has functions related to ecological, social, cultural and aesthetic aspects. The role of green space as a shade and lungs of the city as well as a center of interaction and community communication and adequate recreational facilities. According to Margareta MS (2015) GOS function is as the lungs of the city, which is one aspect of the ongoing recycling function, between carbon dioxide (CO2) and oxygen (O2) gases photosynthesis, especially in foliage. This green system works like a ventilation in the house/building.

The GOS role According to Nadia Imansari, Parfi Khadiyanta. (2015) The urban GOS has an ecological role such as climate control, as a producer of oxygen, noise absorbers and also as a Visual Control by blocking the sun's glare or reflected light. The role of green space is socially cultural as a space of communication and social interaction for the community, recreational facilities, sports, education, even as a culinary center. GOS aesthetic role among them increase comfort, beautify the city environment, and stimulate creativity and productivity of citizens of the city.

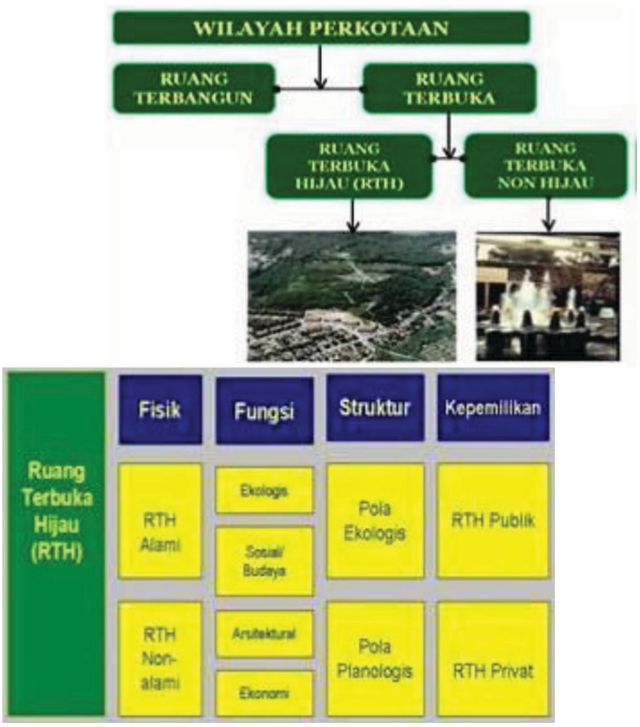

Figure 2: Physical Green Space Position, Function, Structure and Ownership in urban areas. Source: (John D.E., Margaretha Maria S., 2013)

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The supply of green open space is part of global warming mitigation, so it is seen as one of the efforts to handle greenhouse gas emissions, especially CO2, which is most implemented compared to other methods (Frankie Chiarly R., 2015).

2.2. BENCHMARKING OF GOS AVAILABILITY AND EXISTENCE

Efforts related to the improvement of the function of urban forest and urban parks as public open space is very necessary, by providing adequate facilities in addition to conducting more intensive supervision and management in maintaining the condition of public green space in order to always be in good condition (Nadia Imansari, Parfi Khadiyanta., 2015) . The presence of green space that is well managed with planned greening in accordance with the function and aesthetics of the city will be very influential in realizing a good city, harmonious, comfortable, beautiful and supportive of community life and serves as a means to create cleanliness, health, harmony and beauty of the environment.

Park City is a functioning social and aesthetic open space as a means of recreational activities, education or other activities, at the city level. Park city is aimed to serve residents of a city or part of the city area. The park serves a minimum of 480,000 residents with a minimum standard of 0.3 m2 per city dweller. With a minimum park area of 144,000 m2. This park can be shaped as green space (green field) equipped with recreational facilities and sports, and sports complex with a minimum of 90% -90% GOS. All these facilities are open to the public. A city park can create a Sense Of Human a Landmark, and become a community gathering point. In addition, the city park can also increase the value of the property and become the driver of the implementation of development. Park city should be an important component of successful city development or city (Nadia Imansari., Parfi Khadiyanta., 2015).

Figure 3: Aerial photographs and visual hue of Jl.Manyar nursery in Surabaya with private management will be better? Private Participation PT.SIP to be a manager of the municipal government that has the potential to become a conservation area that has ecological, educational, aesthetic, and recreational value.
Source: (Wanda W.C., I Ketut C., 2010)

Forest City ideally has an area in a 2500 m2 mininal stretch. The purpose of city forest management is to support the city environment that serves to

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improve and maintain the microclimate and aesthetic value, absorb water, create balance and harmony of the physical environment of the city, and support the conservation and protection of biodiversity. The urban forest structure can consist of two-tiered city forest, which only has tree planting communities and grasses or storied urban forests that have plant communities in addition to trees and grasses, there are also bushes and ground cover with irregular spacing (Nadia Imansari., Parfi Khadiyanta., 2015).

Figure 4: Surabaya City Forest incorporated with Seed Garden jl. Manyar has a higher vegetation density to strengthen its character, as well as a recreational park also functions as a city lung-patu
Source: (Wanda W.C., I Ketut C., 2010)

Fulfillment of green areas strived as a medium of alignment of the trend of degradation of clean and healthy air. With the availability of adequate green open space is expected to reduce the level of urban air pollution, as well as a rainwater absorption media that ultimately serves as a media to prevent flood hazard. Implementation of this program is done through the preparation of conservation area plan and control over the implementation of land use and critical land conservation. (Noor Hamidah., Tatau W.G., Mahdi S., 2015).

The proportion of urban green space requirement in one region may be different from other areas even in one urban area, thus further study is needed to formulate more integrated method of calculation based on population (Widyastri A.R., Budi F., Agus R.S., 2012).

2.3. GUIDELINES OF GOS PLANNING

GOS is a container that can accommodate certain activities / activities of the environmental residents either individually or in groups (Margareta MS., 2015). According to him, green city attributes are components that must be applied to the green space, so that inclusive and comprehensive can provide benefits as a public space that is optimal enough for a large enough community. GOS currently has an increasingly complex role and functionality. There are several opinions related to the role and function.

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Figure 5: Arrangement of Sampang Area Ex.Pasar Kota Semarang which is converted to RTH. Youth Park Concept Park, Main Plaza, Pedestrian Lane, Gazebo, Shelter, Bicycle Parking Area, Service Building, Toilet, Sculpture and Fountain, and Solar Cell for Pedestrian, Pedestrian Lighting and WIFI Facilities.
Source: (Margareta MS, 2015)

According to Amiany., Elis S.R., Rony S.S., (2012) there are 4 (four) types of GOS based on its ownership consisting:

1. GOS yard such as (yard of houses, office yard, shops, place of business and roof garden
building).

Figure 6: RTH House of the house that is arranged and beautiful with children's play facilities
Source: (Dwi D, 2012)

2. GOS parks and urban forest such as neighbourhood park (Taman Rukun Tetangga,
Taman Rukun Warga, Taman Kelurahan, Kecamatan Park, City Park, City Forest).

Figure 7: Cibeunying Park is a Garden Space in Bandung City that is still awake
Source: (Dwi SN., Ernady S, 2013)

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3. GOS green line roads are road and median islands roads, pedestrian paths and spaces Under the overpass.

Figure 8: Cikapayang Strip Park is Green Ground RTH in Bandung Wetan by utilizing space under overpass as visual softener. This is an alternative solution to the limitations of urban green space provision.
Source: (Dwi SN., Ernady S, 2013)

4. GOS of certain functions is GOS railway boundary, green grid of electricity grid High tide,
GOS boundary river, GOS boundary coast, GOS security Raw water / springs, and funeral GOS.

According to Margareta MS. (2015) the types of GOS are distinguished as follows:

1. Open space in living environment : (a.) Open Space As a source of production such as forestry, agriculture, animal husbandry, mineral production and others, (b.) Open space as a protection against natural and human resources, for example Nature reserves such as forests, marine / water life, cultural and historic areas.(c.) Open space for health, well-being and comfort, eg garden environment, city parks and others.
2. Open space viewed from activities divided into: (a.) Active open space is an open space that invites elements of activity In it, such as plaza, sports field, playground and others. (b.) Passive open space is an open space in which there is no activity Humans among others; Greening / gardening as a source of environmental air.

Figure 9: The Garden Facade of Taman Sampangan Semarang applies the concept of Green City Development Program (P2KH). The orientation of the Garden overlooks the Kaligarang River (Waterfront), by placing the Main Plaza as the "Ending Destination"
Source: (Margareta MS, 2015)

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3. . Open space in terms of its shape is divided into: (a.) Elongated shape; Open space on the elongated shape is generally only has boundaries on its side, such as roads, rivers and others. (b.) Shaped Sticking; Open space shaped sticking out in general that Has boundaries around it, eg field, roundabout and others.
4. Open space viewed from its nature can be divided into: (a.) Open space environment ie open space contained in an environment and its general nature. (b.) Open space by building walls and courtyard building yard General and personal in accordance with its building functions.

Open space is formed because it is influenced by several factors both by the natural environment itself and the artificial environment. These factors are elements that can influence the space through the expression of its elemental properties to some extent. The GOS elements are:

1. Hard Materials such as buildings, fences, pedestrian, and garden furniture
2. Soft Material such as plants, water and so on.

Figure 10: Fence, pedestrian, furniture, and Gazebo Facility, Shelter in Taman Sampangan. The existence of the Park is integrated with the River, where the River Sempadan is utilized as a City Park, which in addition serves as the Utilization of Green Open Space (GOS) Sempadan Sungai, also useful as Public Open Space
Source: (Margareta MS, 2015)

Public spaces by their nature are divided into:

1. Common enclosed space, located within the building.
2. Public open space, located outside the building, used by everyone and Multifunctional (street, pedestrian, environmental park, plaza, sports field, park City, recreation park, etc.
3. Special open space, utilized for limited activities and special needs (Residential garden, ceremonial field park, airfield area, area Military training) (Margareta MS., 2015)

Based on the layout of the GOS City can be prostrate:

1. Coastal Open Space,
2. River Flood Plain,
3. Freeway open-air space (Greenways), and
4. Open space safety area of accident danger at the end of the runway air.

GOS in a city includes:

1. GOS Macro, such as agricultural area, fishery, protection forest, urban forest and Airport security base.

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2. GOS Medium, such as the area of the park (City Park), sports facilities, public cemetery.
3. GOS Micro, ie open land that exist in every residential area Provided in public facilities such as a play ground (Play Ground), garden Environment (Community Park), and sports field. (Margareta MS., 2015)

Figure 11: Micro GOS in the form of Play Ground and Community Park. Taman Sampangan Semarang functioning Economically Rekreatif and Social for the community around which is dominated by Housing and Settlement Area
Source: (Margareta MS, 2015)

2.4. IMPLEMENTATION OF GOS PLANNING

Development of Kahayan River Basin The city of Palangkaraya into GOS is one of the alternative development of nature tourism and environmental conservation of the city that has a natural potential that is very supportive with the richness of the green area. The concept of integrated area planning is expected to balance between the alignment of vegetation and the existence of environmental ecology with the development of urban infrastructure, so that will achieve the goal of applying the concept of sustainable development. (Noor Hamidah., Tatau W.G., Mahdi S., 2015)

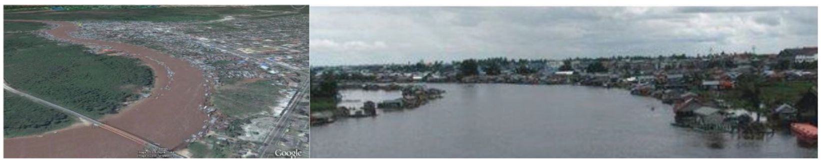

Figure 12: Preservation Efforts of Kahayan River Basin Palangkaraya into GOS The ability of the river to change the landscape, so there are differences in the characteristic areas of the river, and can support tourism activities by displaying a recreational area relying on nature tourism with the concept of planning GOS
Source: (Noor h., Tatau wg., Mahdi s., 2015)

The appropriate location of the green space will determine the optimum green spatial arrangement in urban areas. Green open space planning is attempted to take into account the distribution or location of green open space. The determination of the suitability of the location of public open space development in sub-district of Palu west and east hammer is based on slope, land use, population density, accessibility and supporting facilities (Andi Chairul A., 2015).

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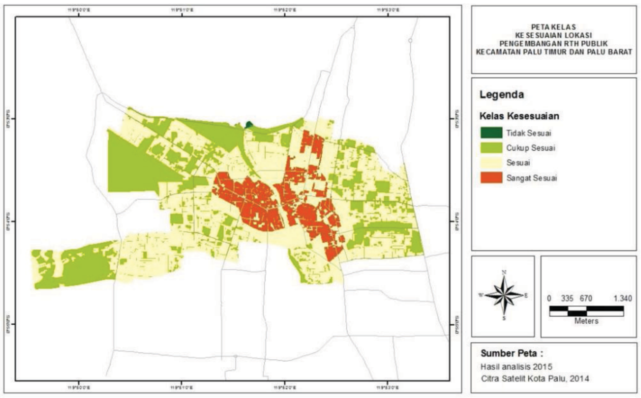

Figure 13: Conformity Determination of the green space location also determines the optimum GOS. Geographic Information System Method (GIS). A system that organizes devices and data, and can utilize storage systems, processing, and data analysis simultaneously, so that information can be obtained related to spatial or spatial aspects
Source: (Andi Chairul A., 2015)

The presence of green space integrated with pedestrian paths creates a micro-environment that makes pedestrians feel comfortable. In addition to facilitating the movement of pedestrians, the pedestrian path is also the attraction of the city to visit kesuatu part of the area within the area. This facility allows for passive and active social interaction and provides opportunities for recreation. Comfort for pedestrians is formed because the GOS balances temperatures, humidity, vegetation and vehicle emissions, including noise and an annoying visual environment (Natalia Tanan., Gede Budi S., 2015).

Figure 14: Integrated pedestrian path with green space at Jakarta park. The allocation of space required for the development of walking modes can reduce the need for space for its development in urban areas
Source: (Natalia T., Gede BS., 2015)

Strategies for development of green open space based on green / ecological infrastructure must be integrated with the Spatial Plan (RTRW) and reflected in the structure and spatial pattern. So the urban green space network with various types and functions into infrastructure systems for the balance of urban ecosystems (Ingeried L.M., Esli D.T., 2015).

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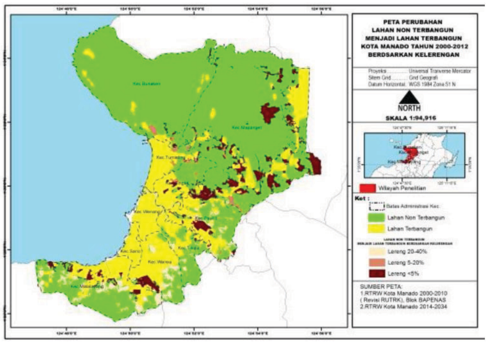

Figure 15: Integrated green space-based GOS structure and pattern with RTRW Manado City as the main component of space formation.
Source: (Ingeried LM., Esli DK., 2015)

The basic concept of arrangement of porong road corridor is to create green open space of functional road corridor in improving micro climate, reducing noise and pollution, comfortable and esthetic. Porong road corridor conceptualized to be a green line that can provide comfort to users with the provision of vehicle circulation paths and pedestrian circulation path. By utilizing the vacant land around the track, it will be conceptualized an environmental park with the function of reducing the negative impact of traffic direction on the environment, improving the aesthetic quality and can be functioned as a Rest Area for users of the track and the surrounding community. (Mochamad IF., AAG.Agung R ., 2014)

Figure 16: The 'Functional' concept is applied to the GOSarrangement of the Porong Highway Corridor. Into a green channel that can provide comfort to users with the provision of vehicle circulation paths and pedestrian circulation paths.dihadirkan a characteristic or landmark on any landscaping materials that can explain or describe the identity of a region.
Source: (Mochamad IF., AAG.Agung R., 2014)

Utilization of vacant land within the city is an effort to improve and utilize an area that is not optimal or in the area of the city that is not strategic

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towards the better and orderly, this is an effort to improve the quality of RTH (Hibnu M., 2013)

Figure 17: Utilization of vacant land to RTH in Taman Terantang Sukamara Tangerang. Garden facilities with city vegetation / forest, plaza, sculpture, water elements, parking spaces, street vendors (street vendors), jogging tracks, and pedestrian paths.
Source: (Hibnu M .., 2013)

The concept of GOS development in high density settlements in Human Settlement is directed towards achieving the Nature and Society (community) elements in each of the GOS typologies that are formed. One form of GOS development concept is done by optimizing the land through planting media in the form of potted plants (Indah Susilowati., Nurini., 2013)

Figure 18: The concept of green open space arrangement in the densely populated area of Surakarta optimizes the land through planting media of plant pots
Source: (Indah Susilowati., Nurini., 2013)

The paradigm of urban spatial development towards the concept of Decent City Children (KLA) should be considered in the spatial development policy. (Dhini D., 2012)

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Figure 19: Taman Ganesha Bandung City is expected to apply the concept of Decent City Children. This park actually has the potential to be used by all ages, but the physical elements that exist, does not allow children's activities to develop according to age category. Children who come in this park, just accompany parents of morning sports
Source: (Dhini D., 2012)

3. CONCLUSION

Alternative efforts to maintain and improve the quality of the environment through the provision of adequate green open space can be: Accuracy of the concept of structuring River Basin area by utilizing the ecology of the area as an GOS assets and tourist areas. Accurate selection of zonning taking into account the distribution and location of green space. The integrated pedestrian path system with GOS creates a micro-environment that makes pedestrians feel comfortable. The concept of green space-based green / ecological infrastructure is reflected in its structure, pattern, type and function into an infrastructure system for the balance of urban ecosystems. The basic concept of structuring the "*functional*" road corridor in improving microclimate, reducing noise and pollution, comfortable and esthetic. The basic concept of the arrangement of vacant land within the city by utilizing an area that is not optimal or in the area within the city that is not strategic towards the better and orderly. The basic concept of arrangement of green open space in high-density settlements by optimizing the land through planting media in the form of plant pots. As well as the concept of Decent City Children (KLA) with specific organisms with specific characters for child development. The above is the basis for consideration in the design of integrated and sustainable urban GOS planning and design, in accordance with the Green Open Space Challenges, Roles, Form and Functions in Sustainable Development Goals (SDGs).

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IDENTIFICATION OF THE PHILOSOPHY, TRADITIONS AND THE CONCEPT OF ISLAMIC EDUCATION AND ITS IMPLEMENTATION IN THE DESIGN OF ARCHITECTURE

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Abstract

Education in Islam plays an important role in the progress of a nation. Through basic education the transformation of philosophy and tradition, Islam developed into a concept in life. The concept of education in Indonesia is supposed to accommodate the values of Islam that became the basis of the life of most of the Indonesian nation. The main tradition of education in Islam Al-Qur'an and Al-Hadith emphasizes on akhlaqul Karimah which originated from informal education from mosque activities or surau and in its development became a pesantren. In its development in line with the advancement of the era and the demands of the government curriculum, pesantren developed into a formal educational institution in the form of madrassas that adhered to the philosophy, traditions and concepts of Islamic education. Implementation of these developments is the demand of educational activities based on general education and religion that have different characteristics to the needs of specific facilities architecturally. For example is the need for space for teaching the science of religion more than just a mosque. This paper aims to explore the philosophy, traditions and concepts of Islamic education through the study of a number of references that are expected to contribute to the sustainability of Islamic values in education in Indonesia. This paper also tries to link it to several examples of the implementation of Islamic values in spatial and architectural concepts.

Keywords: Islamic Education Philosophy, Islamic Education Tradition, Islamic Education Concept, Islamic Architecture Design

1. INTRODUCTION

Architecture is not unfamiliar in the world of Islam, Islam other than religion can also form a culture. Islamic culture is formed on a regional basis and also international and it is formed and continue to adapt to stay don't stray from the teachings and tuntunannya i.e. the Qur'an and Hadith. Two main elements are also developed in accordance with the circumstances of the times so that consensus arose and Qiyas-oriented local culture and blend in because Islam is a religion that teaches.

According to (Akbar S. Ahmed, 1999: 44) in (Mashuri, 2007) In the context of travelling Muslims, since Islam was first delivered by the

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Prophet Muhammad. to mankind is religion that emphasizes the significance of science, both theoretically as well as applicable. In normative, Qur'an and Hadith not only confirms the importance of the search for Science in order to earthly life achievements and the hereafter, but also gives a very high appreciation toward those who practiced the science of knowledge for the benefit of mankind. This religious the behavior of the messages appear clearly on the first letter of the Quran which was revealed to the Prophet. who commanded the man to seek knowledge through reading widely. Practically, the Muslims have implemented the iqra' commands in the form of education since the time of Islamic prophet Muhammad. until this immature. In the process of the development of Islamic education, Muslims never achieve the progress of science and culture, is during the reign of the Abbasid dynasty years 750-1258 M.

On the further development in the 19th and 20th, Islam is growing in all aspects. Development of Islam in Indonesia is starting to feels in the year 1900 to the year 1930, starting with the establishment jam'iyah of the Muhammadiyah and jam'iyah of Nahdlatul Ulama. The basis of the establishment of the second jam'iyah is the struggle for the independence of Indonesia with the intellectual life of the nation and State. Furthermore with the changing times, the two rapidly growing and the jam'iyah be great especially because of the importance of developing education.

One of the most prominent figures in the development of the educational world is Hasyim Ash'ari from jam'iyah of Nahdlatul Ulama. According to (As'ad, 2010) Through the activities of education at pesantren Tebu Ireng, he initiated a series of educational renewal in an effort to provide the cornerstone of the Foundation for the modernization of the institutional system of the Indonesia Islamic education in the early 20th century, its influence very strong coloring pattern of development and the institutional system of Islamic education, especially boarding school, in the homeland even today.

Thus the need for the identification of the starting of the tradition right up to his philosophy that will hopefully be able to find the educational concept and the architectural design of the building as the implementation of education.

2. DISCUSSION

2.1. HISTORY, PHILOSOPHY AND TRADITIONS OF ISLAMIC EDUCATION

According to (Mashuri, 2007), the transformation of Islamic education in the early period, i.e. from the time of the Prophet Muhammad by the Abbasids. In the period of Mahmud, Islamic

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educational activities take place in the form of the simple, centered on the citizen's best friend. In the era of Khulafa'ar-Rasyidun, the mosque was used for educational activities. In the period of the Abbasid Caliphs, as the needs of Muslims in Islamic education developed, traditional Islamic institutions converted into madrasah from many levels of their own.

According to (Ahmad Syalabi, 1960: 33) in (Mashuri, 2007) In Islamic education, once known to many institutions and educational center with the type, level, and its nature. Observer Islamic education such as; Ahmad Syalabi, Mohammed al-Atiyyah Abrasyi, Hisham Nasyabe, Mehdi Nakosten, George Makdisi Syyed Nasr Hossen, and mentions the Islamic educational institutions as follows: *Kuttab, Qushur, Warraqain, Hawanit al-Zawiyah, Trench (Ribat), Manazil al-' Ulama, Salunat al-Adabiyah, Halaqah, Bimaristan, Maktabat wa al-Mustasyfayat Mosque, wa al-jaami ', and the madrasa*. Ahmad Syalabi and George Makdisi classifying the institutions into two, namely; a group of pre and post Islamic madrasah.

Further, social movements in modern Islamic society in Indonesia expressed (Wasito, 2016), the development of the modernization of the Islamic movements that occur in Indonesia began pre-independence until the independence. Among modern social movements of Islam in indonesia include the movement of Islamic States, the movement Muhammadiyyah, and movement Nahdlatul Ulama. Islam emerged in the 6 M then went into Indonesia on 7th century a.d. and began to develop during 13 m. development of Islam in Indonesia almost throughout the islands of Indonesia. Shove off from the reality of Islam, many historical relics of Islamic style di Indonesia yang sangat beraneka ragam. Relics it include, places of worship, the Palace, tombstones, calligraphy, sculpture, performance art, traditions, and literary works.

While according to (Mursyid, 2015) results of the study the sociological viewpoints to the existence of the leader of the boarding schools, the power of cultural societies, as well as how the processes of implementatif kedunya to form the character of the students/learners who seek Islamic Science in it. In addition, this paper will also describe the general trend pattern Muslims see the differences of religion and religious schools in Islam. Concession and related conception that view, at this writing, will kontekskan using Rational analysis researcher Choices Theory and macro-micro analysis. After that, researchers will describe the Strategy pattern can be done in the boarding schools of the religious keberagamaan and internalize the fahah of Islam. One trick is to strengthen the cultural roots of the pesantren which already exists, with social actions ditauladani by kiai.

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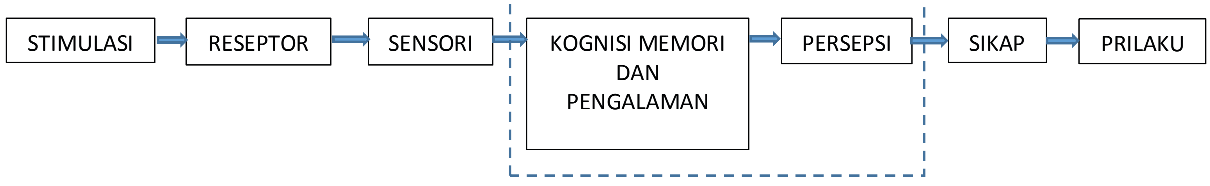
This is because, kiai pesantren and tradition are the two ornaments that greatly influences students.

As the oldest institution and Indonesia specialities according to the (Naim, 1998), the contribution of the boarding school to the community and the nation is still relevant and necessary. When the moral and social-cultural character as now questioned, boarding school as excluded. This is the negative impact of terrorism along the perpetrators and boarding school. But historically, the boarding school was the first institution to focus on the cultivation of moral values and social-cultural character of Indonesia. Boarding school born out of intensive social and cultural interaction between the inhabitants of the coast of the archipelago with the muslim traveler from Gujarat and Arabic. These interactions are not merely economic but also contain the motif mission of religious, social and cultural. Some of the social order of Majapahit remains preserved and synergy with Islamic law.

2.2. ISLAMIC ARCHITECTURE IN THE DESIGN IMPLEMENTATION

In the process of designing a form of artwork as well as architectural form, no escape from human perception of value. Both from the point of view, the background and the many other factors that influence.

Discussion about human perception towards signs, symbols, and spatial articulated by (Harisah & Masiming, 2008), that the occurrence of human perception against the mark, the symbol of spatial and theoretically. In general the experts agreed that the occurrence of perception is influenced by factors such as experience, background knowledge, the background of physical, social and cultural. In the process of communication between humans and objects occurs only if the sign, symbol and spatial cognition can be read by humans that is fed by many factors the last form of perception, attitude and behavior.



Pictures 1. Scheme Process Perception,
Summary Of Resources : the results of the author's Understanding of the (Harisah & Masiming, 2008) from *Berbagai Teori & Kuliah Psikologi Lingkungan* (Sugiyanto, 2003)

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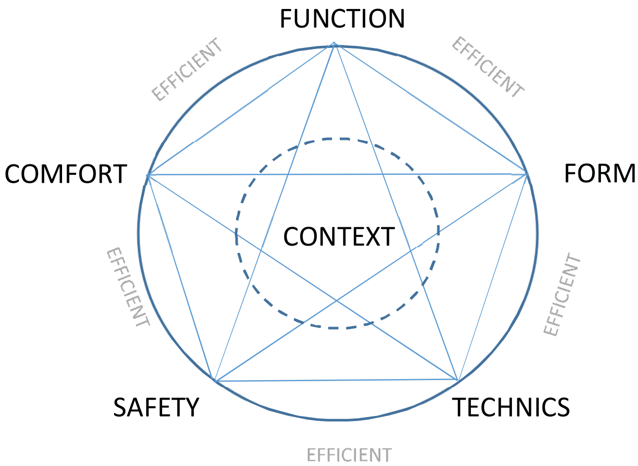
According to (Edrees, 2012), in the Qur'an and Hadith many mentioned the word "building". It shows that there are some principles for this building activity in Islam. For that we as muslim architect we apply Islamic architecture. Build is essentially doing good social arrangements arrangements, engineering, economic, and psychological and reflect on the Qur'an and Hadith. A designer in designing it is recommended to follow the five steps of designing architecture or principles in The Five Star in Architectural Design, is :

1. *Function*
2. *Form*
3. *Technics*
4. *Safety*
5. *Comfort*



Pictures 2. Five principles in architecture
Source : (Edrees, 2012)

Referring to the findings and discussion of research results (Iskandar, 2004) though it only applies to the case of the mosque who researched and can't be generalized on the typology of mosques architecture as a whole. Finally, in general it can be concluded, that the tendency of the rationalist and tajdid attitude among Modernists against provisions of the religion, and reverse the tendency of any provisions of fiqh accept attitude among traditionalists, implicates to think in approaching various problems in life including in architecture. Confirming what was said Rapoport, is *"architecture can provide a place for certain activities, reminding people about the activities carried out, the States of power, status, and privacy; represent and support the cosmological beliefs; convey information; help establish personal identity and group; and the mengkiaskan system value. The architecture also can*

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separate territories and distinguish between here and there, sacred and profane, men and women, front and rear, private and public, that can and cannot be populated, and so on". And conclude some implications of the results of his research which is special with regard to community-based Nahdlatul Ulama mosque, Islam looks to adapt to the local culture and tradition into the embodiment of the new mosque architecture typology. Or vice versa looks that native communities tend to absorb new ideas (Islam) and then assimilation with the confidence that their personal religious beliefs.

The findings show the reality, that through some form of architecture as one of the community's cultural products, look for the peaceful process of acculturation among the cultural dimensions of Islam by the local culture that gave birth to the great diversity of architectural typology of the mosque are rich. Thus, the question of the tradisionalitas and modernity indeed unrelated and completely apart from the assessment of the good or the bad of an architectural expression of the mosque or religious doctrine itself.

While in the territory of and privacy according to (Burhanuddin, 2010), personal involvement in the formation of the territory indicating that territory and privacy related to the behavior of different individuals with one another. Within certain limits then territorial Privacy and can be shaped and controlled by the behavior of individuals or groups of individuals. Meanwhile a man as a creature who has consciousness and thinking ability of norms and values, thus in berperilakupun will be greatly controlled by both which then implies some form of territory and privacy. Islam can be seen as a norm and has its own value system plays a major role in shaping the character of the territories on a scale of individuals and groups, especially in the muslim community, it is caused by the rules in behave of law or contained in the Islamic Sharia. Territory and privacy is closely related to analysis of behavioral environment in the design will be contributed important information as a foundation decision making the design space.

2.3. DESIGN OF ISLAMIC EDUCATION

The design of the tread is an educational institution or school according to (Ismail B. Arifin, Marwati, n.d.) is the result of the analysis and the application of the approach to design. The design of the tread is the alignment of several factors into consideration, namely: environmental governance, Alternate processing footprint, circulation, material, and penzoningan. Because in the process of a school requires the regular education system both in terms of

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curricula, management, human and the building. to meet the kebutukan a good learning process required a supportive convenience factor so that the porses can run either.

But of all the aspects of design that is already cutting edge concept renewable, need to also consider the opinions of (Kosim, 2009) the researching that ejak years 1990-2000s began to appear institutions new to the study of the Qur'an, which is Kindergarten Qur'an or the name of a type. The Agency is growing simultaneously with the discovery of a new method of learning the Qur'an is more systematic and practical such as *Iqra ', Qira'ati and Tartila*. In relation to the existence of the mosque, the new institution can be a partner or a "competitor" Mosque as Islamic religious Institutions.

On the one hand, with the expansion of the Kindergarten of the Qur'an, many options for people to educate his children in learning the Qur'an and Islamic foundations. On the other hand, the presence of Kindergarten Qur'an could threaten the existence of the mosque for hundreds of years has been engaged in preparing a generation of Qur'anic. It could be, the public prefers Kindergarten Qur'an than constrained because the Agency is growing lately has been managed, modern. Of course a challenge for caregivers weight constrained so that these traditional institutions still exist in the middle of the "himpitan" of Islamic education modernization.

In addition to this a thriving Islamic education in Indonesia is a pesantren educational institutions according to (Naim, 1998) Vision and mission boarding school not only emphasize the educational mission but also of da'wah. The Mission of the educational purpose of the boarding school breakfast buffet that is teaching the Sciences of Islam. The Mission of preaching is characterized by the position of the boarding school who was instrumental in transforming the social and cultural values that exist with the ideal (Al-Quran and Al Hadith). Still according to (Naim, 1998) in Tebba (1985: 284) stated that in recent years, it has become a large boarding school in developing community potential by making a variety of creative endeavors that are stub and give example of life in a variety of things to the community. Here, the seminary became the reference of social change. Layout of the charm of the pesantren which evoke the allure of society is always berpijaknya it on the concept of development of the individual and society is an independent, intelligent, plural, tolerant, kosmopolit and ethical. It is understood from the Qur'an as one of Islamic educational institutions strategically is constantly working to reshape the nation's social and cultural character of Indonesia a dignified.

According to (Thonthowi, Wahyuni, & Nulhakim, 2013) Islamic architecture is the architecture that was in them Islamic values are

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applied, such as the value of servitude toward Alloh through building design, simplicity, value the values of Justice, the value of the recognition of the rights of others, and Islamic values that exist. (Sumber: http://auliayahya.wordpress.com). And there in was :

a. *Ijtihad*, that means earnest effort does a mujtahid (people who do ijtihad) to reach a decision about the case that a settlement has not been provided in the Quran and the Sunnah of the Prophet Muhammad along does not contradict the Quran and Hadith.
b. *Taqlid*, It means accepting something dogmatically, as-is, without being understood in advance, for example because it has become a habit or indeed has become a tradition of hereditary.
c. Anti *Mubazir*, This means that no extravagance. Thus, beauty (aesthetic element) does not necessarily have to be expensive or excessive ornamentation wore only a plugin only, and is not functional. The anti-kemubaziran's view, is essentially an efficiency to get optimal results.
d. Rational, that is, not mengada-ngada. Islamic view on something of use it is not far-fetched for example through the use of symbolizing that led to something that is not rational and led to the twit think, terlebihlebih accountability to the community, and should not be redundant.

As for the corresponding space requirement in Islamic education that cannot be ignored is the existence of the mosque or musholla. Because according to the (Hidayat, Shafie, Hayati, & Talib, 2011) The mosque at the time of the Prophet Muhammad has played some functions such as the following:

a. A place of prayer, remembrance, *iʿtikāf, tafakur* and so on.
b. Spot/Center Consulting and communication (economic issues, socio-cultural and so forth).
c. Places/Education Center (from the University to the halaqah tradition).
d. The place of fertilization procedures and Community cooperation.
e. Military training and preparation equipment.
f. The place of the care and treatment of the time wars.
g. A place of peace and court dispute.
h. The place receives guests (religious affairs).
i. A charming place of detention (for a while before trial).
j. Place or religious explanation and Defense Center.

And in the next moment, the function of the mosque or musholla in an area of education is the education :

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1. The Field Of Recitations Of The Quran
   In the surau school, teaching and learning Quran recitations match is done either for *tadarus* or understanding the Quran Quran in two additional time.

2. The Fields of Ulum Islamic
   Learning is purity (thoharoh) and the practice of prayer, is :
   a. Sholat Fardu,
   b. Sholat Jumaat,
   c. Sholat Sunat Rawatib dan Tahiyatul Masjid
   d. Sholat Jamak dan Qasar
   e. Sholat Hajat.
   f. Sholat Tarowih, dan
   g. Sholat Idul Fitri dan Idul Adha

3. The Field Of Learning Attitude Based On Akhlaqul Karimah Islamiah
   Such as the Hadith of the Prophet Muhammad. "*I (Muhammad) sent for refining the akhlaq and manners*" (Al-Hadith). Therefore, education is the most important education akhlaqul karimah in Islam before faith, islam and ihsan.

And based with the demands of the curriculum of the Government, namely the importance of students having a strong personality and character have been mandated in the *Undang-Undang Republik Indonesia Nomor 20* year 2003 about *Sistem Pendidikan Nasional (UU Sisdiknas)*. In *UU Sisdiknas* Article 3 It is said that, "National Education serves to develop and shape the character of a nation's civilization and dignity in the framework of the intellectual life of the nation, aimed at the development of potential learners in order to become a man of faith and piety to God Almighty, precious, healthy, have learned, accomplished, creative, independent and become citizens of a democratic and responsible ".The purpose of national education was a formula about Indonesia's human qualities that should be developed by each unit of education. Therefore, the formulation of national education goals is fundamental in the development of cultural education and the character of the nation.

Then boarding synergize with the Government program, according to the (Naim, 1998) in the context of formal education, social and cultural character of education boarding schools have largely taken over by the madrasah education (MI, MTs and MA) and Islamic College (STAIN, IAIN and UIN). There is a part of the formal Islamic education institutions that still reflects the tradition of boarding

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school. Some madrasa managed primarily by the public (private) still maintain the tradition of boarding school because the still have the intensive islamic boarding school (housing the pupils/students).

3. CONCLUSION

Education in Indonesia is a unique education, in terms of the tradition of education in Indonesia is a combination of 2 fields that can not be separated i.e. public education and religious education. Strong dimensions of Islamic education in Indonesia of the importance of the two legacy of the Prophet Muhammad that is Al-Quran and Al-Hadith who always puts akhlaqul karimah and in forward their knowledge by the scholars.

Islamic philosophy deeply rooted form a unique educational tradition, starting from only informal education in the form of study-study at the surau or mosque is thriving and synergize with global product education form a concept of a good education and charmingly. Education-based dormitories of the pesantren education in the form of physical and mental, can shape the human characters are strong cling to religion. The form of the two sides of the educational synergies developed into formal school in the form of the madrasa, was:

1. Madrasah Ibtidaiyah (Elementary school level)
2. Madrasah Tsanawiyah (the First High school level)
3. Madrasah Aliyah (High school level)
4. Ma'had 'Aliy (University)
5. Mu'alimin (informal education)
6. Madrasah Diniyah (special religious education)

On the other hand, there's one thing being a specificity in the concept of Islamic education that results in philosophy and tradition that cannot be avoided and there should be, namely the existence of the mosque in an educational environment. At least a small mosque there should be, because this space requirement is the heart of the educational process in the religion of Islam. Good for extra-curricular activities as well as mandatory activities.

According to (Van Peursen, 1998) in (Naim, 1998) There are three basic characters allows boarding school can undertake that mission, it is:

1. The institutional system which is integrated with the community.
2. Ongoing learning system (intensive islamic boarding school)
3. Based universal Islamic teachings could be meant in three dimension, namely, Mythic, ontological and functional.

Conveniently, the trio can restore the mission boarding school as a shaper of moral character (akhlaq), social (Ummah), cultural (behavioral) and religiosity of the nation of Indonesia.

