



PROCEEDINGS OF THE  
6<sup>th</sup> INTERNATIONAL SEMINAR & CONFERENCE  
ON LEARNING ORGANIZATION

Leading Organization Based on  
**Technology**, **Knowledge**, and **Innovation**

BANDUNG, WEST JAVA, INDONESIA  
JULY 4<sup>th</sup>, 2018



**Proceedings of the  
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“Leading Organization Based on Technology, Knowledge and Innovation”**

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## PREFACE

Hello and warm welcome to all participants

School of Economic & Business and Telkom University proudly continues a tradition of inviting respected researchers, academics, and professionals to participate in International Seminar & Conference on Learning Organization 2018. This year it would be the 6th ISCLO and held in Bandung, Indonesia, July 4<sup>th</sup>, 2018.

The main objective for this conference is to encourage and enhance the interaction of academicians and professional community in an informal setting to present and to discuss new and current work. Each contributor helped to make the ISCLO better than it has been. The papers contributed the most recent scientific knowledge known in the field of Economics, Finance & Accounting, Marketing, Entrepreneurship, Business Strategic, Information Technology, CRM, Operations, Human Resources & Industrial Organization, Knowledge Management, and Strategic Management.

Combining practitioners and academics should be developed optimally so that the use of scientific advancement is aligned with the needs of the organization. That is why in addition to the contributed papers, we also invited experienced practitioners from Indonesia two outstanding academicians from China and Canada. Mu'min Santoso, the Co-founder and Managing Partner of Ilone Network (RACK Digital, Mothers on Mission, The Hatch) who will speak about Purpose Centric Enterprise, A Harmonious Social & Business Sustainability Approach.

Gloria González-Morales, Associate Professor & Research Director of the Occupational Health and Positive Psychology Lab, University of Guelph, Canada will discuss about resource mobilization and investment in organizational life. While Dr. Ulf Henning Richter, Associate Professor of Global Business and Strategy, Tongji University, China will speak of Connectivity and Strategy in China Logistics Industry.

We have confidence that papers in the proceeding will provide academicians and practitioners with an excellent references. I believe that this will be a great start to drive further studies and researches in all these areas.

Thank you for all authors and participants for their contributions. Have a Great Conference....

Arif Partono Prasetio

Conference Chair

## **HISTORY OF INTERNATIONAL SEMINAR AND CONFERENCE ON LEARNING ORGANIZATION (ISCLO)**

### **1st International Seminar and Conference on Learning Organization (ISCLO) 2013**

**December 4 – 5, 2013, Trans Luxury Hotel, Bandung, Indonesia**

PT Telekomunikasi Indonesia, Tbk (Telkom) bridges the needs of business enterprise with scientific research and academia through the organization of the International Seminar & Conference on Learning Organization (ISCLO) 2013 with the theme "Corporate University to Improve Organizational Performance". University (Tel-U) in collaboration with Telkom Corporate University (CorpU). Telkom being a pioneer of international conferences to discuss the field of Learning Organization and Corporate Learning in Indonesia. This provides an opportunity for Telkom to be a driving force in the field of Corporate Learning. This international event attended by more than 250 participants consisting of academics and practitioners from countries including Indonesia, Malaysia, Singapore, India, China, USA, France and Korea.

### **2nd International Seminar and Conference on Learning Organization (ISCLO) 2014**

**November 5 – 6, 2014, Hotel Indonesia, Kempinski, Jakarta, Indonesia**

Telkom Corporate University and Telkom University are delighted to announce the 2nd International Seminar and Conference on Learning Organization with the theme, "Learning Organization in Increasing the Organization Performance". The purpose of the seminar and conference is to identify and explore the major challenges in implementing Learning Organization and assess the real impacts on organization performance also to form the future research guidance through the publication of high quality applied and theoretical research findings. The following general topics in this conference are Learning Organization, Leadership Pipeline, Global Competitiveness, Knowledge Management, Instructional System Design and High Performance Technology, and Learning Technology and Methodology. All accepted papers will be published in ISSN conference proceedings.

### **3rd International Seminar and Conference on Learning Organization (ISCLO) 2015**

**November 25 – 26, 2015, Hotel Tentrem, Yogyakarta, Indonesia**

Telkom University & Telkom Corporate University are delighted to announce the 3rd International Seminar & Conference on Learning Organization with the theme, "Enhancing Organizational Survivability through Learning Organization". This conference is driven by the function of corporate university as a centralized training or education system within a corporation together with Telkom University as a centralized of academicians in knowledge management. It focused on the integrated development of learning organization, human resources and knowledge management development aligned with the corporation's values and business requirements.

### **4th International Seminar and Conference on Learning Organization (ISCLO) 2016**

**October 26, 2016, Grand Tjokro Hotel, Bandung, Indonesia**

Telkom University is delighted to announce the 4th International Seminar & Conference on Learning Organization (ISCLO). For the first time in 2016, this event organized by Telkom University. This conference is driven by the function of Telkom University as a centralized of academicians in human capital and talent development. It will focus on the integrated development of learning organization, human resources and knowledge management development, strategic alignment, workforce planning, performance management, talent management aligned with the corporation's values and business requirements. Academicians and practitioners from around the world will share recently business

researches, best practices and engaging conference participants in discussions on continues Improvement of Business Process, Expanding Possibilities in Digital Era. All submitted abstracts/ papers will go through a blind peer review process and accepted manuscripts will be published in conference proceedings. Selected conference papers will be published in special / regular issue of Scopus, DOAJ, EBSCOhost Research Databases, ProQuest indexed Journal, and Journal associated with this conference as follows: International Journal of Business and Globalisation (IJBG), International Journal of Learning and Change (IJLC), Oeconomia Copernicana, Journal of Competitiveness, and Management and Business International Journal [ISSN: 2354-6603].

**5th International Seminar and Conference on Learning Organization (ISCLO) 2017**

**September 6, 2017, Bidakara Grand Savoy Human, Bandung, Indonesia**

Telkom University is delighted to announce The 5th International Seminar & Conference on Learning Organization with theme “Encouraging State-Owned Enterprises and Strategic Industries with Their Support Systems to Boost Indonesian Economic Growth”. Telkom University as centralized of academicians drives many parties including government, practitioners, and academicians to share and propose the strategic in the learning organization context to boost Indonesian Economic Growth.

**6th International Seminar and Conference on Learning Organization (ISCLO) 2018**

**July 4, 2018, El Royal Hotel, Bandung, Indonesia**

The 6th International Seminar & Conference on Learning Organization with theme “Leading Organization Based on Technology, Knowledge, and Innovation” could become the right platform to bring out the great ideas into practice. Telkom University presents the opportunities to discuss and throw helpful suggestions for leaders to face challenges in the era of digital economic.

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## CONTENTS

PREFACE .....	ii
HISTORY OF INTERNATIONAL SEMINAR AND CONFERENCE ON LEARNING ORGANIZATION (ISCLO) .....	iii
ORGANIZING COMMITTEE .....	v
CONTENTS.....	vi
1. EFFECT OF FINANCIAL LITERACY ON FINANCIAL INCLUSION WITH SOCIAL CAPITAL AS MEDIATOR (Survey on society of productive age in Regency Bandung) .....	1
2. DECISIONS ANALYSIS OF CONTRACTOR SELECTION PT. ERICSSON INDONESIA USING ANALYTICAL HIERARCHY PROCESS METHOD .....	18
3. DETERMINANTS OF DIVIDEND PAYOUT RATIO: A STUDY OF LISTED COMPANIES IN INDONESIA STOCK EXCHANGE .....	31
4. INFLUENCE OF DOLLAR EXCHANGE RATE, INTEREST RATE, INFLATION, DIVIDEND, OWNERSHIP AND FIRM SIZE TO RETURN SHARES (Study in Sub Sector Company Telecommunications Listing on Bursa Efek Indonesia Period 2010-2016).....	52
5. INVESTOR REACTION TO ANOMALY & RECOVERY SERVICE OF TELKOM-1 SATELLITE YEAR 2017 .....	71
6. THE EFFECT OF THE CONTROL ENVIRONMENT TO EFFECTIVENESS INTERNAL CONTROL SYSTEM (Research in PT XXX, Tbk).....	84
7. THE INFLUENCE OF PERCEPTION ON CUSTOMER BEHAVIOR OF PRODUCT ADVERTISING THROUGH USEETV (CASE STUDY IN BALIKPAPAN CITY OF INDONESIA) .....	95
8. FACTORS AFFECTING ORGANIZATIONAL COMMITMENT IN PHARMACY INDUSTRY: THE ROLE OF COMPENSATION AND LEARNING CULTURE AS PREDICTORS. ....	111
9. KNOWLEDGE MANAGEMENT IMPLEMENTATION: A COMPARATIVE STUDY BASED ON EMPLOYEES' CHARACTERISTICS IN MARINE GEOLOGICAL INSTITUTE .....	124
10. THE INFLUENCE OF OVERTIME TO WORK-FAMILY CONFLICT AND JOB PERFORMANCE IN WITEL BOGOR OF PT TELKOM INDONESIA .....	139
11. FRAMEWORK FOR COMMUNITY OF PRACTICE FOR BLOOD CENTER .....	149
12. RISK-MANAGEMENT BASED GOVERNMENT INFORMATION SYSTEM SECURITY USING OCTAVE ALLEGRO FRAMEWORK.....	158
13. INCREASING AUDIT QUALITY IN INDONESIA .....	169
14. RISK MANAGEMENT EVALUATION IN LIBRARIES BASED ON COBIT 5 .....	181
15. IMPORTANCE- PERFORMANCE ANALYSIS OF TELECOMMUNICATION INDUSTRY.....	192
16. FACTORS AFFECTING ENTREPRENEUR CHARACTERISTICS: A STUDY OF SMALL MEDIUM ENTERPRISE IN GARUT .....	206
17. DOES RAPIDLY GROWING REVENUES ALWAYS PRODUCE AN EXCELLENT COMPANY'S VALUE? DCF & P/E VALUATION ASSESSMENT ON HOSPITAL INDUSTRY .....	213

18. ANALYSIS DETERMINED AUDIT DELAY (AN EMPIRICAL STUDY ON MINING COMPANIES LISTED IN INDONESIA STOCK EXCHANGE DURING 2012-2016).....	228
19. SINGLE INDEX MODEL IN DETERMINING OPTIMAL PORTFOLIO COMPOSITION OF JAKARTA ISLAMIC INDEX (JII) .....	238
20. INDONESIA COOPERATIVE MEMBER WELFARE: DETERMINANT ANALYSIS OF BUSINESS PROFIT ON INDONESIA COOPERATION .....	249
21. RELATIONSHIP AUTHENTIC LEADERSHIP TO COACHING EFFICACY ANALYSIS .....	263
22. COMPARATIVE PERFORMANCE ANALYSIS OF TELECOMMUNICATION COMPANY IN INDONESIA USING ECONOMIC VALUE ADDED (EVA) AND VALUE ADDED (MVA) METHOD IN CASE STUDY AT PT. TELKOM, PT. INDOSAT AND PT. XL FOR THE YEAR 2011 - 2016 .....	281
23. THE EFFECT OF PRICE, PRODUCT QUALITY, PROMOTION, SOCIAL FACTOR, BRAND IMAGE ON PURCHASE DECISION PROCESS OF LOOP PRODUCT ON YOUTH SEGMENT (CASE STUDY OF PT TELEKOMUNIKASI SELULAR) .....	294
24. EFFECT OF TAX SERVICE QUALITY AND TAX SANCTIONS AGAINST VEHICLE TAXPAYER COMPLIANCE AT THE SAMSAT OFFICE OF GARUT DISTRICT .....	310
25. I LIKE YOUR COMPANY? DIVIDEN PAYOUT RATIO: EFFECT FROM FREE CASH FLOW AND PROFITABILITY.....	318
26. THE IMPACT OF LOCAL GOVERNMENT CHARACTERISTICS AND AUDIT FINDINGS OF BPK TO LOCAL GOVERNMENT PERFORMANCE (STUDY ON DISTRICTS AND CITIES IN SOUTH SULAWESI PROVINCE DURING 2012-2015).....	330
27. ANALYSIS OF WEATHER ON STOCK RETURN .....	348
28. ANALYSIS OF MOBILE ADVERTISING EFFECT ON PURCHASE INTENTION WITH BRAND IMAGE AS THE INTERVENING VARIABLES (CASE STUDY: TELKOMSEL MOBILE COUPON) .....	359
29. ENGLISH TEACHING METHOD IN COURSE INSTITUTION.....	372
30. THE ROLE OF THE HIJABERS COMMUNITY IN BUILDING THE BRAND EQUITY OF MUSLIM FASHION.....	384
31. INTEGRATED MARKETING COMMUNICATION POCARI SWEAT TO BE THE BEST BRAND ON ION SOFTDRINK CATEGORY.....	396
32. ANALYZING USERS' EXPECTATION GAP OF AN INDONESIA SHARIA ELECTRONIC BANKING SYSTEM .....	406
33. EMPLOYEES' EMPOWERMENT AND WORKLIFE QUALITY AT INDONESIA STATE-OWNED COMPANY .....	414
34. DESIGNING PROJECT SCHEDULE FOR MIGRATION PROJECT STO DAGO IN PT. XYZ TO ACCELERATE PROJECT DURATION USING SCHEDULE COMPRESSION – A LESSON LEARN CASE STUDY FOR ANOTHER SIMILAR PROJECT .....	422
35. READINESS OF KNOWLEDGE MANAGEMENT IMPLEMENTATION: A COMPARATIVE STUDY BASED ON EMPLOYEES CHARACTERISTICS.....	433

## **EFFECT OF FINANCIAL LITERACY ON FINANCIAL INCLUSION WITH SOCIAL CAPITAL AS MEDIATOR (Survey on society of productive age in Regency Bandung)**

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### **ABSTRACT**

*The level of financial literacy and financial inclusion of Indonesian society especially productive age is still very low compared to 3 ASEAN member states (Thailand, Malaysia and Singapore). Therefore, the government through the Financial Services Authority (OJK) focuses on increasing financial literacy and financial inclusion especially productive population. Bandung Regency is one of the districts whose population is dominated by productive age. Social capital is expected to be a mediator in increasing financial literacy and financial inclusion. This study aims to determine the role of social capital as a mediator between financial literacy and financial inclusion as well as research the direct impact of financial literacy on financial inclusion. The population of this study is the entire population of productive age in Bandung regency amounted to 2,379,411 inhabitants. Research from this study using the technique of non-probability sampling with amount sample of 400 people. This study adopted and used Sobel and Kenny and Baron tests to examine the effects of social capital in the relationship between financial literacy and financial inclusion. The results of this study found that financial literacy has a significant effect on financial inclusion with social capital as mediation in productive age society in Bandung regency.*

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**Key Words:** Financial Literacy, Financial Inclusion, Social Capital, Productivity Age, Bandung Regency

## 1. INTRODUCTION

In the era consumptive as it is this day make human became less and less rational in purchasing their needs so as to affect its financial condition. A lot of things that affect man to buy that impulsive, without any envisages. This is supported with shopping centers are spread out and has been available online which provided access to more easily to consumers in the fulfillment of their needs. According to OJK ( 2015 ) the people in reproductive age should try to set aside for the welfare of income in the future when they retire, but a lot of times them to forget that the most challenging are when they retire at that time, where they did not have a fixed income to fulfill various needs in the parents are not lost large compared to that of while they are still of reproductive age, as the cost of living and also the costs of health.

Based on the data from SNLKI conducted OJK in 2016 literacy level and financial inclusion in a range of the financial industry in indonesia as follows:



Figure 1 Graphs the level of Literacy and the degree of Inclusion of various Financial Industries in Indonesia Year 2016

(source: National Survey of Financial Literacy and Inclusion 2016)

Figure 1 shows that banking industry having a level literacy financial and financial of inclusion of the highest of the financial industry another is as much as 28,90 % and 63,60 %, and industry capital market ranked lowest is as much as 4,40 % and 1.30 %. Can be concluded that the use of financial products in indonesia is not yet flatten on every sector of financial services.

The level of financial literacy and seems to be a lack of inclusion of Indonesian people cause to Indonesia to the position of lower than 4 members ASEAN countries (Indonesia, Thailand, Malaysia and Singapore). Based on the data from the master plan the financial service sector Indonesia (MPSJKI) OJK years 2015-2019 community access if its compare few formal financial Indonesia towards the other ASEAN countries, is as follows:

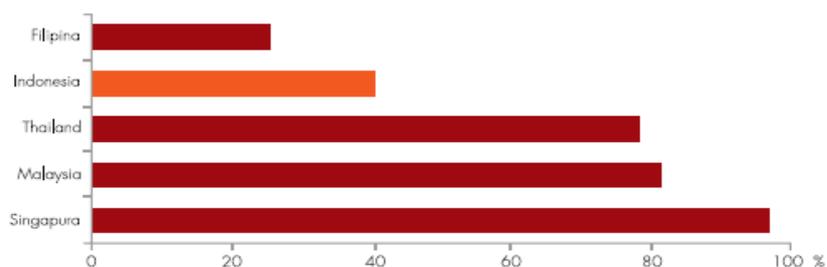


Figure 2 Charts the community's access to formal financial ( source: MPSJKI OJK 2015-2019 )

Based on Figure 2, the level of access for Indonesians is still far behind from other countries within ASEAN. Singapore by 96%, Malaysia 81% and Thailand 78%. The lack of access of Indonesians to formal finance causes Indonesia's financial inclusion rate to be the second lowest among ASEAN countries, especially under Singapore, Malaysia and Thailand. This is caused by some Indonesian people still rely on non-financial institutions as a source of funding. Indonesia's population is the fourth largest population in the world and the largest in ASEAN, until two decades to come this large population will be dominated by the productive age of 70% of the population. The increasingly educated and technologically literate age of the population is the capital to achieve high and sustainable economic growth (MPSJKI OJK, 2015-2019). Surveys conducted by Global Findex (2014) show that the number of adult residents, especially productive age over 15 years who have accounts in various financial institutions only amounted to 35.90%. It indicates that the access of Indonesian people to financial services is still relatively low, therefore OJK targets productive age population (15-64 years old) whose literacy is increased to 3.1 million by the end of 2015. The amount is equivalent to 2% the population of productive age is 157 million. It becomes the target set by OJK to increase financial literacy (swa.co.id, 2015).

Based on the 2011-2017 OJK Performance Report, OJK and the financial services industry and the government undertake several strategic programs through, the Unsecured Offices Finance Program in the Framework of Inclusive Finance, Micro Insurance Program, Socialization and Integrated Capital Market Edition, Syariah Fair Finance, and issuance of SJK Syariah Roadmap. OJK also plays an active role in supporting regional economic growth by initiating various programs such as BPD transformation program, establishment of Regional Access Acceleration Team (TPAKD) in 45 Provinces / Regencies / Municipalities, establishment of PELAKU outlets established 14 outlets in OJK offices in regions as a means of delivering financial information, and handling complaints and increasing access to finance, especially the sector of UMKM.

Programs that have been planned and implemented to date have not had a significant impact because based on Figure 2 the literacy rate and inclusion rates in Indonesia are still below when compared to 5 ASEAN countries, especially Singapore which has reached 90% (national daily, 2017 ). This should be a serious concern for OJK in order to cooperate with other related parties, one of which is with social capital.

Social capital has a very important role in several community groups in various activities. Fukuyama (2001) says that social capital is built by trusts between individuals. Kakumba and Natamba (2013) in his research found that social capital can mediate communities to access financial services. One of the social capital that can help improve financial literacy and financial inclusion is the productive age group.

Based on data from BPS Kabupaten Bandung (2017) the number of productive age population in Bandung Regency 2016 reached 66.15% of the population. Based on data from BPS Kabupaten Bandung (2016), the dependency ratio (2016) is 51.15%, which means that 100 people of productive age in Bandung Regency must bear 51 non-productive population. The higher the dependency ratio indicates that the higher the burden that productive age should bear on the survival of the unproductive and non-productive ages, it is very worrying especially in the next few years productive age will bear a huge burden especially if they can not abandon the attitude wasteful and waste money. Therefore, productive age needs to be a concern because later they will bear the age that is not productive and that will not productive anymore.

Thus the researchers hope that the role of social capital into a means of liaison that will support increased literacy and inclusion in the community in Bandung regency, especially the population of productive age. Some research attempts to explain the role of social capital as a mediator on socioeconomic aspects, but the research does not make the productive age society in Bandung district as the object studied.

## **2. LITERATURE REVIEW**

### **Financial Literacy**

According Lusardi & Mitchaell (2007), financial literacy can be interpreted as financial knowledge that has a goal to achieve prosperity. Orton (2007) made it clear that financial literacy is an integral part of one's life because financial literacy is a useful tool for making informed financial decisions, but from experience in many countries still shows relatively less. According to Huston (2010), Financial Literacy is a component of human resources that can be used to improve financial welfare. Someone is said to be financially literate when having the knowledge and ability to apply that knowledge. According to Annamaria Lusardi (2009), financial literacy is an important component in decision making.