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Models of Sustainable Lake Tourism Design in Ranu Klakah, Lumajang Region, East Java, Indonesia

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Abstract

Entering the 21st century, Indonesia must re-define the concept of tourism development based on new phenomena and paradigms in the influence of global tourism. The characters of tourists who come not mass, and travel to find the source of the source of enriching life spiritually, no longer just a materialistic and physical pleasure. The development of environmentally friendly tourism in the Ranu Klakah Lumajang area is one of the approaches developed to create a sustainable lake area. The development of the tourist area should always protect the existing resources as it is essential for the success of the tour to show the original or local quality of a place. Through ecological analytical approach and descriptive architectural analysis, this arrangement plan is expected to Ranu Klakah Lumajang area, which has high tourism potential will be preserved. Of the five villages in the research area, Tegalrandu village has a high chance to be developed as Extensive mintakat, while other sub-districts have the opportunity to become Intensive mintakat. Three villages are located in the downstream area, which at this time has developed into a tourist camping area. Two other villages, in the middle and upstream areas, are designated as Protected mintakat, by empowering the potential of protected forests as a natural tourist area that will function ecologically, namely as a mintakat protection of forest resources and water resources. Meanwhile, the program to add the completeness of Green Infrastructure as a supporting tourism Ranu Klakah, conducted in mintakat the development of Intensive tourism area developed as a center for development and tourism services.

Keywords: Ecological Lake Tourism, Ranu Klakah, Sustainable Architecture

1. INTRODUCTION

Background

One of the most potential tourism resources is tourism based on natural resources including ranu / ranu which has richness and high diversity in various forms of nature as well as local custom and culture that mngertainya.

Natural resources and the surrounding environment with a variety of high diversity have attractive and tourism value that has the potential to be managed and developed for human welfare.

Tourism is able to increase economic growth relatively quickly by increasing revenue, improving living standards and stimulating other productivity sectors (Nurisyah et al., 2003). Tourism activities are also able to contribute revenue to the local government through taxes and levies. In addition, tourism can create jobs and become a source of income for local residents and attract investors from outside this area (Rosyidie, 2000).

Lake Ranu Klakah area in Lumajang regency, East Java province has developed into a popular tourist area both in regional and national scale. At this time Ranu Klakah, a tourism destination that has a visual beauty and water-based recreation activities, has experienced physical, visual and ecological damage that continues to tend to decline in quality. The condition is caused by the lack of management terpada on the area around Ranu Klakah, and the irregular use of the Lake environment as a whole, by the surrounding community. Indication of the physical environment damage seen in the initial observation, is the presence of some buildings that have passed the edge of Ranu Klakah and the entry of waste and waste into the lake that resulted in decreased water quality. Garbage and waste coming into the lake come from the surrounding community waste, agricultural waste, fishery aquaculture waste (floating net) and waste oil coming from water transportation activities. This condition causes the burden of Klakah ecosystem will be more severe and will ultimately harm all concerned parties.

The ecological tourist area of this natural lake faces problems related to the function of conservation and utilization of natural resources. If this is not prevented, further damage from tourism resources will have an impact on the number of tourist visits. The subsequent impact will decrease the income and welfare of the people who are mostly living from this tourist activity..

Figure 1: Natural View of Ranu Klakah, with Lamongan Mountain as a background

2. REDESIGN OF SUSTAINABLE TOURISM AREA

2.1. Assessment of Tourism Area based on Ecological, Tourism and Socioeconomic Aspects of Society

The development and arrangement of natural tourism area in Ranu Klakah, Lumajang District, East Java with Ranu tourism object object (lake) is examined based on the assessment of ecological aspect, tourism aspect, and socioeconomic aspect of society.

Based on the assessment of physical quality shows that in general physical watershed Ranu Ranu Klakah has a medium tourist fit. The results of the assessment indicate that the downstream area has a greater value than the upstream and middle areas. Based on land classification according to Land Rehabilitation and Soil Conservation Center (BRLKT), Ranu Ranu Klakah-Lumajang watershed area has podsolic soil type, litosol and regosol with classification Soil sensitivity to erosion, sensitive to very sensitive, while annual rainfall occurring at this location is moderate and high ranging from 2,200 to 3.0 mm / year (LTEMP 2009).

The presence of forest vegetation with steep topographic conditions is essential for enhancing the absorption capacity, suppressing surface flow, high mecenant eroi rate and preventing avalanches. Surface flow into energy can crush soil particles on the surface and embrace them elsewhere as part of the erosion process (Noordwijk 2009). Root forests can increase soil moisture absorption against rainwater.

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Clarification result of land cover seen that the conversion of natural forest much changed to agricultural land. This is due to the behavior of people who open the land to meet the economic needs without regard to the ability of land. Communities open up by burning which will then be left if the land is unproductive and the land is transformed into an open and barren overgrown with weeds and shrubs. Another conversion is the growing extent of industrial plantation forests with Eucalyptus vegetation. Community behavior by clearing land for agriculture greatly threatens the sustainability of natural forest.

Assessment of water quality is based on physical quality of water and water chemistry quality. Physical quality parameters of water are the color of water, the speed of the water sediment flow and the water quality parameters are biochemical oxygen demand (BOD), chemical oxygen demand (COD) and dissolved oxygen (DO). Water quality assessment is conducted on Ranu Ranu Klakah watershed as river mouth The. Table 1. shows the assessment hash in five villages as a research location. The results showed that four sites belonging to the moderate category (S), and one location belonging to the low category (R).

Table 1. The Result of Water Quality Assesment

Desa	Physical Quality						Chemical Quality						Corespon dingTouri sm	
	Water Color		Flow speed		Cedime ntation		BOD		COD		DO			
	N	S	N	S	N	S	N	S	N	S	N	S	N	K
Tegalrandu	20	SS	5	TS	10	TS	20	KS	15	S	20	SS	90	S
Tegalciut	20	SS	5	TS	10	TS	20	KS	15	S	20	SS	90	S
Sruni	20	SS	20	SS	20	KS	20	KS	15	S	15	S	110	S
Sumber wringin	15	S	20	SS	10	TS	20	KS	15	S	10	KS	90	S
Sawaran Lor	10	KS	15	KS	10	TS	10	TS	10	KS	10	KS	65	R

Source : Observation, 2010

Note : N = value, S = Score (SS = Very appropriate, S = corresponding, KS = Less appropriate, TS = Not appropriate). K =Chategories (T = High, S = Medium, R = Low).

Water quality, surface water fluctuations and waterfront management are the main principles to be considered in planning a water body (harris and dines, 1998). Ranu water is one of the main capital in the development of ranu tourism, where the reflection of sunlight on the water will cause a pleasant feeling and spirit effect on the scenery (Simonds 2006). Based on that matter, in development and arrangement of ranu tourism area must pay attention and maintain water quality. In general, visual observations conducted at the study sites show that the waters of rivers and ranu are clear. Tegalrandu waters with the environmental situation of settlements, stalls, boat docks and is the estuary and downstream Ranu Klakah watershed has a cloudy water color. Ranu Klakah waters with environmental situation, settlement and market have a rather murky water color, and Ranu Ranu Klakah waters with environmental situation of recreation area, settlement, warung and hotel have clear water color. Ranu Ranu Klakah waters that have a clear water color can support the activity of water tourism activities and become an indicator that the area can support water tourism activities. Form of tourism activities that can be done is a water bike, fishing, rowing, kanoing and canoe.

Assessment of the chemical quality of water is required to determine the level of water pollution to support the water-related direct tourism activity. Assessment of water chemistry quality based on biochemical oxygen demand (BOD), chemical oxygen demand (COD) and dissolved oxygen (DO) parameters. In general, naborsahon watersheds have moderate water chemistry, BOD levels increase due to domestic activities in downstream. Domestic activities produce waste that affects the quality of ranu water, especially the increase of organic matter in waters which will increase BOD and COD levels. In addition, high levels of BOD in ranu probably derived from the remaining feed that is not exhausted by the fish cultivation. This happens because of the increasing number of fish farming in ranu (Subadyo, 2007). Increased BOD results in a decrease in dissolved oxygen (DO) levels in water bodies, thus affecting biota life in water bodies.

The operation of motorized boats as a means of transporting ranu and surrounding areas in Ranu Ranu Klakah waters contributed to contaminating ranu water with oil and fat. Therefore, the operation of motorized boats at this time need to be considered the amount and intensity of its use so that the liquid oil in ranu can be reduced in number.

The results of the physical quality assessment of the watershed and water quality assessment resulted in clarification of tourist suitability based on ecological conditions. Based on the results of the analysis on the five villages studied, it can be concluded ecologically that the five villages within the Ranu Ranu Klakah watershed have potential tourist suitability. The potential area to be developed as tourist area is only 9.56% ha or 0.1% of the Ranu Ranu Klakah River Basin area and 1434.9 or 52.6% potential, and 885.3 or 47.3% are not included in the assessment. For that must be done re-arrangement with the aim of improving the quality of the environment so as to achieve sustainable tourism area.

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Table 2. Classification of Tourism Conformity Classification Based on Ecological Conditions in Ranu Ranu Klakah-Lumajang River Banks

Villages	Physical Quality		Water Quality		Corresponding Tourism	
	N	S	N	S	N	K
Tegalrandu	120	S	90	S	210	S2
Tegalciut	125	S	90	S	215	S2
Sruni	135	S	110	S	245	S2
Sumberwringin	140	S	90	S	230	S2
Sawaran Lor	130	S	65	R	195	S2

Source : Observation, 2010
Note : N = value, S = Score, K = (T = High, S = Medium, R = Low), Chategories (S1= Very Potential, S2= Potential, S3= Not Potential)

Assessment of Potential of Tourism Objects and attractions

Assessment of the first stage is the assessment of the potential objects and attractions that are based on seven assessment paarameter, namely crafts, religious ceremonies, traditional ceremonies, art, building, language, and people's games. Objects and tourist attractions available along the research sites are quite diverse. If viewed from the spread, in each location there is at least one tourist attraction with one or more tourist attractions.

The results of the assessment shown in Table 3 show the Tegalrandu kelurahan which has five objects and 7 tourist attractions have high tourism potential (T), Sruni village with three tourism objects and seven tourist attractions, have medium tourism potential (S), and three other villages Have the arrangement and development of the area, so that the existing potential is sustainable.

Table 3. Object Potential Assesment and Tourisme Attraction at Ranu Ranu Klakah

Villages	Parameter							N	P
	I	II	III	IV	V	VI	VII		
Tegalrandu	10	14	28	14	10	36	18	130	R
Tegalciut	13	16	30	18	16	36	22	151	R
Sruni	28	22	40	29	25	30	32	206	T
Sumberwringin	28	19	34	22	25	30	24	182	S
Sawaran Lor	10	17	26	18	12	36	18	137	R

Source : Observation, 2010
Note : Parameter (I= Craft, II= Religion Ceremonies, III, Tribes Ceremonies, IN= Arts, V: Buildings, VI= Language, VII= Foly Games) N= Values, P= Pontentiality (T = High, S = Medium, R = Low)

Ranu Klakah has a vast landscape, so that tourist objects and attractions can represent various characteristics based on the physical environment of dartan (terrestrial) and aquatic environments (altitude), altitude (beach to mountain), and natural resources (natural resources and Socio-economic resources). Attraction is the main syarakt existence of a tourism activity, merupakn basic elements that are related to the experience (experience) tourists. Attractions other than because of the uniqueness of a site also because of its presence in a spatial space (Fennell 1990).

Table 4. Potential of Tourism Objects and Attractions at Ranu Ranu Klakah-Lumajang

Villages	Tourism Objects	Tourism Attraction
Tegalrandu	Natural Forest	Natural Scenes
		Ountain Bike
	Agriculture holticulture	Hoti dan Coffee Bean farm land
		Farm
	Human Settlements	Tradition
Tegalciut	Natural Forest	Natural views
		Mountain Bikes
	Agriculture holticulture	Hoti dan Coffee Bean farm land
		Farm
	Human Settlements	Tradition
Sruni	Horsing	Legend Tourism
	Human Settlements	Tradition
	Water recreation	Ranu Seightseeing
		Rowing
		Kanoing
		Fishing
		Boots
		Water Cycling
	Tourist Market	Shoping
	Camping Ground	Camping
	Custom Feast	Cultural Festival
		Art Attraction
	Labuh Tradition	Ceremony of *Jumat pon bulan Ruwah*
	Traditional Market	Tradition
Sumberwringin	Agriculture holticulture	Farm land
		Farm
	Human Settlements	Tradition
	Camping ground	Camping
	Traditional Market	Tradition
Sawaran Lor	Human Settlements	Tradition
	Buildings	Villa/inn, meeting
	Traditional Market	Tradition
	Tourist Market	Shoping

Source : Amatan Lapang, 2010.

Assessment of the second stage, is to see the feasibility level of objects and tourist attractions available for the ordering and development of tourist areas. Assessment is based on five modified outcome parameters Inskeep (1991), Umar (2005), and Yusiana (2007).

Table 4. Assessment of Eligibility of Tourism Objects and Attractions at Ranu Klakah

Villages	Potential Tourism	Parameter						N	K
		I	II	III	IV	V	VI		
Tegalrandu	Natural Forest	60	75	10	10	15	20	190	TP
	Agriculture holticulture	30	50	10	10	30	30	160	TP
Tegalciut	Horsing	90	50	20	40	60	40	300	SP
	Human Settlements	70	75	10	10	15	20	190	TP
	Tourist Market	100	50	20	40	60	40	300	SP
	Water recreation	120	75	20	30	45	40	330	SP
	Custom Feast	60	75	10	10	15	20	190	TP
	Traditional Market	90	75	20	20	45	40	190	P
	Water fall	90	100	20	30	45	40	325	SP
	Cultural Feast	120	75	40	30	60	40	365	SP
Sruni	Camping ground	120	75	20	30	45	40	330	SP
	Natural Forest	60	75	10	10	15	20	190	TP
	Agricuture holticulture	30	50	10	10	30	30	160	TP
Sumberwringin	Human Settlements	70	75	10	10	15	20	190	TP
	Tourist Market	100	50	20	40	60	40	300	SP
	Human Settlements	70	75	10	10	15	20	190	TP
	Agricuture holticulture	30	50	10	10	30	30	160	TP
Sawaran Lor	Hutan wisata alam	60	75	10	10	15	20	190	TP
	Agricuture holticulture	30	50	10	10	30	30	160	TP
	Human settlements	70	75	10	10	15	20	190	TP

Source : Observation , 2010, (n =150)
Note: Parameter (I = Objects and attraction, II = Aesthetics and Originality, III= Supporting Facilities, IV= Avaibility of water, V= Trans;potation and Accesbility, VI= Supporting and Community Participation)
N= Values. K= Classification (SP= Very Potential, P= Potential, TP= Not potential)

Based on the existing tourist conditions then the objects and attractions in Ranu Klakah - Lumajang potential to be developed as objects and tourist attractions. Things to do is structuring and repairs kawsan tour to improve the quality of the tourist environment.

Community Social Economy Aspect

Socioeconomic aspect is one aspect in looking at the condition of society and its activities in fulfilling the necessities of life as well as the role and level of accessibility in the development of a region (Umar, 2006). In this study to determine the condition of society, conducted two stages of assessment. First, assess the acceptability or support of the community towards the arrangement and development of tourist areas in their environment, and secondly to see the public preference for the type of participation in the tourist area.

Ranu Ranu Klakah and surrounding kawsaan is an ecosystem that has a high value, both from ecological, socio-cultural, and ecosystem values for human life. For people who live around Ranu Klakah, the potential of natural resources that is a highland and most of the land is dry but blessed with beautiful natural scenery and ranu, resulting in the community began to use the beauty of alan combined with traditional Javanese culture as a cultural attraction Seren Ruwahan), which eventually became the source of livelihood as well as the dominant socio-economic phenomenon in the region. So intertwined the relationship of mutual need between humans with ranu.

Assessment of acceptance rate or community support was conducted through interviews with 150 respondents, selected randomly at each study site. Based on the results of the research shown in Table 11, it is seen that the acceptability level of the community in all research sites has a high score (T). This shows that the community strongly supports the plan of arrangement and development of tourist area in Ranu Klakah.

Table 5. Level of Acceptance of Society to Plan of Regulation of Tourism Area in Ranu Klakah

Villages	I	II	III	IV	V	T	S
Tegalrandu	105	104	105	103	91	508	T
Tegalciut	104	99	105	113	96	517	T
Sruni	120	106	107	120	106	559	T
Sumberwringin	120	106	105	115	101	547	T
Sawaran Lor	108	101	105	109	97	520	T

Source: Observation, 2010 (n =150)

Note: I = Arrangement of area as tourist destination area: II = management of tourist area by society; III = the community's active role in tourism; IV = existence of isatawan; V = the benefits of tourism activities; S = Score (T = high, S = medium, R = low.)

Assessment of people's preference for economic opportunity is needed to see the level of people's willingness to be directly involved in the tourist area. The conduct of tourism can continue if the community is involved in it and the community can improve its welfare from the tourism activities. If this goes well then it can support the continuity of tourism in the region. Horwich et al. (1995) said that community participation in the development and structuring of tourist areas is a joint effort between the community and visitors to protect the culture and ecology through support to the development of local communities, in controlling and managing resources to be sustainable and able to meet the social, cultural and economic needs .

The assessment results show that people in the upstream and middle areas prefer economic opportunities that are close to their daily life, namely as a farmer, then based on assessment of the upstream and middle areas are not

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potential sebgai mintakat tour. While economic opportunities in the downstream area is very potential (Ranu Klakah - Tegalrandu Urban Village, Sruni Village) and potential (Tegalciut) as tourism mintakat, since the existence of tourism activity in these three villages has lasted long, resulting in people prefer economic opportunities directly related to tourism.

The combination of acceptance and the economic opportunity of the community is manifested in the acceptability and the economic opportunity of the community which consist of active mintakat sanagt (S!), Active mintakat (S2), mintakat off (S3). Mintakat very active is mintakat with the level of acceptability and economic opportunities of society is very high, which included in this mintakat is Tegalrandu, Sruni and Tegalciut. The active partnership is mintakat with high levels of acceptability and economic opportunity of the community, including in this village is Sumberwringin village. Inactive madakat is mintakat with low levels of acceptability and economic opportunities of society, which included in this mintakat is Sruni village and Sawaran Lor.

2.2. Priority Analysis of Sustainable Tourism Area Arrangement

Ranu Klakah Tourism Area (KWRK) with all its potential requires the arrangement and management for the existing area, can be sustainable, for it needs to be done efforts to preserve the area. Arrangement is oriented to the importance of the future dpean especially to get a form of social good (Nurisyah 2003). This is done to minimize the impact of the physical environment in the future by protecting the ranu environment.

The arrangement and management of the area is based on the main priority of the three alternatives. The main priority is determined based on the opinions of the expert respondents (n = 4) who know the permaslahan at the location so that the selected destination can be developed.

Based on the analysis results obtained value Consistency Ratio (CR) of 0.03. This value indicates that the information obtained is at a sufficiently high level of confidence, good enough and acceptable. Respondents are consistent in assigning weight values with small deviations. Evaluation of the criteria for achieving objectives based on the improvement of environmental quality, the active role of the community, the development of tourism potential, and the protection of the Ranu Klakah area.

Table 6. Assessment of Weights and Priorities at Criteria Level

Kriteria	Weights	Priority
Improved environmental quality	0.14	1
Active role of the community	0.18	3
Development of Tourism Potential	0.08	4
Protection of Ranu Klakah area	0.33	2
Consistency Ratio (CR)	0.03	

Source: Data Analysis, 2010.

According to the respondents, the improvement of environmental quality is the main priority that must be done, because ecologically environment in KWRK has been damaged due to the behavior of society and entrepreneurs, and natural disaster in the area (Darwo 2006). To overcome these problems, the active role of the community is needed in the form of direct involvement in tourism management, management and development. The process of community involvement depends on the potential of human resources and existing capabilities (Nurisjah et al, 2003). The community's participation is expected to play an active role in the improvement of lignkungan and it is hoped that the community will also actively participate in protecting Ranu Klakah kawsaan so that the desired environmental quality can be achieved.

The existing criteria are expected to have a positive impact on the development of tourism potential. Tourism objects and attractions are tourism potential that requires intensive development and structuring, as objects and attractions are the basic elements that are usually the result of development and management (Gunn 1994). Well-organized tourism potential will open up bigger community economic opportunities. Prevention of environmental change can be done if it gets the holistic attention from all parties, both government, NGO, community, and private.

Ecological conditions in KWRK at this time have started to show signs of environmental damage so that the need for quality improvement. This damage is caused by deforestation resulting in the dangers of erosion and forest fires (Aswandi and Subadyo 2007), fish farming produces high organic waste (Subadyo, 2007), and the development of water hyacinth (Environmental Section of Lumajang Regency 2009). The following table shows that ecological aspects are a top priority based on existing criteria.

Table 7. Priority Weight and Priority Assessment at the Alternative Level

Kriteria	Alternative		
	Ecology	Socio-Ecomomic	Tourism
Improved environmental quality	0.62	0.29	0.09
Active role of the community	0.46	0.32	0.22
Development of Tourism Potential	0.58	0.18	0.24
Protection of Ranu Klakah area	0.71	0.14	0.15

Source : Data Analysis, 2010.

The results of respondents' assessment based on tourism development potential criteria is an ecological aspect. Respondents assume the object and attractiveness will be better if the ecological aspect becomes the first priority for the development of tourism potential. Objects and attractions can be either the uniqueness of a site or a spatial layout (Gunn 1994). This is very suitable dnegan type of tourism contained in the KWRK is a natural tour. Development

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of tourism potential can be done by preserving, protecting and preserving the object and the existing attraction as a tourist attraction, so that the tourist area will be keslajutan keslajutan. One of the tourism potential is the cultural potential of the community. Cultural values must be maintained to maintain a balance between society and the ecological environment. For that, it is necessary to structuring the concept of tourism that further highlight the original life of local communities.

Furthermore, in the protection of Ranu Klakah area, the socio-economic aspect is one aspect that must be considered, because KWRK is an area that is expected to support and increase the income of the community. By reason of the rescue of Ranu Klakah Ranu area which has been degraded the quality and carrying capacity, hence the active role of society to maintain, maintain, and protect the stability of Ranu Klakah Ranu area to be well preserved.

The priority alternative of KWRK that will be developed in Ranu Klakah area can be known based on the result of combined analysis of respondent's opinion. The results of the analysis show that ecological aspect is the first priority, second priority socio-economic aspect and third priority tourism aspect

Table 8. Results of Alternative Assessment for Achieving Goals

Alternative	Weights	Priority
Ecological Aspects	0.61	1
Socio-economic Aspects	0.24	2
Tourism Aspects	0.15	3

Ecological aspect is an alternative to sustainability, because ecology is a unique balanced condition and plays an important role of conservation and land use and development to suppress problems arising as a result of human-caused global changes (Forman & Gordon 1996). The effort to be done is by replanting deforested forests, and the government firmly against illegal loggers. Another thing to do is to review the presence of a semi-aquatic fish sprouts to prevent Ranu Klakah's water contamination (Subadyo 2007) and to make a clean program of water hyacinth covering the visual state of ranu. If this is done well then it will have a positive impact on ranu water system, because the environment KWRK is an ecoton area that is sensitive to changes but has a high ecological diversity (Subadyo, 2009).

The second priority is the socio-economic aspect of the community which focuses more on the impacts of the socio-economic system of society. The main purpose of the tour is to provide benefits to the local community so as to ensure the development of tourism in accordance with local social, ecological and economic goals (Brandon 1993). Society is seen as a part of the ecosystem, where changes that occur will affect the ecological as a whole, it is necessary to know how far the people assess a policy that has provided benefits or harm to

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the community. Conditions in KWRK that have been increasingly damaged and the dependence of the community on a very large footprint leads to decreased incomes of society, it is expected that the public participate actively in maintaining the environment.

The third priority is the tourism aspect. KWRK is a tourist area that has a lot of tourism potential that must be maintained and preserved, in order to avoid damage to the severe tourist environment. Tourism aspect is the result or positive impact of environmental attractiveness, so its survival is determined by good bad environment where the purpose of tourism is to get recreation (Soemarwoto 1996). Excessive tourism development will have a negative impact on the sustainability of tourism, it is necessary a concept of arrangement and development of tourism by empowering local communities so as to improve the welfare of local communities (Kodhyat 1998).

3. DEVELOPMENT AND SUSTAINABLE TOURISM AREAS PLANNING IN RANU KLAKAH

Plans for the development and arrangement of tourist areas include planning that accommodates all the activities planned in a tourist area.

The main concept of development and structuring developed in Ranu Klakah Tourism Area is a sustainable tourism area. The main concept is to create a well-structured and well-structured tourist area that utilizes the potential of natural resources and aims to preserve ranu and improve the welfare of the local community. The main concept developed based on the results of anilisis ecological aspects, aspects of tourism, and socioeconomic aspects of society. Illumination of the concept on the landscape is a model of a development plan tailored to the character of the landscape and tourism potential in the region.

From the analysis, the tourist areas that will be carried out development and structuring are Tegalrandu Kelurahan, Sruni Village and Sumberwringin Village, Klakah Sub-district. These three urban villages as the center of tourism development with three mintakat development and arrangement plan. *Mintakat* plans development and structuring, are:

1. Intensive zone tourism development that is, mintakat development and arrangement of tourist areas of a general nature or public service area. In mintakat consists of mintakat acceptance and service and tourism mintakat. *Mintakat* acceptance and service is an area to receive and memeberikan service to visitors. *Mintakat wisata* is an area used by visitors in tourism and recreation activities with the characteristics of a safe area to be utilized optimally. *Mintakat* intensive tourism development can be established into a center for development and arrangement of tourist areas in the Ranu Klakah watershed, precisely water attractions and supporters in Ranu Klakah tourist area.

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2. Extensive zone tourism development, is a buffer support that serves to support the area of water bodies especially from the influence of physical activity in the vicinity. Mintakat buffer is a mintakat transition from intensive mintakat to intensive mintakat that have the level of conformity of moderate tourism. Activities that can be done is seight seing, out bond, camping area, rock climbing, and art attractions.
3. Protected zone, is a very sensitive mintakat for tourism activities because it has a low level of tourist conformity. The character of this region leads to activities that are specific that serves to protect natural conditions and habitat biota is relatively sensitive to disturbance. This condition can only be used as a visual tourism object with very limited tourism activities such as observation of biota, hiking, and scientific activities. This is done as a natural conservation effort, especially to maintain the water system.

4. SPACIAL CONSEPT AND SIRCULATION OF TOURISM AREA IN RANU KLAKAH

The concept of circulation in the form of circulation network adapted to the concept of space and connect all local elements so as to provide high opportunities for visitors to be able to see many attractions and information and increase the time and expenditure of visitors in order to provide economic benefits for local communities. According to Gunn (1994), the corridor connecting the center of kawsaan with the attraction groups is an important element that can increase the potential of the region.

Circulation system in kawsaan is divided into three, namely the primary, secondary and tertiary circulation. Primary circulation is the primary circulation pathway that connects between tourism objects and inter-mintakat, secondary circulation is the circulation pathway found in tourism objects that connect between objects in a mintakat, tertiary circulation is a natural path within the object or tourist attraction. The tertiary circulation of the boardwalk and tracking primitive. Local roads / neighborhoods that cross ranu area are the primary circulation which is equipped with parking area for tiring area (stop area).

Ranu Klakah tourist area can be visited through two directions, namely from the direction of Ranu Yoso, Probolinggo and from Lumajang City, located in intensive mintakat that serves sebgai public service area tourism development center that is in Ranu Klakah. Selection of the entrance into the tourist area, based on the potential area sebgaia tourist area supported by the number of objects and potential tourist attractions contained in this location. Placement of spaces at the center of the development of tourist areas, where there is a main space and supporting space associated with the circulation path.

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The concept of the arrangement of tourist spaces tailored to the existing environmental conditions. Tourist spaces are divided into two, namely the main room and supporting space. The main room is a space that accommodates all tourism activities, and to enter into the main hall tersbut through the support room. Supporting space includes the reception area (welcome area) and the transition area (transition area). This space connects between the outer space of kembsaan pengembanagn with the main tourist spaces, as well as a liaison between the territorial waters ranu which is the primary route of tourism with the main tourist spaces on the mainland. In each tourist room there are objects of tourism traction funds that support the theme and destination of the tourist room.

5. CONCLUSION

This research have conclusion :

1. Base on the ecological aspect, the potential of tourism objects and attractions and socioeconomic aspects of the community residing in Ranu Klakah area, is potential to be developed as tourism.
2. From the five villages in the research area, Tegalrandu village has high opportunity to be developed as Extensive mintakat, while other sub-districts have the opportunity as Intensive mintakat. Three villages are located in the downstream area, which at this time has developed into a tourist camping area. Two other villages, in the middle and upstream areas, are designated as Protected mintakat, by empowering the potential of protected forests as a natural tourist area that will function ecologically, namely as a mintakat protection of forest resources and water resources.
3. Based on the assessment of the control and improvement of environmental quality of the area, the center of development and structuring of Ranu Klakah tourist area, centered in Tegalrandu urban village. Program of control and improvement of environmental quality of the area, allocated to protected areas in the upstream area. Meanwhile, the program to add the completeness of Green Infrastructure as a supporting tourism Ranu Klakah, conducted in mintakat development of Intensive tourism area, the mintakat planned to be developed as a center for development and tourism services.

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The Total Impulse Study Of Solid Propellants Combustion Containing Activated Carbon From Coconut Shell As A Catalyst

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Abstract

This study investigates the capabilities of thrust, burn time, and total impulse from solid propellant materials. Attempts to increase the three variables are quite difficult because the thrust value is inversely proportional to the value of the burn time, it requires the catalyst as a regulator of the composition to produce an optimal variable value. The activated carbon from the coconut shell is used as a catalyst on a composite solid propellant material containing ammonium perchlorate (AP), hydroxyl terminated polybutadiene (HTPB) and aluminum (Al). The effect of adding coconut shell activated carbon may affect thrust parameters, burn time and total impulse rocket. The method of measuring parameters using rocket thrust test equipment. The mass of the test sample is 250 grams, the diameter of the test chamber is 20 mm, the length of the chamber is 200 mm. After going through the combustion process, it produces a graph and thrust value, total impulse and burning time. The thrust test results show that the test propellant 3 produces the best characteristic composition of 70% AP, 15% HTPB, 10% Al, and 5% activated carbon of 400 mesh with average thrust: 148.67N, total impulse: 637, 5 Ns, burn time: 4,288 s.

Keyword : , AP, HTPB,Al, thrust,total impulse,burn time

1. Introduction

Propellants is the chemical mixture that burned to produce thrust in rockets and consists of a fuel and an oxidizer. A fuel is a substance that burns when combined with oxygen producing gas for propulsion. An oxidizer is an agent that releases oxygen for combustion with fuel. The ratio of oxidizer to fuel is called the mixture ratio and for this case it is 65/35 according to Nakka. The Thrust is the force that propels a rocket or spacecraft and is measured in pounds, kilograms or newton. Total impulse is found by summing up all themeasured thust values and multiplying this by the time increment.[Nakka,2001]. There are two type of solid propellants : homogeneous and composite [O.S.Olaoye et al:2014]. Composite solid propellant composition are generally made up of some oxidizer such as ammonium perchlorate, hydroxyl terminated polybutadiene as a binder [G.Singh et al, 2010]. The transition metal oxides are often used for catalyzing the thermal decomposition of ammonium perchlorate, hydroxyl terminated polibutadiene and alumminium as fuel based composite solid propellants and to adjust their burn rates. The various factors such as the amount of catalyst and the particle size have been known to play important role for the burn rates alteration [K.Kishore et al:1977]. This study investigates the capabilities of thrust, burn time, and total impulse from solid propellant materials. Attempts to increase the three variables are quite difficult because the thrust value is inversely proportional to the value of the burn time, it requires the catalyst as a regulator of the composition to produce an optimal variable value. The activated carbon from the coconut shell is used as a catalyst on a composite solid propellant material containing ammonium perchlorate (AP), hydroxyl terminated polybutadiene (HTPB) and aluminum (Al). The effect of adding coconut shell activated carbon may affect thrust parameters, combustion time and total impulse rocket. Oxidizers are principle ingredients, which produce the high energy on combustion. One of the most commonly used oxidizers is AP. AP dominates the oxidizer list because of its good characteristics that include compatibility with other propellant ingredients, good performance, and availability. AN and KN are also used in some applications. Although the inorganic nitrates are relatively low-performance oxidizers compared to perchlorates, they are used because of low cost and smokeless and non-toxic exhaust [Chaturvedi and Dave, 2011, 2012; Meda et al., 2007]. Binders provide structurally a matrix in which solid granular ingredients are held together in a composite propellant. The raw materials are liquid prepolymers or monomers. The binder impacts the mechanical and chemical properties, propellant processing and aging of the propellant. Binder materials typically act as a fuel, which gets oxidized in the combustion processes. Commonly used binders are HTPB, CTPB, and NC. Sometimes GAP is also used as energetic binder, which increases the energy density and performance of the propellant. HTPB has been abundantly used in the recent years, as it allows higher solid fractions (total 88–90% of AP and Al) and relatively good physical properties [Galfetti et al., 2006; Meda et al., 2005]. Metal fuels such as aluminum and boron are frequently added to propellant mixtures [Galfetti et al., 2003, 2004]. Aluminum, one of the widely used metal additives, is used in the form of small spherical particles (5–60 μm) in a wide variety of solid propellants. Aluminum particles usually comprise 14–20% of the propellant weight. Addition of metal fuel enhances the heat of combustion, propellant density, combustion temperature, and hence the specific impulse. There are some compounds, which can act as both fuel and oxidizer such as NG and AP. The burning rate catalyst helps increase or decrease the propellant burning rate. It is sometimes also referred to as burning-rate modifier. It can be used to modify the burning rate of specific grain design to a desired value.

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Substances such as iron oxide increase the burning rate, while lithium fluoride decreases the burning rate [Sutton and Biblarz, 2001].

In This work, we have investigated the catalytic effect of activated carbon of coconut carbon is canbe to add the thrust, the burning time and the total impulse of composite propellant.

2. MATERIAL AND METHODS

2.1. Materials

Solid propellant that was used in this work is ammonium perchlorat(AP) as oxidizer, hydroxyl terminated polybutadiene(HTPB) as binder, aluminium(Al) as fuel, and actived carbon of coconut shell(ACCS) as catalyst. Komposisi propelan padat umumnya terdiri dari AP 60%-84%, PBN 12%-16%, Al 2-20%, curing agent 0,2%-1%, stabilizer 0-1% [Kishore and Sridhara,1999]. Komposisi lain dibuat dengan AP 65%-70%, Al 15%-20%, Binder HTPB 10%-15% dengan curing agent TDI [Ramesh et al, 2012]. Formula ukuran yang lain AP 68% (AP partikel trimodal, 24% 200μm; 17% 20μm; 27% 3μm), 19% Al 30μm; HTPB 12% dan curing agent, dan 1% katalis laju bakar Fe_2O3. [Hinkelman dan Heister,2011]. This study, the propellant materials had been tested as shown in the table1. composition of the propellant materials.

Table 1. Composition of the propellant materials.

Materials Name	AP	HTPB	Al	ACCS
C1	70 %	15%	15%	-
C2	70%	12%	15%	3%
C3	70%	15%	10%	5%
C4	70%	8%	15%	7%
C5	70%	10%	15%	5%
C6	70%	15%	12%	3%
C7	70%	10%	15%	5%
C8	70%	15%	8%	7%
C9	70%	20%	5%	5%

2.2. Processing of Solid Propelants

The composite solid propellants were formulated by using AP as asolid oxidizer, HTPB as fuel binder, Al as fuel and ACCS as catalyst. AP composition was taking uniform 70%, in all propellants samples. The average particle size of all materials sample were 400 mesh. The total propellant mass was 250 grams, Length (L propelan) : 200 mm, diameter (D propelan) : 20 mm, diameter hollow(D Hollow) : 10 mm. (as shown Figure 1 and Figure 2).

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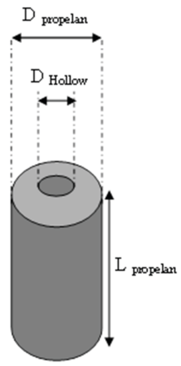

Figure 1. Size of solid propellant

Figure 2. Solid propellant sample

2.3. Instrumentals

Before measurement, the particles of propellants were characterized with scanning electron microscope(SEM) and energy dispersive X-ray spectroscopy (EDX). After this section the static thrust testing for measuring thrust rocket, burn time, total impulse propellants combustion. (as shown figure 3 and figure 4).