### **Financial Inclusion**

According to the Financial Services Authority (2016), Financial Inclusion is the availability of access to various institutions, products and financial services services in accordance with the needs and capabilities of the community in order to improve the welfare of the community. CGAP-GPFI) defines financial inclusion as a condition in which all working-age people are able to gain effective access to credit, savings, payment systems and insurance from all financial service providers. Effective access also includes a convenient and responsible service, at an affordable and sustainable price for the provider. It is hoped that in the end, people can take advantage of formal financial services rather than informal financial services. In the National Strategy for Inclusive Finance, financial inclusion is defined as the Right of everyone to have full and timely access to and full service from financial institutions in a timely, convenient, informative and affordable manner, with full respect for their dignity and prestige. Financial services are available to all segments of society, with special attention to the poor, the productive poor, migrant workers, and people in remote areas. Based on the above explanation it can be concluded that financial inclusion is a term that refers to the circumstances in which financial products and services can be accessed, used, and provide the benefits and quality of good services to improve welfare. is said financial literacy when have the knowledge and ability to apply that knowledge. According to Annamaria Lusardi (2009), financial literacy is an important component in decision making. According to the Financial Services Authority, the Financial Literacy is the knowledge, skills and beliefs that influence attitudes and behaviors to improve the quality of decision making and financial management in order to achieve prosperity (Financial Services Authority, 2016). According to the US Financial Literacy and Education Commission, Financial Literacy is the ability to make good decisions and take effective action for the present and the future as well as financial management. The conclusion of the above opinion is, financial literacy is a series of financial knowledge that is useful to improve one's skills in managing finances in order to avoid financial problems.

### **Social Capital**

The social capital according to Fukuyama (2001) has a very important role in several community groups in various activities. Fukuyama also said that not all norms, values and cultures together can complement each other to support economic growth. Just as with physical capital and financial capital, social capital can also have a negative impact. Fukuyama (2001) says that social capital is built by trusts between individuals. Mutual trust is established for a short time and requires tortuous social processes. As according to Cohen and Prusak L (2001), social capital is as any relationship that occurs and is bound

by a trust, mutual understanding, and shared values that bind members of the group to make possibilities collective action can be done efficiently and effectively.

### 3. METHODOLOGY

In this study, the entire population of productive age in Bandung regency amounted to 2,379,411 inhabitants. The study used non probability sampling technique with 400 samples, using closed questionnaire with Likert's scale measurement which each instrument accompanied by five possible answers to be chosen by the respondents ie points (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly disagree. This questionnaire was adopted from previous research with questions in this research variable adapted to the state of the object of research. While the secondary data source of this research is derived from books, journals, website articles, online news, previous research, and other relevant sources.

Analytical methods used are descriptive analysis, Pearson correlation analysis, multiple linear regression analysis, mediation analysis using Baron and Kenny and Sobel Test to measure direct and indirect influence. For descriptive analysis use the following formula:

$$\text{Percentage} = \frac{\text{Cumulative value of item}}{\text{Frequency value}} \times 100\% \quad (1)$$

for Pearson correlation using the following formula:

$$r = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{[n\sum X^2 - (\sum X)^2] [n\sum Y^2 - (\sum Y)^2]}} \quad (2)$$

For multiple linear regression is formulated as follows:

$$Y = \alpha + X_1 + X_2 + e \quad (3)$$

To test the significance of the estimates of the indirect effects of independent variables on dependent variables according to Sobel (in Baron and Kenny, 1986) are:

$$Sab = \sqrt{b^2 sa^2 + a^2 sb^2 + sa^2 sb^2} \quad (4)$$

Where :

- a = independent variable
- sa = Standard error a
- b = dependent variable
- sb = Standard error b

#### 3.1 RESEARCH QUESTIONS

Broadly speaking, researchers will do:

1. Effect of financial literacy on financial inclusion
2. The influence of financial literacy on financial inclusion with social capital as a mediator

The frame of mind is shown in Figure 2 which is a replication of previous research (Bongomin, et.al 2016) which found that social capital plays an important role in mediating the relationship between

financial literacy and financial inclusion, particularly in accessing financial services in the community. According to Keown et.al (2012: 3) financial management is the study of how people and businesses evaluate investments and earn funds to finance them. Further Keown et.al (2012: 3) reveals three areas of finance are capital budgeting, capital structure, and working-capital management.

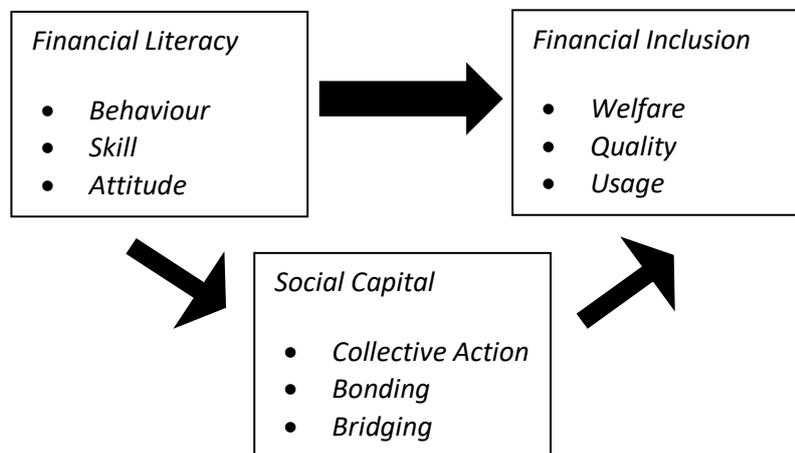


Figure 3 Framework

### 3.2 ANALYSIS

In this paper, we use analysis regression, analysis mediation and Sobel and Kenny and Baron tests to examine the effects of social capital in the relationship between financial literacy and financial inclusion.

### 3.3 DATA

In this study, the entire population of productive age in Bandung regency amounted to 2,379,411 inhabitants. Research from this study using the technique of non-probability sampling with amount sample of 400 people.

## 4. RESULTS AND DISCUSSION

Based on 400 respondents, the respondents were categorized as follows:

Table 1 Sample Characteristics

No	Karakteristik	Unsur	Frekuensi	Persentase
1	Asal Kecamatan	Bojongsoang	203	25,8%
		Baleendah	62	15,5%
		Dayeuhkolot	48	12,0%
		Banjaran	26	6,5%
		Margahayu	25	6,3%
		Cicalengka	20	5,0%
		Cangkuang	18	4,5%
		Cileunyi	18	4,5%

No	Karakteristik	Unsur	Frekuensi	Persentase
		Soreang	13	3,3%
		Cilengkrang	12	3,0%
		Ciparay	12	3,0%
		Ciwidey	9	2,3%
		Katapang	9	2,3%
		Rancaekek	8	2,0%
		Margaasih	7	1,8%
		Pasirjambu	4	1,0%
		Majalaya	3	0,8%
		Pameungpeuk	3	0,8%
2	Jenis Kelamin	Laki-laki	173	43%
		Perempuan	227	57%
3	Usia	15-19 tahun	6	1,5%
		20-24 tahun	80	20%
		25-29 tahun	83	20,8%
		30-34 tahun	121	30,3%
		35-39 tahun	65	16,3%
		40-44 tahun	26	6,5%
		45-49 tahun	9	2,3%
		50-54 tahun	3	0,8%
		55-59 tahun	1	0,3%
60-64 tahun	6	1,5%		
4	Pendapatan	<Rp. 1.000.001	11	2,8%
		Rp. 1.000.001 – Rp. 2.500.000	69	17,3%
		Rp. 2.500.001 – Rp 4.000.000	119	29,8%
		Rp 4.000.001 – Rp 5.500.000	126	31,6%
		Rp. 5.500.001 – Rp 7.000.000	27	6,8%
		>Rp. 7.000.000	47	11,8%
5	Pendidikan Terakhir	D3	105	26,3%
		S1/D4	216	54%
		S2	54	13,5%
		SMA/SMK/MA	24	6%
		SMP/MTs	1	0,3%
6	Pekerjaan	Karyawan Swasta	264	66%
		Pegawai Negeri Sipil	15	3,8%
		Pelajar/Mahasiswa	68	17%
		Wiraswasta	24	6%
		Lainnya	29	7,3%

Based on the origin of Bojongsoang sub-district dominated by 25.8%, based on gender the majority were women by 57% and men by 43%, based on age majority between age 30-34 year 30,3%.

### Descriptive Analysis

For descriptive analysis seen in the following table:

Table 2 Descriptive Analysis

Variabel	Sub-Variabel	Persentase Rata-Rata Skor	Kategori
Financial Literacy	<i>Behavior</i>	74,50%	Baik
	<i>Skill</i>	74,67%	Baik
	<i>Attitude</i>	66,82%	Cukup Baik
	<i>Knowledge</i>	73,57%	Baik
Social Capital	<i>Collective Action</i>	73,20%	Baik
	<i>Bonding</i>	72,58%	Baik
	<i>Trust</i>	72,31%	Baik
	<i>Bridging</i>	72,80%	Baik
Financial Inclusion	<i>Welfare</i>	72,60%	Baik
	<i>Quality</i>	70,30%	Baik
	<i>Usage</i>	68,82%	Baik
	<i>Access</i>	73,40%	Baik

Based on table 2, it shows that almost all sub-variables go in good category and 1 (one) sub variable is good enough. The categories are divided according to the range of values divided into 5 (five) measurement scales: 20% -36% very bad category, > 36% -52% bad category, > 52% -68% good enough category, > 68% -84 % good category and > 84% -100% category is very good. It can be concluded that the average value of financial literacy, social capital and financial inclusion in good category.

#### Pearson Correlation Analysis

In this study using SPSS for windows ver.23, so the output of SPSS as follows:

Table 3 Results of Pearson Correlation Analysis

		Correlations		
		Financial Literacy	Social Capital	Financial Inclusion
Financial Literacy	Pearson Correlation	1	,575**	,575**
	Sig. (2-tailed)		,000	,000
	N	400	400	400
Social Capital	Pearson Correlation	,575**	1	,617**
	Sig. (2-tailed)	,000		,000
	N	400	400	400
Financial Inclusion	Pearson Correlation	,575**	,617**	1
	Sig. (2-tailed)	,000	,000	
	N	400	400	400

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 3 above it can be seen that the correlation r ration between financial literacy and social capital is 0.575 with a significance value of 0,000 <0.05 which means that the variables of financial literacy and social capital have a positive correlation with the level of relationship into the category of strong correlation, then r the correlation between financial literacy and financial inclusion is 0,575 with

a significance value of  $0,000 < 0,05$  which means that the financial literacy variable and financial inclusion have a positive correlation with the level of relationship entering into the strong correlation category and the correlation  $r$  between social capital and financial inclusion is 0.617 with a significance value of  $0,000 < 0,05$  which means that social capital and financial inclusion variables have a positive correlation with the level of relationship into the category of strong correlation so it can be concluded that with the correlation between these variables, this study has fulfill a condition to be able to measure mediators based on Baron and Kenny's (1986) research in Bongomin et.al (2016) says that independent variables are assumed to cause mediators, so the two variables must be correlated.

### Uji Asumsi Klasik

Normality test result using SPSS 23 for windows can be seen through normal graph of P-Plot as follows:

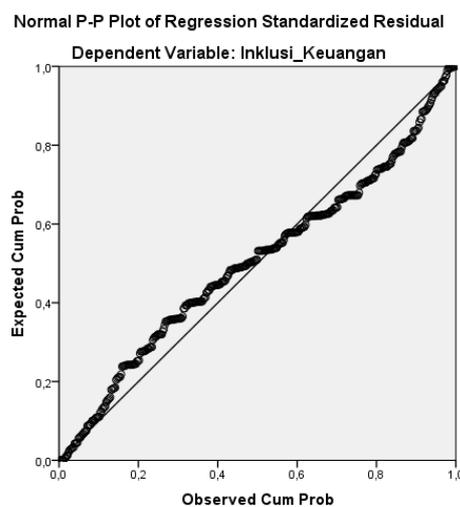


Figure 4. Normal Graph of P-Plot

Based on Figure 4 of the P-Plot chart above, it can be seen that the dots follow and approached the diagonal line so as to approach the normal distribution.

### Autokorelasi Test

The results of data autocorrelation test using IBM software SPSS 23 for windows, can be seen through the following table:

Table 5 Result of Autocorrelation Test

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.567 <sup>a</sup>	.322	.319	.481	1.829

a. Predictors: (Constant), Literacy Financial, Social Capital

b. Dependent Variable: Financial Inclusion

If the Durbin-Watson statistic test score is less than one or greater than three, then the residuals or errors of multiple regression models are not independent or autocorrelation occurs. So based on the value of Durbin-Watson statistical test in this study is above one and below three that is equal to 1.829 so there is no autocorrelation.

### Multikolinearitas Test

Table 6 Multicollinearity Test Results

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Social Capital	,806	1,241
Financial Literacy	,806	1,241

a. Dependent Variable: Financial Inclusion

Based on Table 6 shows that the multicollinearity test results are as follows:

- a. The financial literacy variable has a tolerance value of 0.806 > 0.1 and a VIF value of 1.241 < 10, so there is no multicollinearity.
- b. Social capital variable has a tolerance value of 0.806 > 0.1 and VIF value of 1.241 < 10, then no multicollinearity.

So it can be concluded that from the overall results above, this study has a tolerance value > 0.1 and VIF value < 10 which means no multicollinearity.

### Multiple Linear Regression Analysis

Table 7 Regression Results

Model	Coefficients <sup>a</sup>						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.107	.181		6.135	.000		
1 Social Capital	.317	.048	.305	6.634	.000	.806	1.241
Financial Literacy	.357	.045	.362	7.869	.000	.806	1.241

a. Dependent Variable: Financial Inclusion

From Table 7 above we get a multiple linear regression equation as follows:

$$Y = 1,107 + 0,317X_1 + 0,357X_2$$

The above equation can be explained as follows:

- a. The value of 0.317 in social capital variable (X1) is positive so that it can be said that the better the social capital, the higher the level of financial inclusion of productive age society in Bandung regency. Regression coefficient 0,317 means any increase of social capital equal to 1% hence will increase consideration to financial inclusion of productive age society in Bandung regency.
- b. The value of 0.357 on the variable of financial literacy (X2) is positive so that it can be said that the better the financial literacy, the better the level of financial inclusion of productive age society in Bandung regency. Regression coefficient 0,357 means every increase of financial literacy equal to 1% hence will increase consideration to financial inclusion of productive age society in Bandung regency.

Model Test (Coefficient of Determination)

Table 8 Model Test Results

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.567 <sup>a</sup>	.322	.319	.481	1.829

- a. Predictors: (Constant), Financial Literacy, Social Capital
- b. Dependent Variable: Financial Inclusion

Based on Table 8 the value of R-Square or coefficient of determination is 0.322. Calculation in Table shows that financial literacy, social capital influence to financial inclusion of 32.20%, while the remaining  $100\% - 32.2\% = 67.80\%$  influenced by factors outside this study.

**Hypothesis Testing**

- a. Uji F

Table 9 Test Results F

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.525	2	21.763	94.255	.000 <sup>b</sup>
	Residual	91.665	397	.231		
	Total	135.190	399			

- a. Dependent Variable: Financial Inclusion
- b. Predictors: (Constant), Literacy Financial, Social Capital

From the results of the F test in this study obtained the value of F arithmetic of 94.255 with significance number of 0.000. With a significance level of 95% ( $\alpha = 0.05$ ) then the significance number of 0.000

<0.05. On the basis of such comparison, H0 is rejected or means the variable of social capital and financial literacy have a significant influence simultaneously to the variable of financial inclusion.

b. Uji t

Table 10 Test Results t

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.107	.181		6.135	.000
Social Capital	.317	.048	.305	6.634	.000
Financial Literacy	.357	.045	.362	7.869	.000

a. Dependent Variable: Financial Inclusion

Based on the table above, t test results in this study can be explained as follows:

On social capital variable with level of significance 95% ( $\alpha = 0,05$ ). The figure of significance on the social capital variable is  $0.000 < 0.05$ . On the basis of such comparison, then H0 rejected or means social capital variable has a significant influence on the variable of financial inclusion. On variable financial literacy with level of significance 95% ( $\alpha = 0,05$ ). The figure of significance on the social capital variable is  $0.000 < 0.05$ . On the basis of such comparison, then H0 rejected or means social capital variable has a significant influence on the variable of financial inclusion.

**Mediation Analysis**

Table 11 Effect of Financial Literacy on Financial Inclusion with Social Capital as a Mediator

	Social Capital			Financial Literacy		
	Coeff	SE	p	Coeff	SE	p
Literacy Financial	0,4187	00428	0.0000	0,3572	0,0454	0.0000
Social Capital				0,3169	0,0478	0,0000

Based on Table 11, it can be concluded that the coefficient of financial literacy in social capital is 0.4187 with  $p < 0.05$ , which means that there is a significant effect between financial literacy and social capital. The coefficient of financial literacy on financial inclusion is 0.3572 with  $p < 0.05$ , this means there is a significant relationship between social capital and financial inclusion. The coefficient of social capital in the financial inclusion of 0.3169 and the value of  $p < 0.05$ , this means there is a significant relationship between financial literacy and social capital. Based on the above results, it can be concluded that there is a significant effect between independent variables and mediation variables, then the second there is a significant effect between the variables mediation and the dependent variable.

Next is to search for the Sobel Test to find out the indirect effect of financial literacy on financial inclusion with social capital as a mediator. The results of seeking indirect effects of financial literacy on financial inclusion with social capital as mediators are as follows:

Table 12 Sobel Test Results

<i>Normal theory tests for indirect effect</i>			
Effect	SE	Z	p
0,1327	0,0242	5,4723	0,0000

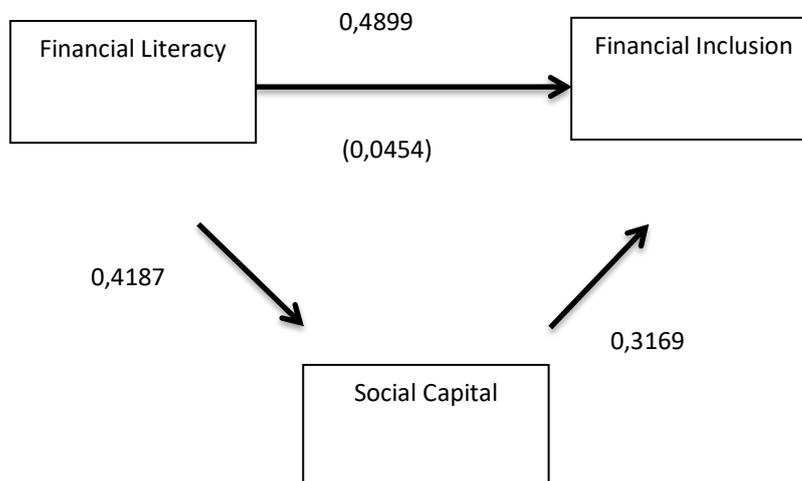
Based on Table 12, it can be seen that the indirect effect of financial literacy on financial inclusion through social capital is 0.1327, greater than the direct effect of financial literacy on financial inclusion (0.1327 > 0.0454) with a test value of 5.723 and  $p < 0.05$ . For more details can be summarized in Table 13 below:

Table 13 Total Securities, Direct Effects and Indirect Effects of Financial Literacy on Financial Inclusion

Total effect of X on Y					
Effect	SE	t	p	LLCI	ULCI
,4899	,0429	11,4196	,0000	,4056	,5743
Direct effect of X on Y					
Effect	SE	t	p	LLCI	ULCI
,3572	,0454	7,8689	,0000	,2680	,4465
Indirect effect of X on Y					
Effect	Boot SE	BootLLCI	BootULCI		
Modal_So	,1327	,0250	,0891	,1881	

According to Table 13, the total effect of financial literacy on financial inclusion is 0.4899. thus the results of the hypothesis can be illustrated in Figure 5 below:

Figure 5 Hypothesis Model of the Calculation Result



Based on the Pearson correlation test in Table 3 that there is a significant relationship between financial literacy and financial inclusion, financial literacy and financial inclusion with social capital as mediator. Subsequent results in the mediation analysis Table 11 shows a significant effect between financial literacy and financial inclusion of 0.0454 with  $p < 0.05$ . These results indicate H1 is accepted because there is a significant effect between financial literacy variables and financial inclusion.

Based on Table 12 above can be seen that the indirect effect through social capital of 0.1327. This suggests that the indirect effect of financial literacy on financial inclusion through social capital is greater than the direct effect of financial literacy on financial inclusion  $0.1327 > 0.0454$  and the mediation function occurs in social capital variables, so H2 is accepted because social capital mediates the relationship between financial literacy and financial inclusion. Then in Table 12 the results of the test show that the value of Z equal to  $5.4723 > 1.96$  greater than the critical point with a significance value of 5% of 1.96, with  $p < 0.05$ . These results confirm that social capital mediates the relationship between financial literacy and financial inclusion in productive age communities in the District. So it can be concluded that financial literacy will be more influential on financial inclusion if through social capital, meaning that the financial inclusion of someone who follow social capital has a higher chance than those who do not follow social capital.

## 5. CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

Based on the analysis that has been done, the researchers found some conclusions that there is a significant influence between financial literacy on financial inclusion, financial literacy has a significant effect on financial inclusion with social capital as a mediator. In addition, financial literacy will be more influential on financial inclusion if through social capital, meaning that the financial inclusion of someone who follow social capital has a higher chance than those who do not follow social capital.

### 5.2 Recommendation

#### Recommendation for regulators

Regulators can take advantage of social capital by working with communities, schools, colleges and other social capital, especially in the productive age community so that they are more aware of the importance of understanding financial literacy and financial inclusion so that the benefits received by the community will be more pronounced.

#### **Recommendation for the community**

Communities in the community are expected to be the drivers of increasing literacy and financial inclusion. Therefore, the productive age society is advised to discuss and exchange ideas about financial knowledge, the economy and other financial products and services in order to provide benefits for the next life and can increase financial literacy and inclusion.

#### **Recommendation for future researchers**

The object of this study is the society of productive age in Bandung regency. For further research it would be better if the object of study could be expanded ie for an unlimited age not only the profitable age alone and devoted to low-income communities or who have problems with financial knowledge such as rural communities, the disabled, immigrants and others. This study also has a limitation that is the implementation time is cross section so it only represents the condition during that period. In the next study can consider for longitudinal research.

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## DECISIONS ANALYSIS OF CONTRACTOR SELECTION PT. ERICSSON INDONESIA USING ANALYTICAL HIERARCHY PROCESS METHOD

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### ABSTRACT

*Selection of contractors is one of the important things in the completion of a project activity for the company. Selection of contractors is a multi-criteria problem that includes both quantitative and qualitative factors. One method that can be used for the selection of contractors is the AHP (Analytical Hierarchy Process) method. This research is conducted in PT Ericsson Indonesia, one of the telecommunication vendors that will develop the partnership relationship with the service provider contractor. Installation, troubleshooting and commissioning. In this research, it will be discussed some of the problems: what criteria are the benchmarks of contractor selection at PT Ericsson Indonesia and which criteria are priority in contractor selection, how is the assessment or priority to the contractor for each criterion used as the benchmark of contractor selection, which contractor should be selected for working on telecommunication projects in PT Ericsson Indonesia, and what are the advantages of the AHP method compared to the previous contractor selection. The samples of this study are the decision makers and those within the department who know the contractor's performance. Sampling is done using judgment sampling because the AHP method requires dependence on a group of experts according to the type of related specialist in decision making.*

*This research uses AHP method assisted by expert choice software. The results of the assessment of the importance of the criteria in the selection of contractors resulted in the following priority / weighting scales: priority I quality (0.409), priority II price (0.199), priority III capacity (0.148), priority IV Tools (0.077), priority V capability (0.069), priority VI experience (0.037), priority VII finance (0.035) and priority VIII OHS (0.026). From the result of the assessment of the level of alternative interest in the selection of contractors, the ranking scale is as follows: 1st rank of contractor Telaga Pitu (0.467), rank II Synergy contractor (0.322), rank III contractor One Zero (0.211). This study also found that the selection of contractors with AHP method is better than the selection of contractors that already exist.*

*in PT.Ericsson Indonesia, because in AHP method there is consistency factor in the assessment, there is a measurement scale to get scores and priorities that can be measured simultaneously where in an existing method, it is not available.*

*Based on the above analysis, the suggestion that can be given is, if the company will develop relationship with the contractor, the company can use AHP method for contractor selection, and the company is select Telaga Pitu contractor as the contractor for the company because the contractor is judging criteria as the contractor with the highest overall value. With this partnership, it is expected to help Ericsson Ericsson company in completing the project target provided by the operator.*

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**Key Words:** contractor selection, Analytical Hierarchy Process (AHP), telecommunication project

## **1. INTRODUCTION**

Development of telecommunication network infrastructure be it 2G, 3G and now 4G requires a lot of funds. Ericsson Indonesia as one of the providers of mobile device and infrastructure in this case plays an important role in assisting telecommunication operators in Indonesia in providing telecommunication network services in question. The construction of this telecommunication infrastructure network involves vendors and contractors. Vendors are companies that provide technology required by telecommunications operators, while contractors are third parties designated by vendors to work on Installation Troubleshooting & Commissioning (ITC).

The selection of contractors is an important part of completing the telecommunication infrastructure project, as this will have a positive impact on Ericsson Indonesia to complete the projects obtained from mobile operators. In Indonesia alone Ericsson has a large project which is obtained from 3 (three) telecommunication operators in Indonesia, namely Telkomsel, Indosat and XL. The current role of contractors has not been able to contribute maximally to Ericsson, so that appropriate contractor selection is required according to the desired criteria to complete the infrastructure project on time. One method that can be used for the selection of telecommunication contractors is the AHP (Analytical Hierarchy Process) method. The advantages of this method is to make the problem wide and unstructured into a flexible and easy to understand model, solve complex problems through system approach, can be used on the elements of the system are mutually free and does not require linear relationship, providing the measurement scale and method to get priority, consider the logical consistency in the assessment used to determine priorities, lead to an overall estimate of how desired each alternative, can consider the relative priority of factors in the system so that people are able to choose the best alternative based on their objectives, taking into account endurance or resilience output sensitivity analysis of decision-making, and taking into account the validity up to the limit of inconsistency tolerance of the various criteria and alternatives chosen by the decision maker.

## **2. LITERATURE REVIEW**

### **2.1 OPERATIONS MANAGEMENT**

Operations Management (OM) is a series of activities to achieve value in the form of goods and services through transformation of inputs into outputs. Activity is a process or set of activities that require one

or more of the inputs, change and add value to the input, to provide one or more outputs for the customer. Input consists of human resources (labor), model (equipment and facilities), purchasing raw materials and services, land and energy, while its output is goods and services.

Some definitions of operations management include "*Operations Management is an activity related to the creation of goods and services through the process of transformation from input to output.* (Heizer and Render, 2015:3).

## **2.2 UNDERSTANDING THE PROJECT**

Another notion according to Schwalbe (Dimiyati and Nurjaman, 2014:2), explains that the project is a temporary venture to produce a unique product or service. In general, the project involves several people who are interconnected in their activities and the main sponsor of the project is usually interested in the effective use of resources to accomplish the project efficiently and on time.

According to Schwalbe (Dimiyati and Nurjaman, 2014:21), each project will be limited by scope, time and cost. These limitations are often used into project management as the three main constraints. For the project to succeed, the project manager should consider the following. First, the scope of work to be undertaken as part of the project, as well as the products and services or results desired by the customer (sponsors) that can be generated in a project. Second, the time required to complete a project. Third, the cost required to complete a project. Each project has a specific purpose, and in the process of achieving that goal there are three constraints to be met, known as Tradeoff Triangle or Triple Constraints

## **2.3 DECISION MAKING**

The development of DSS (Decision Support System) began in the late 1960s with the existence of computer users on time sharing (based on time division). At first one can interact directly with a computer without having to go through an information specialist. Time sharing opens up new opportunities in computer use. It was not until 1971 that the term DSS (Decision Support System) was found, in a journal entitled "A Framework for Management Information System" the need for a framework to channel computer applications to management decision making. based his framework on the type of decision according to Simon and the management level of Robert N. Anthony (Gorry and Morton, 1971).

## **2.4 ANALYTICAL HIERARCHY PROCESS (AHP)**

Analytical Hierarchy Process (AHP) was developed by Thomas L. Saaty in the 1970s. This method is one of the multi-criteria decision-making models that can help the human mindset in which logic, experience, knowledge, emotion, and sense factors are optimized into a systematic process. AHP is a decision-making method developed to prioritize several alternatives when several criteria must be considered and allow decision makers to construct complex problems into a hierarchy or set of integrated levels. Basically, AHP is a method used to solve complex and unstructured problems into its groups, by organizing the group into a hierarchy, then entering numerical values instead of human perception in comparative comparison. With a synthesis it will be able to determine which element has the highest priority (T.L Saaty, 2008).

## 2.5 CONTRACTOR SELECTION

The process of selecting contractors (Arisanto, 2012:32) is a series of activities ranging from identifying the needs of contractor services by the owners, preparing auction package, auctioning, until the contract signature to handle the project's physical implementation. The selection process involves research and evaluation work, which often reaches internal organizational issues, such as personnel and contractor finance. This is done considering the successful handling of large and complex projects, much dependent on the financial position and quality of personnel performing important work such as project managers, construction managers, purchasing managers and others. Given the size of the resources involved, as well as the risks faced, then to get a contractor who is expected to perform the tasks assigned, it needs to be applied strict selection (Soeharto 2011). For large projects and using a fixed price contract form, it is common to take an approach by conducting pre-qualification followed by giving the auction package to the graduating candidate, then evaluating the proposal to determine the winner (Soeharto 2011).

## 2.6 EXPERT CHOICE TOOLS

In this research will use Expert Choice tool software. This software is a system used to perform analysis, systematic, and justification of a complex decision evaluation. Expert Choice has been widely used by various business and government agencies around the world in various forms of application. By using expert choice, there is no more trial and error in the decision-making process. Based on Analytical Hierarchy Process (AHP), the use of hierarchy in expert choice aims to organize estimates and intuitions in a logical form. This hierarchical approach allows decision makers to analyze all options for effective decision-making.

## 2.7 PREVIOUS RESEARCH

Several previous researches using decision-making analysis in selecting contractors using AHP are mostly used for construction contractors. In the preparation of this thesis, the authors take some of the literature used as a reference in theory and methods used.

Table 1 Comparison Previous Research

Title	Author	Description	Result of Research	Source	Difference	similarity
Selection of Latex Based Rubber Based Rubber Products And Its Strategy Formulation Using AHP Method, Fuzzy AHP and Fuzzy Logic	Dedy Sugiarto (2012) Jakarta	Selection of agricultural products based on potential latex	Downline rubber-based downstream products that are potential to be developed are gloves (medical or household) followed by adhesive and foam rubber	Writing Paper Doctoral Program of Agricultural Industrial Technology, IPB, 2012	Application of Fuzzy AHP and Fuzzy Logic	AHP Method
AHP Application As Lecturer Selection DSS Model	Adriyendi (2011) Padang	Selecting lecturers based on predetermined criteria	AHP Application As Lecturer Selection DSS Model	National Seminar on Information Technology Applications 2011, Yogyakarta, 17-18 June	Criteria used	expert choice & AHP
Fuzzy Decision Model for Construction Contractor's Selection in Egypt: Tender Phase.	H. S.Hassaan (2013)	Determine the contractor for the construction project	The assessment of financial stability as most important in selecting contractors is consistent with the general attitude within Egypt.	Industrial Engineering and Engineering Management (IEEM), 2013 IEEE International Conference on	Metode F-AHP	Some criteria
Analysis of Selection of Indosat Telecom Implementation Project In PT Nokia Siemens Networks	Arisanto (2012)	Define contractor for teko project	From result of calculation by AHP method got Intisel Produktifikom have highest value so that chosen as project implementer of Telecom Implementation Indosat at Nokia Siemens Network	Writing Master Program Master of Management Telkom University	Subcriteria and software used	AHP Method
A Fuzzy AHP based evaluation method for vendor-selection	Hua Bai (2008) China	Menentukan vendor dalam supply chain manajemen	The paper presents a method to assess vendors based on a set of assessment indices, in which fuzzy numbers are used to handle the fuzzy elements. Compared with traditional AHP method, the fuzzy AHP is an effective method to evaluate vendors because it has the capability to capture the vagueness of human judgment.	Management of Innovation and Technology, 2008. ICMIT 2008. 4th IEEE International Conference on	Criteria Determination	AHP Method
Evaluating Vendor's Performance in Outsource Software Development Risks Using Analytic Hierarchy Process Technique	Aziz Deraman (2014)	Identify risk using AHP method	main risk in software engineering is Bond and Relationship	2014 8th Malaysian Software Engineering Conference (MySEC)	Criteria Determination	AHP Method
Optimal Vendor Selection Using Fuzzy Case Based Reasoning	Feng Na dkk (2011)	Determine the vendor in the supply chain management	To improve the vendor selection efficiency, a two levels vendor selection model is proposed through case-based reasoning method	IJACSA International Journal of Advanced Computer Science and Applications, Vol. 6, No. 4, 2015	Location and criteria determination	AHP Method
Vendor Selection Using Fuzzy C Means Algorithm and Analytic Hierarchy Process	M. S. Q. Zaikar Nine dkk (2009)	Determine the vendor in the supply chain management	The VFA algorithm has successfully addressed the problem of the analytic hierarchy process (AHP) and reduced computational time when a huge number of vendors present to compete.	Fuzzy Systems, 2009. FUZZ-IEEE 2009. IEEE International Conference on	Location and criteria determination	AHP Method

### 3. METHODOLOGY

Based on research objectives, this research includes explanatory research, which explains criteria and alternatives to the contractor selection process. A quantitative approach is used with AHP method to get the result of analysis from this research.

#### 3.1 PARTICIPANTS

The population in this study are employees working at Ericsson Indonesia who, all populations are subjects of research those directly involved in the determination of the ITC contractor are as follows:

- |   |            |
|---|------------|
| a) ASP Manager                            | (1 person) |
| b) Strategic Sourcing Manager/Procurement | (1 person) |
| c) Customer Project Manager               | (1 person) |
| d) FSO & ASP Management                   | (1 person) |
| e) RAN Design Manager                     | (1 person) |
| f) Network Design Manager                 | (1 person) |
| g) Transport Design Manager               | (1 person) |
| h) Optim Manager                          | (1 person) |
| i) Advanced Engineer / Logistic /Supply   | (1 person) |

In this research the sampling technique uses saturated sampling technique, because the population used is relatively small. Using 3 telecommunication contractors namely SatuNol, Synergy & Telaga Pitu.

#### 3.2 MEASUREMENTS

In this paper, we use the AHP method through expert choice tool. Perform steps of the AHP method for the selection of contractors as below:

1. Preparation of hierarchy
2. Create a pairwise comparison matrix that describes the relative contribution of each element's influence to each of the above-stated criteria objectives.
3. Calculate the weight / priority of each variable at level 1 (criteria) are price, Capacity, Quality (performance card), Capabilities, Tools and machinery, Financial stability, Experience / reference, Legal assessment, OHS.
4. Calculate the weight / priority of each variable at level 2 (alternate) is the weight of each contractor compared with each criterion like step 3 above.
5. After knowing the weight of each criterion and score of each contractor then determined the contractor to be selected. The overall value of each contractor is the sum of the total weight of the contractor by the weight of the criterion. The contractor selected is the contractor with the highest score.

#### 3.3 DATA ANALYSIS

- a) Direct observation in Ericsson Ericsson's work environment to collect general data, background, history, organizational structure, and interview people who are closely

connected with the selection of contractors at Ericsson Indonesia to obtain the required criteria and the criteria weighting

- b) Spread the questionnaire, where the questionnaire form used in this study refers to the example questionnaire in Saaty, 1994. While the items that are compared in the questionnaire is the criteria, and the alternative (contractor) used in the selection of contractors at PT. Ericsson Indonesia, this questionnaire was distributed to the respondents. There are 4 respondents for the assessment criteria of ASP Manager, Strategic Sourcing Manager, RAN Design Manager, and Logistics / Supply Manager since only those respondents have the authority, competence and ability to provide criteria to the selection of contractors in the FGD forum. While 9 respondents are used for assessment of contractor alternative that is ASP Manager, Strategic Sourcing Manager, Customer Project Manager, FSO & ASP Management, RAN Design, Network Design Manager, Transport Design Manager, Optimize Manager, Supply. Furthermore, a matrix of pairwise comparison between all contractors in accordance with predetermined criteria where the scaling scale used scale 1 to 9.

Table 2 AHP scoring scale (Saaty, 2008)

Value	Definition	Explanation
1	Equal Importance	Two activities contribute equally to the objective
3	Moderate importance	Experience and judgement slightly favor one activity over another
5	Strong importance	Experience and judgement strongly favor one activity over another
7	Very strong or demonstrated importance	An activity is favored very strongly over another; its dominance demonstrated in practice
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2,4,6,8	Intermediate Values	Represent Intermediate Values for each element

#### 4. RESULTS AND DISCUSSION

Result of research following AHP method as below:

- a) Preparation of hierarchy

The hierarchical structure of the problem in the selection of contractors in Ericsson Indonesia is as follows

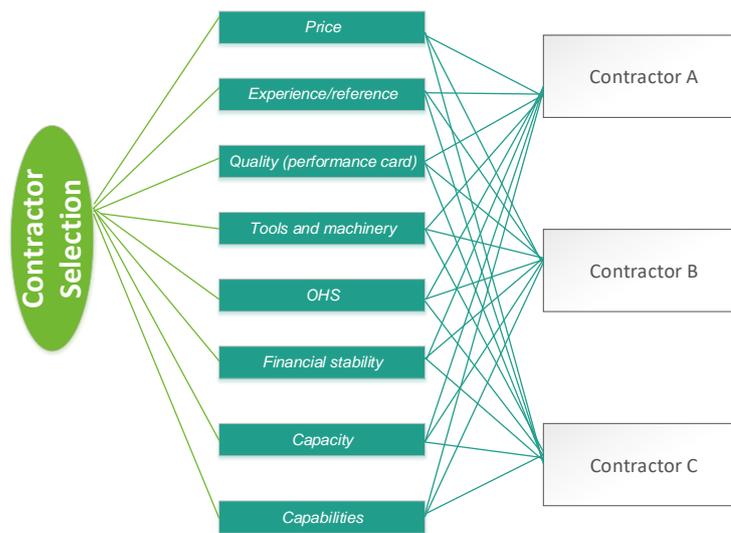


Figure 1 The hierarchy structure of contractor selection criteria

b) Calculating the weight / priority of interest of each criterion variable (price, experience, quality, equipment, OHS, capacity, capability and finance), below is the result of calculation of combination of judgment 4 respondents:

Table 5 Combination judgment of respondents

Criteria	Quality	Price	Capacity	Tools	Capability	Experience	Financial	OHS
Quality	1	4.58258	4.40056	5.91608	5.91608	6.85255	6.43526	7.45391
Price	0.218217685	1	1.18921	5	4.40056	5.91608	5.20681	5.91608
Capacity	0.227243805	0.840894375	1	3.40866	3	3.87298	3.40866	4.78674
Tools & Machinery	0.169030845	0.2	0.293370415	1	1.18921	3	3	5
Capability	0.169030845	0.227243805	0.333333333	0.840894375	1	3	1.96799	4.40056
Experience	0.145931077	0.169030845	0.258199113	1	0.333333333	1	1.18921	2.34035
Financial Stability	0.155393877	0.192056173	0.293370415	0.333333333	0.508132663	0.840894375	1	1
OHS	0.134157778	0.169030845	0.208910448	0.2	0.227243805	0.427286517	1	1
<b>Total</b>	<b>2.2190059</b>	<b>7.380836</b>	<b>7.9769537</b>	<b>17.698968</b>	<b>16.57456</b>	<b>24.909791</b>	<b>23.20793</b>	<b>31.89764</b>

Table 6 weight calculation of each criteria with AHP method

Criteria	Quality	Price	Capacity	Tools	Capability	Experience	Financial	OHS	Total	Average	C. Measure
Quality	0.450652247	0.620875464	0.551659211	0.334261303	0.356937383	0.275094642	0.277287117	0.233682178	3.100449544	0.387556193	9.369708092
Price	0.09834029	0.135486006	0.149080719	0.282502352	0.265500867	0.237500187	0.224354779	0.185470775	1.578235975	0.197279497	9.283270198
Capacity	0.102407931	0.113929421	0.125361138	0.192590893	0.181000282	0.155480229	0.146874797	0.150065647	1.167710339	0.145963792	9.227562447
Tools & Machinery	0.07617413	0.027097201	0.036777249	0.05650047	0.071749115	0.120434572	0.12926616	0.156751409	0.674750307	0.084343788	8.388022369
Capability	0.07617413	0.030788356	0.041787046	0.047510928	0.060333427	0.120434572	0.08479817	0.137958796	0.599785425	0.074973178	8.491808323
Experience	0.065764168	0.022901314	0.032368135	0.05650047	0.020111142	0.040144857	0.051241537	0.073370632	0.362402255	0.045300282	8.643882161
Financial Stability	0.0700286	0.026020924	0.036777249	0.01883349	0.030657385	0.033757585	0.04308872	0.031350282	0.290514235	0.036314279	8.531657708
OHS	0.060458504	0.022901314	0.026189252	0.011300094	0.013710398	0.017153356	0.04308872	0.031350282	0.226151919	0.02826899	8.266258411
Total	1	1	1	1	1	1	1	1		<b>CI</b>	<b>0.110753031</b>

Since the order of the matrix is 8, then for n = 8 the RI value in table = 1.41,

So CRatio = CI / RI = 0.11 / 1.41 = 0.0785 (Consistency value <= 0.1).