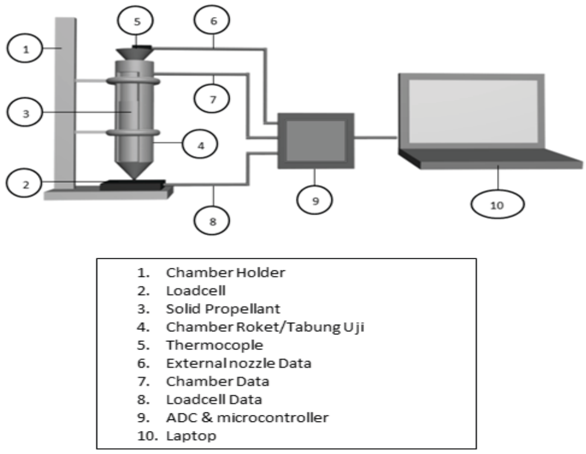

Figure 3. Experimental setup of thrust testing

Konstanta Chamber and Nozzle Rocket Dimension as shown the figure 4

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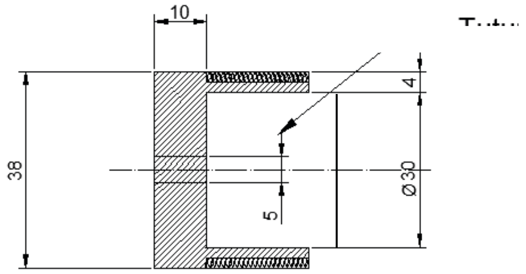
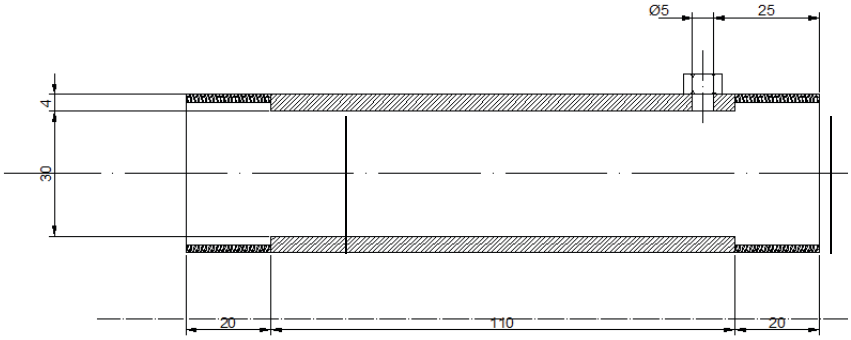
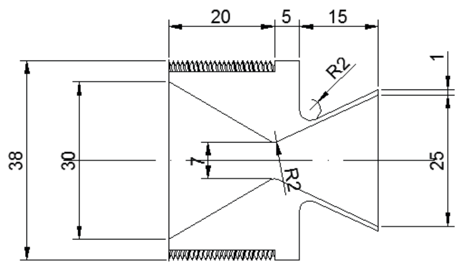


(a)



(b)



(c)

Figure 4. (a) & (b) chamber and (c) Nozzle

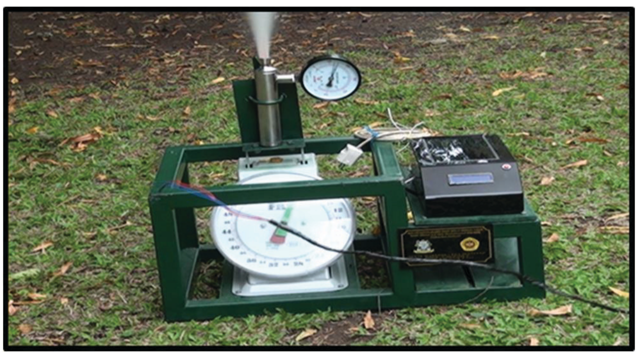


Figure 5. Thrust test tool

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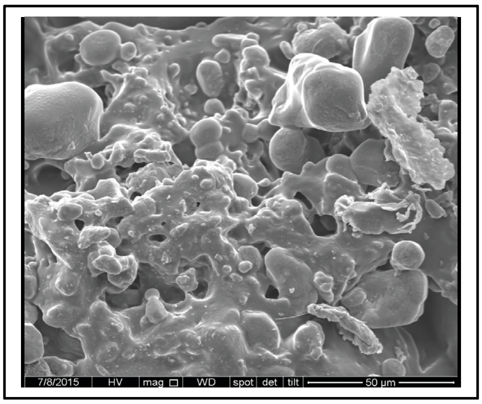
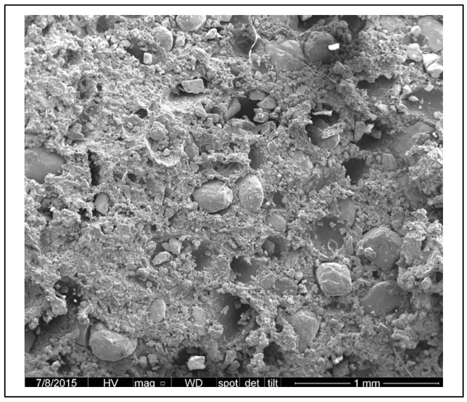
3. RESULT AND DISCUSSION

SEM of Composite Solid propellants (CSP) as shown figure 6.



(a)



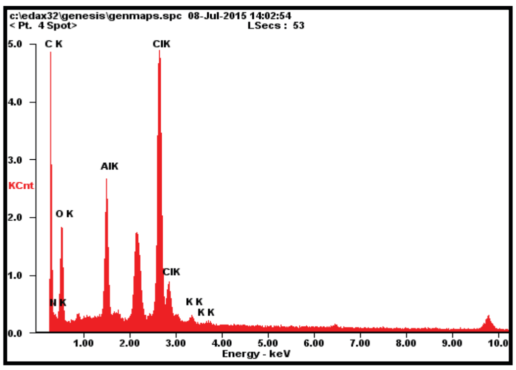
(b)

Element	*Wt%*
CK	52.55
NK	08.00
OK	21.32
AlK	03.68
ClK	14.35
Matrix	Correction

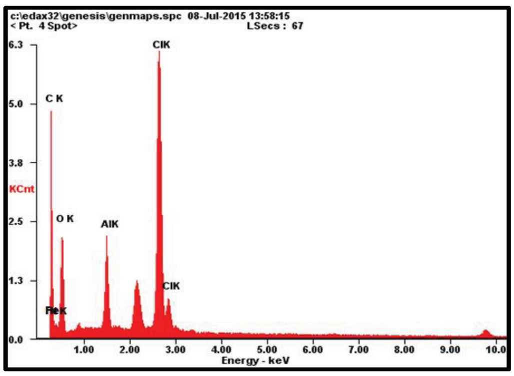
(c)

Element	*Wt%*
CK	57.85
NK	08.00
OK	20.35
AlK	07.08
ClK	14.30
KK	00.16
Matrix	Correction

(d)



(e)



(f)

Figure 6. (a)&(d) SEM of CSP without catalyst and CSP with catalyst (b)&(c)&(e)&(f) Graph and EDAX of CSP without cata and Solid Propellant

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SEM image of CSP without catalyst (as shown Figure 5) showed more solid than CSP with a catalyst. This character causes it was flammable and the buning time was shorter. However, the content of CSP elements with catalyst contains more fuel (such as C, Al, Cl,K). It can be observed that the CSP element with catalyst ratio have increase the burning time, thrust and total impulse.

3.2. Thrust test

Result of thrust test were thrust value, burn time and total impulse such as graph of thrust and parameters value (as shown figure 5). Comparison all compositions yield C3 were the best materials of CSP with catalyst. Effect of ACCS particles as a catalayst were canbe increase total impulse and burn time. (As shown Figure 7 and Figure 8 thrust graph, average thrust, burn time and total impulse)

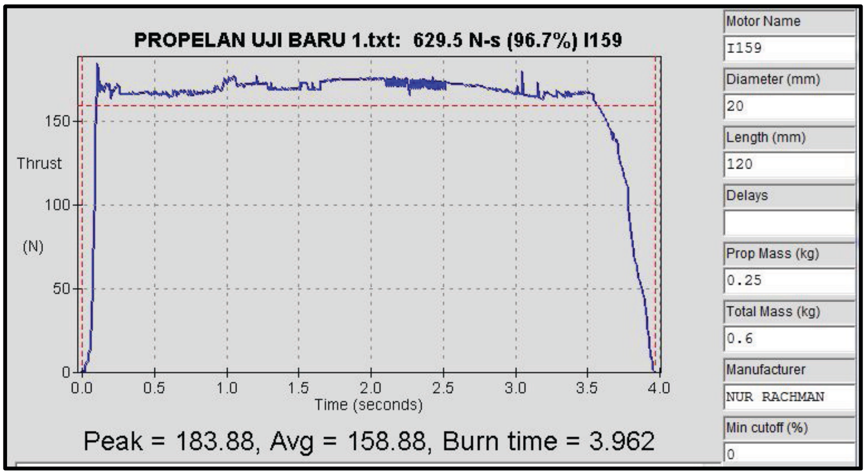

Figure 6. Thrust curve of CSP without catalist

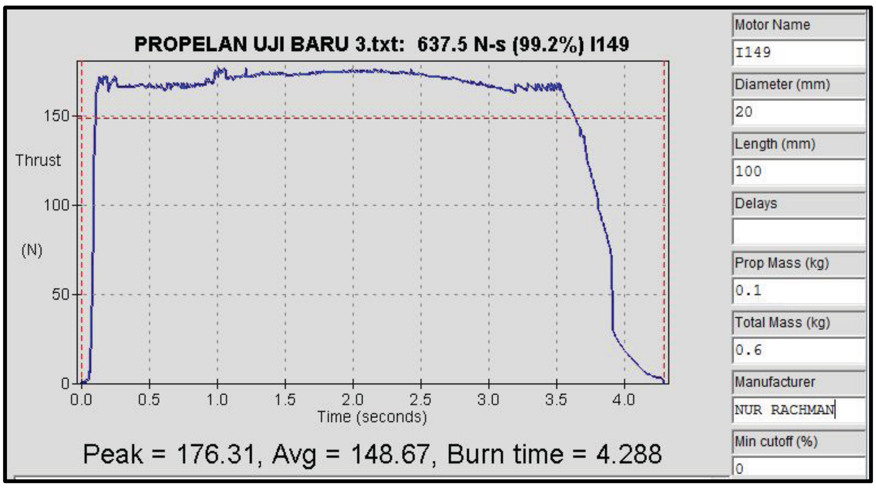

Figure 7. Thrust curve of CSP with catalist (C3)

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From The Figure 6 and The Figure 7 can be comparasion that CSP without catalyst better its thrust values than CSP with catalyst(C3), but better its burn time and the thrust impulse. Thus, C3(AP70%, HTPB15%, Al 10%, ACCS 5%) was the best composition of CSP.

4. CONCLUSIONS

The following conclusions can be drawn from the present investigations on the combustion characteristics of composite solid propellants (AP-HTPB-Al) with and without activated carbon from coconut shell as catalyst.

Addition of activated carbon from coconut shell(ACCS) as catalyst has been found to increase the burning time. Although the CSP without catalyst better its thrust, but total impulse value is lower.

The best CSP of all sample were C3 (AP70%, HTPB15%, Al 10%, ACCS 5%).

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Review The Design of "Kampung Tematik Malang 2016" on Kampung Kramat Kasin, Malang, Indonesia

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Abstract

Sustainable development is the main city building and become. Along with the city will increase settlement slums and settlement wild/squatter (Kustianingrum, 2010). Efforts to do the government as policy management governance to control the growth that it can unrestrained, lead to the state of the environment, social and economic bad. One government efforts by means of the bottom up involving public participation in developing the quality of their packed become a "Festival Rancang Malang" with 57 competition in the Kelurahan within Malang city is expected to their thematic born typical Malang city. Their which was growing in sprawls, kind of unplanned and tend to slums can set and designed of an idea residents of accompanied by Academics College and professional associations architect especially. And therefore the design physical and non-physic produced is expected to provide solutions problem solving in terms of there so as to be a region that identity and benefit the citizens of its inhabitants, and to maintain ecological sustainability. In a review this design writer trying to dissect design their Kampung Kramat Kasin as one competition winner devise Festival Rancang Malang 2016. The findings review was able to deliver in its design comprehensive.

Keywords: Design review, Kampung Tematik, Kampung Kramat,

1. Introduction

One of the SDGs goals 11th is sustainable development, which was about urban and settlement an inclusive, safe tough for disasters and sustainable (UCLG, 2015). This becomes main priority Indonesia's development in Nawacita and Rencana Pembangunan Jangka Menengah (RPJMN) 2015-2019. The success of sustainable development in urban cannot be an important role of regional governments to the planning and implementation of SDGs in participatory. Namely participation a native or cooperation that will involve society in the process of a whole and bottom up, not the interests of certain parties (Subadyo, 2012).

Malang city as second largest city in East Java, also has a role actively supported sustainable development through a competition held by Bapeda

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Malang city in 2016. Competition this titled "Festival Rancang Malang" involving 57 the kelurahan within the city malang, and are expected to become a design competition area activities conducted in participatory sourced of an idea residents assisted devotion assistance academics colleges and professional associations in Greater Malang as an interpreter idea to applicative. Prompting the birth of their thematic typical Malang city, that not only quality in terms of physical, but also non- physical both social culture, economic and support sustainable development. The winner of competition their thematic is embodied physically and funded from the Malang City so that can be enjoyed benefits for the Malang city and out of town unfortunate.

This paper is trying to dissect in depth of design one of the competition their thematic, 2016 namely Kampung Kramat Kasin located in RW 03 Kelurahan Kasin, in Klojen Malang City. In general this village was in the area of common Kasin, inhabited by about 150 families with the total number of 450 people. Scope the area is designed Neighborhood 07 (RT 07), Neighborhood 08 (RT 08), and Neighborhood (RT 09). All has the potential and weakness. RT 07 having the local annual ceremonies, besides RT 07 have potentials social and cultural life and the position tread under cemetery land, then RT08 having the same craft the economic potential, souvenir and good, and RT09 having the culinary things. Land status is municipal so to progress on the supervision of a government Malang City.

Fig. 1. Map of Kelurahan Kasin, Made of various sources, 2017

2. The Planning of Kampung Kramat Kasin

Manifesting their Kramat Kasin inline with sustainable development program through a strategy of their tour design educative planning participatory through the citizens and assistance professional associations in output designs that their iconic be based local karekteristik, both the

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technology and a budget appropriate capacity and apply the principle of ecology for environmental sustainability and the their kampung.

3. Description of The Design Theme

Made with their thematic up the theme their as their religious tourism educative. Tourism expected is based on ecotourism, the community as controller that contribute to the sustainability of culture and welfare locals (Subadyo, 2010).

5. The Concept of Design

5.1. The Concept Religious Tourism and Educational Tourism

Region or this area known as the "Kasin" located near one of the largest funeral in the Malang city, the funeral Kasin or more famous for a grave Kasin. In complex cemetery grave Kasin there were several tomb community leaders who enough seriously impact on the environment and local residents. One of them is the cemetery habib abdul qadir son of faqih that is one of the founders of pondok pesantren darul hadith Malang city.

Besides, there were also their unique in the complex. Namely their or settlement RT 07 of families 70 families with a population of about 250 people. Uniqueness this village lies in physical building use the grave as their homes.

5.2. BRAND KAMPUNG KRAMAT

Fig. 2. Design Logo Kampung Kramat Kasin
source: Personal File, 2016

Brand name Kramat taken also from the name of this village in. So the name has the potential image strong able to tell their identity. The icon has a religious meaning. Kramat means tour and religious educative things. So apart religious tourism has the potential meaning, but there were also has potential education tourism. Through this tourism, it able to give life guidance and improve the relationship with God.

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So, using the concept of paradox that was found in in the poetics of architecture. The tomb should considered austere but designed into a tourist destinations in religious and educational study.

" *Paradoxical statement often bring together whole sets of ideas with regard to existing " knowledge " and " truth " as seen by the one who makes the statement. Paradox is apparently a sound proof of an unacceptable conclusion. It is statement that appears to be contradictory and seemingly says two different things which may even sound absurd, but which is nevertheles true and often sublime* " (Antoniandes. A, 1992).

5.3. THE DEVELOPMENT OF A DESIGN THE AREA OF KAMPUNG KRAMAT

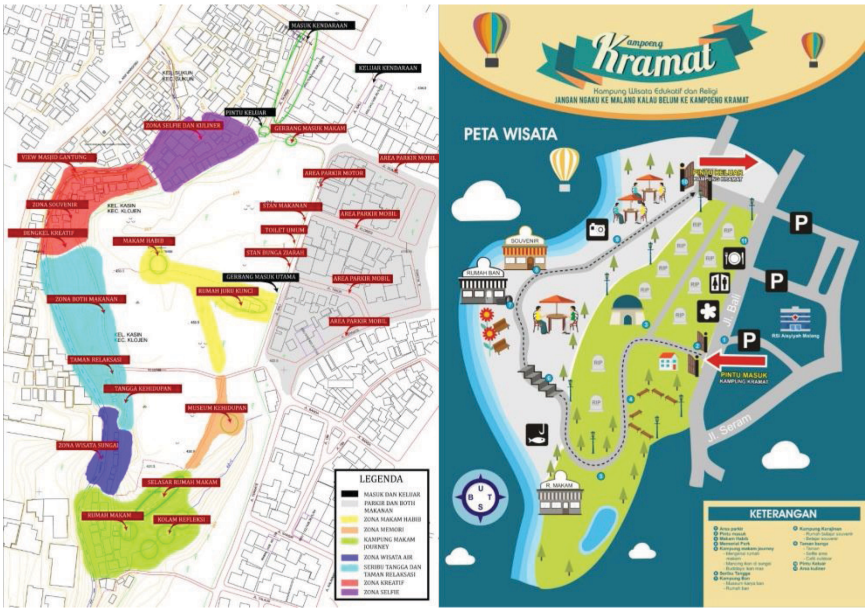

Fig. 3. Lay out Kampung Kramat Kasin
source: personal files, 2016

Based on the field study with residents as well as the device urban village, Kramat designed into a religious tourism area and education, about life by using potential land. So that there are two main zone for base planning, there are religious zone and education zone.

1. Religious tourism
    1. The pilgrimage to the grave of habib
    2.Festival kampung Kramat every the full moon
2. Education tourism (a journey their a tomb)
    1. Museum life
    2. Corridor of kampung Kramat
    3. River

4. Fishing zone
5. 1000 steps
6. Reflexy zone
7. Playground
8. Zona Creative Gallery
9. Selfie zone and culinary
10. Lodging house

6. DESIGN

6.1 Entrance Main Gate

Is the main entrance to the designed of stoneAnd ornament a tire are characteristic their Kasin .To vegetation also use of cambodia.

Fig. 4. Main gate. (source: personal files, 2016)

6.2 Booth

Booth is located on the wall entrance, there are selling food and Exposing Kampung Kasin.

Fig. 5. Culinary Booth . (source: personal files, 2016)

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6.3 Parking area

The motorcycle parking is across eastern walls of main entrance. That allow access to the park placed near public hospitals.

Fig. 6. Parking Area. source: personal files, 2016)

6.4 Museum Kehidupan

This building is located in the area south of, precisely the back of the key. tombThis building is one spot that give education and information about of life that everyone will someday return to the creator of. Ena having a wider area.

Fig. 7. Museum Kehidupan. (source: personal files, 2016)

6.5 Selasar Kampung Kramat

The rail road exist in front of Kampung Kramat. This area beautified by paint murals on paving ground.

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Fig. 8. The Corridor. (source: personal files, 2016)

6.6. Zona Kampung Kramat RT07

The houses painted with painting murals to the point where the impression fun in this area.And giving spot photo selfie for tourists

Fig. 9. Mural Wall. (source: personal files, 2016)

6.7. Corridor Alley of Kampung

Wall corridor also painted with murals for point of impression and a spot for taking picture for tourists.

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Fig. 10. Wall Corridor (source: personal files, 2016)

6.8. Fishing Zone

Kampung RT 07 has main icon is tomb. It located near the river bank. At first had showing carp. So that presented some gazebo sited as a fishing place and playing boat.

Fig. 11. Gazebo in Fishing zone. (source: personal files, 2016)

6.9. River Bank Corridor

The their rt 07 has main icon located near flood plains. Initially was showing carp. So presented gazebo sited as a fishing boat.

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Fig. 12. Gazebo and Fishing zone. (source: personal files, 2016)

6.10. A thousand stairs

The Kampung RT07 has unique households located below cemetery land. Households have the potentiality to be exposed, as a stair, life to strengthen the theme households painted on murals. It is containing a painting of born, baby, toddlers, teenagers, young, adult, old died.

Fig. 13. A Thousand Stairs. (source: personal files, 2016)

6.11. Massage Zone

Gazebo are designed for massage. The pavement installed stone for feet massaging.

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Fig. 14. Massaging Zone. (source: personal files, 2016)

6.12. Zona Playground

Creation this tire are expected to become a attraction for visitors especially children.

Fig. 15. Playground. (source: personal files, 2016)

6.13. Kampung Ban Zone

Besides tire, they also expose some beads on the wall. Bead is a business by residents.

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Fig. 16. Kampung ban Zone. (source: personal files, 2016)

6.14. Selfie Zone

Selfie zone with supersized letter as a photographic background.

Fig. 17. Selfie Zone. (source: personal files, 2016)

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CONCLUSION

Fig. 18. Shelter House Zone (source: personal files, 2016)

Design Kampung Kramat Kasin of their religious tourism and education is expected to realized in accordance guidline in realizing design the results of competition this. So that their benefits can be perceived for the city residents malang and residents RW 03 especially. To design this concept can still developed more detailed per the area, good infrasturktur, infrastructure pattern building occupancy house the side of a river in RT 07.

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MONITORING SYSTEM DESIGN SYSTEM AS MEASURING TEMPERATURE MEASURES

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ABSTRACT

Monitoring system tool as a temperature gauge in the field is a tool that serves as a temperature gauge this happens there are several factors that first the temperature, humidity, and light intensity in the ranks of the Army is still using the manual way. In this tool uses 3 sensors that have 4 parameters of interconnected results to generate index data. The usefulness of each sensor is SHT11 as a temperature and humidity gauge, TSL2591 as a light meter, and anemometer as a wind speed gauge. This tool can serve as a wind speed gauge on a jumping workout.

Keywords: Arduino Uno 328, Sensor SHT11, Sensor TSL2591

1. INTRODUCTION

In this case to support in monitoring and know condition of change of weather or nature that is not stabilized and avoid existence of victim during exercise then used temperature gauge which aims to know index temperature of environment at area where we will conduct exercise, so with data about index The temperature will be able to decide whether the exercise can be held or not, because in order to avoid the risk of casualties. However, on the ground there are still many army equipment still manually in the reading, spending information, and still need three personnel which are operated to monitor that is involving the picket officer and health team as the monitoring and transportation team as the delivery of news or information about the decision to be taken.

2. METHODE

2.1. Sensor SHT11

The SHT11 sensor (SHT11 Datasheet in Darjat, 2008) is a relative humidity sensor as well as a temperature sensor. This sensor is a pair that is equipped with 14 bit analog to digital converter and serial interface circuit. This sensor produces a quality signal with a fast response and is not sensitive to outside interference. The physical shape inside and outside the SHT11 sensor will be shown in Figure 1 below:

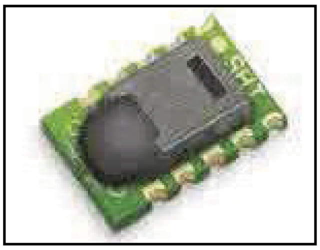

Figure 1. Physical Display of the SHT11 Sensor

2.2. Anemometer

Anemometer is a wind speed gauge that is widely used in the field of Meteorology and Geophysics or weather station forecasts. The name of this tool comes from the Greek word anemos which means wind. The first designer of this tool is Leon Battista Alberti in 1450. In addition to measuring wind speed, this tool can also measure the amount of wind pressure it. Meteorological unit of wind speed is Knots (Beaufort scale). While the meteorological unit of the wind direction is 0o - 360o and the direction of the wind (0o position indicates the North). When blown by the wind, the propeller or bowl that is on the anemometer will move in the direction of the wind. The greater the speed of the wind blowing the bowls, the faster the speed of rotating the bowl plates. From the number of turns in one second it can be known the speed of the wind, because in the anemometer there is an enumerator tool that will calculate the wind speed. In general there are two types of anemometers, an anemometer that measures wind speed (velocity anemometter) and anemometer that measures wind pressure.

Figure 2. Cup Anemometers

2.3. Light Intensity Sensor TSL2591

TSL2591 is a sophisticated digital light sensor because it can be used in various light situations and can distinguish between sunlight and light from incandescent lights. TSL2591 sensor is also much more sophisticated than the LDR sensor because the sensor output is digital so it does not require calibration in its use as well as more efficient because this sensor is faster and precise for the calculation of Lux. The TSL2591 sensor can detect the range of light from 188 Lux to 88,000 Lux quickly because this sensor portion contains both infrared diode spectra that can measure infrared and full spectrum or visible light by the human eye. The TSL2591 sensor and pin configuration will be shown in Figure 3:

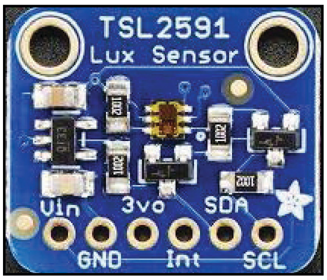

Figure 3. Sensors TSL2591

2.4. ATMega328 AVR Microcontroller

ATMega328 is a microcontroller output from atmel that has a RISC architecture (Reduce Instruction Set Computer) where every data execution process is faster than CISC (Completed Instruction Set Computer) architecture.

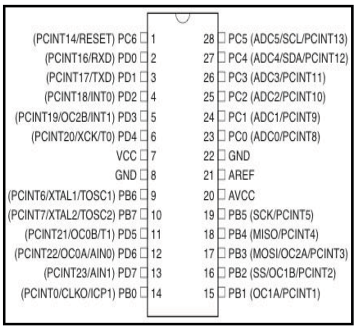

Figure 4. ATMega328 Pin Configuration

2.5. Arduino Uno 328

Arduino Uno 328 is a combination of hardware and software that is open source. The Arduino Uno Board has 14 digital input / output pins (of which 6 pins can be used as PWM output), 6 analog inputs, 16 MHz crystal oscillators, USB connection, reset button power jack. These pins contain everything needed to support the microcontroller and only connect to a computer with a USB cable or a voltage source can be obtained from an AC-DC adapter or a battery to use it. The Arduino Uno 328 board image and Arduino Uno 328 description will be shown in Figure 5 below:

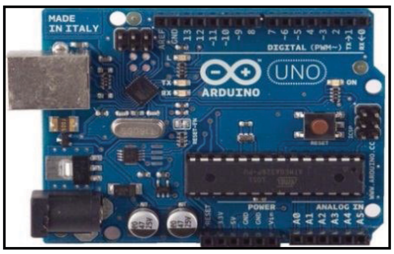

Figure 5. Board Arduino Uno 328

2.6. LCD (Liquid Crystal Display)

LCD (Liquid Cristal Display) is one component of electronic that serves as a display of data, either characters, letters or graphics. LCD display is available in the form of a module that is LCD display along with its supporting circuit including ROM etc.

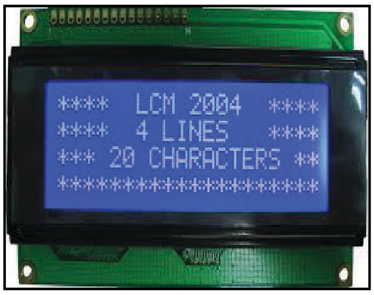

Figure 6. 20x4 LCD display

2.7. 12C (Inter Integrated Circuit)

Inter Integrated Circuit or often called I2C is a two-way serial communication standard using two channels designed specifically for sending or receiving data. The I2C system consists of SCL (Serial Clock) and SDA (Serial Data) channels that carry data information between I2C and its controllers. Devices connected to the I2C Bus system can be operated as Master and Slave.

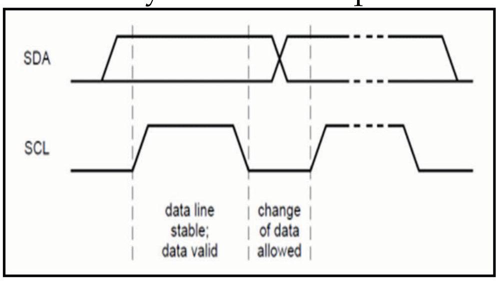

Figure 7. Trasfer Bit on I2C bus

3. RESULT AND DISCUSSION

3.1. Tool Planning

Planning tool design of the monitoring system as a field temperature gauge consists of hardware planning (hardware), hardware device planning includes designing in the whole circuit. From the planning and design of tools that will be made then making block diagram in the manufacture of monitoring system tools as a temperature meter is needed because it will facilitate the reading of the tool working system. Block diagram in the manufacture of monitoring system equipment as a temperature gauge will be shown in Figure 8 below:

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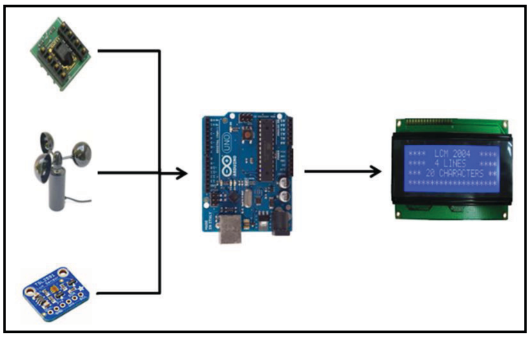

Figure 8. Tool Block Diagram

3.2. Software Design (software)

To control and manage the entire hardware system that has been created it must be supported with the software (software). Software is a programming language design that will be embedded in Arduino Uno 328. Software (programming language) embedded in the microcontroller is a command that will run to control the rangakain of a system so that it can work in accordance with the design and planning. Microcontroller workflow in executing software (programming commands) that have ditanakamkan in it, useful to control the hardware system so that in accordance with the planning, before creating a program to run the tool then first the authors create the flow of the program (flowchart) to facilitate in making the desired program can See in Figure 9:

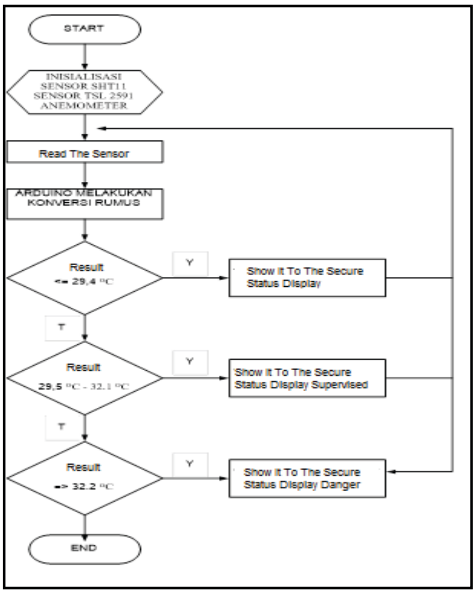

Figure 9. Flowchart of the Software

Figure 9 shows the flow diagram of the designed tool, here is an explanation of the working system sequence both software and hardware. The first is START start the tool. There is an initialization process on each sensor. Arduino receives data from each of the sensors. If the conversion result <= 29.4

OC then it will be displayed on the display with a secure status and then in the loop back to look for more data on the sensor read. But if the result of the conversion on Ardunio Uno 328 " NO " (the conversion result is greater than 29.4 OC it will be forwarded to the next process.

If the conversion result is 29.5 OC - 32.1 OC then it will be displayed on display with safely supervised status then will do loop back again to find more data on read sensor. but if the result of the conversion at Uno Ardunio 328 " NO " (conversion result is greater than 29.5 OC - OC 32.1 then it will be forwarded to the next process.

If the conversion result => 32.2 OC then it will be displayed on display with hazard status then will do loop back again to find more data on read sensor. If the temperature continues to increase then the status on the display will remain the same.

3.3. Arduino Uno 328 Microcontroller Test Results

After the program is executed then the existing LCD on port C will turn on and will display the characters according to which we compile before through the program. This shows that Arduino Uno 328 Microcontroller can work well and shown in Figure 10 below:

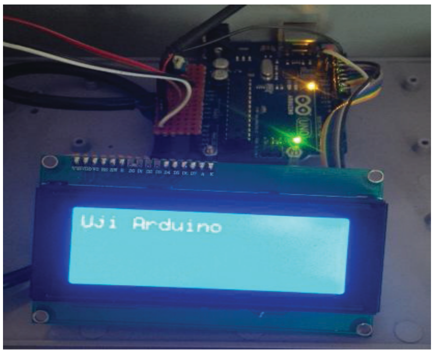

Figure 10. Arduino Board Test View on LCD

3.4. Result of Sensor Tests SHT11

From the results of SHT11 sensor testing that has been done at the time of listing the program successfully uploaded then show the character that shows the temperature and humidity of the sensor SHT11 on LCD 4x20. From this testing process shows that the SHT11 sensor is in good condition as shown in Figure 11 below:

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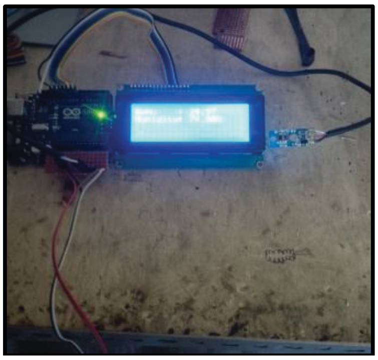

Figure 11. Test View Sensor Sensor SHT11

From the testing stages of the sensor SHT11 shows that the listing of programs uploaded / compiled on the Arduino Uno 328 board is correct and the SHT11 sensor can read the temperature and humidity well. The next SHT11 sensor test is performed by measuring the actual temperature using a digital thermo hygrometer so that the temperature measured by the digital thermo hygrometer is then compared with the temperature data that has been obtained by the SHT11 sensor. The above test results are to get the comparison of SHT11 sensor and the actual measuring instrument (Thermo hygrometer digital) which will be shown in Figure 12 and the comparison result data will be shown in Table 3.4.1 below:

Figure 12. Comparative Test View of SHT11 and Thermo Sensors Digital Hygrometer (Source: Testing)

From the comparative data of SHT11 sensor and Thermo Hygrometer Digital measuring instrument can be shown in table 3.4.1 below:

Table 3.4.1. Results of Experimental Data Sensor SHT11 Against Thermo Hygrometer Digital

NO	Sensor SHT11		Thermo Hygrometer Digital		difference °C	difference %
	(°C)	RH (%)	(°C)	RH (%)		
1	26.85	75.30	27.2	71	0.35	4.3
2	28.30	65.45	28.12	63	0.18	2.45
3	29.01	71.09	28.85	70	0.16	1.09

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3.5. TSL2591 Sensor Test Results

The TSL2591 sensor shows that the listings of uploaded / compiled programs on the Arduino Uno 328 board are correct and the TSL2591 sensor can read the light intensity well. To get more valid results, TSL2591 sensor testing is done by performing a comparison with Lux Meter Digital measuring instrument. The results of comparison testing will be shown in figure 13 and the comparison data will be shown in table 3.4.2 below:

Figure 13. TSL2591 Sensor Comparison Test View and Digital Lux Meter Measure Tool

From the result of comparison data on TSL2591 sensor and Lux Meter measuring instrument get the results that will be shown in table 3.4.2 below:

Table 3.4.2. Sensor Comparison Test

Sensor TSL2591	Lux Meters Measure Tool	Difference Lux
375Lux	370Lux	5Lux
280Lux	290Lux	10Lux
480Lux	455Lux	25Lux
2035Lux	2115Lux	20Lux

3.6. Sensor Design TSL2591

The design of hardware on the monitoring system as a temperature measuring device that includes designing TSL2591 sensor that serves as a sensor of light intensity gauge. Below will show the design block diagram of TSL2591 sensor shown by Figure 14:

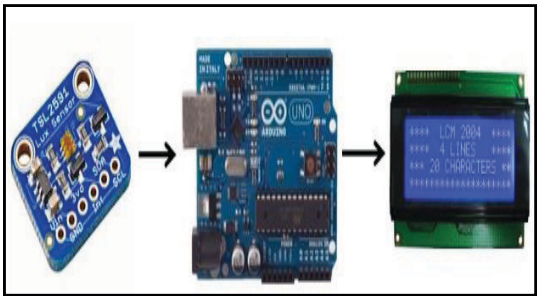

Figure 14. TSL2591 Sensor Design Block Diagram

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3.7. Design of Anemometer

The design of hardware in monitoring system tools as a temperature meter in the field that includes designing an anometer tool that serves as a wind speed gauge. In Figure 15 we will show the block diagram of an anemometer design:

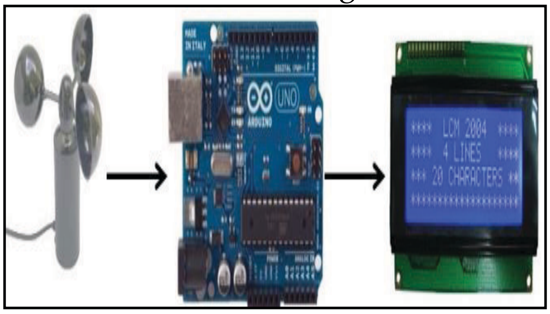

Figure 15. Anemometer Design Block Diagram

Explanation of the block diagram design from Figure 3.11 above can be explained as follows:
A. The anemometer is connected to Arduino Uno A2 pin, after the angina speed data is received it will be sent to Arduino Uno 328.
B. Once Arduino Uno 328 receives data from the anemometer it will be displayed on the LCD.
C. The 4x20 LCD is connected to the Arduino Uno 328 on pins 8, 9, 10, 11, 12, 13 as a data viewer display of anemometer with m / s unit.

3.8. Anemometer Test Results

From the results of Anemometer testing by way of programming on Arduino Uno 328 and rotation speed measurement test showed that Anemometer sensor in good condition which is shown in picture 16 below:

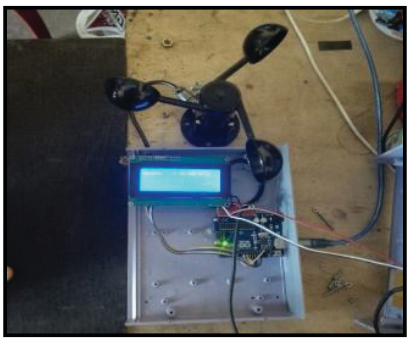

Figure 16. Display Test Sensor Anemometer

3.9. TA Tool Test Results

From the result of testing of TA tool monitoring system as measuring of temperature of field showed that tool have good with in show in Figure 17 below:

Figure 17. Testing Tool Results

3.10. Overall Tool Analysis

Analysis of the tool as a whole functioned to get the data that is done by doing the conversion from the sensor that is used in the instrument design system monitoring as a temperature gauge field.

3.11. Analysis With Conversion Formula

The tool that is made now is involving several variables in order to determine the value that is equipped with a wind speed gauge and has a temperature measurement unit that is oF or oC. At the Wet-Ball World Temperature (ISBB) the equation involves only the unit of temperature composite (oC), moisture (%), and light intensity (Lux). However, in the design tool monitoring system as a temperature gauge which is equipped with wind speed measuring instrument with unit m / s then use the formula as follows:

$AT = Ta + 0.348 \times e - 0.70 \times ws + 0.70 \times Q / (ws + 10) - 4.25$

Information :

Ta = Dry ball temperature (° C)

E = vapor pressure (hPa) [moisture]

Ws = Wind speed (m / s) at a height of 10 meters

Q = Radiation or light intensity

The United States Health Conference In Government Industries publishes a threshold value (TLV) that has been adopted by many governments for use in the workplace. The process for determining ISBB is also described in ISO 7243 based on the ISBB index. The American College of Sports Medicine bases the guidelines on the intensity of sports practice based on the ISBB.

In hot places, some US military installations display flags to indicate hot categories based on ISBB. The military published guidelines for water intake and physical activity levels to adapt and unacclimated individuals in different uniforms by heat category, can be seen in table 3.4.3 below:

Table 3.4.3. ISO Tables and The American College of Sports Medicine

Category	`F	`C	Color Flag
1	< = 79.9	< = 26.6	White
2	26.7 – 29.3	26.7 – 29.3	Green
3	29.4 – 31.0	29.4 – 31.0	Yellow
4	31.1 – 32.1	31.1 – 32.1	Red
5	= > 90	= > 32.2	Black

4. Conclusions

Based on the result of planning and making of temperature monitoring system as temperature gauge in the field, it is concluded as follows: (i) The design of monitoring system tools as temperature gauge field has been running well on each component that is in use and the cost of making this tool cheaper. (ii) In the tool conversion tool on each sensor to get a good result that is by mnggunakan the formula that has been specified that AT = Ta + 0.348 × e - 0.70 × ws + 0.70 × Q / (ws + 10) - 4.25. (iii) To get the result of wet temperature and dry temperature can use additional sensors, but in this tool does not use wet temperatsure index and dry temperature because in Indonesia the temperature does not reach minus degrees, the wet temperature and dry temperature is not given but can be made as a reference for development.