From the calculation of pairwise comparison between variables in selecting the contractor above we get the priority weight for criteria shown in the following table:

Table 7 Priority of contractor selection criteria

Criteria	weighting	Priority
Quality	0.409	1
Price	0.199	2
Capacity	0.148	3
Tools	0.077	4
Capability	0.069	5
Experience	0.037	6
Financial Stability	0.035	7
OHS	0.026	8

The table above shows that in choosing a telecommunication contractor for PT. Ericsson Indonesia the first priority is the Quality criterion with the weight of 0.409, then the second priority is the Price with weight 0.199, the third priority is the capacity with the weight of 0.148, the fourth priority is Tools with the weight of 0.077, the fifth priority is the capability with the weight of 0.069, the sixth priority is experience with weight 0.037, seventh priority is financial stability with weight of 0.035 and the last priority is OHS with weight of 0.026.

- c) Calculating the score / Ranking of each variable at level 2 (alternative) is the score of each contractor compared with each criterion.

Table 7 Scoring of contractor based on criteria

Contractor / Criteria	Quality	Price	Capacity	capability	Tools	experience	financial	OHS
Sinergi	0.259	0.376	0.362	0.404	0.36	0.166	0.387	0.356
Telaga Pitu	0.577	0.345	0.454	0.415	0.347	0.605	0.342	0.33
Satu Nol	0.164	0.279	0.183	0.181	0.293	0.229	0.27	0.313

Table 8 Ranking contractor based on criteria

Criteria	Ranking		
	Sinergi	Telaga Pitu	Satu Nol
Quality	2	1	3
Price	2	1	3
Capacity	2	1	3
capability	2	1	3
Tools	1	2	3
experience	2	1	3
financial	1	2	3
OHS	1	2	3

d) Choosing an Optimal Contractor

After each criteria and alternatives are obtained then synthesis is done to get an overall score of the criteria.

Table 8 Result of score Contractor based on criteria

Criteria	Alternative		
	Satu Nol	Sinergi	Telaga Pitu
Capability (L: .069)	0.014	0.022	0.033
Capacity (L: .148)	0.029	0.054	0.064
Experience (L: .037)	0.009	0.006	0.023
Financial Stability (L: .035)	0.009	0.013	0.012
OHS (L: .026)	0.008	0.009	0.009
Price (L: .199)	0.054	0.073	0.073
Quality (L: .409)	0.067	0.106	0.236
Tools & Machinery (L: .077)	0.022	0.028	0.027
<b>Grand Total</b>	<b>0.212</b>	<b>0.311</b>	<b>0.477</b>

So, the scores obtained from each contractor based on predetermined criteria obtained contractor ranking is selected as follows:

Table 9 Final Ranking Score of the contractor

Alternative	Total Score	Ranking
Telaga Pitu	0.467	1
Sinergi	0.322	2
Satu Nol	0.211	3

e) Consistency

With the AHP model that uses human perception as its input, inconsistency may occur because humans have limitations in expressing their perceptions consistently especially if they must compare many criteria. Based on this condition then man can declare the perception will be consistent later or not.

This measurement of consistency is intended to see the inconsistency of respondents' responses. If CR < 0.1 then the pairwise comparison value on the given criterion matrix is consistent.

Table 10 Consistency

Pairwise Comparison	CR	Remarks
Respondent 1 to between weighting criteria	0.07	consistent
Respondent 2 to between weighting criteria	0.09	consistent
Respondent 3 to between weighting criteria	0.08	consistent
Respondent 4 to between weighting criteria	0.07	consistent
the combination of respondents between weighting criteria	0.06	consistent
Combination between alternatives to Quality criteria	0.00181	consistent
Combination between alternatives to Price criteria	0.00001	consistent
Combination between alternatives to capacity criteria	0.00154	consistent
Combination between alternatives to tools criteria	0.00063	consistent
Combination between alternatives to capability criteria	0.001	consistent
Combination between alternatives to experience criteria	0.02	consistent
Combination between alternatives to financial criteria	0.00083	consistent
Combination between alternatives to OHS criteria	0.00063	consistent

From the table above shows that all respondents' assessment is consistent, and calculation will not be repeated.

f) Comparison of Contractor Selection of AHP Methods with Existing Methods

The comparison between the AHP calculation results and the previous contractor calculation results gives different results following table below

Table 11 Comparison AHP Method with existing method

AHP Method	Previous Method	Remarks
Criteria determined by FGD	Criteria determined by FGD	same
The weighting of each criterion is done with judgment information and paired matrices to determine the importance of each criterion, so that there are priorities of each criterion	The weighted value of each criterion is determined directly through the FGD, so it may be that each criterion has an equally important weight depending on the discussion forum	different
Considers the consistency of each respondent, so if it is not consistent then the assessment should be repeated	There is no consistent information from each respondent who gives a score on each of the criteria	different
AHP provides measurement scales and methods for scoring and prioritization	Providing a measurement scale just to get a score of each contractor is not a priority	different
Priority calculation is done simultaneously by directly comparing each contractor alternative	Priority will be obtained after the calculation for each contractor is completed	different

With this research further strengthening previous studies that by using AHP method, Ericsson can use this method to solve multicriteria problems in contractor selection, this method has emerged as a powerful tool that applies to all fields in decision making to choose the best alternative from several alternatives based on selected criteria. In addition, due to its flexibility and efficiency, AHP has been selected as a reliable instrument in decision-making or problem-solving in the field of project management, especially in the selection of contractors, to help Ericsson Indonesia choose a good contractor to be a partner in line with the company's expectations. The results of this study certainly cannot be used as a benchmark for other vendors in choosing a contractor because each vendor has a criteria and weight adjusted to the expectations or goals to be achieved by the company.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based on research objectives and research results above it can be concluded the following points:

- a) The most influential criteria in contractor selection at PT Ericsson Indonesia are quality criteria with score 0.409, price with score 0.199, capacities with score 0.148, tools with a score of 0.077, capability with a score of 0.069, experience with a score of 0.037, financial stability with a score of 0.035 and the last is the OHS criteria with a score of 0.026
- b) Telaga Pitu Contractors provide the highest score in the criteria of quality, price, capacity, capability, experience while Synergy gives the highest score against Tools and OHS criteria.
- c) Based on the criteria in the selection of the contractor, the contractor Telaga Pitu is rated as the best contractor with a score of 0.467. Next is the Synergy contractor with a score of 0.322 and One Zero contractor with a score of 0.211, using AHP methods in the selection of contractors can assist the company in saving the tender time because it is systematically done through the comparison of criteria, the input can be flexibly taken from the criteria that can change at any time in accordance with the wishes of the company where the priority of the criteria weight will adjust, because each criterion is compared but in the current selection method, there is no comparison between each criterion, so the weighting cannot be done systematically and flexibly and the time is long when there is a new criterion change because it must determine from the beginning how much weighting should be given.

There are several recommendations that can be obtained in this research, namely:

- a) For the company in the future, if there are new criteria relevant to the company or in accordance with the new company policy, then the company may change or add the criteria.
- b) For further investigators, the researcher may use other criteria that are in accordance with the policies of each company.
- c) To reduce the subjective subjectivity of respondents, particularly to reduce the inaccuracy and uncertainty of respondents in mapping their perceptions into numerical numbers, researchers can use the AHP fuzzy method
- d) Ericsson Company may consider the AHP method for subsequent contractor selection.

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## DETERMINANTS OF DIVIDEND PAYOUT RATIO: A STUDY OF LISTED COMPANIES IN INDONESIA STOCK EXCHANGE

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### ABSTRACT

*This study examines the performance of the determinants of dividend payout ratio of listed companies in Indonesia Stock Exchange period 2011-2016. This study use independent variable such as firm size, institutional shareholding, free cash flow, growth and return on asset.*

*The analysis is performed using the data derived from the financial statements of listed companies in Indonesia Stock Exchange during a six-year period. The Panel Data Analysis is used to estimate the regression equation.*

*The result shows that there is relationship between firm size, institutional shareholding, free cash flow, growth and return on asset with dividend payout ratio which simultaneously have significant relationship with dividend payout ratio and the value is 54.93%.*

*The result of this research also shows that institutional shareholding has a positive and significant relationship with dividend payout ratio. Firm size and return on asset have a negative and significant relationship with dividend payout ratio. While the free cash flow has a negative and insignificant relationship with dividend payout ratio and growth has a positive and insignificant relationship with dividend payout ratio.*

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**Key Words:** *Dividend Payout Ratio, Firm Size, Institutional Shareholding, Free Cash Flow, Growth, Return on Asset*

## 1. INTRODUCTION

To be an investor in the capital market has at least two expectations, the first is capital gains, while the second, investors expect to get dividends from companies where the shares are located.

Dividend-sharing season is not important for the investors with capital gains orientation, they only matter with the line of analysis or technical analysis as the basis of investment decisions. It is different case for the investor with dividend orientation or the investor who wants to get a dividend and capital gains. So, this dividend season is the most eagerly awaited moment.

J.B. Maverick, a stock market analyst and commodity futures brokerage has released an article in Investopedia on five reasons why dividends are important to investors (<https://www.investopedia.com/articles/investing/091015/5-reasons-why-dividends-matter-investors.asp>). In this article by Maverick, the importance of dividends that have been substantially proven in the dynamics of the stock market in the United States and can be adapted in the stock market in Indonesia.

The importance of dividends for investors among them is 1). Growth and expansion of profits, 2). Dividends are helpful in equity evaluation, 3). Reducing risk and volatility, 4). Dividends offer tax advantages, 5). Dividends preserve purchasing power of capital.

For investors who have orientation to get dividends, it is necessary to know how the determination of dividends in a company, so that investors can choose which companies are eligible to save the investment.

The issue of dividends for corporations is also very important for a number of reasons: First, firms use dividends as a way of showing to outsiders or potential investors, it has something to do with the stability and prospects of future growth. Second, dividends play an important role in the company's capital structure (Saxena, 1999).

The amount of dividend to be paid by the company depends on the dividend policy of each company. Thus it is necessary for the management to consider what factors will influence the dividend policy set by the company (Hatta, 2002).

## 2. LITERATURE REVIEW

Dividend policy is often regarded as a signal for investors in assessing the good of the company, this is because dividend policy can bring influence to stock price company. Thus, the portion of the profit to be distributed in the form of dividends and the amount of profit to be retained for reinvestment is a serious problem for the management. From previous studies on the dividend payout ratio, several theories have been produced that are currently used as references and literature for research. Such opinions and theories are used as guidelines and references in accordance with the policies or conditions of each company and country. Here are some theories about dividend payout ratio.

According to Gordon and Lintner (1956) in Bringham and Houston (2011), the required rate of return will increase if the dividend payout is reduced as investors are more confident of dividend receipts than the capital gains that will result from retained earnings. Gordon and Lintner's (1956) opinion by MM was given the name **bird-in-the-hand** fallacy. Gordon and Lintner think investors see that a bird in hand is worth more than a thousand birds in the air. However, MM argues that not all investors are interested in reinvesting their dividends in the same company with the same risk, therefore the risk level of their

future earnings is not determined by the dividend payout ratio but it is determined by the level of risk of new investment.

The **irrelevant dividend theory** (Modigliani and Miller, 1961) is a theory which states that dividend policy has no influence, either on company value or capital cost. Modigliani and Miller (MM) (1961) stated that the dividend payout ratio is irrelevant, the value of a firm is not determined by the size of the dividend payout ratio but it is determined by the net profit before tax (EBIT) and business risk. Thus the dividend policy is actually not relevant to be question.

In Bringham and Houston (2011), **Tax Preference Theory** is a theory proposed by Litzenberger and Rasmuswamy (1979) in Bringham and Houston (2011) which states that because of the tax on dividends and capital gains, investors prefer capital gains because they can delay tax payments. If capital gains are taxed at rates lower than the tax on dividends, then high-growth stocks will be responded positively by investors. On the contrary, if capital gain is taxed equal to dividend income, then capital gain's profit will decrease. Nevertheless, the tax on capital gains is still better than the tax on dividends because the tax on newly acquired capital gain is paid after the shares are sold, while taxes on dividends are payable annually after dividend payout. In addition, the investment period also affects the income of investors. If the investor only buys the stock for a period of one year, then there is no difference between the tax on capital gains and the tax on dividends. So investors will ask for higher after-tax profits on stocks with high dividend yields than stocks with low dividend yields. Therefore, this theory suggests that companies should determine a low dividend payout ratio or even not dividend.

Another theory, **Signaling Theory**, it describe that signals are an action taken by the management of a company that provides guidance to investors about how management sees the prospect of the company. The signal or information charge hypothesis is the theory that investors value dividend changes as a signal of earnings forecasts by management. This theory states that the increase in dividends is often followed by a rise in stock prices. Conversely, a decrease in dividends in general causes the stock price to fall. This observation is used to prove MM irrelevant theory error, that stock price action after the change of dividend payout indicates that investors prefer dividend rather than capital gain. However MM has a different opinion. They noted that companies are reluctant to reduce dividends, so the company will raise dividends if there is greater anticipated earnings in the future to support higher dividends. So MM argues that dividends above the expected amount is a signal to investors that the company's management forecast a good profit in the future. Conversely, a decrease in dividends, or a small increase in expected amount, is a signal that management foresees a poor future profit. If the position of MM is true, then a change in stock price after a dividend increase or decrease does not indicate a preference for dividends compared to retained earnings. The price change only indicates the dividend announcement has a signal charge or information about future earnings. Managers often have better information about future dividend prospects compared to public shareholders, so there is obviously an information content in the dividend announcement. However, it is difficult to ascertain whether changes in stock prices that follow a dividend increase or decrease reflect only the impact of a signal (such as MM opinion) or dividend preferences as well as signals. However, the impact of signals should take into account when a company considers changes in its dividend policy.

**The Clientele Effect Theory** suggests that different groups of shareholders will have different preferences on corporate dividend policies. In essence, investors will be sorting themselves by buying stocks that match their choice either for dividends or capital gains. Group of shareholders who need income at this time prefers a high dividend payout ratio. Conversely, the less-pressed shareholder group today is more likely if the company holds most of its net income. In other words there will be a client effect. The Company attracts certain clients with their dividend policy. Investor clients are likely

to lead us to believe that corporate dividend policies are important. However, if there is no greater aggregate demand for a given policy than the market can satisfy, dividend policy is not important, one policy is as good as the other. Impact Clients remind companies to avoid making unexpected changes in dividend policy. With the company's investment decisions that have been made, the dividend rate still remains unimportant. Changes in the policy are only important when it suits other migrating clients.

Jensen and Meckling explain the agency relationship in **Agency Theory** that agency relations are "a contract under which one or more persons (the principal (s)) engage another person (the agent) to perform some service on their behalf which involve delegating some decision making authority to the agent" (Jensen and Meckling, 1976:5). The statement can be interpreted that agency relationship is a contract between the owner of the resource (principal) and the manager (agent) who take care of the use and control of these resources.

Agents are managers of the company who know more about the company's internal information and prospects in the future than the company's principal. Managers have an obligation to provide information about the company with financial statements, the report is important to the owners of the company because they are outside of the company that does not know for sure the condition of the company and have great uncertainty.

Agency theory has the potential to create a conflict of interest created when managers who make decisions have personal goals (Brigham, 2006). According to Meisser, Glover, and Prawitt (2006) this agency relationship resulted in two problems: 1). The occurrence of asymmetric information (information asymmetry), where there is an imbalance of information acquisition between the management as a provider of information with the investors as users of information. Asymmetric theory says that the parties associated with the company do not have the same information about the prospects and risks of the company. Certain parties have better information than others. Managers usually have better information than the investors because it can be said to occur asymmetry information between managers with investors. 2). The occurrence of conflict of interest due to inequality of purpose, where management does not always act in accordance with the interests of the owner. According to Jensen and Meckling (1976), differences in interests between managers and shareholders are particularly vulnerable. The reason is that the decision makers do not have to bear the risk of mistakes in business decisions, as well as if they can not increase the value of the company. The risk is fully borne by the owners. Because it does not bear the risk and does not get pressure from other parties in securing the investment of shareholders, then the management tends to make decisions that are not optimal. In an effort to overcome or reduce the agency problem will lead to agency costs that will be borne by both principals and agents. Jensen and Meckling (1976) divide the agency costs into three parts: 1). Monitoring cost; 2). Bonding cost; and 3). Residual loss.

Some researchers have conducted research on the factors that influence the company's dividend policy, the results of several researchers will be used as reference materials and comparison in this study, among others are as follows:

- 1). D'Souza & Saxena (1999) investigated the effect of agency cost, market risk and investment opportunity on dividend policy on international companies. The results of the study suggest that there is a negative effect of agency cost and market risk on dividend policy, while the relationship between dividend policy and investment opportunity show an insignificant relationship.
- 2). Short, Zhang, and Keasey (2001) investigated the relationship between dividend policy and institutional ownership. The result of the research is that there is a positive relationship between dividend payout policy and institutional ownership. Furthermore the results for the revenue trend model provide a positive revenue trend component to the relationship between institutional ownership

and dividend payout ratio. In addition, there is evidence to support the hypothesis that there is a negative relationship between dividend policy and managerial ownership.

3). Hatta (2002) conducted an investigation of the relationship between dividend policy and corporate investment decisions. The result of the research is there is relationship between dividend payout ratio with company focus, total asset, insider ownership, number of common shareholder, free cash flow and growth. Two variables that significantly influence the dividend payout ratio, the Company Focus and Total Assets.

4). Amidu and Abor (2006) conducted a research entitled Determinants of Dividend Payout Ratios in Ghana. The results showed a positive relationship between dividend payout ratio with profitability, cash flow, and tax. The results also show a negative relationship between dividend payout ratio and risk, institutional holding, growth and market-to-book value.

5). Kumar (2007) conducted a research titled Analysis of the influence of Ownership Structure, Investment Opportunity Set (IOS), and Financial Ratios on Dividend Payout Ratio (dividend payout ratio) (Comparative study on PMA and PMDN companies in Jakarta Stock Exchange Period 2003- 2005). The results showed that in the PMDN companies, ROA has a significant positive effect on dividend payout ratio while the ownership of management shares, institutional ownership, IOS and DER no significant effect on the dividend payout ratio In the PMA company, the ownership of management shares, ISO, ROA and DER have a significant positive effect on the dividend payout ratio while the institutional share ownership does not significantly affect the dividend payout ratio.

6). Chasanah (2008) conducted a research with the title Factors Affecting Dividend Payout Ratio (DPR) On Companies Listed in Indonesia Stock Exchange. The results of his research showed that the return on assets and institutional ownership have a significant and positive influence on the dividend payout ratio in companies whose shares are owned by management. While return on asset and firm size have a significant and positive influence on dividend payout ratio in companies whose shares are not owned by management.

7). Puspita (2009) in a study entitled Analysis of Factors Influencing Dividend Payout Ratio Policy, found that cash ratio, firm size and return on assets have a positive and significant impact on dividend payout ratio. Debt to total assets show a positive and insignificant influence on dividend payout ratio. While the debt to equity ratio has a negative and insignificant effect on the dividend payout ratio. The growth has a negative and significant effect on dividend payout ratio.

8). Hikmah (2010) with the title of research Analysis of Factors Affecting Dividend Policy: Stakeholder Theory Approach, found that the size of firms, agency cost and growth had negative effects significant to dividend payout ratio. The concentration of ownership has a significant positive effect on the dividend payout ratio. While free cash flow does not have a significant effect on dividend payout ratio. And ownership concentration is the dominant variable affecting dividend payout ratio.

9). Setiawan and Phua (2013) under the title Corporate Governance and Dividend Policy in Indonesia found that corporate governance practices in Indonesia are still low, even weakest in Asia. The results of his research also shows that firm size does not affect dividend policy, profitability has a positive relationship with dividend policy, grow influence dividend policy positively.

### 3. METHODOLOGY

#### 3.1 Research Questions

Based on the different research results on factors affecting the dividend payout ratio, as well as the ups and downs of the dividend payout ratio during the period of 2011 to 2016, further research is needed on the factors affecting the dividend payout ratio. So that we can be able to formulated research questions as follows:

1. Are the size of the company, institutional shareholding, free cash flow, growth, and return on assets simultaneously affect the dividend payout ratio of companies listed in the Indonesia Stock Exchange period 2011-2016?
2. Does the size of the company affect the dividend payout ratio of companies listed on the Indonesia Stock Exchange period 2011-2016?
3. Does the institutional shareholding affect the dividend payout ratio of companies listed on the Indonesia Stock Exchange period 2011-2016?
4. Does free cash flow affect the dividend payout ratio of companies listed in the Indonesia Stock Exchange period 2011-2016?
5. Does the growth affect the dividend payout ratio of companies listed on the Indonesia Stock Exchange period 2011-2016?
6. Does return on assets affect the dividend payout ratio of companies listed on the Indonesia Stock Exchange period 2011-2016?
7. Which factors are the most dominant and significant in affecting the dividend payout ratio of companies listed on the Indonesia Stock Exchange period 2011-2016?

#### 3.2 Modeling Volatility

Analysis technique that will be used in this research is panel data regression analysis technique. Panel data regression analysis is used because the data structures performed in this research is panel data, which has time series data and cross section. By using panel data regression models, it is possible to capture individual and inter-individual characteristics that may be different.

According to Baltagi (2005), the advantages of using panel data regression analysis include more informative, more varied, more efficient data, avoiding multicollinearity problems, superior in studying dynamic changes, more able to measure unobservable effects on cross data pure sections and pure time series, and by making the data available in larger quantities, panel data can minimize biases that can occur when aggregating individuals into large aggregates. The regression equation that is estimated as follows:

$$Y_{it} = \alpha_i + \beta^i X_{it} + \epsilon_{it}$$

Where, Y = dependent variable,  
X = independent variable,  
 $\alpha$  = intercept,  
B = slope,

$\varepsilon$  = regression error,  
 $i = 1, 2, \dots, N$ , where  $N$  = sum of the firm,  
 $t = 1, 2, \dots, T$ , where  $T$  = sum of period

### Dependent Variable

#### Dividend Payout Ratio

Ang (1997) states that the dividend payout ratio is the ratio between dividend per share and earnings per share, so perspective, it compares the growth of dividend per share to growth of earning share.

$$\text{DPR} = \frac{\text{Dividend per share}}{\text{Earning per share}}$$

### Independent Variables

#### Firm Size

A large established company will have easy access to the capital market, while the new and small companies will experience many difficulties to have access to the capital market. Due to the ease of access to capital markets is significant for flexibility and ability to obtain larger funds, so the company is able to have a higher dividend payout ratio than a small company (Chang and Rhee, 1990). Here to calculate the size of the firm:

$$\text{Size} = \text{Log of total assets.}$$

Hypothesis : Firm size has a significant positive effect on dividend payout ratio

#### Institutional Shareholding

According to Jensen and Meckling (1976) institutional ownership is one of the major corporate governance mechanisms that help control agency problems. Clientele Effect Theory of Modigliani-Miller states that different shareholders will have different preferences on the company's dividend policy. This indicates that the proportion of stock ownership influences the dividend policy. The existence of ownership by institutional investors such as insurance companies, banks, investment companies and ownership by other institutions in the form of companies will encourage more optimal supervision of insider performance (Moh'd, Perry and Rimbey, 1998) so that it will have an impact on the increase of corporate profits. This increase in profits affects dividend increase, so increasing institutional ownership will increase dividend payout ratio. Here to calculate the institutional shareholding:

$$\text{Institutional shareholding} = \frac{\text{Share owned by Institutional}}{\text{Total share}}$$

Hypothesis : Institutional shareholding has a significant positive effect on dividend payout ratio

**Free Cah Flow**

Jensen (1986) states that free cash flow is a cash flow where excess funding is required for all projects that have a positive net present value after the entire project is discounted on its cost of capital. Simply can be translated as cash residue after being used for various purposes of the company's planned projects such as paying salaries, production costs, bills, debt installments and interest, taxes, as well as capital expenditure for business development. Thus a relatively low rate of free cash flow will reduce agency costs so that the need for dividends to pay for agency costs is reduced. The higher the free cash flow, the higher the dividend payout ratio.

$$\text{Free cash flow} = \frac{\text{Net operating profit-tax-depreciation-changes in capital expenditures-changes in net operating working capital}}{\text{Total share}}$$

Hypothesis : Free cash flow has a significant positive effect on dividend payout ratio

**Growth**

According Riyanto (1995) the faster the growth rate of a company, the greater the need for funds to finance the growth of the company. The greater the future funding requirement to finance its growth, the company usually prefers to withhold its earnings than to be paid out as dividends to shareholders by keeping in mind the cost limits. The higher the rate of growth of the company, the greater the level of funding needs to finance expansion. The greater the need for funds in the future, the more will enable the company to hold profits and not pay it as dividends. Therefore, the growth potential of the company becomes an important factor determining the dividend policy (Chang and Reece, 1990). Growth shows asset growth where assets are assets used for the company's operational activities. According to Halim (2005) Growth is a change (annual growth rate) of Total Assets. This variable is measured by the percent unit formulated as follows:

$$\text{Growth} = \frac{\text{Total Asset (t) - Total Asset (t-1)}}{\text{Total Asset (t-1)}}$$

Hypothesis : Growth has a significant negative effect on dividend payout ratio.

**Return on Asset**

Return on asset is profitability ratios used to measure the effectiveness of the company in generating profits by utilizing its assets. Firms that gain cederung profits will pay a larger share of the profits as dividends. The greater the profits, the greater the company's ability to pay dividends. This attribute of profitability is represented by the level of profit after tax divided by total assets (Chang and Rhee, 1990). According Ang (1997) return on assets is the ratio between net income after taxes to total assets. Mathematically return on assets can be formulated as follows (Ang, 1997):

$$\text{Return on asset} = \frac{\text{Net Income After Tax}}{\text{Total Asset}}$$

Hypothesis : Return on asset has a significant negative effect on dividend payout ratio.

Table 3.1. Variable description

No	Variabel	Symbol	Description
1	Dividend Payout Ratio	DPR	Dividend per share / Earning per share (Ang,1997)
2	Firm Size	SIZE	Log natural asset (Ghozali, 2006)
3	Institutional Shareholding	INST	Institutional shareholding / Total share (Moh'd, Perry, and Rimbey, 1998)
4	Free Cash Flow	FCF	(Net operating profit-tax-depreciation-changes in capital expenditures-changes in net operating working capital) / Total asset (Titman, Keown, and Martin, 2014)
5	Growth	GROWTH	(Total asset this year - Total asset last year) / Total asset last year (Halim, 2005)
6	Return on Asset	ROA	Net income after tax / Total asset (Ang, 1997)

### 3.3 Data

The object of research is listed companies on the Indonesia Stock Exchange during the period 2011-2016. This study is used purposive sampling method with certain criteria. The number of samples examined is 40 companies for 6 years, then the number of samples is 240 observation data.

## 4. RESULTS AND DISCUSSION

### Descriptive statistics

Table 4.1. Descriptive statistic of dependent variables and independent variable

	Dividend payout ratio	Firm Size	Institutional Shareholding	Free Cash Flow	Growth	Return on Asset
Mean	0.401779	29.545116	0.682164	0.080902	0.168237	0.135239
Median	0.381056	29.800205	0.650174	0.062305	0.140784	0.101482
Maximum	2.251729	33.198812	0.981786	0.611164	0.848539	0.657201
Minimum	0.029206	26.193822	0.279741	-0.492156	-0.216538	0.000541
Std. Dev.	0.298405	1.591318	0.156550	0.146224	0.175253	0.105044

Source : data processed

The average value of the dividend payout ratio come near to the minimum value means that the average dividend payout ratio is low. The average value of a dividend payout ratio greater than the standard deviation means that the dividend payout ratio does not vary.

The average value of a firm's size close to its minimum value means that its average firm size is low. The average value of a firm's size greater than its deviation standard means that its size does not vary.

The average value of institutional ownership close to the maximum value means that the average institutional ownership is high. The average value of institutional ownership greater than the standard deviation means that the value of institutional ownership does not vary.

The average value of free cash flow close to the maximum value means that the average free cash flow is high. The average value of free cash flow is less than the standard deviation means that the value of free cash flow varies.

The average value of growth close to the minimum value means that the average growth is low. The average value of growth less than the standard deviation means that the value of its growth varies.

The average return on asset value close to the minimum value means that the average return on asset is low. The average return on asset value of the standard deviation means that the return on asset does not vary.

#### Panel Data Analysis

The regression is run in a panel manner. Various options of panel data regression were run, common effect, fixed effects and random effects. The most robust of all was the fixed effect, thus we report results of the fixed effect regression in Table II. The dividend payout ratio is regressed against the five explanatory variables. These variables include firm size (SIZE), institutional shareholding (INST), free cash flow (FCF), growth (GROWTH) and return on asset (ROA).

Table 4.2. Redundant Fixed Effect - Likelihood Ratio

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.583565	(39,195)	0.0000
Cross-section Chi-square	156.146821	39	0.0000

Source : data processed

Table 4.3. Correlated Random Effects – Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	64.493076	5	0.0000

Source : data processed

From Table 4.2. the value of P is 0.0000 which shows the significant effect. The significant value of cross section chi-square suggests opting fixed effect model rather than a common effects model. Table 4.3. shows the results of Hausman Test. The P value of Hausman test is 0.0000 which is significant. P-value suggests choosing a fixed effect model rather than the random effect model. Soa, for this study, the best fit model is fixed effect model.

R-squared actually represents the correlation between the observed value and the predicted value of the dependent variable. It is also said to be a determination of coefficient. It is explained variation for an individual variable.

Durbin-Watson is used to test the serial correlation of the model. According to the rule, if the value of DurbinWatson ranges from 1.50 to 2.5 then no problem of auto correlation exist, less or more creates the problem of auto correlation.

Table 4.4. Regression Model Result (Fixed Effect Model)

Dependent Variable: DPR				
Method: Panel Least Squares				
Date: 01/11/18 Time: 00:09				
Sample: 2011 2016				
Periods included: 6				
Cross-sections included: 40				
Total panel (balanced) observations: 240				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	-0.140468	0.058995	-2.381034	0.0182
INST	0.844432	0.315595	2.675684	0.0081
FCF	-0.113246	0.149859	-0.755681	0.4508
GROWTH	0.171270	0.099622	1.719205	0.0872
ROA	-1.328650	0.385467	-3.446861	0.0007
C	4.135915	1.819439	2.273182	0.0241
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.549344	Mean dependent var	0.401779	
Adjusted R-squared	0.447657	S.D. dependent var	0.298405	
S.E. of regression	0.221774	Akaike info criterion	-0.006954	
Sum squared resid	9.590831	Schwarz criterion	0.645665	
Log likelihood	45.83452	Hannan-Quinn criter.	0.256004	
F-statistic	5.402328	Durbin-Watson stat	2.042579	
Prob(F-statistic)	0.000000			

Source : data processed

Table 4.5. Coefficient Cross-Section Each Firm

No	Firm	Coefficient Cross-section									
1	ADHI	-0.116898	11	CTRA	-0.002479	21	KLBF	0.281228	31	SMGR	0.397497
2	ADRO	0.332643	12	EKAD	-0.747421	22	LSIP	0.095575	32	SMSM	0.099713
3	AKRA	0.395262	13	FISH	-0.500271	23	MERK	0.027500	33	TCID	-0.237509
4	ASGR	-0.157753	14	GEMA	-0.662403	24	MKPI	-0.151291	34	TKIM	-0.088203
5	ASII	0.582321	15	GGRM	0.313210	25	MLBI	0.469472	35	TOTL	0.077693
6	AUTO	-0.169956	16	GMTD	-0.672445	26	MTLA	-0.603040	36	TOTO	-0.363368
7	BATA	-0.379901	17	HMSP	0.895390	27	PTBA	0.159625	37	TURI	-0.505711
8	BSDE	-0.181392	18	INDF	0.336418	28	PWON	-0.198825	38	UNTR	0.414250
9	CASS	-0.578648	19	INTP	0.398078	29	RUIS	-0.178735	39	UNVR	0.462191
10	CPIN	0.206776	20	ITMG	0.300590	30	SCMA	0.477028	40	WIKA	-0.226212

Source : data processed

Based on the output of fixed effect model in table 4.4. and coefficient cross-section in table 4.5., the regression equation is estimated as follows :

$$Y = (\text{Coefficient each firm}) + 4.135915 - 0.140468\text{SIZE} + 0.844432\text{INST} - 0.113246\text{FCF} + 0.171270\text{GROWTH} - 1.328650\text{ROA}$$

This regression confirm the statistically positive and significant relationship between dividend payout ratio with institutional shareholding. It also shows the negative and significant relationship between dividend payout ratio with firm size and return on asset, and shows negative relationship and insignificant relationship between dividend payout ratio with free cash flow and it also shows positive and insignificant relationship between dividend payout ratio with growth .

R-squared shows the adequacy of the model. In econometric model it explains the percentage of dependent variables explained by the independent variables. It is also called the goodness of fit. Here the value of R2 is 0.549344. This shows that this model predicts 54.93% change in dependent variable due to change in independent variables. Adjusted

Adjusted R-squared shows the coefficient for whole independent variables. Here the value of adjusted R-squared is 0.447657. This shows that there is 44.77% effect on dependent variables from the independent variables.

F-statistics show a fitness of the model. If it is more than probability of F-statistics this shows the fitness of the model. Here the value of F-statistics is 5.402328 and its probability is 0.0000. So, it is concluded that this model is fits. So it can be concluded that the hypothesis that the firm size, institutional shareholding, free cash flow, growth and return on assets simultaneously have a significant positive effect on the dividend payout ratio is acceptable.

### Coefficient Cross-section Analysis

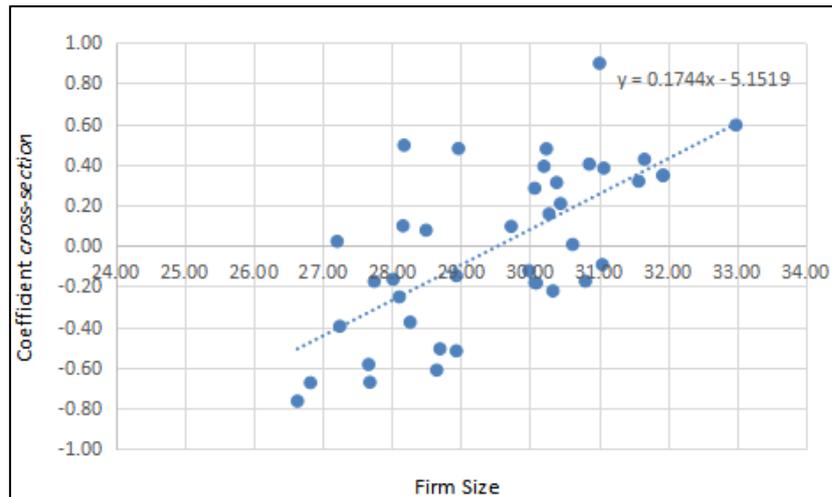


Figure 4.1. Coefficient cross-section vs firm size

Source : data processed

From Figure 4.1 it can be seen that the higher the size of the company, it tends to be higher payout dividend ratio.

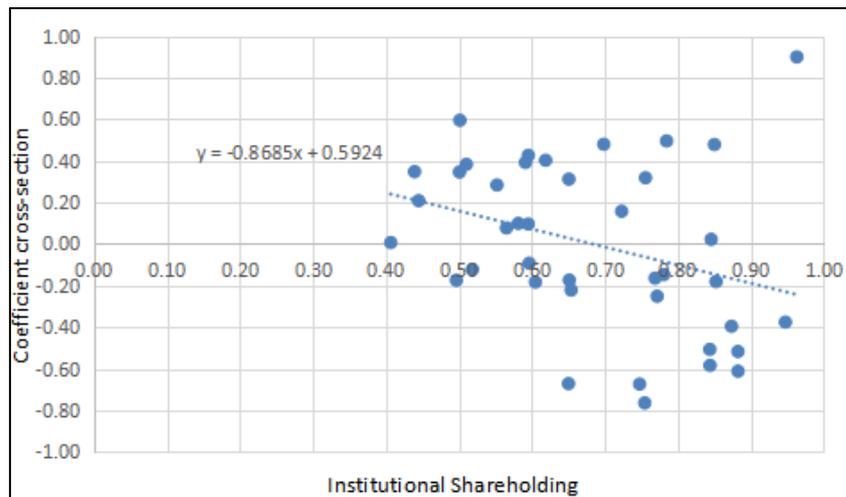


Figure 4.2. Coefficient cross-section vs institutional shareholding

Source : data processed

From Figure 4.2 it can be seen that the higher the share ownership by the institution, it tends to be lower payment of dividend payout ratio.

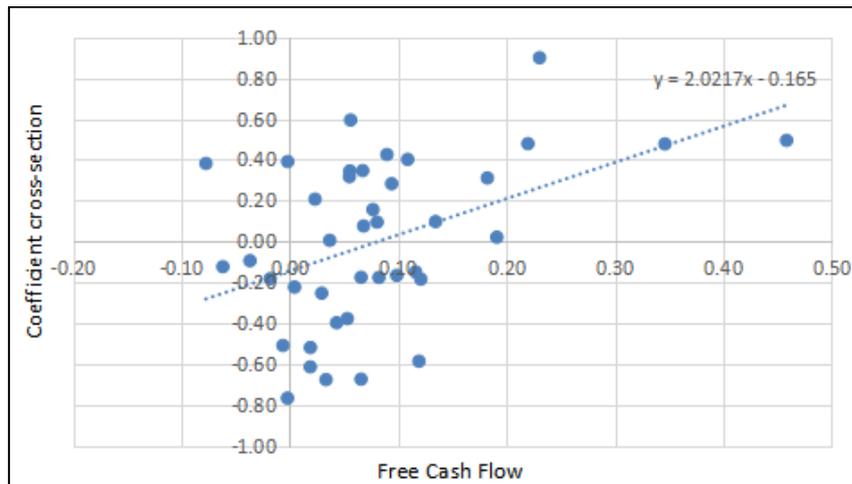


Figure 4.3. Coefficient cross-section vs free cash flow  
Source : data processed

From Figure 4.3 it can be seen that the higher the free cash flow, it tends to be higher payout dividend payout ratio.

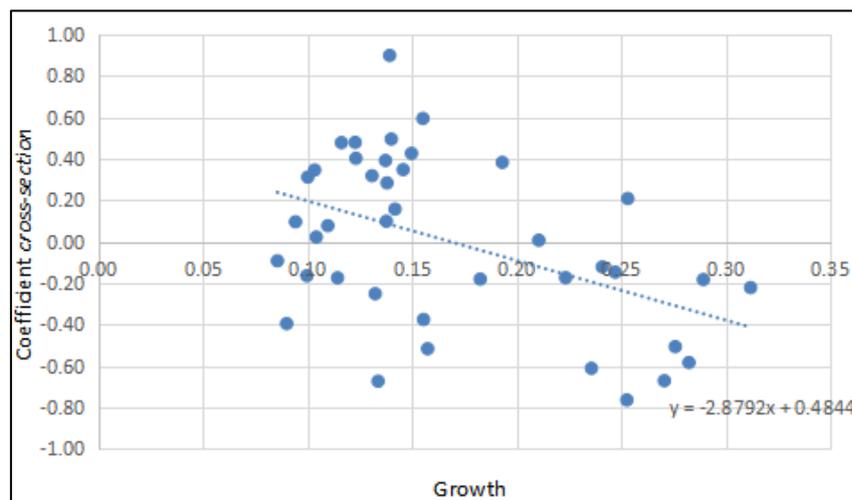


Figure 4.4. Coefficient cross-section vs growth  
Source : data processed

From Figure 4.4 it can be seen that the higher the growth is owned, it tends to be lower payout dividend payout ratio it.



Figure 4.5. Coefficient cross-section vs return on asset  
Source : data processed

From Figure 4.5 can be seen that the higher return on assets owned, it tends to be higher payout dividend ratio it.

#### Discussion

From the results showed that firm size, institutional ownership, free cash flow, growth and return on assets simultaneously affect the dividend payout ratio of 54.93%, while the rest of 45.07% influenced by other variables not examined in this study.

**The first hypothesis** proposed in this study is firm size has a significant positive effect on Dividend Payout Ratio. The result of panel data regression analysis shows that partially firm size has negative and significant effect to dividend payout ratio. This is indicated by the result of t test that is the result of partial test between firm size with dividend payout ratio showing t -2.381034 with probability value 0.0182 smaller than 0.05. This value gives meaning  $H_0$  accepted, it can be concluded that the hypothesis that the size of the company have a significant positive effect on dividend payout ratio rejected.

So from this study can be concluded that firm size has a negative and significant effect on dividend payout ratio. Negative influence means that the larger the size of the company the smaller the dividend payout ratio is paid. The results of this study only in accordance with research conducted by Hikmah (2010) which states that the size of the company has a negative and significant influence on the dividend payout ratio.

This phenomenon is quite interesting, because the results of this study is not in accordance with some other research results Hatta (2002) which states that the size of the company affect the dividend payout ratio. Similarly, the research of Chasanah (2008) and Puspita (2009) which states that firm size has a positive and significant effect on dividend payout ratio.

Another thing that can explain the conclusion of this study that the larger the size of the company the smaller the dividend payout ratio is paid, is that the greater the company then the other costs required for the growth of the company will increase and ultimately affect the decreasing dividend payout .

Based on the cross-sectional coefficient of the firm size variable on the dividend payout, the higher the firm's size the higher the payout ratio dividend. This is in line with the hypothesis proposed by the researcher.

**The second hypothesis** proposed in this research is institutional ownership has a significant positive effect on dividend payout ratio. The result of panel data regression analysis shows that partially institutional ownership has positive and significant effect on dividend payout ratio. This is indicated by the result of t test ie partial test result between institutional ownership with dividend payout ratio shows t value 2.675684 with probability value of 0.0081 less than 0.05. This value gives the meaning  $H_0$  is rejected, it can be concluded that the hypothesis that the ownership of the institution has a significant positive effect on the dividend payout ratio is acceptable.