5. Suggestion

After going through several observations made on this tool and done some testing, then the suggestions that want to be given the author to improve the usefulness of this application are: (i) Continue and further develop the tools that have been created. (ii) Developing a monitoring system design tool for measuring the temperature of the field in order to deliver the measurement result automatically through data transmission. (iii) Refine the tool by providing additional sensors in order to read wet and dry temperatures.

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Design of "Kayangan Api Park" at Bojonegoro as Facilities The 15 Th National Olympic Games

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ABSTRACT

Kayangan Api Park (KAP) is a park dedicated to the 15 th National Olympic Games at Surabaya, East Java. This design is required to create new work architecture in the form of park design with a different concept. The methods used in the design KAP through two approaches including socio-cultural-historical such as interview then biophysical approaches such as observation, spatial analysis and analysis of the carrying capacity. Design KAP done on site with an area of 1500 m^2 with basic concept and inspiring from Javanese local genius and local wisdom as spheres of art and culture in Indonesia. Design processes of KAP refer from step research and analysis, preliminary design and construction drawing with applicated of basic elements as landform, cultural and sociological approach, site development, building and plant material. KAP is a form of cultural park that can accommodate a variety of cultural activities in open space such as exhibition of the installation art work, sculpture, street art and other various work of cultural art. Finally design of KAP is creating a site plan, lay out plan, perspective, sequence illustration, and explanation about detail engineering design.

Keywords : design, kayangan api, park

1. INTRODUCTION

The design of Kayangan Api Park (KAP) purposes, other than to honor the atlet of 15 th National Olympic Games as contlemplation place as well as recreational facilities. The design is to integrate the spiritual value to the atlet need of the community. Spatial the environmental site of KAP is divided into three sections, namely courtyard of *Jaba*, courtyard of *Jero*, and courtyard of *Jero Dalam*, which is designed in length, continuously, with permeable space permeation. Each turn of the yard is marked by a flight of stairs up to three steps. The division of spatial into three parts is based on the following philosophical conceptions: (i) Traditional Javanese philosophy**:** based on this philosophy, three parts of the hall's hierarchical space represent the natural expression of human life, namely the nature of *purwa*, and nature of the *wasesa*, while the staircase serves as a marker of the turn of each phase of the natural life. (ii) The value of local genius that can be lifted in three spatial in KAP is the existence of value owned by KAP as one of three place which is a series of procession of Javanese traditional ceremony since Majapahit era, that is Mount Lawu - Trowulan - Kayangan Api. (iii) Islamic philosophy: in this spatial design is elevated from the use of the odd number of numbers which is reflected in the division of the three spatial plates, which are oddly Islamic numbers symbolize "that is still open - not closed", which gives the balance of the world and the hereafter. It is derived on the basis of one *Hadith Muhammad Rasullollah SAW* which reads: "*Innallaha witrun yahibull witra*" - meaning "Allah is a strange thing, and He likes the odd" (iv) Modern philosophy: in this design is manifested in the spatial distribution of KAP in three parts of the court, conveyed by the intention that through the 15 th National Olympic Games (NOG) event held in 2000 in East Java, we will enter the threerd Millennium, with a burning determination as the fire that always burns in this KAP.

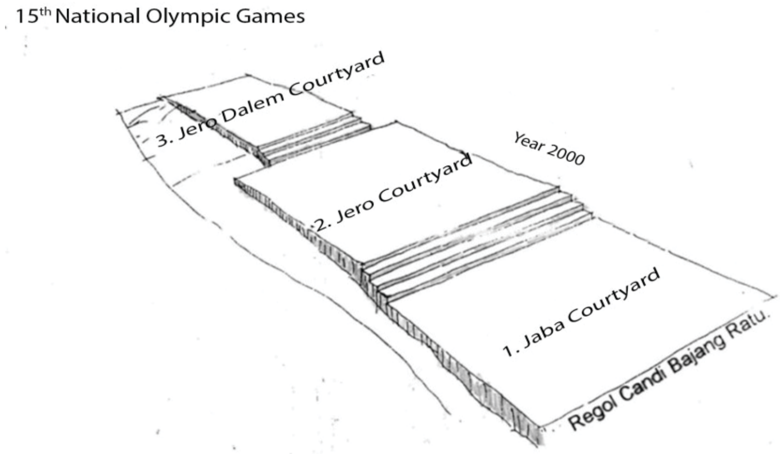

Figure 1. The "Courtyard - Architecture" of the KAP with the Concept of Three Division

The site of KAP complex is surrounded by a fence made of precast concrete with a traditional motif of East Java (Majapahit Kingdom), where the fence lattice is designed with the form of a 2000 NOG fire torch stilts into "*candra sangkala - geni trus murub ing bantala*" - from year 2000 which is the year of the 15 th NOG in Surabaya, East Java, the fire for the caldron taken in this KAP.

2. CONCEPT DESIGN AND IMPLEMENTATION

To entry the KAP complex, visitors will be accepted by the gate of a bridge where under it flow a small river. The existence of bridges and rivers is intentionally maintained, because its existence is appointed as a cosmic symbol of "*samodro-segoro*" - water as the source of life of living things in the world. After this bridge, visitors will be caught by the parking area, which also functions as introduction space. Visitors are then directed to the entrance of *Regol Candi Bajang Ratu* as the only access to KAP.

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2.1. Courtyard of *Jaba*

Before entering the courtyard of *Jaba*, visitors will be accepted by the gate of *Regol Candi Bajang Ratu*. This *Jaba* courtyard, in the form of a stretch of sandy yard, which serves as a ceremonial procession, with a size of 45 m x 45 m. The number 45 on this *Jaba* courtyard symbolizes the country's independence year. In this *Jaba* courtyard there is no building facility. The building attached to the front side of this *Jaba* courtyard is the *Regol Candi Bajang Ratu*.

Regol with the typology of *Candi Bajang Ratu* was chosen with consideration, to give the expression as a point of interest entering this KAP. It is also intended to give a message that to achieve the achievement must pass through a tight selection door (visualized in staircase ladder) as seen on the physical door of *Regol Candi Bajang Ratu*. *Regol* building is deliberately adopted from the typology of *Candi Bajang Ratu* in Trowulan, because the existence of fire park is actually one of three series of historical procession between Mount Lawu - Trowulan - Kayangan Api.

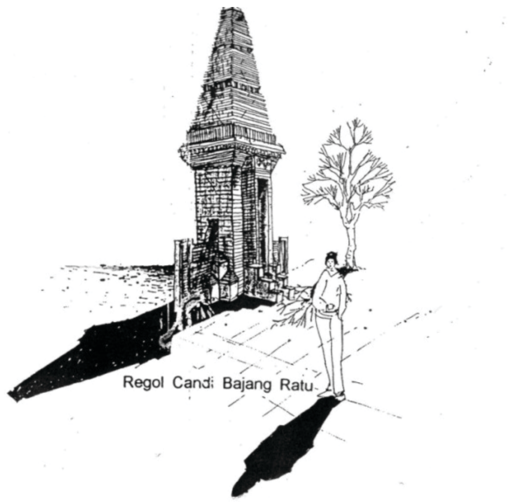

Figure 2. Point of Interest expressed in *Regol Candi Bajang Ratu* at the main entrance KAP

This *regol* has a floor plan of 6 mx 9 m, so the number is 15. This figure becomes the symbol of the 15 th NOG and the symbol of the sacred day of Javanese traditional ceremony at Kayangan Api which falls on every Friday (*Jumat*) *Pahing*, where the number of *neptu* of the day is 6 + 9 = 15. The construction of this *regol* building is made of specially designed exposed brick pairs as the temple brick in Trowulan.

On the courtyard of *Jaba* that serves as the ceremony page there are 2 pieces of service door on the right-left end of the turn limits *Jaba* courtyard with *Jero* courtyard, which serves to provide access to the toilet area. The plot of the building where this toilet area is intentionally placed outside the area of the courtyard with the intention that the sacredness of KAP is maintained.

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2.2. Courtyard of *Jero*

Jero's courtyard is the second level courtyard with 17 m X 45 m. The number 17 represents the 'date of our country's independence', while the number 45 becomes a symbol of the independence year of the Republic of Indonesia. In this section of the *Jero* courtyard there is a fire circle placed by placing the imaginary axis of the *Qiblat* direction as its center line axis, and meeting at a point with the east-west magnetic axis at the *banyu umub* well. This imaginary conception is considered important because the mythical existence of fire in Kayangan Api is a place of making heirlooms in the era of the *Empu Sopa* which became one with the existence of "*Gumuling* well - *banyu umub* "as a place to clean the heirlooms.

Circle of fire is round / circle with diameter of five meter. The round shape becomes an expression of determination that thickens and is whole without beginning and end in holding a flame of struggle. While the number five has the meaning that the basis of our country is *Pancasila*. Number five also reminds us how strong the fingers if fisted, symbolizing the greatness of the unity of the nation that has given birth and keep the country's independence. Cosmic symbols expressed in the form of a circle framed by a backdrop that is limited to eight pieces of base-shaped totem that strung into a single unit. The eight totems symbolize the eight directions of the direction of the wind and the manifestation of the universe's existence. This backdrop is described as the expression of a *floating circle of flame*, which is the boundary between *continental exposures*, the *exposure of oceans* to *volcanoes of the volcano* as a symbol of life in the conception of "*jambhu dwipa*".

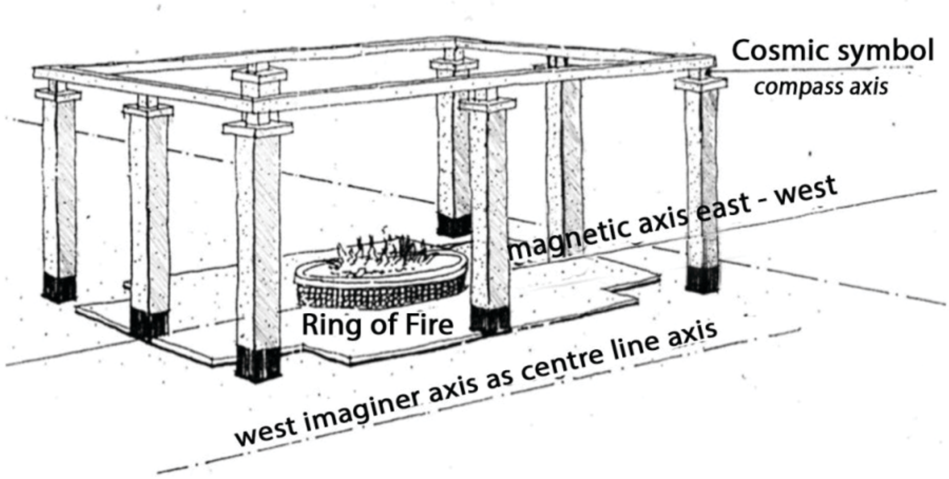

Figure 3. Fire Circle of cosmic concepts based on the axis of the wind - the magnetic of the earth and the direction of Qiblat

In this section of fire circle is equipped with four square-shaped seats size 2 X 2, which is placed in the direction of the breeze axis Northeast - Southeast - Northwest - and the Southwest, with a circle of fire as its center (the volcano of

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life, the palace , Kingdom and heaven). The concept of placement is based on the ancient cosmology concept of Hindu-Buddhist, also based on the Javanese cosmology concept of "*Sedulur Papat Lima Pancer*, which is believed by Javanese society as a symbol of continuity and human welfare and salvation, while the circle of fire as the center of the universe symbolizes eternity.

The finishing material of the backdrop on the fire circle is designed to be made of clinker stone exposed red color which is synchronized with the construction of the fire circumference pair. On the inside of the circle of fire where eternal flame blazes, arranged with a black scalps tone stone formation of Lawu Mountain which is designed sculpturally, so as to show the flame-shaped configuration of ritual nuance.

Figure 4. Sequences Rotunda Fire Circle KAP

At the later stage of development, within this area of the *Jero* courtyard (to the left of the circle of fire) is equipped with a building facilities of Islamic prayer room (*musholla*). For the building of Islamic prayer room is displayed with *Tajug* architecture, where the basic shape of the plan is a square of size 8 X 8 m. Number eignt, gives the meaning of the eighth month (August) as the sacred month of the Indonesian nation, which is strung together with the short side of this 17th-floor *Jero* courtyard, to reveal the 17th as the independence day of Republic Indonesia. The canopy roof is arranged three, tapering upward toward the top of the *mustaka* (crown) to the divine essence. As a follower of the majority, the Islamic philosophy is expressed in the three stacking canopy that reflects the level of devotion, is *Islam - Iman - Ikhsan*. This concept can also be interpreted in the sense.

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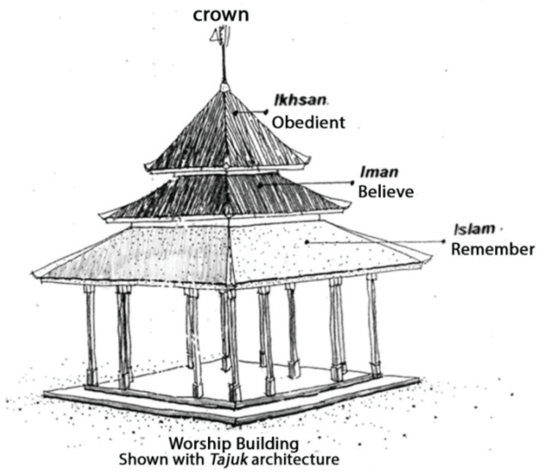

Figure 5. Building typology of *Tajug*

2.3. Courtyard of *Jero Dalam*

Jero dalam courtyard this dimension 27 m X 45 m. The short dimension of *Jero Dalam's* 27-square-meter courtyard is expressed from the number of provinces that are the territory of the Republic of Indonesia. While the dimension of the long side is the number 45, which symbolizes the independence year of the Republic of Indonesia. The formation of the four rectangles is chosen, with consideration when there is an addition (eg, the widening of the province), then this form can flexibly evolve towards the sides.

Inside the *Jero Dalam* couryard is placed *Sasana Kayangan Api* building, designed with the concept of Java architectural formation, where the basic shape of the floor plan is 15 m X 15 m. The number 15 is raised as sign for the 15 th NOG event to be held in East Java. The number 15 is also lifted from the sacred day of traditional Javanese ceremonies held at KAP, on every Friday of *Pahing*, whose number of *neptu* is 15 (sum from *Jum'at* (Friday) = 6 and *Pahing* = 9). This needs to be lifted because until now, this KAP still serves as one of the rituals of traditional Javanese people in Central Java and East Java.

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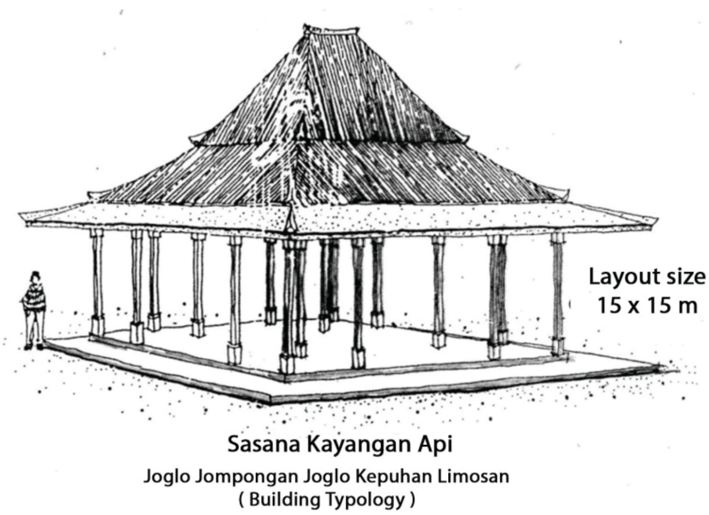

Figure 6. Building Typology *Joglo Limolasan*

The roof applied to the *Sasana Kayangan Api* building is a combination of *Joglo Jompongan* (which is the dominant feature of Javanese traditional architecture of East Java) and *Joglo Limolasan's*, which gives historical meaning that KAP is one of the historic places belonging to "*kasepuhan*". "*Kepuh*", from one of the Majapahit Kingdom sites, while "*Limolasan*" was revealed as a form of the 15^{th} NOG held by the fire taken from this KAP. Level three stacking on the roof of the building *Sasana Kayangan Api* contains a philosophy that symbolizes the three levels of human journey, starting from the mother's content, then the human born, and back to the God "*Illahi Rabbi*"

The layout of *Sasana Kayangan Api* building in *Jero Dalem* courtyard is set back to back, with the intention to bring up open space at the front of *Sasana Kayangan Api* building which serves as one of the procession space of 15^{th} NOG fire taking ceremony. At *Sasana Kayangan Api* building, *soko guru* (coloumn) is the main pillar that supports the roof structure. *Soko guru* is one of the forming elements of the building, a main pole located in the middle of the building *Sasana Kayangan Api*. The numbers of main pillars are as many as four pieces each located in the direction of the winds in the Northeast - Southeast - Northwest - and the Southwest.

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Figure 9. Implementation of *Joglo Limolasan* on *Pendopo Kayangan Api*

The layout of *Sasana Kayangan Api* building in *Jero Dalem* courtyard is set back to back, with the intention to bring up open space at the front of *Sasana Kayangan Api* building which serves as one of the procession space of 15^{th} NOG fire taking ceremony. At *Sasana Kayangan Api* building, *soko guru* (coloumn) is the main pillar that supports the roof structure. *Soko guru* is one of the forming elements of the building, a main pole located in the middle of the building *Sasana Kayangan Api*. The numbers of main pillars are as many as four pieces each located in the direction of the winds in the Northeast - Southeast - Northwest - and the Southwest.

Soko guru in the building *Sasana Kayangan Api* also has a function in the expression of aesthetic values, expressed by the existence of some ornaments that decorate, based on the teachings to do good and human relationship with God. In the section that holds the teacher soko placed ornament patterned *Padma* (lotus), the calligraphy stilasi letters *mim, ha, mim* and *dhal* which means *Muhammad Rassullalah*. Furthermore, the *Praba* ornament (which means glowing light) is inscribed on a pillar located on two places, namely the bottom facing up and the top facing down on each side of each pillar.

The intercropping part of *Sasana Kayangan Api* building is the peak of beauty in this building, which symbolizes heavenly fantasy. With this approach then the ornament pad this section is dominated by the ornament flora *sulur-suluran* (spirals) that symbolize happiness and eternity. At the edge of the intercropping there is *sunduk kili* with pineapple ornament form. Its meaning is that the sweet pineapple is hard to enjoy, which gives a symbol that to achieve and enjoy the beauty of heavenly success must go through a difficult journey, starting from following by the teachings of good deeds and religious teachings (in this case Islamic religion). While the color shown is a golden color that

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symbolizes greatness, red symbol of courage, as well as chocolate as a symbol of immortality and color green and yellow as a symbol of fertility and honor.

3.CONCLUTION

The conceptual plan for the site KAP as an spiritual and recreational historical tourism object by developing spiritual historical interpretation of Bojonegoro district as well as KAP. This design recommends to arrange landscape management plan under the responsibility of KPA Foundation.

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The Effectivity of "Pokdarwis" Role on Successfully Marketing of Tourism Village Towards "Mega Tourism: Batu City For The World"

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Tourism sector is the one of the leading sectors of Batu City. To enhance the spirit of tourism sector development in the international sphere, in 2017 Government of Batu City launched the slogan "Mega Tourism : Batu City For the World". To facilitate the achievement of the target of marketing Batu City in the international world, Government of Batu City can not rely solely on artificial tourism conducted by private parties such as Jatim Park Group, but also have to develop various nature tourism or other uniqueness of Batu City. The Government of Batu City can explore the natural attractions or the uniqueness of local tourism through the development of Rural Tourism. The development of Tourism Village in Batu City, the participation of the villagers through the formation of the Community Based Tourism called Pokdarwis. This research is a case study on Pokdarwis in Village of Pesanggrahan, Junrejo and Dadaprejo in Batu City. Analytical techniques used in this study is descriptive analysis. Based on the results of data analysis in three locations of tourism villages shows that Pokdarwis still has not played an effective role in tourism activities. In general, Pokdarwis in three villages faced obstacles in the implementation of activities in terms of: 1) Pokdarwis members still lacked awareness about the importance and benefits of increasing tourism activities in the region, 2) Pokdarwis members still due independently marketing and promoting their personal business, not their region; 3) The Government of Tourism Department does not coordinate and assist them intensively. These three things, hampered the development of tourist villages. In fact in these three villages each has excellent potential that can be developed. Therefore, to improve the role of Pokdarwis it is suggest that: 1) The leader of Pokdarwis should be given to village officials who have the authority to direct and control activities and have a high interest and motivation in improving the tourism sector, 2) Government of Tourism Department must conduct socialization and training to open the the community mind about the importance and benefits of tourism activities development in the region, 3) Goverment of Tourism Department should conduct intensive coordination and assistance. In general it can be concluded that the existence of Pokdarwis needs to be supported and nurtured continuously, so that it can play a more effective role in mobilizing public participation in creating conducive environment and atmosphere to improve and develop tourism activities around tourism destinations.

Keywords: pokdarwis, community based torism, tourism village

1. INTRODUCTION

Tourism sector is the one of the leading sectors of Batu City. The number of tourists in Batu City in 2016 reached 4,2 million tourists. In 2016 local budget, Government of Batu City set a revenue target of IDR 1 trillion, which 80% comes from the tourism sector. Goverment of Batu City has a target to conjure Batu City into an international tourism destination. Furthermore, to enhance the spirit of tourism sector development in the international sphere, in 2017 Government of Batu City launched the slogan "Mega Tourism : Batu City For the World" to support the image Batu City as Swiss Van Java. To achievement of these target, Government of Batu City can not rely solely on artificial tourism conducted by private parties such as Jatim Park Group, but also have to develop various nature tourism or other uniqueness of Batu City. The Government of Batu City can explore the natural attractions or the uniqueness of local tourism through the development of tourism village. Local communities play an important role in the development of tourism villages because the resources and uniqueness of traditions and cultures inherent in the community is the main driving element of tourism village activities. On the other hand, local communities that grow and co-exist with a tourism attraction become part of an interconnected ecological system. The success of developing a tourism villages depends on the level of acceptance and support of local communities (Wearing, 2002). The local community acts as the host and becomes an important player in the development of the tourism village in all phases from the planning, supervision and implementation stage.

To support the development of tourism in Batu City, Tourism Department make a community called "Pokdarwis". Pokdarwis is implementation of Community Based Tourism (CBT) as an empowerment approach that involves and putting the community as an important player in the context of a new paradigm of development that is sustainable development (sustainable development paradigm). Community-based tourism is an opportunity to mobilize all the potential and dynamics of society, to offset the role of large-scale tourism business actors. In general, the development of tourism potential still places the community as an object not as a subject or an important player in tourism development. This caused many local people have not received the benefits of tourism development optimally and adequately. Therefore, in the development of tourism should make the empowerment of society as a modernization with a more complete supporting infrastructure (VK Muzha et al., 2013).

The formation of Pokdarwis is one of the marketing activities of City Branding namely people marketing. A tourism city can not only rely on promotions by local governments. The role of community support is need to create a conducive culture and climate to the develop of tourism in their area. Entrepreneurs, lodging, tour services, transportation rentals, merchants, hotels must all work together in advancing the region (Intyaswono et al., 2016). The purpose of this study is to explore of the effectiveness of Pokdarwis role in the tourism development in Batu City.

2. THEORETICAL BACKGROUND

2.1 Community Based Tourism (CBT)

CBT is a tourism that realizes cultural, social, and environmental sustainability. This form of tourism is managed and owned by the community for the community, to help tourists raise their awareness and learn about the community and local way of life. Thus, CBT is very different from mass tourism. CBT is a model of tourism development that assumes that tourism must depart from the awareness of community needs as an effort to build tourism that is more beneficial to the needs, initiatives and opportunities of local communities (Pinel, 1998:277) . CBT is not a tourist business that aims to maximize profit for investors. CBT is more related to the impact of tourism for communities and environmental resources. CBT was born out of a community development strategy using tourism as a tool to strengthen the capacity of rural / local community organizations.

The concept of CBT has principles that can be used as a tool of community development for local communities, i.e: acknowledge, support and promote community-owned tourism, involve community members from the beginning on every aspect, promote community pride, improve quality of life, ensure environmental sustainability, maintaining unique local character and culture, Help develop cross-cultural learning, respect for cultural differences and human dignity, distributing benefits fairly among community members, and contributes a defined percentage of the community's project income.

2.2 CBT Development Model

Interest in public participation in the world of tourism begin in America in the early 1970s. Gunn (1972: 66) campaigned the use of a joint forum that was attended by community leaders, constituents, tourism stakeholders as expected. Gunn believes that the benefits of the community approach, he advocates may be beneficial to the population anbegid visitors. Then the one who popularize the concept of community-based tourism development is Murphy (1985). He argues that tourism products are locally articulated and consumed. Tourism products and consumers must be visible to locals who are often very aware of the impact of tourism. Therefore, tourism should involve local people, as part of tourism product, then industry should also involve local people in decision making. Because local communities have to bear the cumulative impact of tourism developments and they need to have greater input, how communities are packaged and sold as tourism products. (Murphy, 1985: 16). Getz and Jamal (1994) criticize the Murphy model, because it does not offer blueprints to implement it in concrete form. Murphy concept in its implementation still have many problems. Public participation is seen as a tool for maintaining the

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integrity and authenticity as well as the competitive ability of tourism products (Gunn, 1994). However, when public participation emerges, tourism destination planning remains focused on commercial interests and very little public engagement. The purpose of this model's tourism planning is more focused on preserving the uniqueness and attractiveness, and in fact more top-down, business-oriented, and economically oriented approach (Bahaire and Elliott-White, 1999: 248). The community approach model becomes the standard for tourism development process, which involves the community in it is a very important factor for the success of tourism products.

In the 1990s, along with the development of interest in developing sustainable tourism products, the form of community participation became very urgent. This form of community participation becomes essential for the achievement of sustainable tourism and for the realization of quality tourism. Getz and Jamal (1994) developed the theoretical foundations of community involvement in tourism planning and development and analyzed the nature and purpose of different collaboration models of cooperative models. They both define collaboration as "a process of joint decision-making among autonomous stakeholders of the interorganizational domain to solve problems or manage tourism-related issues (Getz and Jamal, 1994: 155). The collaboration process includes; 1) Problem Setting by identify key stakeholders and issues. 2) Direction Setting by share a collaborative interpretation, appreciating common goals. 3) structuring and implementing, 4) institutionalization.

D'amore provides guidance models for the development of community-based tourism, i.e : Identify development priorities by local residents (resident), promote and encourage local people, engaging local people in industry, investment in local capital or entrepreneurship is needed, participation of the population in events and extensive activities, tourism products to describe local identity, addressing problems that arise before further development. That points are summaries of the community approach. Local communities should be "involved", so they can not only enjoy the benefits of tourism and continue to support the development of tourism in which the community can provide lessons and explain in more detail the history and uniqueness. In order for CBT to work successfully, there are elements of CBT that must be considered, namely: Natural and cultural resources, community organizations, management and learning. The lesson here aims to help the learning process between Hosts and Guest, educate and build understanding between different ways of life and culture, raising awareness of cultural conservation and resources among tourists and the wider community (REST, 1997).

2.3 Tourism Village

Tourism village is a rural area that offers a whole atmosphere that reflects the authenticity of the countryside, both in terms of cultural social life, daily customs, architecture and spatial structure of the village and has the

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potential for the development of various components of tourism such as attractions, souvenirs, and other tourist needs. (Document Criteria Village Tourism, Ministry of Culture and Tourism, 2001: 3). The countryside with its uniqueness, such as the natural environment, the beautiful landscapes, the diverse plants, the rural communities and their distinctive lifestyle, is an alternative to providing 'other' experiences to tourists and at the same time to diversifying tourism products (Lane, 1994).

Kuvacic, et al. (in Damanik, 2010: 1648) interpreted tourism village by showing a geographical environment where tourism activities took place and original characteristics of traditional culture, agricultural culture, inland landscapes and simple lifestyles. The context of space is important to positioning activity and the implications of rural tourism development. Tourism village is an alternative form of tourism that can contribute positive changes to social, economic and cultural resources in rural areas.

2.4 The Development of Tourism Village

The orientation of tourism development needs to put the facts of environmentally alternative tourism development as the main consideration in developing capacity and capability in society (Beeton, 2006). It can improve the service as well as realize the central role of the community in tourism development activities in accordance with the expectations and capabilities possessed. Public participation is important for decision making in tourism development as well as benefits to be accepted as the implication of on-going rural tourism activity (Wall, 1995).

In Indonesia, the development of tourism village is more facilitated by the state, while the people tend to be passive. As a result, local capacity in responding to state-sponsored innovations through the development of tourism villages still faces a number of crucial issues (Damanik, 2009: 131-133). The involvement of villagers in the development of tourism village becomes crucial, because from them, we will know and understand the extent of the potential of the region. In addition, this engagement is vital to gaining support and ensuring that what is to be gained is related to the needs and benefits of the local people. Finally, the role of citizens in the development of tourism is urgent to be developed and placed as an integrated part. Community participation is not primarily a process of strengthening the capacity of local communities, but it can act as a mechanism to increase the empowerment of citizens to engage in joint development. Some forms of community involvement are the provision of accommodation facilities in the form of homestay, the provision of tourist consumption needs, tour guides, the provision of local transportation, art performances, and others.

In the context of tourism development, community participation is important to be encouraged in order to distribute the benefits of tourism activities directly to the community. The spirit of decentralization and the full granting of authority for citizens to manage tourism in their areas is essential for the realization of community-based tourism. The importance of participation in development means that anything related to economic policy-making, such as attracting outside investors, must involve citizens (Bryson, 1995, 2007). In the process of economic development in the rural areas the citizens should not only be the object, but as subjects in determining the direction of the development of society, so if the people reject the incoming investment, then the government also can not impose his will. Furthermore, the essence of community participation is a form of increasing bargaining power for the community itself, so that its position becomes balanced with the government or investors. It also serves as a power to control the policies taken by the government, resulting in synergies between local resources, the political power of the government, and outside resources or investors. In accordance with the nature of tourist villages which should be initiated internally and independently by local (local) communities this means that the government, both central and local levels only as a facilitator. The process of growing and developing a tourist village will depend on the community itself.

2.5 Tourism Awareness and Pokdarwis in the Development of Tourism Destination

Tourism needs a variety of empowerment efforts, so that people can play a more active and optimal, at the same time receive positive benefits from development activities undertaken to improve welfare. Community empowerment in the context of tourism development can be defined as: "Strengthening and capacity building efforts, roles and initiatives of the community as one of the stakeholders, to be able to participate and play an active role as subject or actor or beneficiary in sustainable tourism development". (Directorate of Community Empowerment, 2010)

The definition affirms the important position of the community in development activities, i.e. the community as the subject or the agent of development; and communities as beneficiaries of development. The community as the subject or the developer means that the community becomes an important player who must be actively involved in the planning and developing process of tourism, together with other relevant stakeholders from both government and private sector. In its function as subjects or actors of the community have a role and responsibility to jointly encourage successful development of tourism in its territory. The community as beneficiaries means that the community is expected to obtain significant economic value from the development of tourism activities to improve the quality of life and social welfare of the people concerned.

Within the framework of tourism development, one of the fundamental aspects to the success of tourism development is the creation of a conducive environment and atmosphere that encourages the growth and development of tourism activities in a place. The climate or conducive environment is mainly associated with the realization of "Tourism Awareness" and "Sapta Pesona" which is developed consistently among the people who live around the tourism destinations. Tourism Awareness in this case is described as a form of public awareness to play an active role in the following 2 (two) things, i.e: a) Communities realize the role and responsibility as a host is good for guests or tourists who visit to realize conducive environment and atmosphere as stated in the slogan of Sapta Pesona; b) The public realize the right and need to be a tourism stakeholders..

SAPTA PESONA, as mentioned above are: "7 (seven) elements of charm that must be realized for the creation of a conducive environment and ideal for the development of tourism activities in a place that encourages the growing interest of tourists to visit". The seven elements of Sapta Pesona mentioned above are: 1) Safe; 2) Orderly; 3) Clean; 4) Cool; 5) Beautiful; 6) Friendly and 7) Memorable. The realization of the seven elements of Sapta Pesona in the development of tourism in the region will lead to: 1) Increase interest in tourist visits to destinations; 2) The growth of prospective tourism business climate and 3) Increase employment and income opportunities, as well as multi economic tourism impact for the community.

There are four general strategies in marketing or encouraging a city to be more attractive to tourists, entrepreneurs or investors to a particular city or region (Kotler, 2002: 245) by: 1). Image marketing: the uniqueness and goodness of the image . Often supported by slogans 2). attraction marketing: attractions or natural beauty, buildings and historic sites, parks and landscapes, convention and exhibition centers, malls and supermarkets. 3) Infrastructure marketing: infrastructure as a supporter of environmental attractiveness of life and business environment, including roads, railways, airports, and communication networks and information technology. 4) People marketing: among other things includes hospitality, heroes or local renowned, competent personnel, entrepreneurship skills and positive comments or responses of the former resident to the market place.

Tourism awareness and "Sapta Pesona" as an important element in support the development of tourism destinations certainly can not be realized automatically without any steps and efforts to pioneer, grow, develop and implement consistently in tourism destinations. Therefore, community participation is needed to be actively promoted in developing Tourism awareness and Sapta Pesona together with other relevant stakeholders. In this case the Pokdarwis or the tourism drive group as an informal institutional establishment formed by members of the community (especially those concerned with developing tourism in the region), is one of the stakeholder elements in the community that has important linkages and roles in developing and realize the tourism awareness and Sapta Pesonoin the area.

3. METHOD

This research is a case study on Pokdarwis in Village of Pesanggrahan, Junrejo and Dadaprejo in Batu City. Analytical techniques used in this study is descriptive analysis. This data analysis is done by understanding and compiling data that has been collected systematically based on community response in all three villages

4. RESULT AND DISCUSSION

In general, the three villages of Pesanggrahan, Junrejo and Dadaprejo have interesting tourism potential (Table 1). But unfortunately the potential has not been optimally revealed. People who are able to produce their own products tend to work alone to sell their products. Whereas if people work together to promote their village, it will be a lot of tourists come to the village. One of the participating community's exemple is community around the Depok Parangtritis beach in Yogyakarta (Nawawi, 2013). The communities jointly set up "Koperasi" to manage and recycle garbage around the beach. It is beneficial for the environment and provide additional income for communities around the beach. If the beach in a clean condition, it will attract more tourists come to the beach.

Pokdarwis was formed to mobilize community participation to jointly develop tourism potential in the village. But unfortunately, the role of each Pokdarwis in 3 villages is not optimal yet. The community does not yet have an awareness of the importance and benefits of developing tourism activities in the village. One of the Leader of Pokdarwis in Pesanggrahan Village is actually quite active and creative trying to develop his village. One of his ideas is to develop the area of Mount Panderman to be like the area of Mount Bromo. If people around Mount Panderman want to work together to provide horses and "motor trail" to facilitate tourists climbing Mount Panderman,it will attract more tourist. But unfortunately, this creative idea is still difficult to accept by society. In this case, the Goverment of Tourism Department should play an active role in raising public awareness and facilitating the activities of Pokdarwis.

Table 1. Tourism Potential Village

Village	Hamlet	Tourism Potential
Pesanggrahan	Wonosari	Fishing tour and quoting vegetables
	Macari	Religious tourism (the oldest mosque that stood in 1825)
		Herbal education tours (tours that offer educational traditional medicine / beauty products
	Srebet Barat	Religious tourism (Mayangsari Tomb)
		Nature tourism Source "Kasinan" (hot water)
	Srebet Timur	Cultural tourism "Bantengan"
		Nature tour jogging track on the slopes of the

		mount Panderman
	Krajan	Cultural Tour (art studio of Mr. Sunarto) Cultural Tour (traditional music "campursari" owned by Mr. Jumeneng songwriter Batu Tourism City) Historical tour (royal heritage statue)
	Toyomerto	Nature tourism (Mount Panderman) Dairy cattle tour (biggest milk supplier in Batu City where number of cows more than the population) Cultural tourism (source ceremony)
Junrejo	Rejoso	Wood craft tour (kitchen appliance)
Dadaprejo	Karangploso	Ceramic craft tour
	Areng-areng	Plant breeding tour Earthenware tour Cultural tourism "Jaranan"

Based on the results of data analysis shows that in the three locations of tourist villages, Pokdarwis still has not played an effective role in tourism activities. In general, Pokdarwis in the three villages faced obstacles in the implementation of activities in terms of: 1) Pokdarwis members still lacked awareness about the importance and benefits of increasing tourism activities in the region, 2) Pokdarwis members still due independently marketing and promoting their personal business, not their region; 3) The Government of Tourism Department does not coordinate and assist them intensively. These three things, hampered the development of tourist villages. That results are in accordance with the opinion that lack of coordination and cooperation between departments of government can be very damaging to not only the quality of the tourism product, but also to the efectiveness of participatory tourism develoment approach. On the other hand, lack of roles of agencies, overlap in responsibilities of government departments and little accountability between them make the most needed coordination for participatory tourism development approach less possible. In brief, a participatory tourism development strategy will invite more actors to play roles in the tourism development process, and thus increase the need for interaction amongst agencies. Any lack of coordination may frustrate potential opportunities for the community to involve itself in tourism development (Tosun, 2000)

In fact in these three villages each has excellent potential that can be developed. Therefore, to improve the role of Pokdarwis it is advisable: 1) The leader of Pokdarwis can not walk if given to the community, should be given to village officials who have the authority to direct and control activities and have a high interest and motivation in improving the tourism sector, 2) Tourism must conduct socialization and training "open mind" to open the minds of the community related with the important and the benefits of development of tourism activities in the region, 3) Goverment of Tourism Department should conduct intensive coordination and assistance. In general it can be concluded that the existence of Pokdarwis needs to be supported and nurtured continuously so that it can play a more effective role in participating in mobilizing public participation in creating environment and atmosphere conducive to the growth and development of tourism activities around tourism destinations.

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The Total Impulse Study Of Solid Propellants Combustion Containing Activated Carbon From Coconut Shell As A Catalyst

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Abstract

This study investigates the capabilities of thrust, burn time, and total impulse from solid propellant materials. Attempts to increase the three variables are quite difficult because the thrust value is inversely proportional to the value of the burn time, it requires the catalyst as a regulator of the composition to produce an optimal variable value. The activated carbon from the coconut shell is used as a catalyst on a composite solid propellant material containing ammonium perchlorate (AP), hydroxyl terminated polybutadiene (HTPB) and aluminum (Al). The effect of adding coconut shell activated carbon may affect thrust parameters, burn time and total impulse rocket. The method of measuring parameters using rocket thrust test equipment. The mass of the test sample is 250 grams, the diameter of the test chamber is 20 mm, the length of the chamber is 200 mm. After going through the combustion process, it produces a graph and thrust value, total impulse and burning time. The thrust test results has been shown the propellant sample (C3) was the best characteristic composition consist of 70% AP, 15% HTPB, 10% Al, and 5% activated carbon of 400 mesh with average thrust: 148.67N, total impulse: 637, 5 Ns, burn time: 4,288s.

Keywords : , AP, HTPB,Al, thrust,total impulse,burn time

1. Introduction

Propellants are chemical mixtures that are burned to produce thrust in a rocket and consist of fuel and oxidizing agent. Fuel is a combustible substance when combined with oxygen-producing gas for propulsion. Oxidizing agents are substances that release oxygen for combustion with fuel. The ratio of the oxidizer to the fuel is called the mixed ratio and for this case is 65% oxidator and 35 % fuel. The Thrust is a force that drives rockets is measured in pounds, kilograms or newtons. The total impulse is found by summing all values based on the theme and multiplying by increasing time. [Nakka, 2001]. There are two types of solid propellant: homogeneous and composite [O.S.Olaoye et al: 2014]. The composite solid composite compositions generally consist of several oxidizing agents such as ammonium perchlorate, hydroxyl which terminate polybutadiene as binder [G.Singh et al, 2010]. Transition metal oxides are often used to catalyze thermal decomposition of ammonium perchlorate, hydroxyl terminated polybutadiene and aluminum as fuel-based composite solid propellants and to adjust their burn rate. Various factors such as the number of catalysts and particle size have been known to play an important role for changes in burn rate [Kishore et al: 1977]. This study examined the ability of thrust, burn time, and total impulse of solid propellant materials. Attempts to improve these three variables are quite difficult because the thrust value is inversely proportional to the value of fuel time, this requires the catalyst as a regulator of the composition to produce the optimal variable value. The activated carbon from the coconut shell is used as a catalyst in a composite solid propellant material containing ammonium perchlorate (AP), hydroxyl precipitated polybutadiene (HTPB) and aluminum (Al). The effect of adding coconut shell activated carbon may affect the parameters of thrust, burn time and total impulse rocket. Oxidizing agents are the basic materials, which produce high energy in combustion. One of the most commonly used oxidants is Amonium Perchlorate. The Ammonium Perchlorate dominates the oxidator list because of its good nature which includes compatibility with other propellant materials, good performance, and availability. Amonium Nitrate and Kalium Nitrate are also used in some applications. Eventhough inorganic nitrate is a relatively low-performance oxidant compared to perchlorate, they are used for low-cost and smokeless and non-toxic expense [Chaturvedi and Dave, 2011, 2012; Meda et al., 2007]. The binder provides a structural matrix in which a solid granular material is incorporated in a composite propellant. The raw material is a prepolymer or liquid monomer. The binder affects the mechanical and chemical properties, the propellant processing and the aging of the propellant. The binder usually acts as a fuel, which is oxidized in the combustion process. Commonly used binders are hydroxyl terminated polybiutadienen, Carboxy-terminated polybutadiene, and nitrocellulose. Sometimes Glycidyl azide polymer is also used as an energetic binder, which increases energy density and propellant performance. HTPB has been widely used in recent years, as it allows higher solid fractions (total 88-90% Amonium Perchlorate and Aluminium) and relatively good physical properties [Galfetti et al., 2006; Meda et al., 2005]. Metal fuels such as aluminum and boron are often added to the propellant mixture [Galfetti et al., 2003, 2004]. Aluminum, one of the most widely used metal additives, is used in the form of small spherical particles (5-60 µm) in various solid propellants. The aluminum particles typically comprise 14-20% by weight of propellant. The addition of metallic fuel increases the combustion heat, propellant density, combustion temperature, and hence its specific impulse. There are several compounds, which can function both as fuel and oxidizers such as Nitro Glicerin and Amonium Perchlorate. The combustion rate catalyst helps to increase or decrease the propellant burning rate. Sometimes it is also called a burn rate modifier. It can be used to modify the combustion rate from a particular grain design to the desired value. Substances such as iron oxide increase the rate of combustion, while lithium fluoride lowers the combustion rate [Sutton and Biblarz, 2001]. The coconut shells are agricultural waste and are available in very large numbers throughout the tropical country of the world. Moreover, coconut is an important agricultural product for tropical countries around the world as a source of new energy biofuels [Bangboye A.isaac and Jekayinfa, 2006]. Particle size analysis of coconut shell particles was carried out in accordance with BS1377: 1990 [Rajan T.P.D et al., 2007]. Approximately 100 grams of coconut ash particles are placed on a set of filters arranged in fine order and shaken for 15 minutes which is the recommended time to achieve complete classification. The weight held on each filter is taken and expressed as a percentage of the total sample weight. Of the weight retained, the amount of fineness of the wheat (AFS) is calculated [Aigbodion. V.S, 2010]. Chemical analysis of coconut shell morphology mainly consists of Silicon, Carbon, Oxygen, Magnesium, Aluminium with small amounts of Ferro [P.B Madakson et al., 2012]. In this study, we have investigated the catalytic

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effect of activated coconut carbon carbon which can add thrust, combustion time and total propellant composite

MATERIALS AND METHODS

2.1. Materials

Solid propellant that was used in this work is ammonium perchlorat(AP) as oxidizer, hydroxyl terminated polybutadiene(HTPB) as binder, aluminium(Al) as fuel, and actived carbon of coconut shell(ACCS) as catalyst. The solid propellant composition generally consists of AP 60% -84%, PBN 12% -16%, Al 2-20%, curing agent 0.2% -1%, stabilizer 0-1% [Kishore and Sridhara, 1999]. Other compositions are made with AP 65% -70%, Al 15% -20%, Binder HTPB 10% -15% with TDI curing agent [Ramesh et al, 2012]. Other size formulas AP 68% (AP trimodal particles, 24% 200µm; 17% 20µm; 27% 3µm); 19% Al 30µm; 12% HTPB and curing agent, and 1% Fe_2O_3 fuel catalyst. [Hinkelman and Heister, 2011]. This study, the propellant materials had been tested as shown in the table1. Composition of the propellant materials.

Table 1. Composition of the propellant materials.

Materials Name	AP	HTPB	Al	ACCS
C1	70 %	15%	15%	-
C2	70%	12%	15%	3%
C3	70%	15%	10%	5%
C4	70%	8%	15%	7%
C5	70%	10%	15%	5%
C6	70%	15%	12%	3%
C7	70%	10%	15%	5%
C8	70%	15%	8%	7%
C9	70%	20%	5%	5%

2.2. Processing of Solid Propelants

The composite solid propellants were formulated by using AP as asolid oxidizer, HTPB as fuel binder, Al as fuel and ACCS as catalyst. AP composition was taking uniform 70%, in all propellants samples. The average particle size of all materials sample were 400 mesh. The total propellant mass was 250 grams, Length (L propelan) : 200 mm, diameter (D propelan) : 20 mm, diameter hollow(D Hollow) : 10 mm. (as shown Figure 1 and Figure 2)

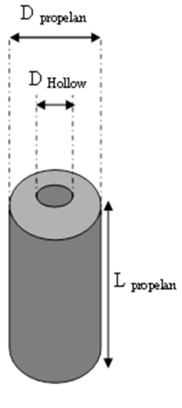

Figure 1. Size of solid propellant

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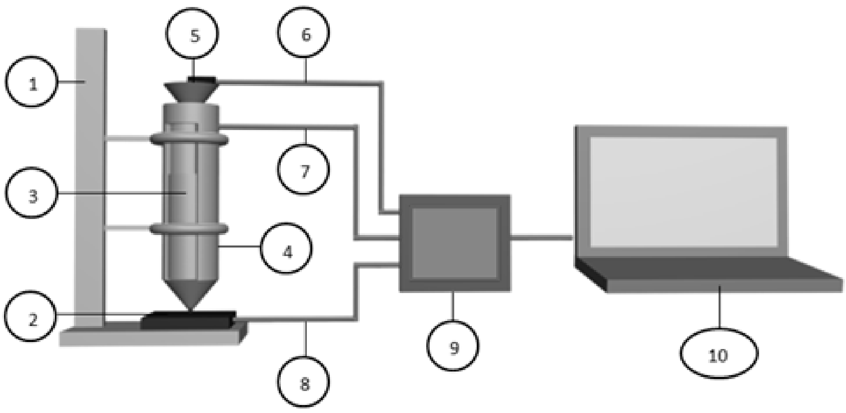
Figure 2. Solid propellant sample

2.3. Instrumentals

Before measurement, the particles of propellants were characterized with scanning electron microscope(SEM) and energy dispersive X-ray spectroscopy (EDX). After this section the static thrust testing for measuring thrust rocket, burn time, total impulse propellants combustion. (as shown figure 3 and figure 4)



1. Chamber Holder
2. Loadcell
3. Solid Propellant
4. Chamber Roket/Tabung Uji
5. Thermocople
6. External nozzle Data
7. Chamber Data
8. Loadcell Data
9. ADC & microcontroller
10. Laptop

Figure 3. Experimental setup of thrust testing

Konstanta Chamber and Nozzle Rocket Dimension as shown the figure 4

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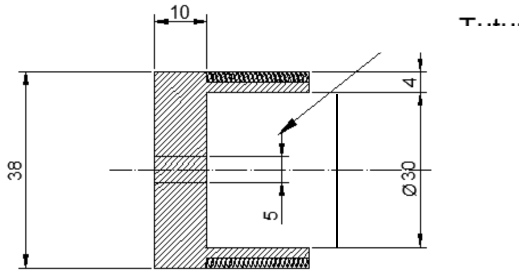
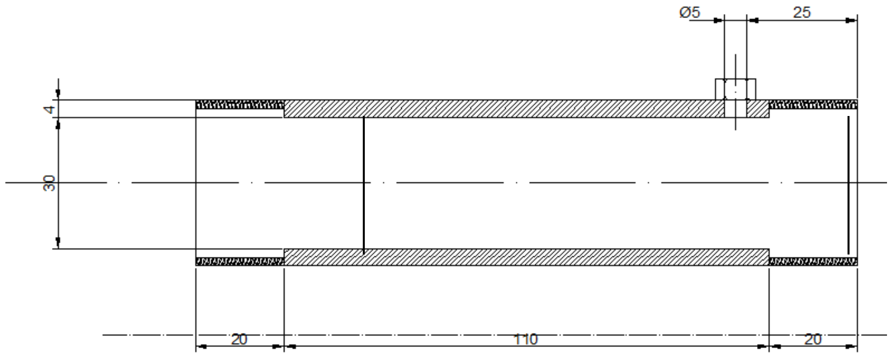
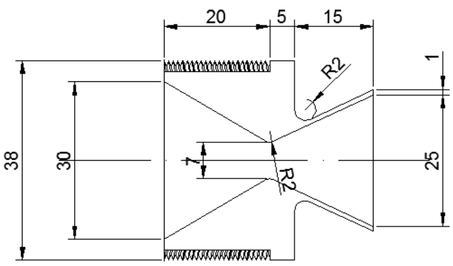


(a)



(b)



(c)

Figure 4. (a) & (b) chamber and (c) Nozzle

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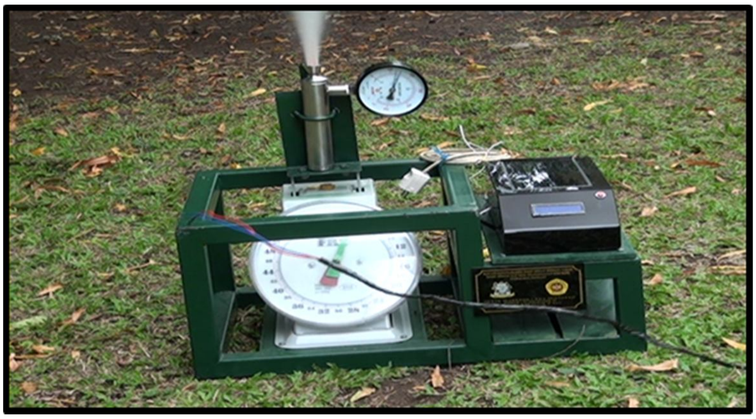
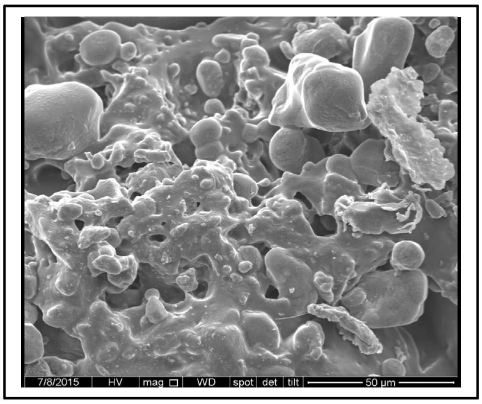


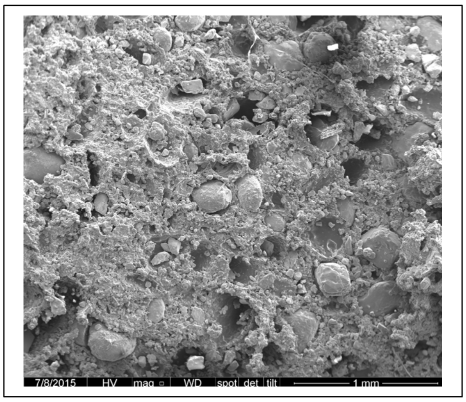
Figure 5. Thrust test tool

2. RESULT AND DISCUSSION

SEM of Composite Solid propellants (CSP) as shown figure 6.



(a)



(d)

Element	***Wt%***
CK	52.55
NK	08.00
OK	21.32
AlK	03.68
ClK	14.35
Matrix	Correction

(b)

Element	***Wt%***
CK	57.85
NK	08.00
OK	20.35
AlK	07.08
ClK	14.30
KK	00.16
Matrix	Correction

(e)

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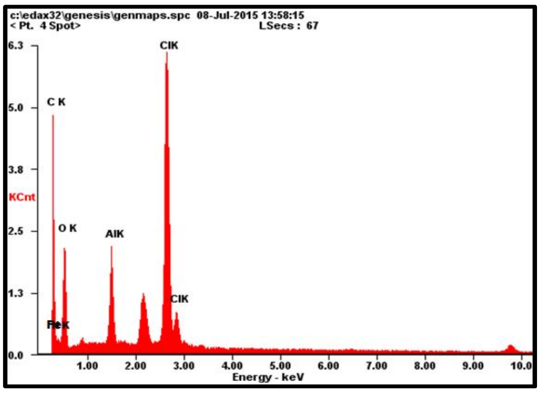
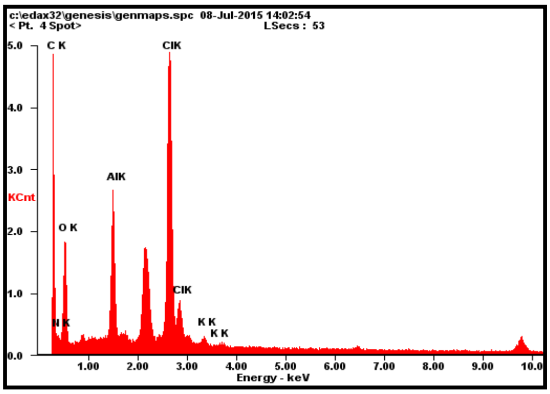


(c)



(f)

Figure 6. (a)&(d) SEM of CSP without catalyst and CSP with catalyst

(b)&(c)&(e)&(f) Graph and EDAX of CSP without cata and Solid Propellant

SEM image of CSP without catalyst (as shown Figure 6) showed more solid than CSP with a catalyst. This character causes it was flammable and the buning time was shorter. However, the content of CSP elements with catalyst contains more fuel (such as C, Al, Cl,K). It can be observed that the CSP element with catalyst ratio have increase the burning time, thrust and total impulse.

3.2. Thrust test

Result of thrust test were thrust value, burn time and total impulse such as graph of thrust and parameters value (as shown figure 6). Comparison all compositions yield C3 were the best materials of CSP with catalyst. Effect of ACCS particles as a catalayst were canbe increase total impulse and burn time. (As shown Figure 7 and Figure 8, visualitation using thrust curve tool)

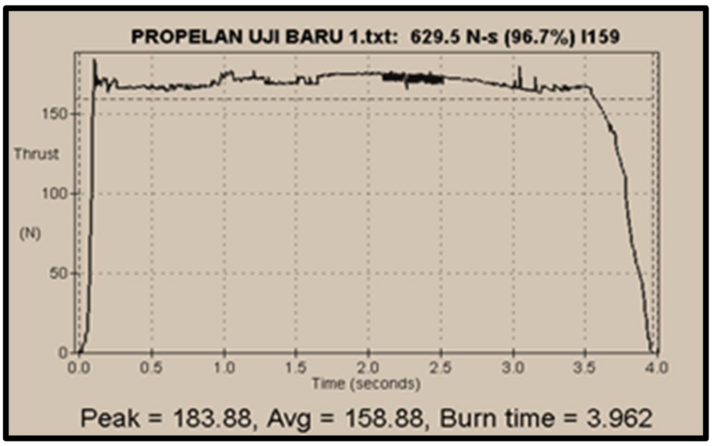


Figure 7. Thrust curve of CSP without catalist

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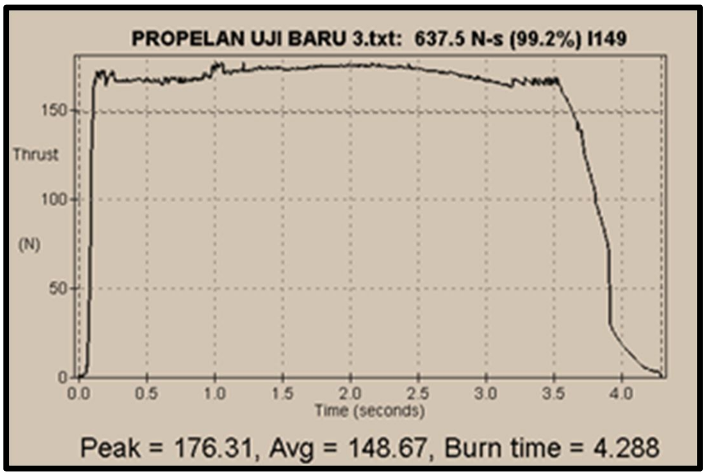

Figure 8. Thrust curve of CSP with catalist (C3)

From The Figure 7 and The Figure 8 can be comparasion that CSP without catalyst better its thrust values than CSP with catalyst(C3), but better its burn time and the thrust impulse. Thus, C3(AP70%, HTPB15%, Al 10%, ACCS 5%) was the best composition of CSP.

3. CONCLUSIONS

The following conclusions can be drawn from the present investigations on the combustion characteristics of composite solid propellants (AP-HTPB-Al) with and without activated carbon from coconut shell as catalyst.

Addition of activated carbon from coconut shell(ACCS) as catalyst has been found to increase the burning time. Although the CSP without catalyst better its thrust, but total impulse value is lower.

The best CSP of all sample were C3 (AP70%, HTPB15%, Al 10%, ACCS 5%).

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VILLAGE PERFORMANCE IN SOCIETY EMPOWERMENT AT MERJOSARI VILLAGE LOWOKWARU DISTRICT MALANG CITY

(Evaluation Study Based on Policy of Malang Mayor Regulation Number 71 2008 Year About Basic Duty, Fungtion, and Village System Management)

By

Yali Kogoya, Agus Sholahuddin, Kridawati Sadhana

Abstract

Performance is a describe about implementation of accomplishment level a policy in making a target, goal, mission and vission of organization that poured forth planning strategy an organization. Performance terminology often to used to state about achievement or individual success level although a group with have a success criteria that already made before.

Village is village chief workspace area as a part of territory/city or under district, based on Malang Mayor Regulation Number 71 2008 Year About Basic Duty, Fungtion, and Village System Management, related with that, so village can not get loose from so many policy that has taken by city government (include founding and providing). And the consequence of that thing, the village government demanded to have a better skill to answer duty challenge that will harder at the future.

So that's why, we need a serious attention from many sides to providing society, to improve the performance, here Merjosari Village Lowokwaru District Malang City in function to support and kick also realize program as a shape of good performance.

Cause the demand of society needed, so it's often to be happen unsatisfied of society, because a bad performance that shows from government. In this research investigate about performance of village agency based on basic duty and village system management.

This research use quantitative research method and measured use likert scale with focused on productivity, service quality, responsibility, and accountability, based on basic duty and village fungtion. From the result of that four indicator research, the writer conclude that Merjosari Village Government still have to do repairing.

Keyword : Performance, Basic Duty and Village Fungtion Evaluation

Preface

Village is village chief workspace area as the city region equipment or regency region or under district, based on Regulation Number 32 Year 2004. Especially in village level, based on Policy of Malang Mayor Regulation Number 71 2008 Year About Basic Duty, Fungtion, and Village System Management, related with that so village can not run from so many policy that has taken from city government (include founding and providing), also in implemention of region autonomi, village is a part of region autonomi implementation itself. The consequence from that thing is village government need to have a better performance to answer a duty challege that will harder for the future.

Here is the village chief have a role with using their authority as a leader. Though formal impression that adhere as a leader. Besides have a duty in administrative and give public service also complited an infrastructure, Village Chief also as a leader in doing message Policy of Malang Mayor Regulation Number 71 Year 2008 and has a duty in providing society in implementation of providing society's program and building in partisipative.

To fight poverty line in comprehensive for all sectors, so we need a very basic policy,, there are a policy anti poverty that really have to prioritize and depend on the society. The main concept for the development that centered to the society is looking for the creative initiative from society as the main development source and looking for the material wellfare and their spiritual as a goal that they want to achieve for the development.

This Providing concept from village government can do from the quality improvement program or the quality of government apparatus around that place. This is very important, remember village is the smallest unit in government order inside of NKRI and directly relate with society. So hopefully the government performance especially for village government can improve the better and qualified service for the society.

In accelerate effort to tackling poverty and improve the better quality of live for the society, government do so many society's providing program in giving help to tackling many problem of live or unproper society's burden environment with an expectation to cut poverty chain. So that's why it needs attention from many sides to providing the society, here Merjosari Village is to do many programs and realize the program as a part of society's dedication so they can leave from their difficulty of live.

Based on that background that already explained above, so the writer feel so interest to do research further, with title : Village Performance in Providing Poor Society Program (Evaluation Study Based on Policy of Malang Mayor Regulation Number 71 2008 Year About Basic Duty, Fungtion, and Village System Management in Merjosari Village, Lowokwaru District, Malang City)

The goal of this research is to know the Performance of Village Chief in Providing Poor Society Program in Merjosari Village Lowokwaru District Malang City can measured from Productivity, Service Quality, Responsibility, and Accountability.

Definition of Public Policy

William N. Dunn say that the terminology of public policy in his book entitled *Public Policy Analysis,* the definition is : "Public Policy is dependence pattern that really complex from many collective that depend each other, include many decisions to not act, that made by institute or government office" (Dunn, 2003:132).

Like what Dunn say that signalize many collective choices that depend each other, where inside there are many decisions to do act. This public policy made by institute or government office. A decision when already made, so it have to implemented by administration units that mobilize financial source and human, also evaluated in order to make a supervice mecanism toward that policy based on the goal of that policy itself.

Inu Kencana Syafie in his book entitled *Administration Science Companion* take Harold Laswell's opinion, policy is : "Intelectual duty in making decision include clear goal, explainig tendency, analize the condition, future development projection and research, assessment and experiment, also assessment and choosing the probability" (Dalam Syafie, 1992:35)

Public Policy Evaluation Theory

Evaluation is one kind of level in the public policy process, evaluation is a method to assess what a policy or program is working well or not. Evaluation has so many definition, Willian N. Dunn, giving a meaning at the evaluation terminology is :

In general meaning, evaluation terminology is same with appraisal, rating, and assessment, word that explain about an effort to analize the result of policy in meaning of value. In specific meaning, evaluation is related with information production about value or the benefit from result of policy" (Dunn, 2003:608)

Evaluation is a final step in the process of public policy. Evaluation is a method to assess what a policy or program are working good or not. Lester and Steawrt is Kusumanegara (2010) say that policy's evaluation is learning about many consequences of public policy. Policy's evaluation is to look at the reason of failure a policy or to know what a public policy is already done can have an like what we want.

Goal of Policy's Evaluation

In policy's evaluation, there is a special focus that want to achieve by evaluator. The specific goal of policy's evaluation are (Subarsono, 2005:120-121) :

a. Establish performance level a policy with evaluation, so it can known goal attainment degree and policy's target.

b. Measure an efficiency level a policy with evaluation also can known how much cost and benefit from a policy.

c. Measure a outcome level a policy. One kind of evaluation's goal is to measure how big and quality of outcome from a policy.

d. Measure an impact a policy in advance step, evaluation is to look the impact from a policy, in positive or in negative impact.

e. To know a deviation. Evaluation also to know deviations that probably happen, with compare between goal and target with attainment aim.

f. As a material to input a policy that will happen at the future. A final goal from evaluation is to give advice for future process in order to have a better policy.

Performance Concept

Performance is quality and quantity that already achieved by officialin doing their duty based on their responsibility that already given to them. In this case, an emplyee can learn how big their performance by information tools like good comment from workmate. But a performance assessment that based to the formal system and structurize that measure, assess, and influence attributes related with behaviour work and the result include absent level is also important.

The definition of performance based on Hasibuan say that achieve a performance, an apparatus must have a proficiency, experience, seriousness, and time in order to make their dream come true like what they want in organization or governmental institution to used in explaining the goal and standart performance and motivate a performance for the official.

A success goal attainment measurement of organization can do by performance assessment. It is performance assessment for the participant, or for the organization. Participant's performance finally will estuary in organization performance. To assess a participant performance, it needs indicators performance.

According to the Nurlaila (2010:71), performance is the result our output from a process. Dessler (2000:41), performance is a work achievement, there are a comparison between work result with who already decided before.

According to the Anwar Prabu Mangkunegara (2000:67), performance is the result of work in quality and quantity that already achieved by an official in doing their duty based on their responsibility that already given to them.

Performance theory from Agus Dwiyanto in her book Public Birocrasion Reformation in Indonesia, there are many performance indicators, such as Productivity, Quality of Service, Responsivity, Responsibility, Accountability (Dwiyanto, 2008:50-51).

Dwiyanto say that government organization performance can measured by many indicators, such as :

a. Productivity Indicator

   Productivity is a comparison between the result of attainment (output) with all of sources that already used in (input). Productivity not only measure an efficiency level but also service effectivity.

b. Quality of Service Indicator

   Quality of service indicator is one kind of critis method to measure the satisfication of society toward the service that has accepted from government organization. In this case the quality of public service is a condition where an attendance fulfilling or even add more from what we hope based on work system that actual from service receiver.

c. Responsivity Indicator

   Responsivity is an organization capability to know what the society needed and prioritize service to develop public service programs based on society's necessary and aspiration

d. Responsibility Indicator

   Responsibility is explaining about what the implementation of government organization activities is doing with a right organization principle or with an explisit organization's policy.

e. Accountability Indicator

   Public accountability shows how a policy can use, in society's importance matter without ignoring their duty and responsibility as government apparatus.

The concept above can understand that performance is how far the level of implementation's capability in organization's duty to achieve goal. In this research context, so the definition of performance is capability level of village official in improving the village performance based on their basic duty and their fungtion.

Performance measure or output is management tool to measure the success and failure in implementation of strategy to achieve goal and organization target. Performance measure always need a calculation again with organization's vission and mission also with goal and organization's target.

Measure a Performance Theory

Scope and measure method of performance indicator is very determine what apublic organization can success or not (Keban, 1995). Further more, Keban also explain that a correct measure like manner and method of data collecting to measure a performance also really determine in assessment the final performance.

Donald dan Lawtondalam Keban, (1995:11) say that organization performance assessment can use as a success measure an organization in temporary time and that assessor also can have input for repairing and improving organization performance.

Levine dkk (1990:295) propose three concept that can be used to measure a public birocration performance, such as : responsiveness, responsibility dan accountability (Dwiyanto, 1995:48), (Georgepoulus and Tannenbaum in Emitai Etzioni 1982:98) using success measurement an organization with :

1. Organization's productivity.
2. A flexibility of organization so it can success to adaptate with a changing inside of that organization.
3. No stress, pressure or conflict between many parts of that organization.

Definition of Government

Government as people association manage the authorities, doing leadership and government coordination also society's build from many company where they are place in. Government is an organization or institution for the one who have a power and to manage a country problem and society's welfare.

Government is from English and France language, both of them are Latin language, Gubernaculum, means that management, but in Indonesian language become executive body and sometimes become a master of country.

The definition of country in wide meaning is every single activities of public institution such as legislative, executive, and judicative in their effort to acieve country's goal. The definition of country in narrow meaning is every single activities of public institution that only in executive side (C.F. Strong).

The definition of country in wide meaning is every thing that has done by a country in having a society's welfare and country's interest itself; so it doesn't means that only government that doing executive duty, but also having other duty include legislative and judicative.

Definition of Village Government

Village is the smallest unit in NKRI government Indonesia (Suryasubrata,1990:74). In making a village, it have to look at many requirements of wide area, total society and the other requirment that will decided further in Indonesian Ministry.

In implementation of UU Number. 12 Year 2008 about second changing of UU Number. 32 Year 2004 about regional government say that village is a region that already stayed by many society's that have a government organization, under district chief, and doesn't have a right to having their own government. Village organization is the top of government implementation, because in village, government apparatus will face to face with society directly, and it will explain more in this article : Village is village chief workspace area as a part of regency region or city region, under district, (Policy of Malang Mayor Regulation Number 71 2008 Year About Basic Duty, Fungtion, and Village System Management).

Then that village government consist of village chief and their staff. Village staff consist of village secretary and many section. All of village government apparatus will doing their founding duty, providing, and service to the society as well.

Definition of Providing

Providing is an effort to provide (develop the client from no or less capability condition become having capability) to achieve the better life. So providing society is an effort to develop society from no or less capability condition become having capability in order to make the society can achieve the better life.

Providing is an effort to build that own capability, with supporting, motivating, and arousing the awareness of their potential also to develop it. That effort has followed by that own society.

According to the Shardlow (1998:32) see that so many definition about providing, so in essentials is to explain how an individual, group, or community can control their own life and organize to shape their future based on what they want. This Shardlow's opinion, is not far from the opinion that say about providing as a part to support the client to decide what they want to do by theirself with an effort to handle a problem that they have, so they can realize and have full of authority in making their future.

For the society as the actor and having an ideal position in government side and developing is not a simple job. The position as a balance mate only can happen when beginning the repairing process in every single aspect, inclide consequence to providing society. So with that step, we should we have to do is do the right providing to the society and improving capacity of government organization and many institution become the supporter to build that. But before that, it needs to find the meaning of providing society. In terminology, providing is come from basic word provide, it means power and capability. So based on that meaning, providing is a process to go to capable, to have a power, and a process to giving ability from one side who has a power to the other who don't have before.

Definition of Poor Society

In Indonesian Language context, poverty is come from basic word poor, that has given affix and suffix. Poor is doesn't has any property, lack of everything, have a low salary, at the other definition poor is the one who have a job but can not fulfilling their basic needed.

Poverty is a condition where the people unableness to fulfill their basic necessary like home. It is because the scarcity of fulfill their basic necessary tool, or difficulty of access to that job. Poor people is a condition where the society's physic don't have any access to the basic infrastructure in proper environment, with a bad quality of housing that under standar also unstabil job.

According to the Sar A. Levitan in Ala (1981:3) say that poverty is lack of commodities and services that needed to achieve a proper standart of live. And based on Statistic Centre and Social Department Institution (2002:3-4) say that poverty is uncapable of an individual in fulfill their basic minimun needed to proper life.

Poverty Clasification

There are many clasification of poverty, that often to be reference to understand about substantion of poverty. That clasification are based on a standart : comparing a salary level that needed to fulfill minimum basic necessary. Based on this clasification, so we knnow it as absolute poverty and relative poverty. The community inside of absolute poverty is the one who can not fulfill their minumin basic necessaary. And the community inside of relative poverty is the one who have a capability to be under average of society's salary around them. The general clasification in this case is absolute poverty and relative poverty. And at the other opinion say that clasification of poverty are natural, cultural, and structural.

Cause of Poverty

Cause of poverty can happen because natural and economy condition, structural and social condition, also cultural condition (culture). Natural and economical poverty ahppen because the limitation of natural resources, human, ans the other resources so the probability of production id small and can not be used for the development.

Structural and social poverty because the resulf of development that not spread well, institution management, and policy in development. And cultural (culture) poverty cause attitude or life behavior that feel enough so it traps a people in poverty line (Nugroho and Dahuri, 2004:167-168; Soegijoko, 1997:137) and (Nasution, 1996: 48-50).

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Research Phenomenology

In this research useding quantitative phenomenology. With using survey, research that do in big and small population, but the data that already learned in that population is data only a sample, so we found relative tragedies, distributive and the relation between variable in sociology and psicology (in Sugiyono, 2006).

This research focued on facilitaed the researcher in collecting data so the researcher only focus in their research in duty and fungtion performance of village in providing society at Merjosari Village, such as :

1. Productivity is organization's capability of village in achieveing output and source that using input before.
2. Service quality prefer to be important in the satisfication level and society service.
3. Responsibility is the implementation of organization's acivity in administration principle and right policy.
4. Accountability is how big the efficiency and the result that already achieved.
5. Evaluation is measure the result, from target by condition, time, and space.

In order to collect the information from research object based on what we see, doing election toward society's elements in purposively, means that 9 samples based on researcher consideration.

Research Method

What kind of research that used in this journal is based on experiment in descriptive and prefer to used likert scale analyze data to know the fact, condition, also incident in order to find the solution. Cholid Narbuko and Abu Ahmadi (2003;44) giving the definition of research with an effort to find solution right now based on data, how to serve data, analyze and interpretation.

What we will focus in this research is how the apparatus performance in Rotana governmental village look at productivity aspect, quality service, responsifity, responsibility, and accountability.

There are 9 informants in this reseach are nine village official and nine societies, one government section. Peace and general obedient, chief of providing society's section, chief of general infrastructure's section, village secretary, and chief of Merjosari village.

Collecting data technique in this research is primer data and secunder data, such as :

1. Secunder data
   a. Observation
   b. Questionnaire
2. Primer data
   a. Documentation
   b. Literatures study

Data Analyze Technique

We have a data from the range will analyze with quantitative technique. Data will analyzed with using table frequency. And the result of this analyze explaining in descriptive with giving image about the performance in Merjosari Village Lowokwaru District Malang City. That Village chief performance can be measured with using likert scale. And the answer for every single question in order with assumtion is :

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3.3 Table, Measurement Scale

No	Category	Score
1	Always (Very Good)	5
2	Often (Good)	4
3	Sometimes (Enough)	3
4	Seldom (Not Enough)	2
5	Never (Not Good)	1

DESCRIPTIVE OF RESEARCH

Service Quality Aspect

Public service quality is a condition where the service to fulfill and add more from what we want based on work system that actual from service receiver. Quality of service issue prefer to be more important in explaining the performance of public service organization. There are many negative opinion because unsatisfication of society toward the service quality from receiver.

To know the reaction of responden toward the pronouncement in questionnaire about society's satisfaction toward service quality from village is :

4.22 Table
The Performance of Village from Service Quality Aspect

No	Information	A	B	C	D	Jml
17	Conception of responden in doing their duty about who have to be served	4	5	0	0	9
18	Conception of responden to always keep a good realtion with society	6	3	0	0	9
19	Conception of responden have a mecanism for the side who served	2	7	0	0	9
20	Conception of responden asking to the one who served are satisfied or not	3	3	0	3	9
21	Conception of responden in solving problem with the one who served	1	2	0	6	9
22	Conception of responden at the level of service to the society	0	1	0	8	9
23	Conception of responden to difficulty in administration management	4	5	0	0	9
	Jumlah	**20**	**26**	**0**	**17**	

Based on that table and calculation above, we can take a conclution that the performance of Merjosari Village Lowokwaru District Malang City's office from service quality aspect is good.

Related with service quality, this is the capability of village organization in knowing society's necessary in giving service, that looking from sensitivity level toward society's complaint in giving service. Merjosari Village Lowokwaru District Malang City's office already have three section based on policy of malang mayor regulation's plan number .... year 2016 about position, organization structure, duty and fungtion also district work management are government section, peace and general obedient section, society's providing section, and general infrastructure section in responding society's complain. Based on the result of questionnaire.

Responsibility Aspect

Responsibility is explaining what the implementation of government organization's activities is well done or not by following the organization's principle. Explicitly means that clear, uncovered or slow-moving also have an obvious value and not make the society confuse.

To know what is the opinion of responden toward pronouncement in questionnaire about implementation of organization's activities in Merjosari village

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based on the policy in village, are in this table:

Table 4.34
Village Performance from Responsibility Aspect

No	Information	A	B	C	D	Jml
25	Conception of responden in village organization's structure that already built and have a high performance	2	7	0	0	9
26	Conception of responden in organization's desain based on the duty and village fungtion	2	6	1	0	9
25	Conception of responden in authority that given to them and guarantee they do their duty	0	8	0	1	9
26	Conception of responden in procedur and work mecanism in village can run well	1	8	0	0	9
27	Conception of responden duty and fungtion of section in village	9	0	0	0	9
28	Conception of responden in placement based on their education	0	4	5	0	9
29	responden in placement based on their education	0	6	1	2	9
30	Conception of responden about understanding all of their duty and fungtion	1	7	1	0	9
31	Conception of responden about supervicing toward village official	0	8	1	0	9
32	Conception of responden about solving their duty is faster from the deadline	0	8	1	0	9
33	Conception of responden toward the time discipline in their deadline	9	0	0	0	9
	Jumlah	**19**	**62**	**10**	**3**	

Based on that table and calculation above, we can conclute that the performance of Merjosari Village Lowokwaru Distric Malang City's office in their responsibility in good.