So from this study can be concluded that the ownership of the institution has a positive and significant influence on dividend payout ratio. It can be explained that with the ownership of shares by the institution causes the supervision of the company management becomes higher. With the supervision by other institutions as shareholders, then management will show good performance that *terntunya* will have implications to the increase in corporate profits. This increase in profits will have an impact on increasing dividends.

The results of this study are in accordance with the research conducted by Short et al (2001), Chasanah (2008) and Hikmah (2010) stating that institutional ownership has a positive and significant effect on dividend payout ratio. However, the results of this study are not in accordance with the research done by D'Souza and Saxena (1999) which states that institutional ownership has a negative and significant effect on dividend payout ratio and research of Amidu and Abor (2006) and Setiawan and Phua (2013) the ownership of the institution has a negative and insignificant effect on the dividend payout ratio, and Hatta (2002) study that the institutional ownership does not affect the dividend payout ratio.

Based on the cross-section coefficient of the institutional ownership variable on the trend of dividend payout. Based on the cross-section coefficient data obtained results that the higher the ownership of the institution the tendency will be lower payout dividend ratio it.

**The third hypothesis** proposed in this research is free cash flow have a significant positive effect on dividend payout ratio. The result of panel data regression analysis shows that partially free cash flow has positive and insignificant effect on dividend payout ratio. This is shown by the result of t test that is the result of partial test between free cash flow with dividend payout ratio shows the value of t - 0.755681 with probability value equal to 0.4508 bigger than 0.05. This value gives meaning  $H_0$  accepted, it can be concluded that the hypothesis that states free cash flow have a significant positive effect on dividend payout ratio rejected.

So from this research can be concluded that free cash flow has a negative effect and not significant to dividend payout ratio. The higher the free cash flow, the lower the dividend payout ratio. However, the effect of free cash flow on dividend payout ratio is not significant.

This means that free cash flow has no effect on the dividend payout ratio and its direction is the opposite. What may explain the results of this study is that the possibility of idle cash is used for reinvestment rather than for dividend payments.

Judging from the company's data in the sample research, for companies that have a negative cash free cash, it turns out the growth data of its assets continue to increase and annually still share dividends. The possibility of the company using funds from third parties for the purpose of adding assets or to

share dividends. This is a possibility that causes free cash flow is not a factor determining the company's dividend policy.

The results of this study in accordance with research Hatta (2002) and Hikmah (2010) which states that free cash flow has a negative and not significant effect on dividend payout ratio.

Based on the cross-section coefficient of the variable free cash flow on the tendency of dividend payment, it is obtained that the higher the free cash flow, the tendency will be higher payout dividend ratio. This is in line with the hypothesis proposed by the researcher.

**The fourth hypothesis** proposed in this study is the growth significantly negatively affect the dividend payout ratio. The result of panel data regression analysis shows that partially growth has positive and not significant effect on dividend payout ratio. This is indicated by the result of t test ie partial test result between growth with dividend payout ratio shows t value 1.719205 with probability value equal to 0.0872 bigger than 0.05. This value gives the meaning  $H_0$  accepted, it can be concluded that the hypothesis that states significant negative growth influence on dividend payout ratio is not acceptable.

This means that growth has no effect on the dividend payout ratio and the direction is opposite. Growth does not affect the amount of dividend payout ratio either a company that grows rapidly or does not grow.

This phenomenon is very interesting because the results of this study contrast with the results of research conducted by D'Souza and Saxena (1999) which states that the growth has a positive and significant effect on dividend payout ratio and not in accordance with the research Amidu and Abor (2006) and Puspita (2009) which states that growth has a negative and significant effect on dividend payout ratio and Chasanah (2008) which states that growth has negative and insignificant effect on dividend payout ratio.

Usually, if the company is and has been growing rapidly in the past, it will most likely have a lower dividend payout rate. A fast-growing company needs more funds to grow, therefore the company wants to keep most of its revenue rather than paying higher dividends. Therefore, the company will have a lower payment ratio.

However, in this study, it appears that the dividends are paid without consideration of the growth of the company. In other words, this dividend policy does not depend on investment decisions.

The results of this study are in accordance with Setiawan and Phua (2013) which mentions the growth has a positive but not significant effect on dividend payout ratio.

Based on the cross-section coefficient of variable growth on the dividend payout then it is obtained that the higher the growth then the tendency will be lower payment of dividend payout ratio. This is in line with the hypothesis proposed by the researcher

**The fifth hypothesis** proposed in this study is the return on assets have a significant positive effect on the dividend payout ratio. The result of panel data regression analysis shows that partially return on asset has negative and significant effect to dividend payout ratio. This is indicated by the result of t test ie partial test result between return on asset with dividend payout ratio shows t -3.638004 value with probability value 0.0004 is smaller than 0.05. This value gives the meaning of  $H_0$  is rejected, it can be concluded that the hypothesis that states return on assets have a significant positive effect on dividend payout ratio is not acceptable.

So from this study can be concluded that the return on assets have a negative and significant effect on the dividend payout ratio. Companies that have high return on assets will provide lower dividends to investors.

The results of this study are not in accordance with the research of Chasanah (2008), Kumar (2007), Puspita (2009) and Setiawan and Phua (2013) stating that the return on assets has a positive and significant effect on the dividend payout ratio.

This phenomenon is quite interesting as well because of all the research studied gives results that companies that have a high return on assets will provide high dividends to investors. What may explain the results of this study is the possibility that the company returns most of its profits into the company for use as an investment.

This is also supported by research data that provides images of the average development of the total assets of companies studied from 2011 to 2016 is increased.

Based on the cross-section coefficient of the return on asset variable on the dividend payout then it is found that the higher return on asset, the higher the payment of dividend payout ratio. This is in line with the hypothesis proposed by the researcher.

Based on result of t test show that **dominant independent variable** is return on asset variable. With a coefficient of -1.328650 and has a significant relationship to the dependent variable. It is said to be dominant due to the decrease of dividend payout ratio of 1.328650% as a result of the increase of return on assets by 1%, the magnitude of this decline is much higher than the increase or decrease caused by other independent variables. This shows that the higher return on assets, the company's ability to pay dividends is lower. In this research found that company with high return on asset ability will decrease dividend payout ratio.

## 5. CONCLUSIONS AND RECOMMENDATIONS

This study tries to examine whether firm size, ownership of institution, free cash flow, growth and return on asset influence on dividend payout ratio at companies listed in Indonesia Stock Exchange period 2011-2016. The results of hypothesis testing by using panel data regression analysis with five independent variables (firm size, ownership of institution, free cash flow, growth and return on asset) and one dependent variable (dividend payout ratio)

1. The result of research is obtained R value Squared equal to 54.93% which means that 54.93% dividend payout ratio variation can be explained by five independent variable of company size, ownership of institution, free cash flow, growth and return on asset while the rest of 45.07% influenced by other variable which was not meticulously in this study.
2. The result of research indicates that firm size has significant negative effect to dividend payout ratio. From the results of this study can be concluded that the hypothesis that the firm size has a significant positive effect on dividend payout ratio rejected.
3. The result of the research shows that institutional ownership has a significant positive effect on the dividend payout ratio. From the results of this study can be concluded that the hypothesis that the ownership of the institution has a significant positive effect on the dividend payout ratio is accepted.
4. The results showed that free cash flow had no significant negative effect on dividend payout ratio. From the results of this study can be concluded that the hypothesis that free cash flow has a significant positive effect on dividend payout ratio rejected.

5. The result of the research shows that the positive growth is not significant to the dividend payout ratio. From the results of this study can be concluded that the hypothesis which states that the growth has a significant negative effect on dividend payout ratio rejected.
6. The results showed that return on asset had a significant negative effect on the dividend payout ratio. From the results of this study can be concluded that the hypothesis that the return on asset has a significant positive effect on the dividend payout ratio is rejected.
7. The result of research also shows that the most dominant and significant factor in influencing dividend payout ratio is return on asset variable with coefficient value of -1.328650, institutional ownership variable with coefficient value 0.844432, variable growth with coefficient of 0.171270, variable of firm size with value coefficient -0.140468 and the last variable free cash flow with coefficient value -0.113246.

### **Implications**

As a study that has been conducted on companies listed on the Indonesia Stock Exchange, the conclusions drawn certainly have implications for all involved actors as well as subsequent research, in connection with the above implications are as follows:

1). For company management, given the group of investors who expect dividends and based on the results of research that the profitability proxied by return on assets gives the result that high return on assets will provide lower dividends to investors, to keep investors who expect this dividend is still want to invest in the company then it can be considered if the company get a high profit should the dividends paid to shareholders also increased, because with increased profitability should the company's ability to pay higher dividends. Similarly, the variable size of the firm that has a significant negative effect on the dividend payout ratio, with the greater the company, the tendency will require even higher capital, to get investors who one of the groups are investors who expect dividends, then it is recommended that companies with large corporate size to consider giving high dividends.

2). For investors, the results of this study are expected to provide additional information about companies that provide dividend payout ratio policy decisions, so that investors can be more careful in assessing the companies selected to invest. Based on the result of the research that the variable of institutional ownership is the variable which have positive and significant influence to the dividend payout ratio, so based on the research result, for the investor who wants big dividend, it is recommended to have company having high institutional ownership structure. Based on descriptive statistics, the average value of institutional share ownership is 0.682164. To determine which companies have a high value of institutional ownership, then we can take the limitation that those who have high institutional ownership are those who have an institutional ownership value above the average each year. Based on these criteria, then according to the industry sector, companies included in the category are:

1. Sector Basic Industry and Chemicals: EKAD
2. Consumer Goods Industry sector: GGRM, BRAND, MLBI, TCID, UNVR
3. Property Sector, Real Estate And Building Construction: MKPI
4. Sector Trade, Services & Investment: ASGR, GEMA

### **Recommendation**

In this study, the authors use variable size of the company, institutional ownership, free cash flow, growth and return on assets. Based on the analysis of determination of firm size variable, institutional ownership, free cash flow, growth and return on asset have contribution explain dividend payout ratio equal to 54.93%, hence 45.07% unknown other variable that can influence dividend payout ratio. Researchers are aware that there are other variables that are also likely to play a role in influencing the dividend payout ratio in companies listed in Indonesia Stock Exchange period 2011-2016. Therefore research on dividend payout ratio can further add independent variables such as management ownership, market-to-book value, agency cost, cash ratio, tax, risk, financial ratios or other variables ..

The selection of the population is taking all companies in the Indonesia Stock Exchange without sorting out its industrial sector, it may need to be reconsidered, given the results of this study more hypotheses are rejected than accepted. Researchers indicate the likelihood of this happening due to too diverse corporations studied both from the size of the company, the size of the achievement of financial ratios, share ownership and type of company. When viewed, the sample companies in this study consist of 8 industry sectors including agriculture, basic industry and chemical, consumer goods industry, infrastructure utilities and transportation, mining, miscellaneous industry, property, real estate and building construction and trade, service & investment. Yet each sector has its own peculiarities which will certainly provide a different picture of financial statements. This is certainly very influential on the results of research where the data used in the study.

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**INFLUENCE OF DOLLAR EXCHANGE RATE, INTEREST RATE,  
INFLATION, DIVIDEND, OWNERSHIP AND FIRM SIZE TO  
RETURN SHARES  
(Study in Sub Sector Company Telecommunications Listing on  
Bursa Efek Indonesia Period 2010-2016)**

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**ABSTRACT**

*The purpose of this study is to analyze how the return of shares of the Indonesian Telco's companies listing in Indonesia Stock Exchange (BEI) in 2010-2016 will be affected by external and internal factors which include the influence of dollar exchange rate, interest rate, inflation, dividend, ownership (insider and external) and company size either partially or simultaneously. This study uses data analysis techniques in this study using regression analysis. The sample used is Top-3 Telco Company that is EXCEL, INDOSAT and TELKOM by using Annual Company Report and Annual Financial Report and Bank Indonesia Report in a monthly statistic to know the effect on dividend, ownership and assets. The results showed that in the Telco's company the dollar exchange rate, interest rate, inflation rate and external ownership have a positive effect on stock return, while insider ownership, dividend and firm size have negative effect on stock return.*

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**Key Words:** Dollar exchange rate, Inflation, Interest Rate, Dividend, Ownership, Size of company, Stock Return

**JEL Classification:** C19, G13, G14

## 1. INTRODUCTION

The tight increasingly development of the business aspect in Indonesia will create an increasingly keen competition among companies. Companies industry in Indonesia are the way for investors to invest in various forms of securities. So it is not wrong for companies of various aspects and types to be part of the capital market.

Public involvement in the capital market is by buying shares that offered in the capital market. For an investor, the investment in the selected securities would be expected to provide a return rate that corresponds to the risks that investors must bear. Bodie et.al. (2008), explains in investment theory that uncertainty of return asset from a company caused by existence of influence of business environment factor that is external environment and internal environment. With regard to investment, every investor in making investments, always faced a trade-off between return and risk. Any rational investor decision will make an investment choice that gives a certain return by taking the lowest risk possible or an investment option at a certain risk that generates the highest possible return.

This rate of return is a major factor because of return is the result obtained from an investment (Jogiyanto, 2000: 155). The return value of each security varies from one to another. Not all securities will provide the same return for investors. Return of a security is determined by many things such as the company's performance and the company's strategy of managing the profits. The conditions that make investors and creditors feel worried if the company has financial difficulties (financial distress) that leads to bankruptcy. Expectations to earn a return also occur in financial assets.

Large companies are considered to have less risk than smaller companies because large companies are considered to have more access to the Elton and Gruber capital markets (in Jogiyanto, 2007). Therefore, when connected with stakeholder theory that large companies have a large number of stakeholders that will provide an overview to the market will a large company which will be responded positive market so that it is expected to be able to increase the stock return of the company in order to get support from stakeholders.

The high population in Indonesia become one factor for the company in the era of the fourth wave of technology and digital wave revolution in conducting business activities with investment offerings for the people who promise an advantage in the capital market.

Furthermore, the sample in this study is a group of industrial Services Companies in the Sector Infrastructure, Utilities and Transportation Sub Sector Telekomunikasi covering: EXCL (XL Axiata Tbk), ISAT (Indosat Tbk) and TLKM (Telekomunikasi Indonesia Tbk).

**Table 1.1 Return of Telecommunication Company Share in Indonesia  
 for 2010 - 2016 period**

No	Tahun	Operator Telekomunikasi		
		EXCL	ISAT	TLKM
1	2010	1.7461	0.1429	-0.1587
2	2011	-0.1462	0.0463	-0.1132
3	2012	0.2597	0.1416	0.2837
4	2013	-0.0877	-0.3566	0.1878
5	2014	-0.0644	-0.0241	0.3326
6	2015	-0.2497	0.3580	0.0838
7	2016	-0.3671	0.1727	0.2818

*Source: Company Annual Financial Report at [www.idx.co.id](http://www.idx.co.id), data is processed*

In table 1.1 above it can be seen that during the period 2010 to 2016, stock return telecommunication companies listing on the Indonesia Stock Exchange (BEI) are as follows:

1. PT Excel Axiata Tbk, in 2010 and 2012 stock returns retrofitted but in 2011 to 2016 tend to always decrease,
2. PT Indosat Tbk, in 2010 to 2012 stock returns retrofitted, but in 2013 to 2014 tends to decline and despite retrofitting in 2015 and 2016,
3. PT Telekomunikasi Indonesia Tbk, in 2010 and 2011 stock returns decreased but in 2012 to 2016 tend to strengthen.

Despite an increase in the number of service users but investments made in the capital market by investors are not directly correlated to expected earnings and returns.

Based on the description of the above general conditions that affect the company and describe the actual conditions of macro-economic activities that affected a company in carrying out its business activities, the research will examine the internal and external factors that impact in the performance of telecommunication sub-sector companies, especially on stock return to stakeholders.

Based on the background, and the phenomenon mentioned above, writer is interested in this research with the title "Influence of Dollar Exchange Rate, Interest Rate, Inflation Rate, Dividend, Ownership, and Firm Size to Return of Share in Company Sub Sector Telecommunication Listing in Indonesia Stock Exchange Period 2010-2016".

## **2. LITERATURE REVIEW**

The literature review in this study discusses the financial theories used in order to get the right direction in formulating basic theories for basic theoretical and empirical as well as the development of hypotheses. This study will begin by reviewing the concept of stock return, then review the theories of Financial Management which became the grand theory (main theory). The theories are used interrelationships in the relationship between variables that will form a basic model of research or grand theoretical model.

Return of stock is the level of profit enjoyed by the investor on a stock investment that he did (Ang, Robert 1997). Every short-term and long-term investment has the primary goal of gaining a profit called return, either directly or indirectly (Ang, Robert 1997). In simple terms investment can be defined as an activity of placing funds on one or more of one asset during a certain period in the hope of earning or increasing the value of investment. The concept of risk is inseparable in relation to returns, as investors always expect an appropriate rate of return on each investment risk it faces. Return of shares is the income earned during the investment period per amount of funds invested in shares (Bodie, 1998).

Several previous studies on the effect of macro-economic variables on stock performance showed different results as found by Tirapat and Nitayagasetwat (1999) that there is a corporate sensitivity to macroeconomic variables called systematic risk of the company obtained from the results of regression of stock returns of firms with macroeconomic variables the.

Economic developments in some countries are influenced by interest rates. Tandeli (2001, in Meta 2007) mentions that when the economy is in a stable state of interest rate decline, on the contrary when the economic conditions are unstable then the interest rate becomes high. According Sugeng (2004), an increase in interest rates will result in a decrease in return and vice versa. In the face of an increase in interest rates, shareholders will sell their shares until the interest rate returns to a level that is considered normal.

Research on the relationship between inflation and stock return as Widjojo (in Almilia, 2003) says that the higher of the rate of inflation will further lower the level of profitability of the company. While research conducted by Utami and Rahayu (2003) to prove empirically the influence of inflation on stock prices, the higher the rate of inflation the lower the stock return. And research conducted by Adams et al. (2004) and Nurdin (1999) who found the significant inflation negatively affect the stock return.

Amarjit's research (2010) in Carlo (2014) states that the dividend policy proxies by the Dividend Payout Ratio (DPR) can also be attributed to the stock return of the company. This is because companies that have a high DPR will increase the share price, so the demand for shares increase, and this will impact on a positive return.

According to Effendi (2009), Good Corporate Governance is defined as a company's internal control system that has the primary goal of managing significant risks to meet its business objectives through securing corporate assets and increasing shareholder value in the long term.

Previous studies that analyzed the effect of firm size on stock returns showed inconsistent results. The results of Karacaer's research, et al. (2009) shows that firm size has a positive effect on stock return. The results of Daniati and Suhairi (2006) showed that firm size influenced the expected return. The results of Munte (2009) and Solechan (2008) show that firm size does not affect stock return. The results of Sofilda and Subaedi (2008) show that firm size does not affect stock prices.

### **3. METHODOLOGY**

#### **3.1 RESEARCH QUESTIONS**

Based on the formulation of the research problem can be raised the question of problem formulation as follows:

1. How does the effect of Dollar exchange rate on telecom shares return on the Indonesia Stock Exchange period 2010-2016?
2. How does the interest rate affect the return of telecommunication sub-sector shares in Indonesia Stock Exchange 2010-2016 period?
3. How Does Inflation Rate Influence on Telecommunication Sector Stock Return In Indonesia Stock Exchange 2010-2016 Period?
4. What is the effect of Dividend on the return of telecommunication sub-sector shares in Indonesia Stock Exchange 2010-2016 period?
5. How is the effect of Ownership on the return of telecommunication sub-sector shares in Indonesia Stock Exchange period 2010-2016?

6. How does Firm Size affect the return of telecommunication sub-sector shares in Indonesia Stock Exchange for 2010-2016 period?
7. How is the effect of dollar exchange rate, Interest Rate, Inflation, Dividend, Ownership and Firm Size on stock return on Telecommunication Sub Sector Companies in Indonesia Stock Exchange 2010-2016 period?

### 3.2 Modeling Volatility

The method that will be used in this research are quantitative, descriptive, exploration method. This research is included in causal research, because this research is conducted to test the hypothesis about the effect of causality between one or several variables. In this research will be developed a model that is expected to be more explain again the relationship of causality between variables analyzed, and at the same time can make the research implications useful for the development of science as well as a method and techniques for solving problems in the field.

This study focuses on empirical testing of model builds developed on the basis of the proposed basic theoretical models, as noted in Chapter II. The identification and integration of determinant variables of internal and external factors of the company in relation to the achievement of Stock Return, is done through a research empirical model. The formation of empirical models of this research is to answer the research problem that has been explored into 7 (seven) research questions, as previously stated.