Related with responsibility, we can see from the implementation of village's activities that already appropiate with the procedure and work mecanism. Organization activity are based on many regulations, here is based on policy of malang mayor regulation's plan number .... year 2016 about Position, Organization Structure, Duty and Fungtion also District Work Management and Village Duty that not made yet by our government, but the orientation activities already done in village level and district in Malang City since 2016 year. That performance still have to appropiate with development. Based on that item in this case are in medium level.

Accountability level

Public accountability show how a policy can be used, here a society's importance without pushing away their duty and responsibility as village government apparatus. Means that it will have many policies that already taken as the consideration in implementing their duty and good fungtion from government apparatus or that own society.

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To know the opinion of responded toward pronouncement in questionnaire about their duty and responsibility in Merjosari Village based on their consideration is :

Tabel 4.44
Village Performance from Accountability Aspect

No	Keterangan	A	B	C	D	Jml
35	Conception of responden in giving information toward the society correctly	4	5	0	0	9
36	Conception of responden in giving responsible information	2	7	0	0	9
37	Conception of responden in giving law assurance	1	8	0	0	9
38	Conception of responden about village work based on procedure and mecanism	1	8	0	0	9
39	Conception of responden in planning a good village, chief asking for suggestion	0	8	0	1	9
40	Conception of responden about knowing the program that already made before	1	8	0	0	9
41	Conception of responden about village that have a standart and ethics	1	8	0	0	9
42	Conception of responden about village that doing performance evaluation	1	8	0	0	9
43	Conception of responden about organization that doing performance measurement	1	8	0	0	9
	Jumlah	**12**	**68**		**1**	

Based on that table and calculation above, we can conclute that the performance of Merjosari Village Lowokwaru Distric Malang City's office in their accountability is good.

Related with accountability, we can see from consistency level between policy and the activity of Merjosari village with society's aspiration. Accountability of Merjosari Village Lowokwaru Distric Malang City's office, we can see from the eighthvission and mission, there is create a society's service that have a good quality, fair, measureable, transpatant, and accountable. Improving service quality also keep on touch with many attentions and suggestion from soeciety. Based on that questionnaire, we can conclude that it is in a good level.

Productivity Aspect

Productivity is a comparison berween the result of government work with apparatus competence that supported by progression of technologyin implementing the duty, for example in computer sets and internet network. With the other word that productivity have 2 (two) different meaning. *First*, effectivity to manage an achievement target with quality and quantity. *Second,* efficiency is related with an effort to compare a work planning with performace attainment. Based on the result of this research, productivity of government apparatus performance in Merjosari Village in generally can do their duty. But sometimes ti hampered by the lackness service that given to the society is not good enough. In improving village performance in implementing their duty always related with SOP.

To know about the opinion of the responden toward pronouncement in quistionnair about village performance, we can see in this table :

4.52 Table
Village Performance from Productivity Aspect

No	Keterangan	A	B	C	D	Jumlah
41	Conception of responden about the service from village	2	7	0	0	9
42	Conception of responden about service from village to fulfill society's needed	2	7	0	0	9
43	Conception of responden about service from village is descriminative	0	0	1	8	9

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44	Conception of responden about village is helping in providing society around	1	7	1	0	9
45	Conception of responden about village chief's decision in calculating the outcome	1	7	1	0	9
46	Conception of responden about providing society that already made is helpful	1	8	0	0	9
47	Conception of responden about training program can help the society	2	7	0	0	9
	Jumlah	**9**	**43**	**3**	**8**	

Based on table and calculation above, we can conclude that the performance of Merjosari Village Lowokwaru Distric Malang City's office in their productivity is good.

Related with productivity, we can see from involvement of an official in making a strategic plan, achieveing short and long term goal. Village already do measurement of performance and make serious efforts to keep measurement of that organization's performance based on the necessary and organization's purpose. Village always claculate an impact in every decision. Based on that questionnaire, we can conclude that it is in a good level.

Conclution

The result of this research and explanation about village performance in society empowerment at Merjosari Village Lowokwaru District Malang City (Evaluation Study Based on Policy of Malang Mayor Regulation Number 71 Year 2008 About Basic Duty, Fungtion, and Village System Management) and policy of malang mayor regulation's plan number .... year 2016 about position, organization structure, duty and fungtion also district work management.

The writer can conclude that village government apparatus is ready to do their basic duty, we can see from many acieving performance from four aspect as village performance indicator, there are : service quality, productivity, responsibility of village apparatus already good where it shows with many commitment and seriousness of apparatus in doing their duty and their fungtion. In government implementation at Merjosari village. Also village apparatus accountability already good where we can see from the capability of apparatus, also doing evaluation that shows to the society.

Implementing basic duty and fungtion of village to support society participation in providing society activity is good. In this case, we can see from data questionnaire with responden that involve directly with society activity. It means that in general village is supporting a good participation.

Implementing of basic duty and village fungtion, here we do three month and for every semester also evaluarion for a year. It means that in general society admit about implementing evaluation that has done by the village is good. To all variable item in doing basic duty and village fungtion in government implementation are in a good condition. It's describe that the implementation basic duty and fungtion in Merjosari village in improving the performance in general is good.

Suggestion

Based on the result of this research and a conclution above, so we make many suggestions to improve the performance of Merjosari Village Lowokwaru Distric Malang City, such as :

1. We hope for all of Merjosari Village's official can improve the condition so organization's performance can realize as well also to the development in improving the quality of society's service.
2. We need to improve organization's performance from process aspect, such

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as service quality indicator, responsibility, and accountability.

3. We also need to improve organization's performance from the result, such as productivity indicator and efficiency also evaluation.

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Educational Leadership and Group Decision Making

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ABSTRACT

In an organization that consists of variety of human resources with a different expertise background, it can create a dynamic atmosphere. It certainly can be an advantage. However, if the leader cannot managed properly, the diversity can be a conflict, especially in group decision-making context. Every individual has his own preferences based on their knowledge. Some of them can provide shared information, but there are who have unshared information that held by just one member. Such conditions led the decision making process was not optimal. These problems need the leader's attention. This research was an analytical study to analyze the factors that most affect to the quality of the group's decision. Finally, this study shows that factors such as leadership style, knowledge of leader and leadership experience have a considerable influence on the quality of group decisions.

Keywords: Leadership, Leaders, Group Decision Making

Introduction

Group decision making is a participative process where a group of individuals collectively analyze an issue or situation, consider and evaluate alternative solutions, and select the best alternative solution. The number of individuals engaged in the group decision making process varies. In schools, some time ago, decision making was made by school committees. However, with the increased complexity requiring special knowledge in various sectors which commonly is not possessed by one individual only, group decision making is increasingly needed. This group decision making approach in the end must be taken as decisions made must be accepted and applied by various groups and areas.

Group Decision Making Methods

Brainstorming

Brainstorming is useful in finding numbers of alternative and varied solutions where great ideas are required (Proctor, 2003). Brainstorming activity involves group members to present ideas or initiatives verbally. The task of such group is to collect a number of initiatives from all group members. After ideas from all groups have been exhausted, the process of alternative evaluation from all incoming ideas starts. In line with technological advancement, brainstorming process no longer requires group members to be present in one room. The submission of ideas and alternative solutions can be done through email or other media, such as online group discussions.

Nominal Group Technique

Nominal group technique is a structured brainstorming technique applied to generate great ideas related to issues and to ensure that all group members share equal participation in ideas development (Madi & Islam, 2011). According to MacPhail (2001), nominal group technique is an interview technique where participants face each other and write down their ideas independently. This technique not only produce great ideas, but also capable of identifying consequences from such ideas. Written and independent submission holds its own benefits, resulting in an open and honest discussion. The position of a leader in this method is to act as facilitator to ensure efficient flow of information traffic and discussion taking place in the forum. In this group decision making, there are definitely individuals who are in conflict from the outset. Independent submission will make them present what they feel so that a leader must be able to position itself as an intermediary and to create a conducive discussion environment.

Delphi Technique

Delphi technique was developed by Dalkey and Helmer widely used to achieve convergence in opinion about knowledge in real condition where such opinion is requested from experts in certain (Hsu dan Stanford, 2007). Delphi method stems on the statement that "two is better than one" (Dalkey, 1972). The Delphi Technique is designed as a group communication process to analyze in detail and discuss certain issues in order to set objective, policy investigation, and future prediction (Ludwig, 1997). The Delphi Technique is used to settle "what can/must" (Miller, 2006). With the Delphi Technique, where most participants are subject experts, a leader may not position itself as a determining factor. A leader must be able to act as good listener, capture brilliant ideas and translate them into problem solving measures in ordderto find the best solution.

Advantages of Group Decision Making

In the group decision making process, the leader may not be the smartest and most knowledgeable individual. The leader is more like a partner able to listen well, provide in-depth responses to exhaust greater ideas and able to record great ideas to be the best solution, and to collectively predict what will happen in the future. According to Gunnarsson (2010) and Proctor (2011), group decision making has several advantages.

More Knowledge

When a lot of individuals are involved in decision making, there is an accumulation of information and knowledge as compared to one individual only. The gap will be closed by other individuals, and so on.

More Alternative Ideas

With the abundant information and knowledge, there will be more alternative ideas pouring in. By listening to initiatives from other individuals, other members can combine them with their own ideas resulting in a more unique solution.

Greater Acceptance of Decision Taken

Through joint decision making, personal egos will be set aside and accept decision jointly taken. As such, decision taken can be more accepted and successful when applied.

Greater Understanding on Issues and Decision

By being engaged in decision making process, members will understand and comprehend issues occurring and the decision taken.

Disadvantages of Group Decision Making

Aside from its advantages, there are several flaws in group decision making according to Gunnarsson (2010) and Schoenfeld (2011).

Groupthink

Groupthink emerges when the desire for solidarity and consensus is stronger than the desire to achieve the best solution (Schafer, 2011). As individuals are reluctant to be branded as non-cooperative by other members, he or she is forced to be just like other members..

Conflicting Secondary Goal

Many members try to position themselves as more important and smarter in making decision. Too much energy is taken to maneuver and argue leaving little time to reach a quality decision. (Lunenburg, 2010).

Ambiguity in Accountability

Who is accountable for the final result? Every member involved in the decision making, spreading accountability to all members. But, who is really accountable?

Time

Group decision making process requires more time as compared to making individual decision. It takes time to establish a group, and build interactions among members. Occasionally, time for individual arguments takes longer compared to the time to reach a decision.

Group decision making is a fact in an organization's journey as there are a lot of individuals involved in making group decisions.

Leader's Position in Group Decision Making

A leader must have an accurate way of thinking in order to make a group decision. A leader must evaluate whether it is necessary to initiate a group decision making process. However, if school principals intend to operate as a learning organization, they have to engage followers in the group decision making process (Senge, 2006).

According to Corey (2011), Isaksen (2011), Jonassen (2011), and Schoenfeld (2011), there are several suggestions to achieve effective results from group decision making.

- School principals must write down unwritten norms.
  Norms will be important to ensure that all members work well.
- A leader must know its group's respective demography.
  Acceptance and respect to diverse opinions.
- School principals must determine the group's strength and future training needs.
- Provide training in certain subject matter based on their capabilities.
- School principals must avoid making premature decision making.
  Leaders can apply various methods, such as, brainstorming, nominal group technique, and Delphi technique.
- School principals must set limits.
  Seek agreement on fair conflict boundaries.
- School principals must accept that conflict can be a healthy change tool/factor.
  Use consensus model to settle conflicts.
- School principals must keep their focus on practical issues.
  Engage in substantive discussion group.
- School principal must show tangible results
  Elevate group's commitment to act.

Conclusion

There are many advantages in group decision making. But on the other hand, there are also disadvantages as consequences to be faced. In particular, there are some measures to be taken by school to make group decision making become effective. The measures/steps are not given to eliminate disadvantages as such are existing fact. The steps given to school principals are to maximize existing advantages and minimize disadvantages, in addition, with the steps given leaders are expected to lead group discussions to stay focus on its objective and produce quality decisions instead of being trapped in individual arguments which ultimately could degrade the quality of decisions made.

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The Authenticity and Social Distance Effect on Motivation of Corporate Social Responsibility and Implication on Company Image on PT Amerta Indah Otsuka, Pasuruan - Indonesia

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ABSTRACT

Purpose - This study aims to describe Authenticity, Social Distance, CSR Motivation and Company Image. This study also analyzed the effect of Authenticity on CSR Motivation, analyzed the influence of Social Distance on CSR Motivation and analyzed the influence of CSR Motivation to Company Image PT Amerta Indah Otsuka, Kejayan Pasuruan

The research design - The research design using causal research design, the population in this research is the direct beneficiaries of Rumah Belajar and Posyandu program of PT Amerta Indah Otsuka, Kejayan Pasuruan consists of parents / guardians of the participants of Rumah Belajar, elementary school teachers participated in Rumah Belajar of AIO, And Posyandu officers, as well as the village Pacarkeling district Kejayan Pasuruan. The analytical technique uses path analysis.

Findings - Based on the results of the analysis show that authencity is formed from indexical and iconic, the main contribution of authenticity formation is indexical. Social Distance is formed from Objective Social Distance and Subjective Social Distance, the main contribution of social distance formation is Objective Social Distance. CSR motivation is formed from Corporate Charity, Corporate Philanthropy and Corporate Citizenship, the main contribution of CSR motivation is Corporate Philanthropy. Company Image formed from Personality, Reputation, Value and Corporate Identity, the main contribution of establishment of company image is Corporate Identity. Authenticity has a significant effect on CSR Motivation, Social Distance has significant effect on CSR Motivation. Motivation of CSR has a significant effect on company image of PT Amerta Indah Otsuka, Kejayan Pasuruan.

Renewal - This study is the application of findings in previous research (2016) to direct stakeholders and linked the influence of CSR motivation to company image. **Keywords:** authenticity, social distance, motivation CSR, company Image, Otsuka

PRELIMINARY

Corporate Social Responsibility has become the main criterion in measuring company performance which also means the importance of social, economic, and environmental sustainability. Stakeholder expectations for corporate involvement in socio-economic empowerment are increasingly promoting the importance of CSR, aligned with the company's expectations to be increasingly accepted by consumers. Lim and Yang (2016: 398) argue that the main factor in getting consumer recognition from CSR activities lies in how to find consumer skeptic responses; in this case authenticity is an important factor for predicting CSR performance. The determination of authenticity is a matter of difference between "what is real and what is false". Company honesty embodied in authentic CSR can provide benefits for the company through consumer trust.

Corporate CSR motivation in practice is influenced by many things. Different types of business, company location, product form can cause different motivation company in implementing CSR. Community, consumers as stakeholders (stakeholders) have a role in influencing corporate CSR motivation. Social Distance is an indicator of the influence of society on CSR motivation of the company. McShane and Cunningham (2012) argue that CSR can be dangerous. The existence of false green wash campaigns, false claims of corporate social values can trigger cynics and render CSR unenlightened (Cristian Aid: 2004; Beder: 1997; Rowell: 1996). Company honesty in making claims or campaigns will indirectly benefit the company by gaining consumer confidence in the authenticity of CSR

Lim and Yang (2016) analyzed the relationship between authenticity, social distance, and CSR motivation. Authenticity measured from 2 indicators, indexical and iconic. The results show that the authenticity indexical has a strong influence on the confidence of the product than the iconic authenticity. Authenticity iconic has a stronger effect on attitude formation than authenticity indexical. This study supports the idea that companies are more likely to show CSR authenticity in terms of abstract dimensions, eg moral. When social distance is close, companies can increase the persuasive effect of CSR activities by communicating authenticity indexical. When social distance is far away, firms should give priority to emphasizing the importance of ethical behavior when engaging in CSR activities rather than taking advantage of the certification system, as well as reducing consumer suspicion on corporate CSR activities.

Research Lim and Yang (2016) is using a sample of 168 students and not a general target consumer of corporate CSR activities. Lim and Yang's research limitations (2016) exist in the population and sample determination without the involvement of customers and stakeholders. The method used is a scenario method to concretize different experimental manipulations. Based on limitation of Lim and Yang research (2016), in this research the researcher will use respondent and sample from consumer, stakeholder and beneficiary directly from CSR activity of PT Amerta Indah Otsuka, Kejayan Pasuruan.

Currently CSR has been viewed more than as a liability, ie as a form of corporate responsibility for the triple bottom line in the concept of CSR. CSR also began to be used as a marketing tool of a company, introducing a company, promoting products, strengthening brand position. Another function of CSR is also used as a social fence, as the data the company will use in responsiveness when there are issues that affect the company's environmental, social, and economic. Handajani et al. (2009) in his research concluded that Corporate Social Responsibility is part of the strategy management tool in opportunistic management behavior to gain support from stakeholders. Corporate Social Responsibility is an important economic phenomenon that provides good implications for companies, workers, consumers, investors, governments, and non-governmental organizations (Kitzmueller, 2008).
Susanto (2007: 39-40) in his study explains that CSR will enhance the company's image, which in the long run will enhance the company's reputation. When there are certain parties who accuse the company of improper conduct and practices, the community will show its defense. Employees will also stand behind the company, defending the place where employee institutions work. According Sunggal (2007: 65), the implementation of social responsibility in the form of philanthropy and community development activities are generally packaged to seek a positive image. Mukti et al. (2014) explains that the sustainability of the company will only be ensured if the company takes into account the social and environmental dimensions.

Budiarsi (2005) examines the bottom line concept aimed at stakeholders, corporate functions, management functions and integrated in all aspects. Its success can be addressed in corporate social performance that will shape the image / reputation of the company. A positive image or

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reputation will be a very valuable asset and hard to imitate.
Based on the previous research, the researcher is motivated to conduct this research, which aims to describe Authenticity, Social Distance, CSR Motivation and Company Image, analyze the influence of Authenticity on CSR Motivation, analyze the influence of Social Distance to CSR Motivation and analyze the influence of CSR Motivation to Company Image PT Amerta Indah Otsuka, Kejayan Pasuruan.

LITERATURE REVIEW

Authenticity

Authenticity is a term commonly used to describe the level of intact consideration in terms of one's experiences, thoughts, emotions, and self (Harter, 2002). In terms of art, authenticity may refer to the concept of physical work of art, as well as antiques will be judged antique if the goods show authenticity, originality and not an imitation. Assessing the authenticity of a physical object is different from when on an intangible object. Authenticity over real objects refers to people who are not part of modern commercialization, and has a theoretical foundation (Fine, 2004), such as historical craft (Grayson and Martinec, 2004), or artwork (Roskill and Carrier, 1983).

Authenticity has also been the subject of research and study in marketing, advertising, public relations. Authenticity is discussed as a consumer experience (Bruner, 1994; Grayson, 2002; Grayson and Martinec, 2004), tourism and experiential goals (Cohen, 1988; Hughes, 1995), consumer behavior (Wallendorf and Arnould, 1991), sustainability (Camilleri, 2008). Grayson and Martinec (2004) in Consumer Perception of Iconicity and Indexicality and Their Influence on Assessments of Authentic Market Offering test authenticity with iconic and indexical indicators. According to Pierce, indexical authenticity refers to cues, such as handprints, step instructions, thinking that it is a reality and relating space and time to other things (Grayson and Martinec, 2004). There are 2 items related to this indicator that is physical (the relationship between the teacher and the material being taught), and the physical (between the teacher and his behavior). The diversity can only become a competitive advantages when it is well managed or unity in diversity (Herdhayinta et al., 2017).

Iconic as a person's experience phenomenon in something (Grayson and Martinec, 2004). In order to measure iconicity, the appraiser must have current knowledge and expectations so that it can compare it. Two things in original original reproduction icons (eg silver in a souvenir shop), and authentic machining (eg stunning mountain climbers) (Grayson and Martinec, 2004).

Social Distance

Social distance is the underlying power of social relationships. Conversely, relationships reflect distance. Clearly, social distance is an independent variable. Some, however, who have also seen a close relationship between the two have made the distance dependent. According to Casareo (2007: 11) social distance is the lack of availability and relational openness - of the intensity variables - of subjects in other respects perceived and recognized as the basis of their inclusion in the social category. This is the result of a dynamic interaction of factors lying in three distinct dimensions of space, themselves in mutual co-production: physical, symbolic and geometrical.

Bichi (2008) in the study of Mixed Approach to Measuring Social Distance defines social distance as lack of availability and openness relationship. There are three barriers to social relationships among people: money, education, employment. Indications in social distance can be measured from Objective Social Distance (OSD) and Subjective Social Distance (SSD) (Bichi, 2008). OSD is about social stratification which is how social strata in society, relationship with neighbor and its surroundings. SSD is about relational closure which is closeness of social relationships in society.

CSR Motivation

Companies that implement CSR is actually still difficult to determine the benefits that will be obtained (Wibisono, 2007). Can be interpreted there is no guarantee that a company that implements CSR will get the certainty of its benefits. Megnan and Farrel (2004) in Susanto (2007: 21) defines CSR as "A Business acts in socially responsible manner when its decision and account for and balance disesets stake holder interest". The definition emphasizes the need to pay equal attention to the interests of diverse stakeholders in every decision and action taken by business people through social / responsible behavior. Furthermore, Griffin (2008) defines CSR as "the business of a business to create a balance of its commitment to groups and individuals within the business entity environment that includes consumers, other businesses, employees and investors."

According Saidi and Abidin (2004: 69), there are three stages or paradigms that motivate companies in implementing CSR:
1) Corporate Charity, is charity encouragement based on religious motivation
2) Corporate Philanthropy, namely the humanitarian impulse that usually comes from the norm and the universal ethics to help others and fight for social equity
3) Corporate Citizenship, namely the motivation of citizenship in order to realize social justice based on the principle of social involvement.

Company Image

Susanto (2007: 38) explains that corporate image is formed from associations between companies with a set of positive and negative attributes. For example a company is associated with attributes: quality, good service, but lacks social responsibility. So true corporate image or corporate image is in the minds of its stakeholders. From the individual side, these prominent attributes determine whether a company has a good or bad reputation.
The image will be formed when humans will process the stimuli that will be perceived by the senses (apersepsi) and then interpret it (perception) by giving meaning through associations based on prior knowledge. When we capture corporate symbols of logos, names or speeches we hear, the psychological processes within us associate with certain attributes to give meaning. Attributes are derived from previous experiences recorded in memory (Susanto, 2007: 39).

Iman (2010:79) menyatakan bahwa informasi yang lengkap mengenai citra perusahaan meliputi empat elemen sebagai berikut.

a. *Personality*, keseluruhan karakteristik perusahaan yang dipahami publik sasaran seperti perusahaan yang dapat dipercaya, perusahaan yang mempunyai tanggung jawab sosial.
b. *Reputation*, hal yang telah dilakukan perusahaan dan diyakini publik sasaran berdasarkan pengalaman sendiri maupun pihak lain seperti kinerja keamanan transaksi sebuah perusahaan.
c. *Value*, Nilai-nilai yang dimiliki suatu perusahaan dengan kata lain budaya perusahaan seperti sikap manajemen yang peduli terhadap pelanggan, karyawan yang cepat tanggap terhadap permintaan maupun keluhan pelanggan.
d. *Corporate Identity*, komponen-komponen yang mempermudah pengenalan publik sasaran terhadap perusahaan seperti logo, warna dan slogan.

Conceptual Framework for formulating hypotheses

1. Influence Authenticity and Social Distance to CSR Motivation

Motivation of CSR is influenced by authencity and social distance. The company is now beginning to take advantage of authenticity as part of its brand possitioning strategy, especially in terms of showing the attractiveness of the product. On the consumer side, consumers meet the needs of authenticity by making subjective judgments of the value of authenticity on the consumer goods (McNamara, 1997). This can be interpreted that consumers base consumer decision making on the evaluation and consumer perceptions themselves on the authenticity.

Authenticity in this study used indicators from Grayson and Martinec (2004: 298) consisting of indexical and iconic. Social distance is the underlying power of social relationships. The social distance concept is used to measure the psychological atmosphere close to each other between individuals in a group and individuals from other groups. Social distance (SD) in this research use indicator from Bichic (2008: 489) which consist of objective social distance and subjective social distance. The results of Lim and Yang (2016) show that authenticity and social distance have an effect on CSR motivation.
H1: Authenticity influences CSR Motivation PT Amerta Indah Otsuka.
H2: Social distance effect on CSR Motivation PT Amerta Indah Otsuka.

2. Effect of CSR Motivation on Company Image

Company image is a psychological impression and description of various activities of a company in the eyes of public audiences based on the knowledge, responses and experiences that have been received. A particular assessment of the company image by the public can be in the form of good, medium and bad image. Good image arises from the result of public judgment or response to various activities, empathy, achievements and reputation of the company during its various activities. Company image in research using Faith indicators (2010: 79) consisting of personality, reputation, value and Corporate Identity. Company image can arise from aspects that show its seriousness in corporate social responsibility that is more concerned with environmental sustainability, using environmentally friendly technology and improving the welfare of the surrounding community.

Radyati (2013) explain the motivation of CSR based on normative interisik theory is that companies are driven to meet social norms and moral obligations to the stakeholders, regardless of the rewards they will receive. CSR motivation based on instrumental exterical theory is the company's effort to perform CSR as an instrument to get reward in the form of business advantage which in turn can increase stock price. Motivation of CSR in research using Saidi and Abidin indicator (2004: 69) consisting of corporate charity, corporate philanthropy and corporate citizenship. Ramadhan (2011), Majid (2012), Vegawati et al (2015), Chun and Bang (2016), Wiguna and Rahantha (2016) and Aryawan et al (2017) prove that CSR affects the company image. On the basis of previous research, the hypothesis is formulated as follows:

H3: The motivation of CSR has an impact on PT Amerta Indah Otsuka's company image.

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Tabel 1. Respondents Characteristics

Respondents Characteristics	Categories	Frequency	%
Age	17 tahun – 32 tahun	63	43%
	33 tahun – 48 tahun	68	46%
	49 tahun – 63 tahun	16	11%
Graduate	Elementary - Senior High School	123	84%
	Diploma - Bachelor	24	16%
	Master - Doctoral	0	0%
Job Status	Goverment Officer	25	17%
	Employee	2	1%
	Self Business	27	18%
	Housewife	93	63%
Spouse's job status	Goverment Officer	8	5%
	Employee	63	43%
	Self Business	45	31%
	Housewife	31	21%
CSR Program	Posyandu	79	54%
	Rumah Belajar	68	46%

The relationship between the variables used in the research model can then be poured in the form of a conceptual framework.

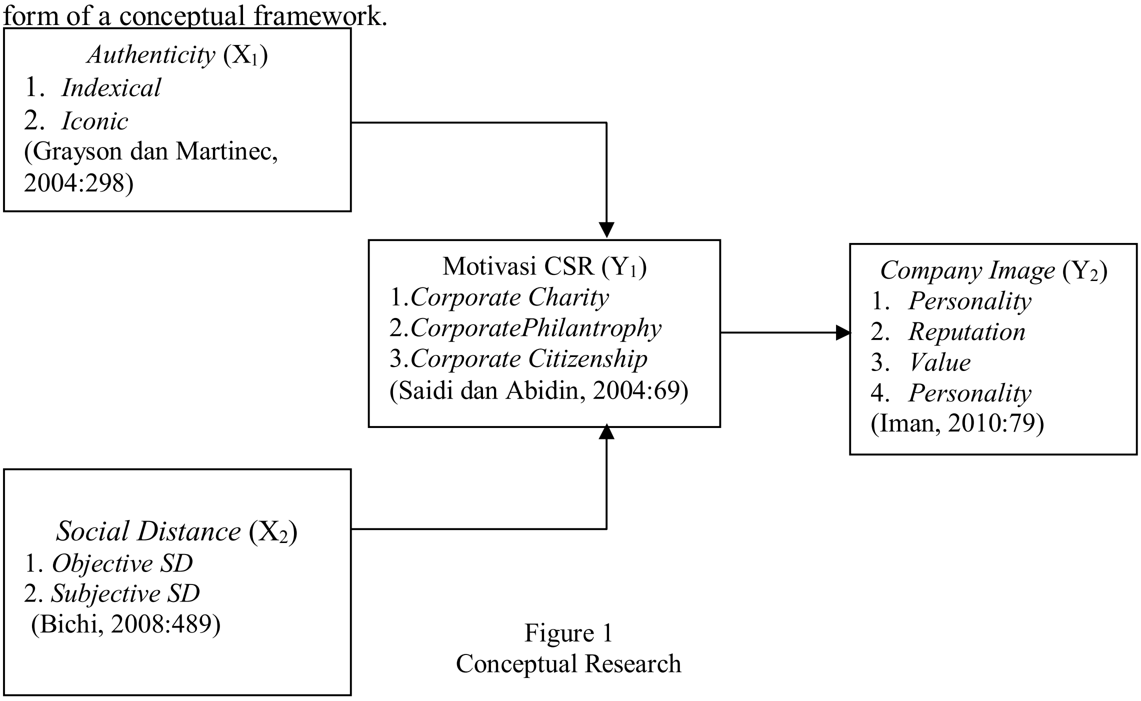

Figure 1
Conceptual Research

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RESEARCH METHODS

Research design

Based on the purpose of this research, the research design is the design of causal research. Sanusi (2014: 14) explains that the design of causality is a research design that is structured to examine the possibility of causality among variables. The approach used in this research is a quantitative approach, the process begins with the preparation of theoretical model and analysis as the basis for the provision of temporary questions (hypothesis), then proceed with the operationalization of the concept, until the conclusion as a research finding

a. Authenticity

Authenticity is the identification to describe something is original, not copy or imitation.
Indicator of authenticity used in this research are:

1) Indexical, referring to cues, behaviors, and related to physical and physic
2) Iconic, related to the phenomenon of experience experienced by someone in attending something

b. Social distance

Social distance is the condition of the gap between individuals or groups caused by differences in terms of customs, rules, habits, and socioeconomic structures that limit the relationship between people with each other.
Social distance indicator used in this research are:

1) Objective Social Distance related to Social Stratification, how social strata in society.
2) Subjective Social Distance related to Relational Closure, how closeness of relationship in society and surrounding environment.

c. CSR Motivation

The motivation of CSR is the drive to meet social norms and corporate moral obligations to the stakeholders, regardless of the returns the company will receive.
The CSR motivation indicators used in this study are:

1) Corporate Charity
2) Corporate Philanthrophy
3) Corporate Citizenship

d. Company image

Company image is the impression someone generates from the experience of using the product.
The indicators of corporate image are:

1) Personality
2) Reputation
3) Value
4) Corporate Identity

Data and Sample

The population in this research is direct beneficiaries of Rumah Belajar and Posyandu program of PT Amerta Indah Otsuka, Kejayan Pasuruan. This population amounted to 147 people consisting of parents / guardians of students Rumah Belajar participants, elementary school teachers participated Rumah Belajar AIO, participants and Posyandu's officers, village government officers. The number of samples in this study is 147 so the sampling technique using census.

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Data analysis technique

Data analysis in this research use descriptive analysis and path analysis (Path Analysis). Equation model of this research can be formulated as follows:

Equation 1
Z = b1X1 + b2X2 + e

Equation 2
Y = b3Z1 + e

Information:
X1 = Authenticity
X2 = Social Distance
Z = CSR Motivation
Y = Company Image

B1 ... b3 = Coefficients
E = Error term

Results and Discussion

Profile of Respondents

The number of respondents that have been collected in this research are 147 direct beneficiaries of Rumah Belajar and Posyandu Program of PT Amerta Indah Otsuka, Kejayan Pasuruan. Each respondent as a sample has different characteristics. Therefore, it is necessary to group with certain characteristics. The following will be presented description of respondent data based on its characteristics

Tabel 2. Result of significancy variable test

Variabel	Koefisien Regresi	Standar Error	Nilai t	Nilai p
$Z = b_1X_1 + b_2X_2 + e$				
Authenticity	0,564	0,084	6,725	0,000*
Social Distance	0,201	0,081	2,468	0,015*
$Y = b_3Z_1 + e$				
Motivasi CSR	0,457	0,051	8,904	0,000*

Validity and Reliability Test Results

Based on the validity test that has been done on the obtained probability value is smaller than 0.05. This means that the statement items used in the questionnaire are valid or actually measure what should be measured. Based on the results of the test reliability indicate that the variable authenticity, social distance, CSR motivation and company image has a reliability coefficient greater than 0.60, so based on the reliability test, the existing instrument is feasible to be used.

a. Good fit of Model Test

The influence of authenticity and social distance on CSR motivation

The result of multiple regression analysis shows that the value of F for regression is 35,363 with significance probability level for model formulated in this research is 0.000. This shows that the probability value is smaller than 0.05, so that it can be taken the decision that the research model is already fit (fit. The influence of CSR motivation on company image)

b. Coefficient of Determination

1. Effect of authenticity and social distance on CSR motivation

The coefficient of determination is used to see the ability of the independent variables in explaining the variation of the dependent variable. To know the variation of the dependent variable that can be explained by the variation of independent variables can be known from the value of determination. Based on the analysis results show that the coefficient of determination or R square of 0.329. The coefficient of determination (R square) of 0.329 contains the meaning that the variation of CSR motivation can be explained by independent variable research of 32.9% while 67.1% is explained by other factors outside the model.

2. The influence of CSR motivation on company image

Based on the analysis results show that the coefficient of determination or R square of 0.353. The coefficient of determination (R square) of 0.353 contains the meaning that the variation of company image can be explained by independent variable research of 35.3% while 64.7% is explained by other factors outside the model

c.) Significant Variable Test Results (t test)

1) Influence Variable Authenticity Against CSR Motivation

The effect of Authenticity on CSR motivation is significant with regression coefficient 0,564 and standard error is 0,084 and value t equal to 6,725 and p value 0.000. This means that Authenticity has a significant and positive effect on CSR motivation, which means that increasing authenticity will be followed by increasing CSR motivation. Stakeholders' experience in receiving CSR program, good relationship between person in charge of company with stakeholders will increase authenticity.

2) Influence of Social Distance Variable on CSR Motivation

The effect of social distance on CSR motivation is significant with regression coefficient 0,201 and standard error equal to 0,081 and value of t equal to 2,468 and p value equal to 0,015. This means that Social Distance significantly influence CSR motivation, which means increasing social distance in the sense of getting closer social distance in the community will be followed by an increase in CSR motivation.

3. Effect of CSR Motivation Variable on Company Image

The influence of CSR motivation on company image is significant with regression coefficient 0,457 and standard error equal to 0,051 and value t equal to 8,904 and p value 0.000. This means that CSR motivation has a significant effect on company image, which means increasing CSR motivation will be followed by improvement of company image

DISCUSSION

Effect of Authenticity on CSR Motivation

Authenticity affects CSR motivation, indicating that authenticity is an important factor for predicting CSR motivation. As McNamara (1997) argues that the company is now beginning to take advantage of authenticity as part of its brand positioning strategy, especially in terms of showing the appeal of the product. On the consumer side, they meet the needs of authenticity by making subjective judgments of the value of authenticity on the goods they consume. This can

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be interpreted that consumers base consumer decision making on the evaluation and consumer perceptions themselves on the authenticity. This is in accordance with the research results Lim and Yang (2016) stating that the authenticity effect on CSR Activity

Social Distance Influence on CSR Motivation

Social distance has a significant effect on CSR motivation, which means that the closer public relations in the environment will increasingly motivate corporate CSR. In the principle of responsibility, a significant emphasis is placed on the interests of corporate stakeholders. Here the company is required to pay attention to the interests of the company's stakeholders, increase the value of the community in its environment, create value added of the products and services for the company's stakeholders, and maintain the added value that it creates. While corporate stakeholders can be defined as the parties concerned about the existence of the company. These include employees, consumers, suppliers, communities, the environment, and government as regulators. CSR as an idea, the company is no longer faced with the responsibility that rests on the single bottom line, the value of the company (corporate value) is reflected in the financial condition (financial) only. But the company's responsibility should rest on the triple bottom lines. Here the other bottom lines besides financially are also social and environmental. Because the financial condition alone is not enough to guarantee the value of the company to grow sustainably (sustainable).

The sustainability of the company will only be ensured if, the company takes into account the social and environmental dimensions. It is a fact of how the resistance of the surrounding community, in various places and time, comes to the forefront of a company that is deemed not to pay attention to its social, economic and environmental aspects. This is in accordance with the research results Lim and Yang (2016) which states that social distance effect on CSR Activity

The Influence of CSR Motivation on Company Image

Motivation of CSR has a significant effect on company image. Corporate Social Responsibility (CSR) is a long-term investment that is useful to minimize social risks, and serves as a means of improving the company's image in the eyes of the community. CSR is an investment for the company for the growth and sustainability (sustainability) of the company and is no longer seen as a means of cost (cost center) but as a means to achieve profit (profit center). CSR is a firm commitment to support the creation of sustainable development (sustainable development). On the other hand, people question whether companies that are business-oriented to maximize economic benefits have a moral commitment to distribute their advantages in building local communities, because over time society does not simply demand the company to provide the necessary goods and services but also to demand responsibility social.

Corporate Social Responsibility can be an alternative for companies to face various issues related to social and environmental issues. Corporate Social Responsibility can be proof of company's alignment to society and environment. Having a Corporate Social Responsibility program can be an appropriate step to maintain business continuity and maintain customer confidence in the entity. The results of this study support Ramadhani (2011), Majid (2012), Vegawati et al (2015), Wiguna and Rahantha (2016), and Aryawan et al (2017) researches that corporate social responsibility influences the company image.

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Conclusions, Limitations, and Recommendations Conclusion

This study aims to describe Authenticity, Social Distance, CSR Motivation and company image, analyze the influence of Authenticity on CSR Motivation, analyze the influence of Social Distance to CSR Motivation and analyze the influence of CSR Motivation to PT Amerta Indah Otsuka, Kejayan Pasuruan. Based on the results of the analysis show that authencity is formed from indexical and iconic, the main contribution of formation of authenticity is indexical. Social distance is formed from objective social distance and subjective social distance, the main contribution of social distance formation is objective social distance. CSR motivation is formed from Corporate Charity, Corporate Philanthropy and Corporate Citizenship, the main contribution of CSR motivation is Corporate Philanthropy. Company image is formed from personality, reputation, value and corporate identity, the main contribution of company image formation is corporate identity. Authenticity has a significant effect on CSR Motivation, social distance has significant effect on CSR Motivation. Motivation of CSR has a significant effect on company image of PT Amerta Indah Otsuka, Kejayan Pasuruan.

Limitations and recommendations

This study has several limitations. Respondents who are domiciled or work in areas where the company is investing do not reflect the wider value of authenticity and social distance. For the next researcher can also add other variables that are expected to increase the motivation of CSR and company image, eg employee perception, work environment, and corporate culture

PT Amerta Indah Otsuka, Kejayan Pasuruan should continues to implement corporate social responsibility effectively, efficiently and flexibly, as a manifestation of the company's concern to account for the impact of its operations in the dimensions of profit, people and the planet, so that the impact will contribute benefits to society and the surrounding environment. The CSR program that is implemented remains by maintaining the authenticity. Company image can be enhanced by employees being more friendly to stakeholders and providing services as needed to be loyal to PT Amerta Indah Otsuka product, Kejayan Pasuruan.

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The Role of Society in Increasing Voter Participation in Pilkada in Kab. Deli Serdang

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The participation of the community in increasing voter participation in the election of regional head elected by regional head election, can be considered or viewed as social problem in society, of course, the social problem has its own cause for the society itself.

In the implementation of Pilkada activities of course, community participation is a form of concern or a response from the public in conveying his political aspirations.
So it is now as if the level of community participation becomes one of the indicators or a barometer for election and government organizers to the success of the implementation of regional election.

In Kabupaten Deli Serdang in two periods of elections based on election results in 2008 voter participation of 45.44% and in elections in 2013 voter participation tends to decrease up to 38.02%. Whereas at that time the Regent and Vice Regent Candidates who became participants at that time enough (many), in 2008 as many as nine candidate pairs, while in 2013 as many as 11 candidate pairs. Events of two periods of electoral execution in Kabupaten Deli serdang dismissed the theories or layman's opinion that the number of candidate pairs that competed in the elections would certainly have an impact and influence the level of public participation, because the logic of the crew of each candidate pair will bring its participants and the community also in Choose there are many options, but the

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opinion is contrary to the events that occurred in elections in Deli Serdang district in the last two periods although the number of candidates to remember, public participation tends to decline.

Therefore it is deemed necessary to undertake an assessment of what factors influence or influence the community's participation. The focus of the problem becomes a big question for writers among other things:

1. What is the role of the community towards its participation in the implementation of the regional head election in Deli Serdang Regency?
2. What factors are obstacles and as a driver for the community in participating in the election of regional heads in Deli Serdang regency?

Background

Deli Serdang Regency is one of the regencies / cities located in the province of North Sumatra. Deli Serdang Regency consists of 22 Subdistricts and 380 villages, 14 sub-districts, directly adjacent to Karo Regency, Simalungun Regency, Serdang Bedagai Regency and Medan City.

Deli district serdang which has the motto "Bhineka Perkasa Jaya" has a vision of "Deli serdang advanced, competitive, religious and united in diversity", with the population according to data BPS 2015 of 2,193,070 inhabitants. With large natural resources relying on the plantation sector, as well as a sizable industrial sector as well, characterized by the establishment of two Industrial Zones in the district area. Deli serdang, and supported the agricultural sector as well as fisheries and livestock.

For that Deli Serdang district should be led by a figure who has the ability to build and manage the existing resources to improve the welfare of the community, of

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course, the elected leaders should be through a democratic process of constitutional strength that is the general election.

The existence of the election of the regional head or better known as the abbreviation Pilkakada, is the impact of the process and the spirit of reform that in the name and put forward democracy. Pilkada in Indonesia was first performed in 2005. Because before head of region and deputy head of region elected by DPRD. It was preceded by the direct presidential election of the Republic of Indonesia in 2004.
Indonesia has actually had a constitutional foundation for direct local elections by the people. This happened when we enacted the Temporary Constitution of 1950 when Indonesia was a union (RIS), namely the birth of Law No. 1 of 1957.

Article 23 of Law No. 1/1957 states that the regional head is elected according to the rules stipulated by law. Before the law existed, while the head of the region was elected by the DPRD. The law to elaborate Article 23 was designed on the consideration that the regional head is a person well known to the people of his area. Therefore, the regional head should be directly elected by the people.

It appears that Law No. 1/1957 gives a sense of democracy, in the sense of open access for the people to participate in the election of regional heads. However, along with the political dynamics of the time, two years later President Soekarno issued a decree back to the 1945 Constitution.

Hence U, Temporary Constitution no longer applies with all its consequences. Thus, the direct election system as mandated by Law No. 1/1957 is new to introduction in the political stage, since empirically it has not been implemented. After Presidential Decree 5 July 1959, President Sukarno issued Presidential Decree No. 6 of 1959, regulating the mechanism and procedure of appointment of regional head . Thus, it is clear the difference. Law No. 1/1957 is based on the

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provisional Constitution in the federal state system (RIS), while Presidential Decree No. 6/1959 is issued under the 1945 Constitution in a unitary state system (NKRI). To further reinforce the regional head election system not only based on the Presidential Decree, No. 18/1965 on the subject of regional government. In this law the regional head is appointed and dismissed by the president or the interior minister through candidates submitted by the DPRD.

Thus, the position of central officials over the head of the region is getting stronger. The dominance of the central government to control the region is increasingly seen when the position of the regional head is defined as a state official whose arrangements are based on government regulations. The consequence of such a system, a regional head can not be dismissed by a decision from the DPRD. The dismissal of the regional head is the full authority of the president (for the governor) and the minister of the interior (for the bupati or mayor). This law was later perfected by the New Order with the birth of Law No. 5 of 1974. Based on Law No. 5/1974, the authority of the region

was restricted and controlled by President Soeharto. The regional head is appointed by the president of a qualified candidate and submitted by the DPRD. In fact, at that time the regional head was not the result of the DPRD election, given the amount of vote support in nominations or the order of nominations did not prevent the president from appointing any of the candidates proposed by the DPRD. This system was made possible by the time of the day, so that the central government would get a governor or a Bupati who could cooperate with the central government. Zaman had changed.

Reform is a necessity. The 1945 Constitution is amended. Law No. 22 of 1999 on regional autonomy was born, to follow the amendment of the Constitution, until then out of Law No. 32 of 2004. All laws and regulations are made in the name of democratization. However, considering that democratization is more out of its

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goal of prospering the people, evaluation is also carried out, changes are made again.

General Election as a means of channeling democratic aspirations from the people to their representatives in the government, ranging from regional heads of governor or mayor to president.Pemilu play a role Important for the life of nation and state. Through elections every citizen has the right to determine those who will sit in the leadership seat. Initially the election was intended only to elect members of representative institutions such as DPR, Provincial DPRD, and Regency / City DPRD. However, following the 1945 amendment in 2002, the presidential and vice presidential election (pilpres), previously conducted by the MPR, was agreed to be conducted directly by the people.

So since 2004 pilpres were incorporated into the election regime. So that the current election in public is the legislative elections and presidential and vice presidential elections are held every five years. Whereas in 2007, based on Law Number 22 Year 2007, the election of regional head and deputy regional head (pilkada) was also included as part of the election regime. Background with the issuance of Law Number 32 Year 2004 regarding Regional Government, By the people through the Election of Regional Head and Deputy Head of Region or the abbreviated Pilkada. Pilkada was first held in June 2005. Since the enactment of Law Number 22 Year 2007 regarding General Election Organizer, the election was included in the election regime, so

officially named General Election of Regional Head and Deputy Head of Region or abbreviated Pemilukada.

The first regional head election organized under this law is the election of Jakarta Capital City in 2007. In 2011, a new law on the organizers of the general election was issued, namely Law Number 15 Year 2011. In this law, the term used is Election of Governor, Regent, and Mayor. In 2014, DPR-RI again raised crucial issues related to direct election of regional heads. The Plenary Session of the

House of Representatives of the Republic of Indonesia on September 24, 2014 decided that the Head of Region Elections shall be returned indirectly, or re-elected by the DPRD.

Decision The direct election of regional heads is not directly supported by 226 members of DPR-RI consisting of Golkar Party Faction amounting to 73 people, PKS (PKS) is 55 people, National Mandate Party Faction (PAN) b 44 people, and Gerindra Party faction numbered 32 people. This decision has caused some parties disappointed. This decision was considered a step back in the field of "development" of democracy, so there is still a way to thwart the decision through material test to the Constitutional Court. For some others, the direct or indirect Pemilukada is judged equally. But one thing the principle that must be underlined (although in the implementation of direct Pemilukada later it turns out to please the people) is: First, Pemilukada does not directly cause the people's suffrage is lost. Secondly, Pemilukada does not directly cause DPRD members to get two rights at once, namely the right to vote and the right to legislation. Whereas if the direct election, does not cause the election of members of parliament (as citizens) the right to vote still exist. Part of the history of the implementation of elections in Indonesia that began in 1955, colored by four different traditions and political climate, namely the old order, New order and transitional order and reform. The election of regional heads during the New Order period, although not carried out by a single package with the election, but the implementation was not participative, even the community seemed forced to accept the leader in his area as head of government in the region, because the election of the regional head was done by appointing or appointed by the central government But since the enactment of Law No. 4 of 1975, known as the central government appointment system, with certain

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variations, namely through the approval of the Ministry of Home Affairs and the Headquarters of the Indonesian National Armed Forces formerly known as ABRI Headquarters.

Then in 1999 since the issuance of Law No. 22/1999, the election of regional heads was conducted through a representative system through the DPRD. Thus, virtually no participation at all. Even after the regional autonomy has been implemented, the public is limited to being able to watch without participating in political participation. From the history of Pilkada in Indonesia, it is certainly not separated from the role of the community that has a significant impact on the participation of the community itself in the intended Regional Head Election. Methodology Approach This study is a sociological study that examines the role of communities in improving their participation in elections. It can be estimated that the author tries to explore social action which is the action, interaction and reaction to the election of the regional head. In an effort to study the existing problems, the writer tries to approach using the basics of social theory, the theory of action (weber) and phenomology.

Symbolic Interactive Theory, a theory that as a reaction to functional structural theories that deny the authority and autonomy of individuals in its position in society. This theory is based on the idea that people's ability to respond to themselves as objects enables them to communicate with themselves through the use of symbols, the core view of approach This theory is individual-individual is an object that can be directly examined and analyzed through interaction with other individuals, George Hebert Mead (1863-1931) While the method used in studying the phenomenological public phenomenon (phenomenological) is a qualitative research method.

The author will try Utilizing the concepts of research methods that have been well introduced by Marshall and Rosman (1989: 48-49) about the qualitative approach and Straus and Corbin (1990: 124-145). Finding Tentative Findings The tentative findings found in this study are certainly a perception of the authors,

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describing the electoral situation in the Deli Serdang kabupeten. The Deli Serdang district community does not seem to have a high response to the implementation of regional election.

Of course there are some things that become the findings that can be used as a reference in this discussion. Background with the number of candidate pairs on the pilkada, not necessarily boost or mengkatrol community participation will be high also on pilkada tersebut.Terbukti from elections Deli Serdang Regency in 2008 with participants reaching nine pairs candidates, with a diverse background candidates, From businessmen, bureaucrats, retired TNI, farmers and activists and even political party cadres. However, the participation of the voters is not more than 50%, which is only 45.44%. It is even worse when we see voter participation in elections in 2013 whose voter turnout decreases from the previous election, which only reached 38.02% with more participants than previous participants, as many as 11 candidate pairs. By calculation and thought and logic layman, of course more and more election participant hence voter participation will be high, because ought to each Sing candidate pair will be supported by konsituen respectively.But the opinion and lay judgment is inversely proportional, it turns out many of the candidates or candidates in the election of regional heads, the reality is not necessarily will have an impact on the high participation of the community to come to the Voting Place (TPS) .

If the national election is very different, the public participation in electing the election with the election of legislative election and the presidential election in 2014 that the result of voter participation is higher than the Pilkada of Regent and Vice Regent of Deli Serdang, that is reaching 57.20% and Presidential General Election Reached 59.46%. It is certainly a big question mark for the author, as well as causing a high curiosity, why it can happen, especially during the elections in Deli Serdang District. Of course there are several factors that cause less maximum voter participation in the implementation of elections In district Deli

Serdang in 2008, even tends to decline in the elections of Deli Serdang Regency in 2013. If viewed from the consensus factors of the election participants in 2008 was followed by nine pairs of candidates, consisting of various backgrounds between bureaucrats, entrepreneurs or entrepreneurs, activists Or activists, farmers, and from political party cadres. Candidacy five pairs of Independent and four pairs of political parties as well as from various backgrounds of the profession is certainly a separate selling point for the voting community, with community in Deli serdang presented by many choise to be mandated in leading Deli Serdang district.

Likewise at The elections of the Regent and Vice Regent of Deli Serdang in 2013 which was attended by 11 candidate pairs, who were mostly popular figures and backgrounds of various professions, of course the community was given many choices, but it did not make most of the people give their voting rights At the time of the election took place. So it was pointed out there are other factors that make the lack of participation of the community in choosing, which need to be studied and known by the interested parties, so that the factors that cause the community are reluctant to participate in menggun Will have the right to vote on the election known and conducted evaluation.

Therefore, in the effort to know the factors that cause the lack of maximum voter participation in Pilkada in Deli Serdang Regency, and answer the above questions, it is needed a research, so it is expected that the elections in Deli Serdang district will be better than before.

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Motivation Effect on UMKM Performance in Banjarmasin City: Overview of Locus of Control as a Contingency Factor

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Abstract

Globalization affects business and their proprietors, including Micro, Small and Medium Enterprises (MUMKM). This requires businessmen to be responsive, ready to change and adapt to the change itself as business competition is fierce. Should businessman does not make changes and fix their motivation and character in these conditions, it will have an impact on achieved business performance. Should businessman does not want to change, they would be run over by changes itself. In order for the business/company to survive, a businessman must have the carrying capacity of character/personality to face the business environment pressure. The self-carrying capacity is the most important aspect. It is the motivation of a UMKM actor to produce a good performance. In addition, this study also reviews the locus of control as a contingency factor that affects business performance. This study aims to analyze the influence of motivation on UMKM performance in Banjarmasin by reviewing locus of control as a contingency factor. This study used 100 businessmen possessing status as manager and or UMKM business owners in Banjarmasin City as samples. Data collection process utilized questionnaires method. Data were collected and processed using moderating regression analysis (MRA) and interaction regression between variables. Research results exhibited motivation and locus of control possessing a positive effect on business performance. However the locus of control as a contingency factor which does not prove to be moderating between the motivations of business performance.

Keyword: motivation, locus of control, contingency, UMKM performance

INTRODUCTION

The current technological revolution has changed all aspects of human life. In business realm, in particular, a technological revolution has led to remarkable changes in competition, marketing, and human resource management. As a result, business realm became more global and fierce in competition. The fierce nature of the competition becomes a serious problem for companies because business environment has undergone a change marked by increasing uncertainty conditions that make it difficult in many business activities. This uncertainty condition is known as contingency factor, which can affect company/business or Micro, Small and Medium Enterprises (UMKM) performance.

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In order to achieve a good business performance, a maximum effort is required. One of the factors that encourage efforts in achieving good performance is the motivation that is born from within an entrepreneur or UMKM proprietors. The motivation of an entrepreneur or UMKM proprietor will have an impact on the business behavior it takes, which in turn will have an impact business performance result. Therefore, it is imperative that UMKM proprietor motivation in relation to business behavior undertaken to possess an impact on business objectives performance result.

In the current era of globalization phenomenon, should UMKM proprietors not supported by a strong or high motivation, it would affect performance achievements. Therefore motivation serves as a means of bridging a person's success, including UMKM proprietors. McClelland's research (1961, 1985); Mulyanto (2004); Brahmasari (2008); Sutanto and Eliyana (2014); Huda (2014) concluded that motivation affects businessman/entrepreneur performance successes. Green, et al. (1996) mentions the motivation and locus of control can determine the success of an entrepreneur managing business.

In an effort to achieve maximum business performance needed a leverage from both outside and inside in the form of self-character. The UMKM proprietor possesses limitations which require character leverage in accordance with recent competitive and changing business environment. One of the characters related to successful business performance, including on UMKM scale, is the locus of control. In this study, UMKM performance is reviewed based on the locus of control as a contingency factor, in addition to motivation as an independent variable.

REVIEW OF RELATED LITERATURE

The rapid growth of business units at the micro scale exhibits a huge entrepreneurial spirit. Bygrave's opinion (1996: 1) mentions that it is currently the period of entrepreneurship. The spirit of entrepreneurship must be based on a drive or motivation that arises from within a person. This entrepreneurial spirit or motivation

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is evident through the growth of businessmen which is increasing through various fields or sectors of economic activity in the community.

Idrus (1999); Anomsari and Mahmud (2011) mentioned that a large number of people are working in informal sector (which include self-employed and self-employed assisted temporarily by family) in Indonesia are: 49.24% in trade and restaurant; 18.66% in the mining and quarrying sub sector; 4.36% in the building sub-sector (construction); 5.36% in the transport and communications sub-sector; And 18.52% in the public service sub-sector of total worker working in each subsector.

The data continues to grow through a various business field which was conducted due to community creativity. This exhibit growing entrepreneurship motivation in the society. But is high motivation exhibited by high growth rate is followed by good business performance? In order for the "birth" of new Micro, Small and Medium Enterprises (UMKM) does not end at merely micro business scale/ranking? However, it occurs in all other strata/rank of business, such as on the scale of small and medium enterprises, even large scale business. The fact that the increase of business growth from micro scale to small scale or from small scale to medium scale even from medium to large scale is relatively small. Table 1 exhibits UMKM growth in last six years. On average there are a million more "births" of new business units each year. Based on existing data in Banjarmasin City (Table 2), it exhibits the largest growth contribution from a micro business unit.

Table 1
Development and Growth of Small and Medium Micro Business
2010 - 2015

No	Year	Total UMKM (Million)	Business Unit Growth (Million)	Percentage(%)
1	2010	53,82	1,06	1,97
2	2011	55,20	1,38	2,50
3	2012	56,53	1,33	2,35
4	2013	57,89	1,36	2,35
5	2014	59,30	1,41	2,37
6	2015	60,70	1,40	2,31

Source: processed from BPS data, 2017.

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In Banjarmasin City UMKM growth during the last two years (2015 and 2016) exhibits rapid birth of micro business units compared to other business units, as exhibited in Table 2 below:

Table 2
UMKM Development and Growth
Banjarmasin City 2015-2016

No	Business	2015	2016	Business Unit Growth	Percentage (%)
1	Medium	1.642	1.694	52	3,17
2	Small	3.723	3.827	104	2,79
3	Micro	31.514	42.336	10.822	34,34
Total		36.879	47.857	10.978	29,77

Source: processed from Bappeko, 2015/2016 and Dinkop & UMKM Banjarmasin, 2017..

The data exhibits Micro business growth possessing highest growth compared to Small and Medium Enterprises business unit. This also exhibits entrepreneurship motivation among the community has grown well, but the motivation in developing the business itself needs to be increased as there are still a number of obstacles. Based on this need, it is necessary to research the influence of motivation on UMKM performance. UMKM proprietors motivation become the basis of action or behavior in entrepreneurship. Every businessman would want a satisfactory result of business performance. Performance is the result of work that can be achieved by a person or group of people in an organization either quantitatively or qualitatively, in accordance with the authority and duties of each responsibility, in an effort to achieve the objectives of the organization concerned legally, not violating the law and in accordance with moral and ethics (Moeheriono, 2012: 95).

Whether a business develops or falls can be seen from its resulting performance. Rue and Byars (1997) states that performance is the level of result achievement or achievement level of organizational goals. The similar opinion expressed by Fahmi (2010: 2), stating that performance is the result obtained by an organization, whether the organization is profit or not profit oriented generated during a period of time. Wheelen and Hunger (1995: 286) states that performance is an achievement obtained by a company in a certain period reflects corporate health level as measured by

Return on Investment (ROI). Prakosa (2005: 47) states that a company's performance is a measure of company success that is measured every predetermined time period. This result could be regarded as the value of each activity that has been prepared and implemented to be able to identify whether the strategy is made and its implementation is appropriate or vice versa. Wiklund and Shepherd (2003) stated that a company's performance is the work achieved by UMKM managers/owners to develop the organization through five indicators related to the market position, sales growth, employment growth, customer loyalty and financial results.

UMKM businessmen performance can be seen from both quantitative and qualitative aspects (Moeheriono, 2012: 95; Bernardin and Russell, 2003; Jauck and Glueck, 1988) as well as through revenue growth indicators, sales volume growth, business growth and asset growth (Amstrong , 2004: 29; Sandjoyo, 2004: 122; Jeaning and Beaver, 1997). It can also be seen from indicators related to market position, sales growth, employment growth, customer loyalty and financial results (Wiklund and Shepherd, 2003; Wheelen and Hunger, 1995: 286), or can also measure through productivity indicators, profits and prices (Istanto, 2010: 135), or ROA and sales growth (Majeed, 2011: 195). Subagyo (2013: 68); Armstrong (2004); Rue and Byar (1977); Jeaning and Beaver (1997); Wheelen and Hunger (1995); Hadjimonalis (2000); Wilkund and Shepherd (2003); Sandjoyo (2004); Sangen (2005); Mentioned that business performance can be measured through sales growth, profit growth, asset growth, and labor grow indicators.

Motivation is derived from the word "motiv" which means encouragement, while the urge will be in the form of energy/energy which motion soul and body to perform an action. Motiv is also a driving force that causes people to behave, and instills certain purpose in their respective actions. As'ad (1998) argues that motives are defined as need, want or desire. Drivers or impulses in humans. Motives are directed at goals that may be realized or may not be realized. Gerungan (2000) states that the motive has an understanding that includes all the movers, reasons, impulses in man to perform a deed.

Riani (2005) concludes the motive or motivation to give strength, the drive to move oneself in certain behaviors and at the same time give direction to one's self to respond or do activities toward goal achievement. Robbins and Judge (2013: 245) argue that motivation is the willingness to struggle or strive to a higher level toward achieving organizational goals provided that it does not ignore the ability to gain satisfaction in the fulfillment of personal needs.

According to Santrock (2007), motivation means is the process of giving spirit, direction, and persistence of behavior. Pinder (1998: 53) says that "a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behavior, and to determine its form, direction, intensity, and duration". Motivation is an impulse of the soul that makes a person moved to perform productive actions, both work-oriented money making and not. Schiffman and Leslie (1997: 49) states: "This motivation describes as the driving force generated by events that arise as a result of the results of a need that have not yet Fulfilled. The desire to meet everyone's needs will give birth to motivation.

McClelland (1961, 1985); Robbin (2003); Robbins and Judge (2013) mentions there are 3 (three) needs in which someone based their motivation respective actions, which are described as follows

1) *Need of achievement/n Ach*

   There are three characteristics of people who possess high achievement needs according to McClelland: a) People possessing high achievement needs have a sense of responsibility in implementing a task or finding solution to a problem; b) People possessing high achievement needs tend to establish moderate difficulty levels and calculate the risks; c) People possessing high achievement motivation have a strong desire to get feedback or response to the execution of their duties.

2) *Need of Power/n Pow*

   The need for power is the need to influence and control others and be accountable to it. People possessing a high need for power have the following characteristics: a) The desire to directly influence others; b) The desire to exercise control over others; b) There is an attempt to maintain the relationship of leaders and followers.

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3) *Need of Affiliation/n Aff*

The need for affiliation is a desire to make friendly and warm relationships with others, similar to Maslow's social needs. People possessing high affiliation needs have the following characteristics: a) They have a strong desire to gain the blessing and peace of others; b) Tendency in adapting to others desires and norms in their respective environment; c) They have a genuine concern for the feelings of others.

In terms of the motivation with the birth or the emergence of a behavior or external response as a result of a strong drive from within that person, Campbell in Gibson (1996: 87) suggests that motivation relates to a) The direction of behavior; b) The power of response (i.e effort) after a person chooses, followed by certain actions; c) Endurance behavior or how long a person is continuously behaving in a certain way.

Wexley and Yukl (1995: 45) argued that motivation is something that raises work spirit or drives. Therefore a person's motivation strength determine resulting achievement. Regarding UMKM proprietors, a strong motivation will encourage a businessman to make a business breakthrough with high spirits to produce maximum business performance as expected..

McClelland's research (Robbins, 2003: 173) on entrepreneurs exhibits more meaningful evidence of achievement motivation than groups of other jobs. This means that entrepreneurs possessing higher N-ach than from other professions. The key characteristics of entrepreneurial roles according to McClelland include the ability to assume moderate or less risk as a result of skill and not by chance, a vigorous and / or creative exercise (= motivation) of personal responsibility, and knowledge of the outcome -decision; Which is considered a measure of results (Robbins, 2003: 218; Mulyanto, 2004: 93). McClelland's results on Robbins and Judge (2013) also state that in a less risky state, entrepreneurial performance will be more dependent on skills or achievements than other jobs. McClelland argues that the motivation of an entrepreneur does not merely want to achieve profit itself, but because the entrepreneur has a strong desire to excel. Through motivation of achievement, a motivation of power and motivation affiliated to a businessman, it will give effect to the overall business performance (Mulyanto, 2004: 92).

An innovation or improvement requires a passionate and active entrepreneur. Entrepreneurs can work for a long time, for example, 70 hours to 80 hours per week. It is not the length of time that matters, but because the entrepreneurial spirit that endures working for such a long time, therefore individuals possessing high N-ach, are not interested in the recognition of others or society for its success, but an entrepreneur requires a method to measure achievements.

The results of McClelland's (1985) study concluded that achievement satisfaction derives from taking initiatives to act to achieve success, rather than from a general recognition of personal achievement. People possessing high N-ach are less affected by money, but more interested in achievement. Based on this fact, the standard for measuring success for the entrepreneur is clear, such as profit, market share or sales growth rate.

In order to achieve a good business performance, there are various decisive personality characteristics, Riani's research (2014) mentions achievement motivation. According to McClelland in Tamizharasi and Panchanatham (2010), the high need (motivation) for achievement is a personal characteristic of an entrepreneur. Through possessing high motivation for achievement, an entrepreneur will always have the desire to excel and will work better than others to achieve success (McClelland, 1985).

In addition to motivation, one's character also affects the resulting performance. Especially on an independent businessman in determining actions, therefore character affects the results of decisions made then ultimately also possess impact to overall business performance. One of the characteristics that serve as a review in supporting UMKM performance business is the locus of control. Locus of control implies how an individual capable of mastering their own destiny. It is the belief that an individual can or can not control events that affect them. The concept of locus of control was developed by Julian B. Rotter in 1954 and has since become an important aspect of research on personality.

Kreitner and Kinicki (2000); Dumitriu at al. (2014) also stated locus of control as one of the variables of personality (personality) which is defined as an individual's belief to control their own destiny. The locus of control illustrates how far one looks at the relationship between actions undertaken (action) with the result or outcome. It means locus of control is associated with work attitude and self-image. Rotter (1966: 489) divides the locus of control into 2 (two) namely Internal Locus of Control and External Locus of Control. Internal control refers to the extent to which a person expects results depends on the behavior itself or personal characteristics. On the other hand, external control is the extent to which a person expects that a result is based on chance, luck, or fate, is under the control of others or unpredictable.

High internal individuals locus of control tend to possess better self-control, exhibit more political behavior, and more likely to try to influence others than individuals with an external locus of control. Internally oriented locus of control managers exhibit greater confidence in their ability to influence the environment, are better able to cope with stressful situations, rely more on an open and supportive way of influencing, emphasizing more risky and innovative corporate strategies and Resulting in higher group and enterprise performance than oriented managers.

According to Subagyo (2013); Lee and Tsang (2001) stated that other factors are only supporting factors. But individual factors (characteristics) of businessmen plays the most important role in determining business success. Taormina and Lao (2007); Turker at al. (2012) states that success (a business) is determined by individual characteristics. Therefore a businessman must possess supporting personal characteristics, one of which is the Locus of Control. Kreitner and Kinicki (2000), and Riani (2014) stated that locus of control is one variable of personality. The results of Lee and Tsang (2001); Sumantri et al. (2013); Subagyo (2013: 184) mentions the character of entrepreneurial dominant influence on UMKM performance.

Bello's research result (2001) states one of the important variables that become locus of control output is business performance or organizational performance. Based on this fact, contingency approach on locus of control is used as a factor that moderates a relationship in this study. The contingency factor chosen is the locus of control owned by UMKM. A condition that causes an uncertainty is known as a contingency factor. Brownell (1982) examines several studies and found the influence of conditional factors as a variable that moderates the relationship between independent variables and dependent variables. Conditional factors can be grouped into four variables, namely: culture, organizational, interpersonal, and individual. Environment outside the organization or business contains many uncertainties. Therefore, this study reviews the influence of motivation on business performance with locus of control as a contingency factor.

Accordingly, Riani's research (2014: 12) states that the need for achievement and internal locus of control of entrepreneurs/businessmen is essential to achieve competitive advantage for UMKM. Ferdinand (2005) states that sustainable competitive advantage is the company's strategy to achieve its ultimate goal, which is high-yielding performance. That is, sustainable competitive advantage is not the ultimate goal, but as a means to achieve the ultimate goal of the company, which is to improve business performance. Green, et al. (1996) also mentions that individual characteristics such as motivation and locus of control can determine the success of an entrepreneur in managing how the business is run.

This research model exhibits the influence between motivation and locus of control as contingency factor to business performance. That with high motivationand good locus of control level will affect business performance. Motivation (McClelland, 1961, 1985); Green, et al. (1996); Sumantri, et al. (2013) and locus of control (Kreitner and Kinicki, 2000); Riani, 2014) is a characteristic factor or personality that exists within a person and influences the subsequent actions which impacts or influence undertaken performance. Shouldthe internal locus of control is dominant in a businessman, it indicates aforementioned businessman in possessing good understanding and take advantage of everything in a complex decision-making. With a high internal locus of control, it is possible for a businessman to increase motivation through creative strategy-making and incorporating risk. Thus, the motivation will work very well if the businessman has a high internal locus of control which ultimately affect business performance.

Locus of control is identified as a reinforcing factor in the relationship between motivation and business performance. Businessman motivation in running a business or entrepreneurship is linked to a source of control because at the time of emerging entrepreneurial interests or taking business risks permitting businessmen in influencing business performance goals achievement, and that is what creates an

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internal locus of control. Homell and Avolio (1993) found the internal locus of control significantly and positively affects performance, it is possible that one way a businessman improves business performance is by emphasizing creative strategies and incorporating risk. Bownell (1982, 1983) explains that managers with internal orientation work better than with external orientation.

Based on the theoretical framework and previous research findings that examine the effect of motivation on business performance with a review of the locus of control as a contingency factor, the conceptual framework of the three variables can be explained in Figure 1 below:

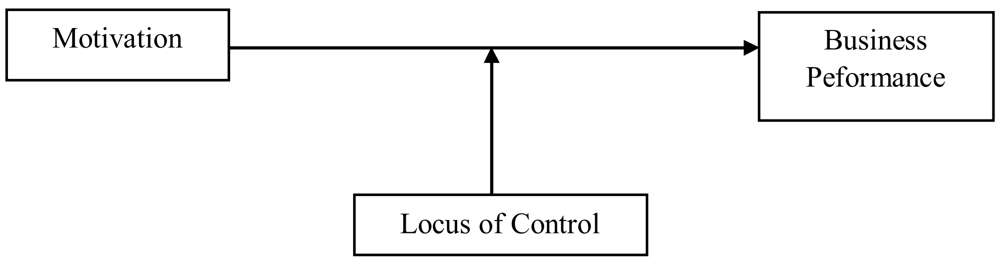

Figure 1. Research Framework Concept
Motivation Effect on Business Performance: Overview of Locus of Control as a Contingency Factor

RESEARCH HYPOTHESIS

Based on the conceptual framework, the hypothesis proposed in this research are:

H1: Motivation has a significant effect on business performance.

H2: Locus of control is a contingency factor between business performance motivation.

RESEARCH METHOD

1. Sample and Population

The population of this study amounted to 47,857 units. Given existing large number of population, respondents were determined based on samples requirement, namely the UMKM proprietor that have been operating for at least 2 (two) years, the company stands alone and is not a branch or franchise, and is the owner or manager. Therefore the research used Purposive sampling technique. According to Cooper and Schindler (2008), one of the types of purposive

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sampling is judgment sampling is to choose the sample members (respondents) who meet determined criteria.

The subject of this research is the manager and / or owner of the company / unit of UMKM, because the manager or owner of the business unit is the most responsible and understand the ins and outs of the overall business management, both concerning human resources and resources Other power, including capital, production, and marketing issues. In order to determine the size or quantity of samples the researcher used the following Slovin Formulas (Sanusi, 2014: 101) follows:

$$n = \frac{N}{1+N\alpha^2}$$

N = total Population
n = total Sample
α = inaccuracy tolerance (in percentage)
With an tolerable error rate of 5%.

2. Research Variable Parameter

The data measurement tool used is the questionnaire. Each respondent is given a number of questions or statements to answer in accordance with the alternative choice of answers already provided in five categories; Strongly Agree (SS) score 5, Agree (S) score 4, Neutral (N) score 3, Disagree (TS) score 2, and Strongly Disagree (STS) score 1.

3. Data Analysis Technique

To analyze the data in this study used descriptive analysis intended to determine the motivation, business performance, and locus of control and determine the tendency of respondents' assessment of the variables studied. To obtain a description of the above variables, a frequency distribution analysis tool is used by utilizing SPPS facility in Moderated Regression Analysis (MRA). MRA is used to determine the influence between motivation and locus of control on business performance. Based on the approach adopted, the regression equation (Sunjoyo, et al., 2013) is:

$$\mathbf{Y = a + b_1 X_1 + b_2 X_2 + b_3 X_1 . X_2 + e}$$

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HYPOTHESIS EXAMINATION RESULT ANALYSIS

1. Hypothesis 1 Examination

Hypothesis 1 reads: Motivation significantly influence the Performance of Micro, Small and Medium Enterprises in Banjarmasin City.

1) Determination Coefficient

Table 3 Determination Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516[a]	.266	.259	.42171

Based on Table 3 above, it is known that R value is 0,516. R square value (R^2) is 2.66. This exhibits that the motivation effect on UMKM performance amounted to 26.6%. The remaining 73.4% UMKM performance is influenced by other variables.

2) Regression Coefficient

Table 4
Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.963	.467		2.059	.042
	X1 - MOTIVASI	.669	.112	.516	5.961	.000

a. Dependent Variable: Y1 - KINERJA USAHA

Table 4 above exhibits a t value of 0.516 with a significance of 0.000. To test the hypothesis that "Motivation has a significant effect on UMKM Performance" following the rule of significance <0.05 then the hypothesis is accepted. The significant value in Table 4 above is 0.000 <0.05. Thus the hypothesis stating 'Motivation has a significant effect on UMKM performance' is proven/accepted. This is in line with the results of McClelland's research (1961, 1985, Mulyanto (2004), Turker at al. (2012), Sutanto and Eliyana (2014); Huda (2014).

2. Hypothesis II Examination :

Hypothesis 2 reads: Locus of Control is a contingency factor in Banjarmasin City UMKM Performance Motivation.

Testing the hypothesis is tested through Moderation Regression Analysis (MRA). This analysis used two regression analyses, regression analysis I and regression analysis II (Sunjoyo et al., 2013: 170). Regression analysis I used a simple regression analysis to determine R square value. The second regression analysis to know R square value. Furthermore, to determine the moderation variable is seen from value b on regression coefficient tables. If b value is positive then the variable is not a moderating variable. If b value is negative, then the variable is a moderating variable. The moderating variable can strengthen or weaken the influence of the independent variable to dependent variable. If the value of R regression analysis II is greater than the value of R regression I, then the moderating variable strengthens the relationship between independent and dependent variables. Vice versa.

The results of regression analysis of this study exhibited a positive b value of 0.869 (in Table 7). Thus the Locus of Control variable is not a moderation variable between Motivation and Performance of UMKM. The hypothesis that "Locus of Control to be a contingency factor between Motivation to UMKM Performance" is not proven. If b value is negative, then the Locus of Control variable becomes the moderating variable and reinforces the influence of the Motivation on UMKM performance because the R square value on regression analysis II (0.268) in Table 4 is higher than R square value on regression analysis I (0.266) in table 7.

Table 5 Coefficient of Determination (Result of Regression Analysis I)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.516[a]	.266	.259	.42171

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Table 6 Coefficient of Determination (Regression Analysis Result II)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518[a]	.268	.253	.42327

Table 7 Regression Coefficient (Regression Analysis Result II)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.869	.502		1.732	.086
	X1 - MOTIVASI	.643	.124	.495	5.203	.000
	X2 - LOCUS OF CONT	.054	.102	.050	.528	.599

Conclusion

a. UMKM proprietors in Banjarmasin City have a strong motivation in running the business through the desire to always achieve or achieve success in business exhibited by their tenacity in performing their respective business objective, therefore their business performance as exhibited through sales growth continues to increase.

b. UMKM proprietors in Banjarmasin City exhibit locus of control's internal character affecting business performance in positive and significant results. Nevertheless, the locus of control as a contingency factor is not a moderating variable between UMKM performance motivations in Banjarmasin City.

Suggestion

a. Increasing UMKM proprietors personal and business capacity, through ongoing training with mentoring and networking to improve business performance.

b. Further research related to build true entrepreneurship mentality on UMKM proprietors to enable them to upgrade their business scale.

c. Expand the research area or increase the number of samples.

Limitations

This research is conducted only on the scope of UMKM Banjarmasin businessmen which is inappropriate to be generalized in other regions/cities due to different cultural and characteristics. Therefore further research is required. It is suggested to add variables from other contingency factors such as culture, organizational, interpersonal, and individual to determine the influence of conditional factors as a moderating variable on the relationship between independent variables and dependent variables.

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Site Setup *Patirtan* Watugede Singosari, Malang, Indonesia As a Spiritual Tourism Object

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ABSTRACT

Patirtan site is an ancient cultural relic, associated with the ritual bath with holy water. *Patirtan* Watugede site in Singosari Malang, is one of the ancient kingdom of Singhasari, which is a big kingdom in East Java. Spiritual tourism activities at temple sites and *Patirtan* sites in East Java and Malang Raya continue to increase. On the other hand, some *Patirtan* sites evolved into tourist destinations, undergoing uncontrolled development renovations. Utilization and development in the area of partial *Patirtan* sites, tend to contradict the concept of conservation. Through the historical approach, then analyzing the physical character and function of Watugede's *Patirtan* site, as well as the value of society's preference, can be formulated the concept of *Patirtan* Area Arrangement as a tourist destination spiritual. There are findings of the main elements used as a spiritual tourism activity on these *Patirtan* sites, namely: water source, meditation area, ritual ceremonial courtyard and building site *Patirtan*. Formulation of Concept The arrangement and development of *Patirtan* website as a spiritual tourism object is done descriptively, with the implementation of Draft Drawing. The concept of Arrangement and development of Watugede's *Patirtan* site as a spiritual tourism object was found as a result of research, by examining the phenomenon of *Patirtan* site in Malang Regency, which is related to the utilization, preservation of physical element, socio-culture, economy and environment.