Then will be tested whether the variable of external factors such as exchange rate of exchange rate of rupiah to USD, SBI interest rate, inflation rate and internal factors like Dividend, Ownership and Firm Size influence to stock return of telecommunication sub sector company, described the research model as follows:

**Table 3.1 Operation Variables for Research**

Variable	Dimension / Variable Concept	Variable Measurement	Scale
Return Stock (Y)	The rate of return enjoyed by the investors on a stock investment it does (Ang, Robert 1997)	$Return\ Saham = \frac{(P_1 - P_0) + D}{P_0}$ Where: P1 = Price, ie price for time t P0 = Price, ie the price for the preceding time D = Dividend	Ratio

Variable	Dimension / Variable Concept	Variable Measurement	Scale
<p><i>Ownership</i> consists of:</p> <p>1) Ownership Internal shares (X<sub>1.1</sub>)</p> <p>2) Ownership External shares (X<sub>1.2</sub>)</p>	<p>The percentage of ownership of shares owned by management (Ownership of Internal Shares) and public / public shareholdings (External Shares Ownership).</p> <p>The amount of ownership of shares by management of the entire number of shares outstanding.</p>	$\text{Internal Ownership (IO)} = \frac{\sum \text{saham oleh Manajemen}}{\sum \text{seuruh saham beredar}}$ $\text{Eksternal Ownership (IO)} = \frac{\sum \text{saham oleh Masyarakat/Publik}}{\sum \text{seuruh saham beredar}}$	<p>Ratio</p> <p>Ratio</p>
<p>Dividend (X<sub>2</sub>)</p>	<p>A profit share to shareholders based on the number of shares owned. This division will reduce the retained earnings and the available cash for the company, but the distribution of profits to the owners is indeed the main objective of a business.</p>	$\text{Dividend Payout Ratio (DPR)} = \frac{\text{Earning per Share}}{\text{Dividend per Share}}$	<p>Ratio</p>
<p><i>Firm Size</i> (Ukuran Perusahaan) (X<sub>3</sub>)</p>	<p>It describes the size of a company (Jaelani, 2001 in Suryani, 2007: 42). The size of the company that shows the size of the company can be seen from the size of capital used, total assets owned, or total sales obtained.</p>	$\text{Firm Size Growth} = \frac{(\text{Firm Size}_t - \text{Firm Size}_{t-1})}{\text{Firm Size}_{t-1}}$	
<p>Interest rate (X<sub>4</sub>)</p>	<p>Percentage of principal debt paid as fee (interest) in a given period</p>	$\text{Tingkat Suku Bunga} = \frac{\text{Harga Uang dipinjam}}{\text{Periode waktu tertentu}}$	<p>Ratio</p>

Variable	Dimension / Variable Concept	Variable Measurement	Scale
Inflation rate (X <sub>5</sub> )	Inflation is also a process of declining currency values continuously	$\text{Tingkat Inflasi} = \frac{(\text{Tingkat Inflasi} - \text{Tingkat Inflasi}_{t-1})}{\text{Tingkat Inflasi}_t}$	Ratio
Dollar Exchange rate (X <sub>6</sub> )	An agreement known as the exchange rate of a currency against current or future payments, between two currencies of each country or territory	$\text{Nilai Tukar Uang (IDR ke USD)} = \frac{\text{Nilai 1 Rupiah}}{\text{Nilai tukar USD}}$	Ratio

In this study, the population in this study were 6 (six) Telecommunication Service Companies in Infrastructure, Utilities and Transportation Sectors in Indonesia Stock Exchange period 2010-2016. Furthermore, to avoid differences in the characteristics of industrial activities whereas the entire population is a telecommunications sub-sector, this research will focus on companies in telecommunication sub-sector which is a company with top 3 (three) market category in Indonesia.

In this study the type of data used is secondary data is data obtained indirectly through intermediaries (obtained and recorded by other parties). The data used in this research are inflation data, exchange rate, interest rate, dividend, ownership and firm size and return of shares of Industry Group of Service Companies in Infrastructure, Utility and Transport Sector Sub Telecommunication Sector listed on BEI 2010-2016

The following model of multiple linear regression in this research are:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + e$$

Remark:

Y = Stock Return

a = Constants

b = regression coefficient

e = Error term

X<sub>1</sub> to X<sub>6</sub> = Dollar exchange rate, inflation rate, interest rate, dividend, ownership (Insider and external) and firm size.

### 3.3 Data

In this thesis, the sample used is a sample of companies in the sector of Infrastructure, Utilities and Transportation in Indonesia Stock Exchange period 2005-2014. In this research the sampling technique is taken by purposive sampling, this is the technique of sampling using certain criteria specified by the researcher (Sugiyono, 2013).

Sample selection criteria in this study are as follows:

- 1) Companies that have published their consolidated financial statements from 2010 to 2016.
- 2) The trading of its shares is active in IDX during the study period.
- 3) The Company has listings before the observation period and is not delisted until the end of the period.

Furthermore, the sample in this study is a group of industrial Services Companies in the Sector Infrastructure, Utilities and Transportation Sub Sector Telekomunikasi covering: EXCL (XL Axiata Tbk), ISAT (Indosat Tbk) and TLKM (Telekomunikasi Indonesia Tbk).

**Table 3.2 Objek Penelitian Sub Sektor Telekomunikasi**

No	Kode Saham	Nama Emiten	Tanggal IPO	Keterangan
1	BTEL	Bakrie Telecom Tbk	3-Feb-06	
2	EXCL	XL Axiata Tbk (dh Exelcomindo Pratama Tbk)	29-Sep-05	Object Penelitian
3	FREN	Smartfren Telecom Tbk	29-Nov-06	
4	INVS	Inovasi Infracom Tbk	3-Jul-09	
5	ISAT	Indosat Tbk	19-Oct-94	Object Penelitian
6	TLKM	Telekomunikasi Indonesia Tbk	14-Nov-95	Object Penelitian

Source: *idx.co.id*, data is processed

In accordance with the description of the company to be used as a research object, the information that can be submitted for research consideration is between Bakrie and Smartfren there has been a merger and transfer of ownership and Inovasi Infracom currently focuses on services that are enterprise-specific to enterprise scale and not all levels of society can feel the service so that later companies that enter into the object of research for the period 2010-2016 is Excel, Indosat and Telkom.

Data collection method in this research is to document that is record monthly data which is listed on Monthly Statistic for return data of telecommunication sub-sector share monthly. For monthly exchange rate and interest rate data obtained from the official website of Bank Indonesia ([www.bi.go.id](http://www.bi.go.id)) and Central Bureau of Statistics (BPS) for monthly inflation rate data.

According Sugiyono (2013) data when viewed from the source can be divided into primary data and secondary data.

#### 1. Primary Data

The primary data source is the data source that directly provides data to the data collector.

#### 2. Secondary Data

Sources of secondary data is a source data obtained by reading, studying and understanding through other media sourced from literature, books and corporate documents.

In this study, the type of data used is secondary data is data obtained indirectly through intermediaries (obtained and recorded by other parties). The data used in this research are inflation data, exchange rate, interest rate, dividend, ownership and firm size and return of shares of Industry Group of Service Companies in Infrastructure, Utility and Transport Sector Sub Telecommunication Sector listed on BEI 2010-2016

#### 4. RESULTS AND DISCUSSION

Based on the 54 samples used in this study, descriptive statistics are obtained for all analyzed variables: Stock Return, Dollar Exchange Rate, Interest Rate, Inflation, Internal Share Ownership, External Share Ownership, Dividend, and Size of the Company. This descriptive statistic is presented with the aim to know the characteristics of the variables analyzed in detail which includes the number of samples, range, average, minimum, maximum, and standard deviation.

For research data exchange rate dollar against rupiah using data from <http://www.ortax.org> and exchange rate used is middle value. The dollar exchange rate ratio is as follows:

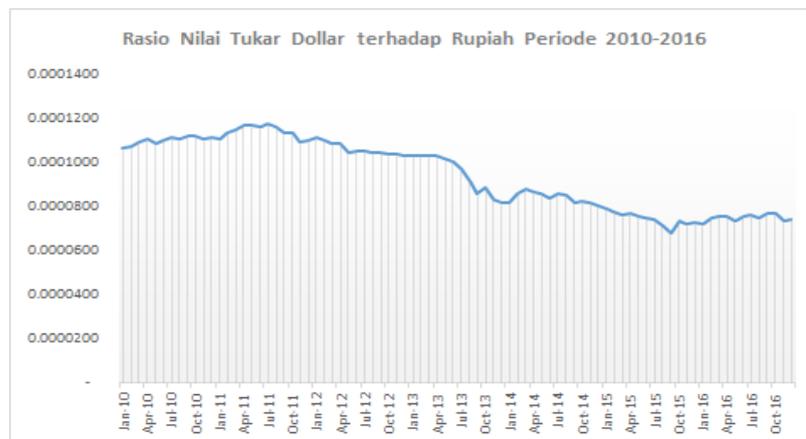


Figure 4.1 Dollar Exchange Rate Ratio during 2010-2016

It appears that during the period of January 2010 to July 2012 the exchange rate tended to be stable, but from July 2012 to December 2016, the Rupiah experienced pressure and caused the fall of the rupiah.

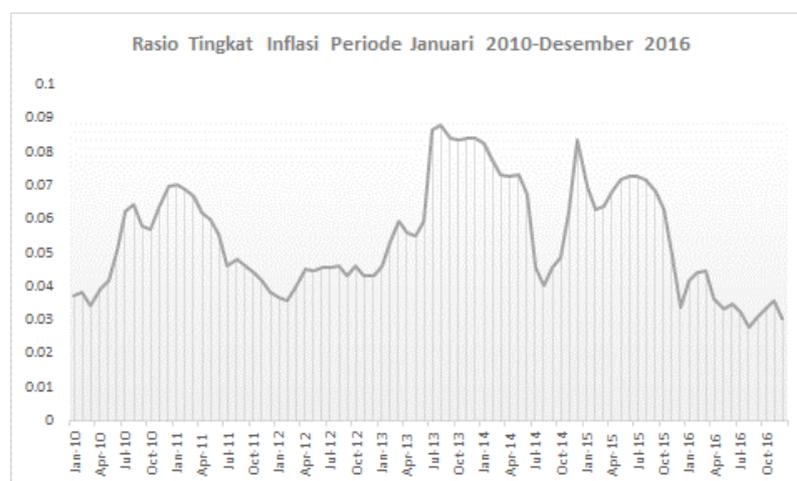


Figure 4.2 Inflation Rate Ratio during 2010-2016

The inflation rate ratio during 2010-2016 period with the following trend, 2010 inflation tends to increase, while in 2011 it tends to decrease. However, the inflation ratio in 2012 is relatively stable and

a significant increase occurred in 2013 which was followed by a decline back to August 2014. After rising in August 2014 to the end of 2015, the inflation ratio tends to be stable until December 2016.

Table 4.1 Dividend Payout Ratio Top-3 Indonesia Telco 2010-2016

Tahun	Dividend Payout Ratio		
	EXCL	ISAT	TLKM
2010	0.31490	0.50000	0.50340
2011	-	-	0.55580
2012	-	1.10000	0.48000
2013	1.14000	-	0.51000
2014	-	-	0.54000
2015	-	-	0.46000
2016	0.02000	-	0.49000

During the period 2010 to 2016, Telco looks consistent to make payments to shareholders with the following explanation: 1) Excel only gives dividends in 2010, 2013 and 2016 with the consideration of financial condition that is not possible, 2) Indosat, also only give dividends in 2010 and 2012. 3) Telkom, consistent in giving dividends to its shareholders.

The data used for the research is the composition of both Internal and External Ownership, where the Internal Ownership is the ownership of shares by the Commissioner or Director of the company. While External Ownership is the ownership of shares by Public other than business entity.

Table 4.2 Ownership (Insider & External) Ratio during 2010-2016

Tahun	Onwership					
	Excl-Int	Excl-Eks	Isat-Int	Isat-Eks	Tlkm-Int	Tlkm-Eks
2010	0.000580	0.199974	0.000002	0.155949	0.000001	0.344939
2011	0.000722	0.200966	0.000002	0.150856	0.000001	0.303218
2012	0.000864	0.334513	0.000002	0.151982	0.000001	0.328914
2013	0.001134	0.335154	0.000002	0.152074	0.000001	0.351859
2014	0.000447	0.335154	0.000002	0.153204	0.000001	0.368060
2015	0.000688	0.335690	0.000002	0.207079	0.000048	0.381247
2016	0.000581	0.336388	0.000002	0.207079	0.000090	0.401292

Excel has a relatively stable Ownership ratio from 2010 to 2016 with the highest Internal Ownership ratio in 2013. Medium Ownership Ratio Indosat is relatively small and there is no change from 2010 to 2016. In Telkom, the Internal Ownership shows an increase starting in 2016 with the increase share ownership by Commissioners and Directors.

Company size describes the size of a company. The size of the company that shows the size of the company can be seen from the size of capital used, total assets owned, or total sales obtained. The size of the company will affect the ability to bear the risks that may arise due to various situations faced by the company



Figure 4.3 Asset (Firm Size) Ratio during 2010-2016

In general, Excel could have the highest ratio of other Telco's in 2014, although ultimately at a ratio that is below zero. While Indosat has fixed asset ratio that depicts unstable firm size and majority below zero, despite touching positive ratio in 2012 and 2015. Telkom has positive ratio since 2010-2016.

Table 4.3 Descriptive Statistics Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
TktDolar	84	,000068	,000118	,00009422	,000015919
TktSkBunga	84	,057500	,077500	,06718750	,006591213
Inflasi	84	,027900	,087900	,05440238	,016201658
ExtrnIO	84	,655041	,944759	,82127929	,098585494
InsdrO	84	,000150	,264552	,07576288	,120111242
DPR	84	,153340	,733750	,38879004	,216195573
Size	84	-,022790	,220377	,06769014	,075024735
ReturnShm	84	-,085490	,576747	,11757457	,212360141
Valid N (listwise)	84				

Based on Table 4.3 above can be explained that the Stock Return variable has an average of 0.11757457 (11.76%) with a standard deviation of 0.212360141 indicates that in general from 3 companies (84 sample data) shares of the company under one. The maximum value of this stock return variable is 0.576747 and its minimum value is -0.085490.

Variable Size has an average of 0.06769014 (6.77%) with a standard deviation of 0.075024735, indicating that of the 3 companies selected as members have revenue as a result or Return of the use of company assets. The highest Size value is 0.220377 and the lowest Size value is -0.022790.

The variable of House of Representatives has an average of 0.38879004 (38.88%) with a standard deviation of 0.216195573, it shows that the 3 companies that are members of the sample in this study generally have a high percentage of return, which exceeds 40% to finance investment. The maximum value of this House variable is 0.733750 (73.37%), and the minimum value is 0.153340.

External Ownership Variable (Extrnl-O) has an average of 0.82127929 (82.13%) with a standard deviation of 0.098585494, it indicates, the 3 companies that are members of the sample in this study generally use the Number of shares outstanding in trading activities company stock. The maximum value of this External Ownership variable is 94.48%, while the minimum value is 65.50%.

The Insider Ownership (Insdr-O) variable has an average value of 0.07576288 (7.58%) with a standard deviation of 0.119501816, this condition indicates that the selected companies are members of the sample in this study of company stock owned by the manager on average by 7.58% of the company's ownership. The maximum value of this Internal Ownership variable is 26.45%, while the minimum value is 0.015%.

Inflation rate variables have an average value of 5.44% with a standard deviation of 0.016201658, this condition indicates that the firms selected to be members of the sample in this study inflation by managers on average amounted to 5.44%. The maximum value of this Inflation variable is 8.79%, while the minimum value is 2.79%.

The interest rate variable has an average value of 6.72% with a standard deviation of 0.006591213, this condition indicates that the firms selected to be members of the sample in this study The average interest rate faced by managers is 6.72 %. The maximum value of the variable interest rate is 7.75%, while the minimum value is 5.75%.

The exchange rate Dollar variable has an average value of 0.000009422 (0.01%) with a standard deviation of 0.000015919, this condition indicates that the companies selected to be members of the sample in this study The dollar exchange rate that occurred when it was flat at a rate of 0.009%. The maximum value of this Dollar exchange rate variable is 0.000118 (0.012%), while the minimum value is 0,000068 (0.007%).

Normality test aims to test whether in the regression model, the annoying / residual variable has a normal distribution. The normality test method used is Kolmogorov-Smirnov (K-S), the result is as follows:

Table 4.4 Normality Test

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			84
Normal	Mean		,0000000
Parameters <sup>a,b</sup>	Std. Deviation		,16640827
Most	Extreme	Absolute	,096
Differences		Positive	,088
		Negative	-,096
Kolmogorov-Smirnov Z			,882
Asymp. Sig. (2-tailed)			,418

a. Test distribution is Normal.

b. Calculated from data.

Sumber : Hasil olah data SPSS versi 20.0

To determine data by Kolmogorov-Smirnov statistical test, the significance value should be above 0.05 or 5% (Ghozali, 2009). From table 4.4 the value of Kolmogorov-Smirnov 0.882 with the significance value of  $0.418 > 0.05$ , this means that the residual data is normally distributed.

The formulation for all hypotheses present in this study has led to the consequent formation of empirical research models. Tests for all hypotheses that accompany the empirical model of the study, using regression analysis performed through the Amos program package 20.0 shown in Figure 4.8 below:

Based on the above Figure 4.8 regression weights obtained on the output estimates from the results of the data with Amos version 20.0 as presented in the following:

Table 4.5 Results of *Coefficients* SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1,891	1,716		-1,102	,274
TktDolar	9985,140	6238,044	,748	1,601	,114
TktSkBunga	15,675	8,641	,487	1,814	,074
Inflasi	-4,997	1,592	-,381	-3,140	,002
ExtrnIO	,895	,919	,415	,974	,333
InsdrO	-1,412	,585	-,799	-2,413	,018
DPR	-,521	,191	-,530	-2,722	,008
Size	-2,060	,616	-,728	-3,343	,001

Based on Table 4.5 above and regression weights in the output estimates (Table 4.2), structural equations of data analysis result with SPSS program package for testing influence Dollar Exchange Rate, Interest Rate, Inflation Rate, Dividend, Ownership and Firm Size to Return Stock as follows:

$$Return \text{ Saham} = -1,891 + 9985,140TktDolar + 15,675TktSkBunga - 4,997Inflasi + 0,895ExtrnIO - 1,412InsdrO - 0,521DPR - 2,070Size \dots (4.1)$$

#### Simultaneous Hypothesis Testing (Test F)

To know whether or not a significant influence of free variables on a non-free variable is used F test.

Hypothesis: The Effect of Dollar Exchange Rate, Interest Rate, Inflation Rate, Dividend, Ownership and Firm Size simultaneously on Stock Return.

1.  $H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$

Dollar Exchange Rate, Interest Rate, Inflation Rate, Dividend, External and Insider Ownership and Firm Size simultaneously have no positive and significant effect on Stock Return.

2.  $H_a: \text{at least one } \beta \neq 0$

Dollar Exchange Rate, Interest Rate, Inflation Rate, Dividend, External and Insider Ownership and Firm Size simultaneously have a positive and significant effect on Stock Return.

$\alpha = 5\%$

F test results can be displayed in the following table:

Table 4.6 Simultaneous Hypothesis Test (F Test)

R-squared	0,386	Mean dependent var.	0,18641
Adjusted R-squared	0,329	S.D. dependent var.	0,13228
S.E. of regression	2.13E+13	Sum squared residue	0,001
F-statistic	6,824	Durbin-Watson stat.	0,348
Prob. (F-statistic)	0.000		

From Table 4.6 above, visible Prob. value. F-statistic of 0.0000000, where the value of Prob. F (.000000) < 0.05. Thus  $H_0$  is rejected.

Thus there is a positive and significant influence simultaneously between the variable Dollar Exchange Rate, Interest Rate, Inflation Rate, External Ownership, Internal Ownership, Dividend and Firm Size of Share Return.

#### Partial Hypothesis Testing (t test)

To know whether or not a significant influence of partial independent variables on a dependent variable is used t test.

Hypothesis:

- 1) 1) Effect of Dollar Exchange Rate on Stock Return  
 $H_0: \beta_1 = 0$  The Dollar exchange rate has no positive and significant effect on Stock Return.  
 $H_1: \beta_1 \neq 0$  The Dollar Exchange has a positive and significant effect on Stock Return.
- 2) Effect of Interest Rate on Stock Return  
 $H_0: \beta_2 = 0$  The Interest Rate has no positive and significant effect on Stock Return.  
 $H_1: \beta_2 \neq 0$  The Interest rate has positive and significant effect on stock return.
- 3) Influence of Inflation on Stock Return  
 $H_0: \beta_3 = 0$  Inflation has no positive and significant effect on Stock Return.  
 $H_1: \beta_3 \neq 0$  Inflation has positive and significant effect on Stock Return.
- 4) Effect of External Ownership on Stock Return  
 $H_0: \beta_4 = 0$  Extrnl-O has no positive and significant effect on Stock Return.  
 $H_1: \beta_4 \neq 0$  Extrnl-O has a positive and significant effect on Stock Return.  
 $\alpha = 5\%$
- 5) Influence of Insider Ownership to Stock Return  
 $H_0: \beta_5 = 0$  Insdr-O has no positive and significant effect on Stock Return.  
 $H_1: \beta_5 \neq 0$  Insdr-O has a positive and significant effect on Stock Return.  
 $\alpha = 5\%$
- 6) Effect of Dividend on Stock Return  
 $H_0: \beta_6 = 0$  Dividends have no positive and significant effect on Stock Return.  
 $H_1: \beta_6 \neq 0$  Dividends have a positive and significant effect on Stock Return.  
 $\alpha = 5\%$

7) Firm Size Effect on Stock Return

Ho:  $\beta_7 = 0$  Firm Size has no positive and significant effect on Stock Return.