Keywords : Environment; *Patirtan*; Sites setup; Tourism

1. INTRODUCTION

Malang Regency has quite important historical background, related to Kanjuruhan kingdom and Singhasari kingdom. Singhasari Kingdom established in the 13th century, undoubtedly has a high historical value. There are many sites in the form of temples and *Patirtan* sites in the district of Malang, as a relic of the kingdom. One of the historical heritage that has historical value and high social value, is *Patirtan* Watugede site or known "Ken Dedes Baths", located in District Singosari Malang Regency.

On the other hand, Malang Regency government develop Tourism sector, become one of development focus. This development policy, because Malang Regency has a wealth of places of high historical value, which has the potential to become a very interesting tourist attraction. One such tourist attraction, is *Patirtan* Watugede site in Singosari Malang Regency, which is the site of *Patirtan* Ken Dedes. Watugede *Patirtan* site today, widely used as a "spiritual *Patirtan*" tour by the conservation community of Javanese culture.

Patirtan Watugede site complex, by ordinary people called "Ken Dedes Baths", is one of the tourist *Patirtan* that has a pretty high sacred value in the district of Malang. The existence of the baths, has attracted many people to conduct a spiritual-motivated visit. Community awareness of the existence of this site, quite significant, related to social and cultural values. The existence of spiritual tourism demand on the site *Patirtan* Watugede, by the Java cultural preservation community, of course, must be governed through development planning. Arrangement of an effective *Patirtan* site area, is required for the function and purpose of managing the site to run optimally and continuously

2. METHODS

Arrangement of *Patirtan* site area, conducted by approach of meaning analysis and historical value, owned by *Patirtan* site area. *Patirtan* site structuring approach, considering the historical aspect, archaeological aspects, mythological aspects, and artistic values. Arrangement of the *Patirtan* site is based on the concept of revitalization, through the preservation of a living culture in the community, as a spiritual object. The concept aims to preserve the *Patirtan* Watugede site, which has a water source that is considered sacred by the community

3. CONCEPT DESIGN AND IMPLEMENTATION

The physical condition of the Watugede bath site area, an ancient rectangular pond. The walls of the pond are made of ancient bricks are neatly arranged and strong. The foundation of the wall is still quite sturdy, with conditions that some have no longer intact. The edge of the pond is adorned with several small statues, into a shower of water that will fill the pool. Water out of the mouth of the statue, until now, never stops, even in the dry season. This pool has a stone staircase that allows visitors into the pool.

3.1. Spiritual Tourism at Watugede *Patirtan* Sites

In the observation and inventory phase of Watugede *Patirtan* site, which is done descriptively, linked to interviews with the resource persons. Based on the results of triangulation, from observations and interviews, on the meaning of spatial behavior of spiritual tourists, there are four types of activities:

- Ritual of taking 'holy water' at the water source.
- Ritual of 'soak' in *Patirtan* pond.
- Ritual bathing at the water source.
- The ritual ceremony of offerings.
- Ritual dance.

The ritual of taking 'holy water' is carried out at the Watugede waterfall *Patirtan* site, located in the northeastern part of the *Patirtan* pool. Taking 'holy water' is done by the Hindu community of Java and the conservation community of Javanese culture. Water is believed by the Javanese community as a medium of energy transformation, when in contact with the body parts of a person (source: Agus Irianto, Patrieran Watugede). The holy water coming out of the water source on the Watugede site, as a place of high religious value, is undoubtedly believed to be efficacious. The holy water-taking event by the Javanese culture conservation community is based on the Javanese calendar, according to certain good days, for example on Tuesday night Kliwon, Legi Friday night, and so on.

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Figure 1. Ritual Dance at Watugede Waters Water Site, conducted by Cultural Conservation Community, as a form of meditation.
Source: Researcher, 2017.

The meditation ritual 'soaked' at the water source of the Watugede *Patirtan* site, was conducted by several communities of Java cultural conservationists. Society of Javanese cultural conservationists still believe that the ritual bath, is a behavior (road) is quite effective for self-purification. This community is quite a lot, they are not only domiciled in Malang Raya, but from various regions in East Java, Central Java, Yogyakarta and DKI Jakarta. The 'soak' ritual at the water source of the Watugede *Patirtan* site, is still believed to be an ancestral heritage ritual, through the source medium of 'holy water'. Sanctification through 'bathing' in the source of 'holy water', is considered to be a spiritual and spiritual cleansing (Junianto and Subadyo, 2016). The bathing ritual at the water source of the Watugede *Patirtan* site, conducted by the Javanese cultural conservation community, is also considered a self-cleaning. The ritual is performed by bathing in a water source, located in the northeast corner of the *Patirtan* pool. There are several cultural preservation communities, domiciled in unfortunate Singosari, in performing bathing rituals at Watugede's *Patirtan* site. The Tenggerese, who follow the 'Jowo-Budho' religion, regularly perform the 'holy water' ritual, every year (Subadyo, 2016). The ritual in the Watugede baths, often performed also with dance, as a ceremonial unity. This form of ritual dance, created by their group. Ritual dance is one form of meditation, through the offering ceremony with dance or dance movements. Ritual dance ceremony is mostly done by the conservation community of Javanese culture and also traditional dance studio from Malang Raya area. Ritual dance moves, no 'grip' or formal dance, but spontaneity follows the motion that is' guided by natural energy. Dancers in a relaxed and focused condition, will then feel the urge to move in the rhythm of dance. Ritual dance is often performed in two places, namely at the source of water in the northeastern part of the pond, and done in the pond *Patirtan*

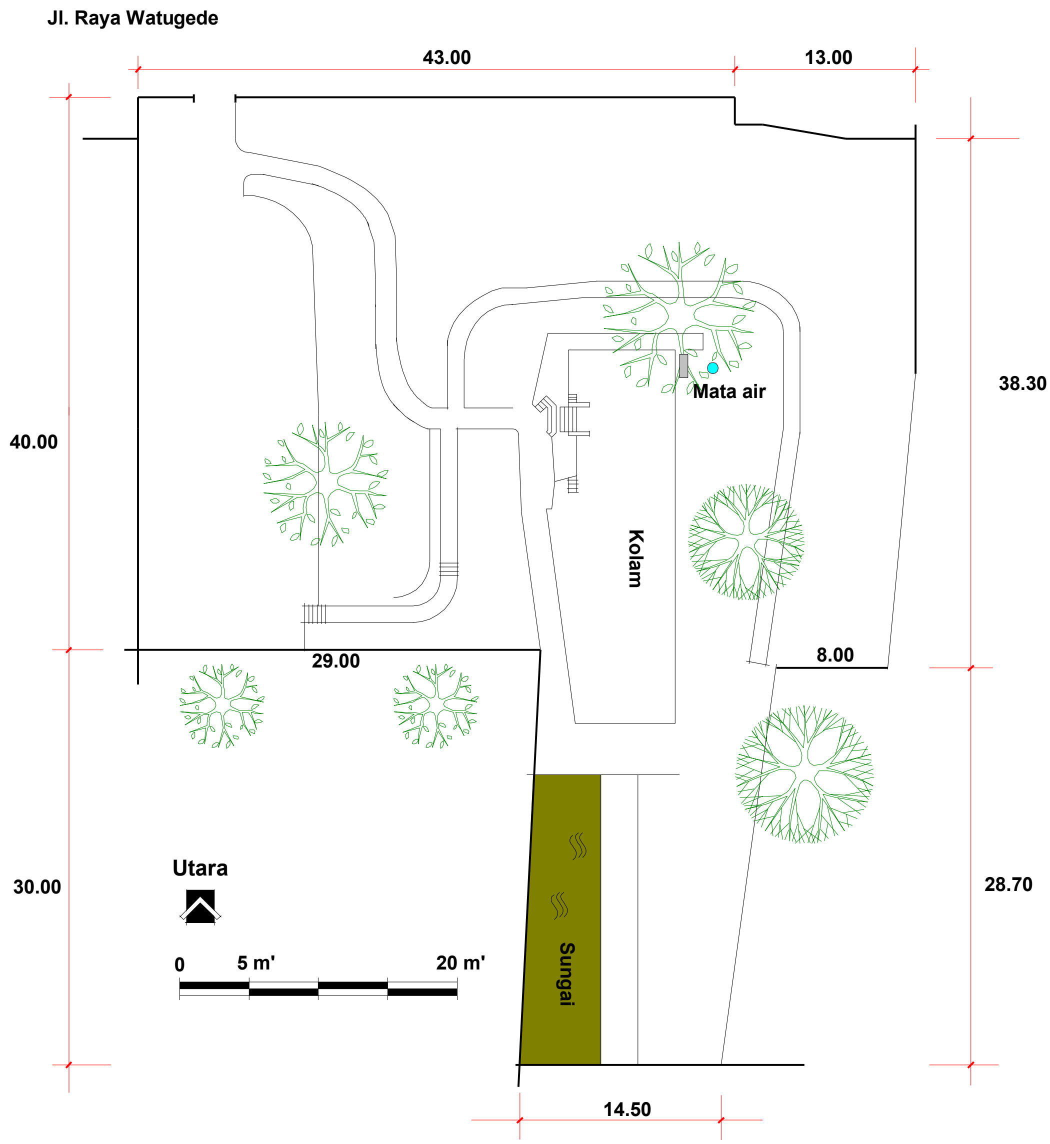

Figure 2. Site Plan (existing) *Patirtan* Watugede.
Source: Measurement Results, 2017.

3.2. Activities Area for Spiritual Tourism

Based on the spatial behavior patterns of the users / stakeholders of the spiritual sites at Watugede *Patirtan* site, can be formulated spaces used for spiritual tourism and ritual activities, as follows:

1. Water resources; which is on the northeast corner of the pond, as the main area of spiritual tourism on the Watugede *Patirtan* site. In this area, it is also used for ritual ceremonies, offerings, ritual dance and meditation.

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2. The site of *Patirtan* Watugede, located at the front entrance and in the form of yard, in addition to motorcycle parking, is also often used for the preparation of ceremonies and rituals, in the form of Meditation Square.

3. Building site *Patirtan*; a pond building, which has a high historical value, is used for bathing rituals. *Patirtan* pool is also used for ceremonial ritual bath, with ritual dance, and water meditation.

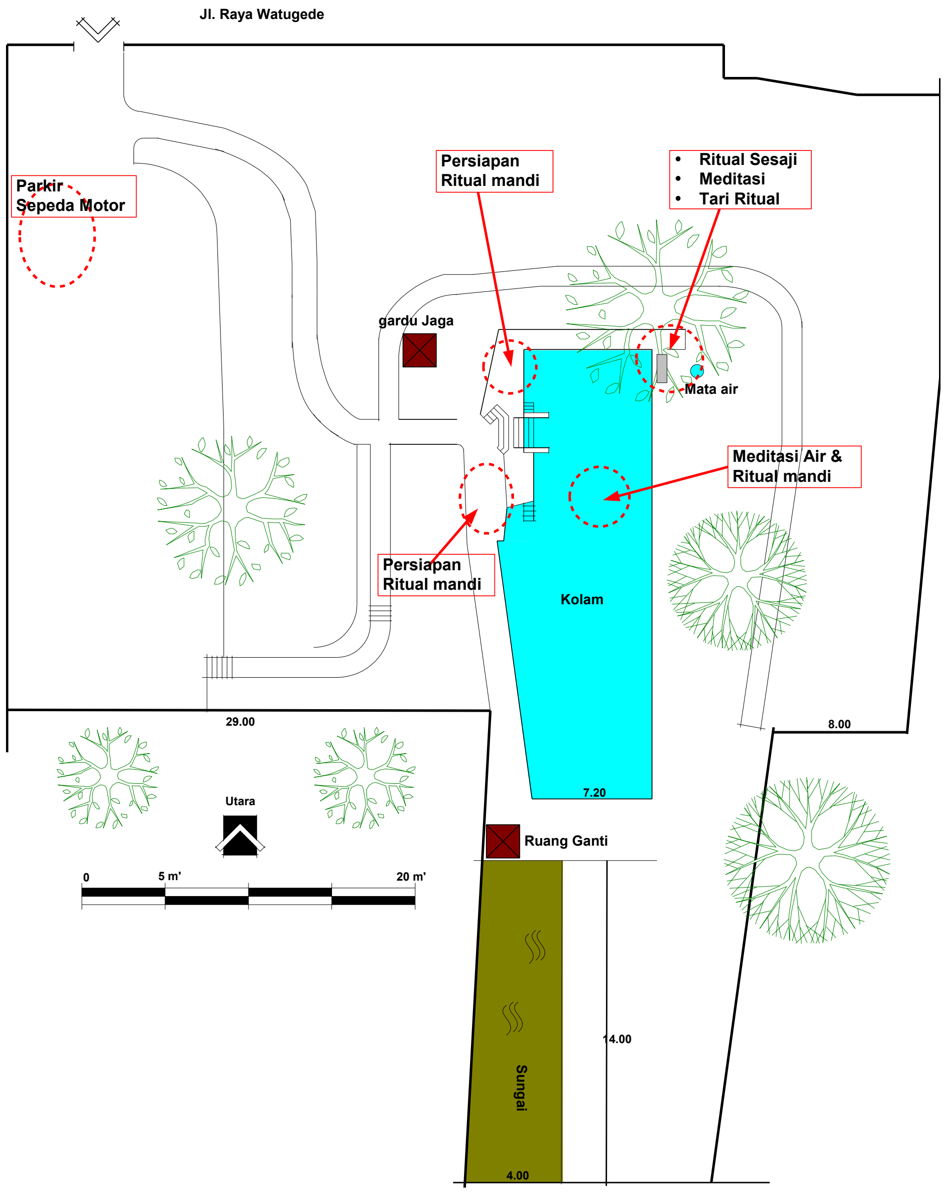

Figure 3. Area of Spiritual Tourism Activities *Patirtan* Watugede.
Source: Observation results and interviews, 2017.

3.3. Supported Activities Spiritual Tourism

Activities supporting spiritual tourism, is an activity directly related to spiritual tourism, whether that occurs before performing rituals or after performing rituals or offerings. Based on observation of behavior patterns of spiritual tourism and interviews with actors and resource persons, can be formulated spaces used for supporting activities and kinds of activities, as follows:

• Parking Visitors; Visitors who use Sepede motorbikes, park in *Patirtan* yard, while the visitors who use the car, parked on the street outside *Patirtan*

• Ritual Preparation, In performing ritual ceremonies and offerings, or meditation, there are preparation activities, which include: arranging offerings or ubarampé, dressing custom, arranging ritual ceremonial equipment, and so on. During this time, the perpetrators of the ritual, do so by the pool. This is so because there is no place for the preparation of the ritual.

• Lavatory, Lavatory activities are often performed by ritual actors, along with changing clothes, either before performing bath rituals or after performing bath rituals. The current Lavatory, an emergency, is unplanned.

Figure 4. Motorcycle Parking Area, on the front page of the *Patirtan* Complex.
Source: Field Observation Results, 2017.

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Figure 5. The bathing ritual preparation area, on *Patirtan*'s pool lips.
Source: Field Observation Results, 2017.

Figure 6. Bathroom, also used for Replace Room.
Source: Field Observation Results, 2017.

3.4. Sites Setup Watugede’s *Patirtan*

From the discussion and analysis of spiritual tourism behavior that has been described earlier, it can be concluded a concept of Site Arrangement *Patirtan* Watugede, berlandasakan utilization and preservation of the region. The concept of the arrangement of the Area, including the physical elements of building sites, landscape elements and supporting building arrangements.

- Site Building, The physical condition of the building site is a major element that must be preserved, and maintained as much as possible from the damage. *Patirtan* Watugede site building, including: Wall building Swimming of brick, stone statue shower, stone Dakon and stone Gores. Another pool wall, as well as the courtyard / lips pond, is a new building that serves to strengthen the building site.
- Landscape Elements, Landscape element is a buffer pond building, an area of the courtyard outside the pond up to the boundary of the fence *Patirtan* area. This landscape element not only functions as a Garden, but more principally serves as a buffer area for the *Patirtan* Pool as well as a water source. On the East Sea and the eastern part of the Pond *Patirtan*, it is necessary to plant vegetation with retaining roots, to protect landslides. The buffer area, should be a passive park area, to safeguard the possibility of visitor destruction.
- Supporting Buildings, Supporting buildings are new buildings, which serve as supporting activities of *Patirtan* Swimming pool. The supporting building, the planning should align the *Patirtan* Pool and minimize the landscape of the *Patirtan* area.

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Figure 7. The bird's eye perspective of the Watugede *Patirtan* area.
Source: Imagery Concept Implementation Picture, 2017.

1. Home: Front Page Setup, including Gate design, and yard for Motorcycle Parking. Material for Gate and Front Plate of this material use Natural stone / stone temple. The design of the Gate of the *Patirtan* region should give the impression that the area is a historic site which is a relic of Singhasari kingdom. Detailed ornaments that are decorative elements, are designed to be distinctively 'Singhasari'.

2. Ward Preparation: Ward House Preparation, designed for Ritual preparation activities, preparing ubarampé ceremonial equipment. This building is in the form of 'Limasan' characteristic of traditional Javanese architecture, with dominant material of wood.

3. Gazebo: The Gazebo building is designed for transition space activities before or after a bathing ritual. The building is designed using the dominant material of wood.

4. Building Room Replace: The Building of the Replace Room integrates with the Lavatory, designed in the southern part of the *Patirtan* Pool, with the dominance of wood material. The building of 'Limasan' traditional Javanese architecture

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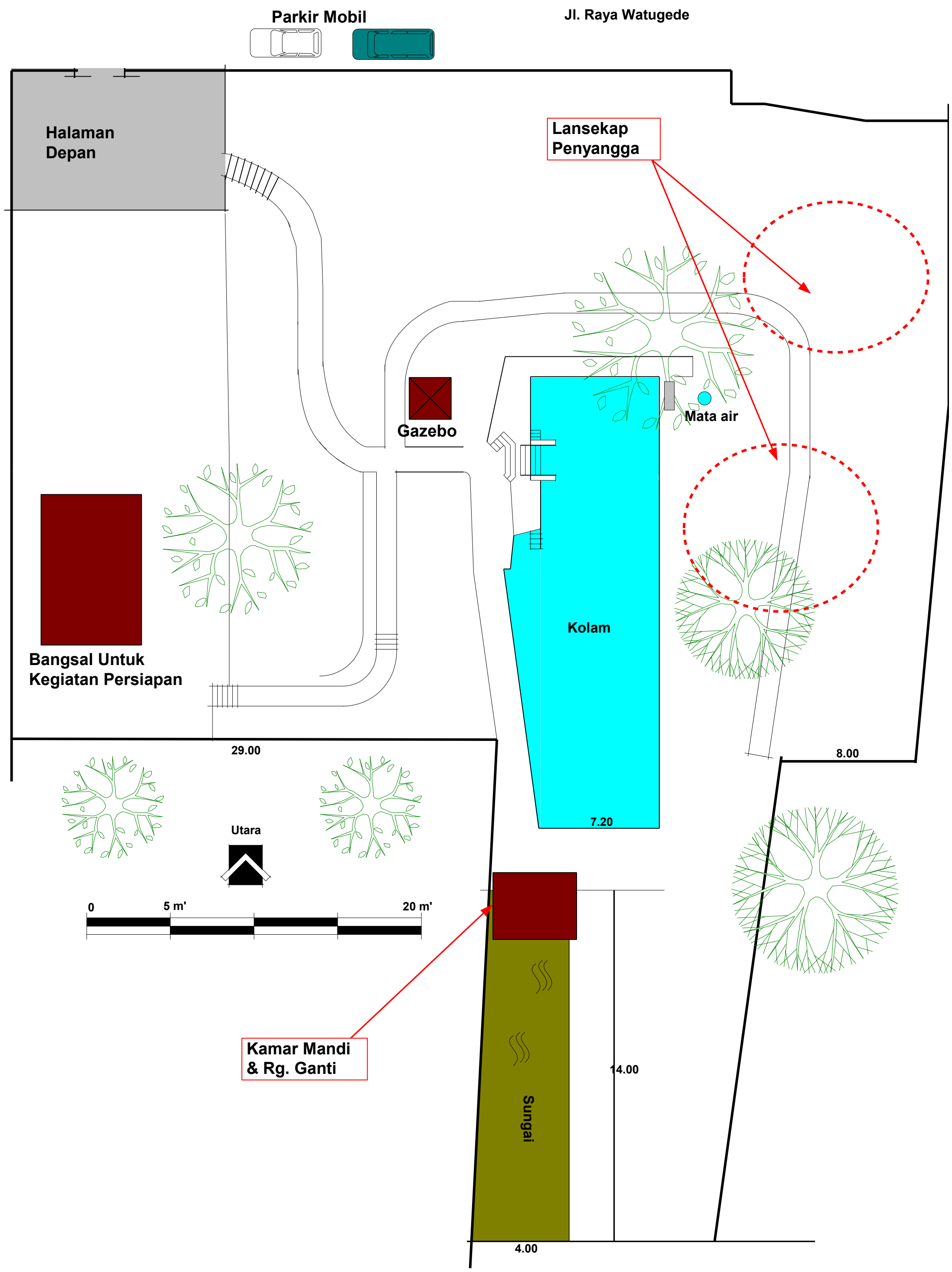

Figure 8. Siteplan Site Setup *Patirtan* Watugede Site.
Source: Imagery Concept Implementation Picture, 2017.

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4. CONCLUSION AND PROPOSITION

4.1. Conclusion

Based on the study and discussion in the previous chapter, it can be concluded as follows:

- It is important to maintain and preserve *Patirtan* Watugede Site area, in addition to exploiting and developing new facilities to support spiritual tourism activities.

- Some conservation and development of the necessary physical and landscaping elements at the *Patirtan* Watugede Complex, encompassing the manufacture of Gate and front yard, Preparation Ward, Gazebo and Replace.

- Non-physical conservation, carried out in the form of the establishment of *Patirtan* Site Pattern governance rules and codes of conduct to preserve the sanctity of *Patirtan*

4.2. Proposition

There are several suggestions that can be submitted and the arrangement and conservation of *Patirtan* Watugede site, as follows:

- Required area as well as arrangement for car parking, so as to improve visitor comfort.

- Determination of policy towards *Patirtan* Watugede Site area, should maximally involving people around the area, BPCB - Mojokerto, elements of the district government, as well as community elements cultural preservation.

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The Social Phenomenon in "Majelis Ta'lim" as The Effective Mean of A Family that Carries Out Islamic Values in Their Home

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ABSTRACT

Currently, the phenomenan that occures in "Majelis ta'lim" is believed as a means for Muslims to gain religious knowledge that is beneficial to the livelohood and life in the world as a provision for eternal life in the afterlife. It is mostly held at home and especially in mosques, and even in public places. The attendant rate is very high over time, thus causing profit for those who follow the activity. The advantages gained are horizontal (social) and vertical values (velued by Allah SWT). Home is a basic human need. Implementation of an Islamic home is a hope for every Muslim. Just like a muslim woman's body, the house also needs a "hijab". Based on this, then it is expected to be used to separate private and public spaces. This can be used as an indicator of the application of Islamic values at their home.

Keywords: *majelis ta'lim, social value, home*

1. INTRODUCTION

The change of society will be in line with the cultural changes taking place in that society. Humans have the basic nature. It always lacking and trying to meet these shortcomings so that people with humans in it are dynamic, active, creative, innovative, aggressive and responsive to change.
Currently people are more frequent to attend *majelis ta'lim*. This is a social activity of society that aims to understand knowledge of religion – called *tholabul 'ilmi*. This activity is symptomatic and leads to an increase in frequency. The *majelis ta'lim* may work well if some actors/performers perform their roles. Jama'ah or audience, *ustadz*, *takmir* mosque - if held in mosque, or someone or community organizing *ta'lim* activities.
The benefits derived from these ta'lim activities are the increase of faith in the form of submissive to the orders of alloh and away from the prohibition of alloh. It is expressed in daily practice. Among them is applying it in the layout of his home.
A moslem family in order to apply the *syariat* in their life will try to apply it in every aspect of life including designing their house. House design here refers to both early design and late design – early means design that is conducted before construction and late if the building has been built. Basic *syariat* which are used by moslem are Quran and Hadiths. Other studies have examined an Islamic house based on the layout in relation to the qibla orientation (Tim Perencana; 2008).

Islamic house is a house in which it doesn't cover itself from the world (Rahmanullah, 2009) so that a good interaction and social relationship with surrounding is maintained. Rahmanullah (2009) further explained that house is a place which is used for its occupants to cover their behavior and to be able to apart themselves from the society so that they can take a rest and calm their mind. Rest, both physically and psychologically, will raise freshness and body-mind calmness so that productivity rises. House which capable to give relaxes to its occupants needs sufficient privacy. Islam describes the house through the hadith "Al-bayti jannati", my house is my heaven.

'Hijaab' is a cover for strengthening the view, whether worn on the human body or 'body building'. Arfah (2008) states that hijab is something that covers women such as walls, doors, or clothing. Private or public zones have an impact on the realization of their dwellings. The use of constraints (spatial & visual) between private and public spaces is appropriate.

This study aims to find the relationship between the phenomenon of attendance levels in majelis ta'lim with the application of Islamic values in their homes especially the use of "hijab" between private and public space.

2. LITERATURE REVIEW AND METHOD

2.1. Teori Sosial

Social theory derived from Ritzer; 1992 states that the social behavior paradigm focuses on interrelationships between individuals and their environment. The environment in question consists of a variety of social objects and non-social.

In the theory of social behavior is happening of mutual influence for that system theory initiated by Ritzer became the main theory, while social behavior theory became a supporting theory. As Ritzer points out; 2008, the method used in system theory is the method of questionnaires. This method belongs to the type of quantitative research. That is why sociologists, when applying system theory, then the research is identical using a quantitative approach.

Talcott Parson in Ritzer; 2008 suggests that the system presupposes the unity between the parts that relate to one another to achieve a certain goal. To study social action, the Parson defines four systems of action, namely: 1). Cultural system; 2). Social system; 3). Personality System; And 4). Organism system. Weber in Ritzer; 1992 presents five basic characteristics that become the target of sociology research, namely: 1). Human action; 2). Real and thoughtful actions (unreal); 3). Actions that include the positive influence of a situation; 4). Actions directed to a person or individual; And, 5). The action takes into account the actions of others and is directed towards that other person.

This research is a combination of qualitative and quantitative research with social behavior approach, phenomenology, and functional structure.

2.2. Majelis Ta'lim

Majelis ta'lim is one of the non formal education institutions that aims to improve faith and piety to Allah SWT and noble character for the congregation, and realize the grace for the universe. Majelis ta'lim become an alternative religious education institution for those who do not have enough energy, time, and opportunity to study the religion extends formal education. This is what makes majelis ta'lim has its own karkteristik value compared to other religious institutions. Majelis ta'lim become an alternative religious education institution for those who do not have enough energy, time, and opportunity to study the religion extends formal education. This is what makes majelis ta'lim has its own characteristic value compared to other religious institutions.

The phenomenon present in the majelis ta'lim can be observed from the easy to get information. Information about the time and place as well as the topics and speakers called Ustadz. Information disseminated through social media groups - wattsaps, facebook - poster postings at venues, and verbal announcements, especially those held in mosques.

The muslims must behave a strong desire called "izzah" to assemble. The impact of the activities of "Aksi Bela Islam" held in Jakarta some time ago that influenced samebody to have it. "Izzah" to gathered in majelis ta'lim and or praying in congregation – "Sholat Subuh Berjama'ah" - in mosque.

2.3. Islamic Values

Islamic homes are buildings that are used to live and inhabited guided and based on the Islamic values of the Quran and Hadith. The occupants can do all their activities of both the relationship with humans and Allah SWT. The scope of relationship consist of the social context, private, and worship that must be done properly and calmly (khusyu ').

The private and public space in islamic home must be separated by a partition called hijab. The form of hijab in a house can vary like a wall, furniture, curtains, and others. The ideal "hijab' is a barrier that can block the sound and visual aspect of its inhabitants

2.4.Reserach Method

As mentioned above that this research is a combination of qualitative and quantitative research. This study aims to find the relationship between the level of attendance in majelis ta'lim with the application of Islamic values in their homes, especially the use of "hijab" - partition between private and public space.

The samples was determined by mosques observation through 'takmir's' data. The recommended mosque is having a lot of activity, not only the obligatory prayers (sholat fardhu) but also the activities of lectures (pengajian) and social. For example Ied praying activities, 'Tafsir' the Qur'an learning, 'Aqidah' and 'fikih' learning, management of death (called: 'Rukun Kematian'), etc. Mosque like this certainly has the jamaah address data. So, this data will be obtained mosque's 'jamaah' and then it will shows the muslims family houses.

3. DISCUSSION

The passion and desire to attend in the majelis ta'lim can be influenced by many things. Among them, the topic of lecture, ustadz/speaker, location, time, and many others. The most reliable information in the current era comes from social media. The ease of getting information further strengthens the motivation to attend. Starting from the curiosity, seeking knowledge, up to bigotry to ustadz is the background of the presence of jamaah in a majelis ta'lim. This can be seen from the information submitted to the audience. Audiences who wear specific clothing will seem to dominate when a certain ustadz gives a lecture, if another ustadz giving the lecture was not attending.

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Here are examples of announcements/invitations and photographs during during the implementation of the majelis ta'lim took place. All photographs of the Majelis ta'lim in mosque Manarul Islam Sawojajar except the majelis ta'lim Riyadlul Jannah.

Figure 1. poster undangan kegiatan ta'lim yang mudah diakses

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Figure 2. Ta'lim activities in the mosque in the framework of Shubuh Berjama'ah movement

Figure 3. Ta'lim activities in the mosque in the framework of Shubuh Berjama'ah movement

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Figure 4. Ta'lim activities in the mosque in the framework of Shubuh Berjama'ah movement


Figure 5. Majelis Ta'lim at Masjid Ba'da Dhuhur

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Figure 6. Majelis Ta'limRiyadlul Jannah activities at Unmer

The photographs above show the relationship between the poster invitation with the event held. Relationships that occur straight relationship, meaning the invitation spread successful event attended by jamaah.

Randomly applying social and religious values in the home especially the use of private and public space partition (the use of partitions by type of house) can be presented in the following table:

Table 1.. Partition Model at 54 Building Type

Source: Reseacher

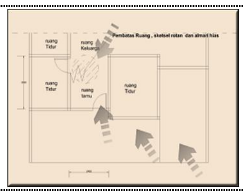
Block	Form	Plan	Ilustration
F4/G 10	• rattan panels • height above the head		
G2/A 17	• curtain panels • height above the head till ceiling		

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Table 2. Partition Model at 45 Building Type
Source: Reseacher

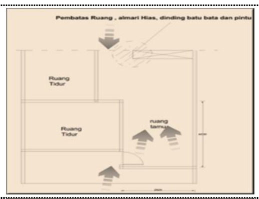
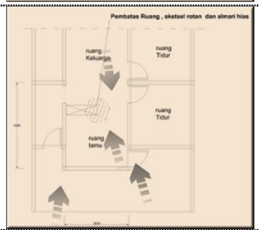
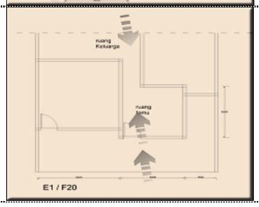
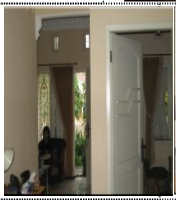
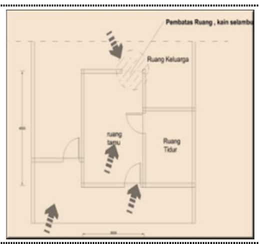
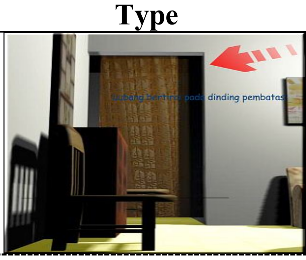
Block	Form	Plan	Ilustration
A3D/ 16	• wall with a door opening • door panel • half broad areas of the wall		 
E1/F2 0	• Cupboard as partition • less than half the width of the room • high above the head		 
E1/F1 9	• wall with a door opening • nocovered		  

Table 3. Partition Model at 36 Building Type
Source: Reseacher

Block	Form	Plan	Ilustration
G5F/ 06	• wall with a door opening • curtained • less than half the width of the field of the partition		 

The following table shows the description of the partition/hijab used by the jamaah in his house (Triyosoputri, 2012):

Table 4. The style space partition: Wall with curtained doors opening
(Source: 2012 analysis)

Type	Location	Description
		• Wall with curtained doors opening • dimensions of the hole is less than half the width of the partition • impermeable view but not soundproof

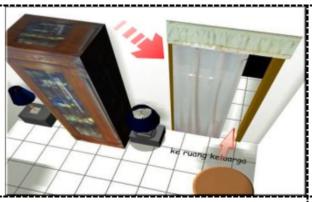
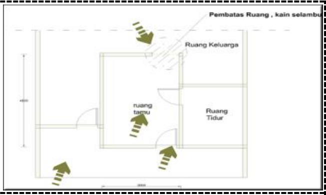
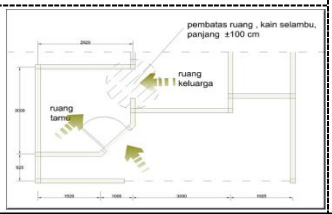
		
		

Table 5. The style space partition: Wall cavities without closing the curtains
(Source: 2012 analysis)

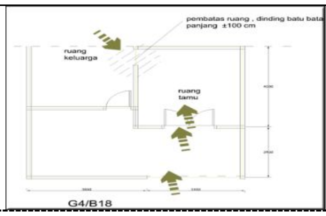
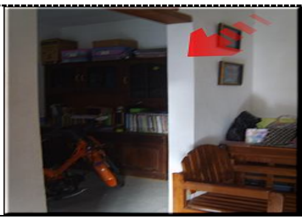
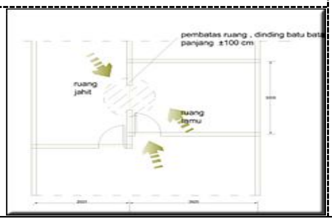
Type	Location	Description
		• Wall cavities without closing the curtains • dimensions of the hole is less than half the width of the partition • The position is quite good as a cover so that the function of the hijab to be optimal • lack of sight and sound proofed
		

Table 6. The style space partition: Wall with or no a door & window
(Source: 2012 analysis)

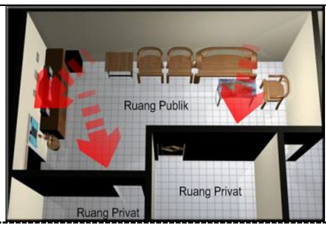
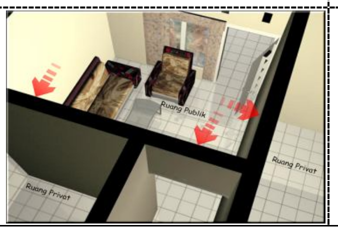
Type	Location	Description
		• Wall with a door & window as space partition • There is doors & windows • sight and sound proofed • direction of the main entrance of shariah compliance
		• The walls of hollow as space partition • No covered • impermeable view but not soundproof

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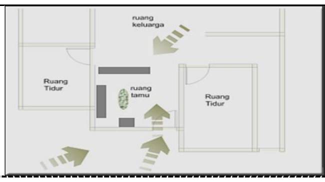
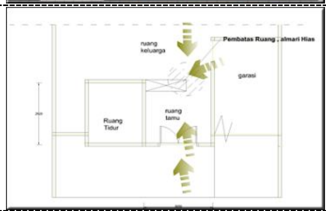
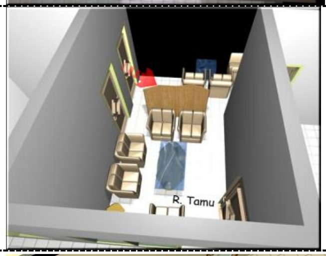
Table 7. The style space partition: Furniture
(Source: 2012 analysis)

Type	Location	Description
		• chair set as space partition • moveable and flexible • Width / seat spans more than half the width of the space • Material from wood and fabric. • no sight and sound proofed
		
		• Cupboard as space partition • wood and glass as a material • High above the heads of adults • Space partition dimension is more than half the width of the space • less close sight and sound
		
		• rattan panels as space partition • height above the head • no sight nor sound proofed
		• curtain as space partition • height above the head till ceiling • visually close but not soundproof

In addition to the results of physical observations above were obtained also a picture of respondents (owner / occupant). This discussion is obtained by distributing questionnaires to a sample selected with a few questions. The questions are intended to explore the identity of the occupants in relation to religious activity and its implementation on the use of the partition element of public space – private.

Tabel Percentage Preview Questionnaire Results
Source: analysis researchers (2012)

No	Question	Prosentage	Note
1.	Sex, male; female	64; 36	
2.	Age: uper 50 years; male; female	68.1; 22,7	
3.	Education: SLTA	36,4	
4.	Works; most pension	40,9	
5.	Income: mayority 2 – 4 juta	40.9	
6.	Number of family members (1 – 4 person)	68,2	
7.	The sex of most family members are women	81,8	
8.	Level of frequency prayers in the mosque of more than 3 times per day	63,6	
9.	Level of frequency to following the review (pengajian) in the mosque of more than 3 times per week	72,7	
10.	Distance to the mosque the majority of between 100 - 300 meters	54,5	
11.	The existence of a separate guest room with living room / dining	90,9	
12.	Separate family room with dining area	50	
13.	The function only as a barrier limiting the majority (not the cover)	68,2	
14.	Materials / barrier material, the majority of bricks	31,8	
15.	Partition height, above the majority of adult head	63,6	

Discussion of test results with SPSS - Pearson Correlation, shows the number 0.302, which means having a low correlation (low correlation) between the space partition material is used with a level of frequency 'berjamaah praying'and attend in majelis ta'lim in the mosque. Similarly low correlation (0.309) was also found between the size of the space partition above the head with a level of frequency majelis ta'lim ('pengajian') in the mosque; and, the relationship was so so (moderate) = 0.548 between the size of the space partition by the number of religious ('pengajian') who followed.

4. CONCLUSION

This study aims to find the relationship between the level of attendance in majelis ta'lim with the application of Islamic values in their homes, especially the use of "hijab" - partition between private and public space.
The conclusion of this study did not find a significant relationship between the attendance in majelis ta'lim with the application of Islamic values in the use of hijab / partition at home.
It may be that the findings of this study will be significant if the focus of research on other aspects or respondents. Respondents or informants are expanded not only around the mosque, not just in takmir databases.
Thus this research is still open to be developed by anyone.

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