H1:  $\beta_7 \neq 0$  Firm Size has positive and significant effect on Stock Return.

$\alpha = 5\%$

Test Criteria:

1) Accept H0 if  $-t_{table} \leq t_{arithmetic} \leq t_{table}$

2) Reject H0 if  $-t_{arithmetic} < -t_{table}$  or  $t_{arithmetic} > t_{table}$

With  $t_{table} n = 84$ ,  $diff = 76$  equal to 1,980

T test results based on data processing are presented in the following table:

Table 4.7 Hypothesis Testing by Partial (t test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
(Constant)	-1,891	1,716	-1,102	,274
Dollar exchange rate	9985,140	6238,044	1,601	,114
Interest rate	15,675	8,641	1,814	,074
Inflation	-4,997	1,592	-3,140	,002
Extrnl-O	,895	,919	,974	,333
Insdr-O	-1,412	,585	-2,413	,018
Dividend	-0,521	,191	-2,722	,008
Size	-2,060	,616	-3,343	,001

1. For the variables Dollar Exchange Rate (X1) obtained value t arithmetic of 1.601 with a positive direction. Because t arithmetic (1,601) < t table (1,980), then H1 is rejected. Therefore, it can be concluded that the Dollar Exchange (X1) partially has a positive and insignificant effect on the Return of Shares (Y) with Prob. = 0.114 >  $\alpha = 0.05$ .
2. For variable Interest Rate Level (X2) obtained value t arithmetic equal to 1.814 with positive direction. Because t count (1.814) > t table (1,980), then H1 is rejected. Therefore, it can be concluded that the interest rate (X2) partially has a positive and insignificant effect on the Return of Shares (Y) with Prob. = 0.074 >  $\alpha = 0.05$ .
3. For variables Inflation (X3) obtained t value counted -3.140 with a negative direction. Because t arithmetic (-3,140) < t table (1,980), then H0 is rejected. Therefore, it can be concluded that Inflation (X3) partially has a negative and significant effect on the Return of Shares (Y) with Prob. 0.002 >  $\alpha < 0.05$ .
4. For External Ownership variable (X4) obtained by t value equal to 0.974 with positive direction. Because t arithmetic (0.974) < t table (1,980), then H1 is rejected. Therefore, it can be concluded that Extrnl-O (X4) partially has a positive and insignificant effect on Return of Shares (Y) with Prob. = 0.333 >  $\alpha = 0.05$ .
5. For variables Insider Ownership (X5) obtained t value counted -2.413 with a negative direction. Because t arithmetic (-2,413) < -t table (-1,980), then H0 is rejected. Therefore, it can be concluded

that Insider-O (X5) partially has a negative and significant effect on the Return of Shares (Y) with Prob. = 0.018 >  $\alpha = 0.05$ .

6. For variables Dividend (X6) obtained t value counted -2.722 with a negative direction. Because t arithmetic (-2.722) < -t table (-1,980), then H<sub>0</sub> is rejected. Therefore, it can be concluded that Dividend (X6) partially has a negative and significant effect on the Return of Shares (Y) with Prob. = 0.008 <  $\alpha = 0.05$ .
7. For variables Firm Size (X7) obtained t value counted -3.343 with a negative direction. Because t arithmetic (-3.343) < -t table (-1,980), then H<sub>0</sub> is rejected. Therefore, it can be concluded that Size (X7) partially has a negative and significant effect on the Return of Shares (Y) with Prob. = 0.001 <  $\alpha = 0.05$ .

From the results of the above explanation of variables that affect positively and not significantly partially to the dependent variable Return Shares are independent variables Dollar Exchange (X1), Interest Rate (X2) and External Ownership (X4), while the negative and significant independent variables Inflation (X3), Insider Ownership (X5), Dividend (X6), and Firm Size (X4), on Stock Return (Y).

Results of research conducted with implications:

#### 1. Theoretical implications,

Agency Theory says that managers as agents who are held responsible by shareholders do not always act in the interests of shareholders because they have different goals (Jensen and Meckling, 1976). Furthermore Jensen and Meckling said that the agency conflict occurred because of the separation of ownership and control functions. This separation can encourage managers to tend to behave opportunistically more self-serving to achieve prosperity, rather than the prosperity of the owner.

Thus, managers are interested in investing capital in order to increase growth and decrease corporate risk through diversification, although this may not necessarily improve shareholder wealth (Bethel and Julia, 1993). Managers in public companies have an incentive to expand the company beyond the optimal size, although the expansion is done on projects that have a negative net present value (NPV).

The decrease in the composition of managerial ownership will affect the increase of investment that can increase the Return of Shares. This shows that if the company in Indonesia ownership of shares by the management of large companies will control the company not for the welfare of the owner and increase the Return of Shares. But to improve its own welfare.

#### 2. Managerial implications

In the scope of financial management financial management function is how management takes financial decisions. Jensen and Smith (1984); Weston and Brigham (1991), explains financial decisions consisting of investment decisions, funding decisions, and dividend policies. Company objectives can be achieved through the implementation of the financial management functions carefully and appropriately, since any financial decisions taken will affect other financial decisions and will in turn impact the value of the company (Jensen and Smith, 1994; Fama and French, 1998 ). The company's goal is to increase the value of the company, which is reflected in its share price (Wright and Ferris, 1997; Walker 2000; Qureshi, 2006). Key decisions taken by the company include investment decisions, funding decisions, and dividend policies. An optimal combination of all three will maximize the value of

the firm, thus the decisions are interrelated with each other (Mbodja and Mukhrejee, 1994; Qureshi, 2006).

The implications of the results of this study in relation to financial decision-making by managers are to provide guidance for managers in carrying out corporate financial management functions, with the aim of enhancing corporate value. The implication of this research result to the company's financial management function is in carrying out the Dividend policy function, the result of hypothesis testing 6 shows that Dividend policy (DPR) has a negative and significant effect to Stock Return. Thus, the results of testing this hypothesis proves that the managers of the company in determining the policy Dividend, profitable and increase the Return of Shares.

### 3. Implications for Investors

The results of this study include the managers of these companies showing sufficient evidence that there is an opportunistic behavior. This is indicated by the positive and insignificant influence of external stock ownership on Stock Return (hypothesis 4). Furthermore, it is shown by the existence of negative and significant influence of internal share ownership to stock return (hypothesis 5).

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of hypothesis testing, it can be concluded as follows:

1. The results of hypothesis testing obtained 4 accepted hypothesis that is, hypothesis 3, hypothesis 5, hypothesis 6 and hypothesis 7. While the hypothesis is rejected hypothesis 1, hypothesis 2 and hypothesis 4.
2. Based on the results of testing on hypothesis 1, found enough evidence that the managers of the companies sampled in this study did not exhibit opportunistic behavior. It can be proven that the exchange rate of dollar against the rupiah has an effect and not significant to the stock return.
3. Based on the results of testing on hypothesis 2, found enough evidence that the managers of the companies sampled in this study did not exhibit opportunistic behavior. It can be proved such that the Interest Rate is influential and not significant to Stock Return
4. Based on the results of testing on hypothesis 3, found enough evidence that the managers of the companies sampled in this study did not exhibit opportunistic behavior. It can be proved that Inflation has an effect on and significant to Return of Stock.
5. Based on the results of testing on hypothesis 4, found enough evidence that the managers of the companies sampled in this study did not exhibit opportunistic behavior. It can be proved that External Share Ownership has a significant and insignificant effect on Stock Return.
6. Based on the results of hypothesis testing 5 it can be concluded that the managers of the companies sampled in this study have utilized the use of Internal Shares Ownership by management and commissioners of the company to increase profit or Return of Shares. This can be proven, Ownership of Internal Shares are significant and significant to the Stock Return
7. Based on test results on hypothesis 6 it can be concluded that Dividends can increase Stock Return. This is proven to be significant and significant Dividend to Stock Return.

8. Based on the results of testing on hypothesis 7 it can be concluded that Company Size can increase Stock Return. This is proven Size Company significant and significant to the Stock Return..

Based on the discussion, the limitation of research and conclusion then there are some suggestions that can be put forward as follows:

1. Company

Ownership of Internal Shares has a negative and significant effect on Stock Return and research results for External Share Ownership proved ineffective as a control mechanism means that it has not been able to prevent opportunistic behavior of corporate managers.

The decrease in the composition of managerial ownership will affect the increase of investment that can increase the Return of Shares. This shows that if the company in Indonesia ownership of shares by the management of large companies will control the company not for the welfare of the owner and increase the Return of Shares. But to improve its own welfare.

This is very important to be done by the company's strategy in dealing with external and internal factors so that stock returns provide maximum income / optimal and continue to survive and grow.

2. Investors

For investors in investing should study and pay attention to the company's share ownership structure. According to the results of this study found that the ownership of internal shares of the company

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## INVESTOR REACTION TO ANOMALY & RECOVERY SERVICE OF TELKOM-1 SATELLITE YEAR 2017

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### ABSTRACT

*The purpose of this study is to analyze the Indonesian capital market reaction to TELKOM-1 service anomaly incidents on August 28, 2017 and the recovery of TELKOM-1 satellite service on September 10, 2017 indicated by abnormal return (AR) and trading volume activity (TVA). This research uses Event Study method to analyze market reaction and t-test different to analyze difference between AR and TVA before and after event period. The sample used in this research is TELKOM shares as the service provider and the shares of the five major banks of service users; Mandiri, BNI, BRI, BTN and BCA using survey method of stock price data in IDX and observation of data from t-10 up to t + 10. The results showed abnormal return and trading volume activity in two periods of event varied but not statistically significant, either for TELKOM shares or group of five major banks. Significant differences in abnormal return and trading volume activity occur when compared between TELKOM shares and 5 Bank shares.*

**Key Words:** Abnormal return (AR), Trading Volume Activity (TVA)

**JEL Classification:** C19, G13, G14

### 1. INTRODUCTION

Market reaction over the information submitted by the company is shown by the presence of the company's stock price changes. This reaction can be measured by using the return value as the price changes or by using the abnormal return (abnormal return). Abnormal return is the return of the investor that does not match the hope. Abnormal return in the form of the difference between the expected return with the return obtained. Other related market reaction over the information submitted by the company is transformed in the form changes of daily transaction volume and frequency of transactions. Stock trading volume, hereinafter referred to as the Trading Volume of Activity (TVA). TVA used to measure whether the individual financiers know information issued by the company and using it in the purchase or sale of shares, so that will benefit above normal (abnormal return).

On Friday, August 25, 2017, Telkom-1 Satellite had its service anomaly approximately 16.51 PM. This triggered a shift in the direction of the antenna Telkom-1 satellite that made satellite transponder services disrupted. As a result, a number of services that require satellite connections cannot be running optimally. These disorders also affect a number of services for banking and broadcasting. Telkom-1 satellite has 63 customers, where eight customers are VSAT service provider with 12,030 sites. While the total ground segment affected by this case more than 15,000 sites. Illustration of service anomaly of TELKOM-1 Satellite as shown in Figure 1 below.

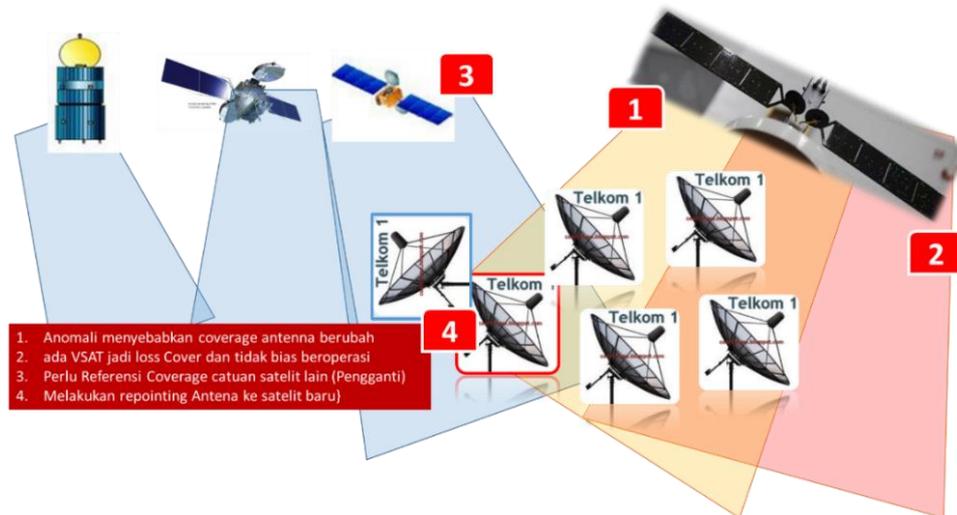


Figure 1. Illustration of TELKOM-1 Satellite Anomaly

In Figure 1 indicated that initial position of Satellite coverage was area-1, due to anomaly service it turned into area-2. It impact device antenna receiver (4), partially cannot receive information from TELKOM-1 Satellite and has to be changed the direction heading into another satellite coverage (3).

Revenue from satellite business contributed 0.6% total income of Telkom Group. Telkom-1 was insured to Jasindo, the insurance company in Indonesia, which has a strong track record in the sector. The impact cost of this event roughly 0.2% of revenue of TELKOM group. TELKOM provides satellite communication services to users, including the following: Broadcaster, banks, TNI/POLRI, Government, Enterprise and TELKOM themselves. This event affected the shares of TELKOM as a provider TELKOM-1 Satellite (Percentage shares of TELKOM in BEI was 2.47% shares) and shares of Five major banks (Mandiri (1.13% shares IDX), BNI (0.37% shares IDX), BRI (3% shares IDX), BTN ( 0.21% shares) and BCA (0.3% shares IDX)). A total of five Banks have a proportion of shares around 5% of the total number of shares that are on the BEI. In General, the Bank uses the TELKOM-1 services for ATM connection with VSAT terminal support. This becomes important because it involves 15,000 sites scattered throughout Indonesia ATM and involve large national banks: Bank Mandiri, BRI, Bank BNI, Bank BTN and BCA.

Given the big amount of site customers and spread coverage then this incident caused big cost and impact on the company's image service providers and service users. The company's stock price will tend to decline. Users of Telkom-1 satellite dominated by banking and Government, including the Indonesian armed forces and police which has very broad covering major cities to remote locations throughout Indonesia. The five main banks as the users of TELKOM-1 satellite service are: Bank Mandiri, BRI, BNI, BTN and BCA.

The event examined consists of two parts the first part on on 28 August 2015 when TELKOM did a press conference and the second part on September 10, 2017 when TELKOM did a press conference of the associated recovery services of TELKOM-1.

The research period is 21 days Exchange (t-10 to t + 10) with the announcement of the first took place on 28 August 2017 and the second event occurred on 10 September 2017.

In the event of satellite Anomaly T0 on 28 August 2017 will be researched the abnormal return difference and the difference in Trading Volume of Activity for the stock of TELKOM Stock, 5 banks and TELKOM Shares with the stock comparison to 5 banks. Similarly with the event of satellite Recovery with T0 10 September 2017.

## **2. LITERATURE REVIEW**

Abnormal return can occur due to certain events, such as national holidays, the beginning of the month, the beginning of political atmosphere resistant, which is unpredictable, events, stock split, offer Prime stock, and others. Abnormal return is generally influenced by economic events, the non-economic and political events. Macro-economic factors such as interest rates, inflation, monetary and fiscal policy affect the stock market overall, while the micro economic factors affect the performance of individual companies. The non-economic events such as earthquakes, floods, plane crash, terrorist attacks and natural disasters can also have a significant effect on the country's economy. Capital market integration is influenced by some events that occur, such as the crisis of the economic, political crisis and natural disaster crisis.

Such events sometimes lead to the increasing integration of the capital markets but can also lead to capital markets increasingly segmented (Nainggolan, 2010).

However, some recent research event study tend to observe the reaction of the stock market by using a variety of events that are not associated with economic activities. According to Yanti, Firga, (2012). Examine abnormal return around the days of the announcement of the Syariah Indonesia stock index (ISSI), to analyze the data is done with the study of events. The estimation period used is 15 days, 10 days before and 5 days after the launch of ISSI. The population in this research is the whole company are registered into the ISSI. While the sample is determined by the method of purposive sampling. The results of this research concluded the presence of abnormal return of shares during the period of observation 15 days before the launch of ISSI. As for the period of 10 days and 5 days before the launch and 15 days, 10 days, 5 days after the launch of ISSI test results one sample t-test showed that there is no abnormal return. On testing by using a paired sample t-test can be concluded there is a difference of abnormal return in the period of observation is 15 days. While observation for a period of 10 days and 5 days there was no difference in abnormal return (AR).

Whereas Istanti (2013) in her research concluded that there was a relationship between dividend policies with stock prices on the Indonesia stock exchange LQ45 and there is the influence of the dividend policy against stock price LQ45 in Indonesia stock exchange.

Ramiah and Graham (2013) research on the impact of domestic and international terrorist attacks against Indonesia's stock market with the findings showed that the equity portfolios were affected by the September 11 attacks and the Bali bomb attacks.

Chandra, at.al. (2014) researching on event study related to political events in Indonesia. Such research aims to know the difference in average abnormal return (AAR) and the average trading volume of activity (ATVA) group LQ-45 before and after the presidential elections in Indonesia years 2004 and 2009. Data analysis technique used is to compare paired sample t-test. The research results showed that there was no difference in average abnormal return and average trading volume of activity significantly on the LQ-45 group before and after the presidential elections in Indonesia years 2004 and 2009.

Sajid Hassan (2014) researching on the influence of political events in Pakistan against the stock market, with the results show that political events in Pakistan to return the shares on the stock exchanges of Pakistan.

### **3. METHODOLOGY**

#### **3.1 RESEARCH QUESTIONS**

We formulated the problem with research questions as follows:

1. Is there any significant difference of the abnormal return (AR) and trading volume activity (TVA) for TELKOM share while the announcement of TELKOM-1 satellite anomalies on 28 August 2017?
2. Is there any significant difference of the abnormal return (AR) and trading volume activity (TVA) for TELKOM share at the time of the announcement of the recovery of TELKOM-1 on September 10, 2017?
3. Is there any significant difference of the abnormal return (AR) and trading volume activity (TVA) for Banks share at the time of the announcement of TELKOM-1 anomaly on Friday 28 August 2017?
4. Is there any significant difference the abnormal return (AR) and trading volume activity (TVA) for Banks share at the time of the announcement TELKOM-1 recovery on September 10, 2017?
5. Is there any significant difference of the abnormal return (AR) and trading volume activity (TVA) between TELKOM shares compared to the stock of the bank on 28 August 2017?
6. Is there any significant difference of the abnormal return (AR) and trading volume activity (TVA) between TELKOM shares compared to the stock of the bank on September 10, 2017?

#### **3.2 MODELING**

In this paper, we uses Event Study method to analyze market reaction and t-test different test to analyze difference between AR and TVA before and after event period. The samples used in this research are TELKOM shares as the service provider and the share of the five major banks; Mandiri, BNI, BRI, BTN and BCA using survey method of stock price data in IDX and observation of data t-10 up to t + 10.

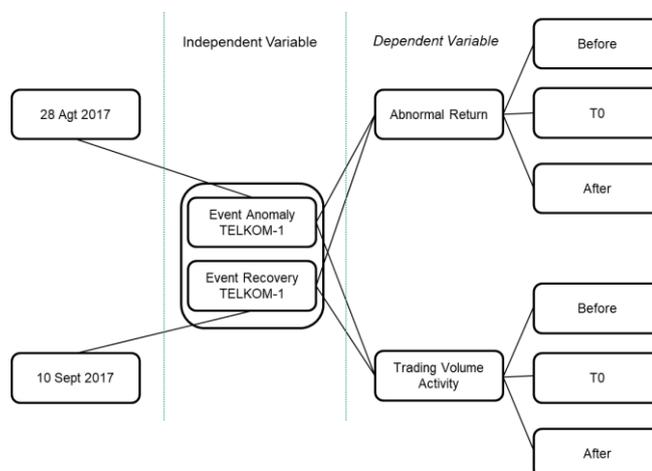


Figure 2. The Framework & Model

For event of satellite Anomaly with T0 on 28 August 2017 will be researched the abnormal return difference and the difference in Trading Volume of Activity for the stock of TELKOM, 5 banks and TELKOM Shares compared to 5 banks. Similarly with the event of satellite Recovery with T0 10 September 2017.

Independent variables used in this study is the Event announcement of TELKOM-1 Satellite anomaly on 28 August 2017 and recovery of TELKOM-1 satellite service on 10 September 2017. Table 1 the following submitted a list of variables, definitions and sources of reference.

Table 1. Operation Variables

Variabel	Simbol	Definisi	Ukuran	Sumber
<i>Abnormal Return</i>	<i>AR</i>	It is the difference between the return actually happens with expectation return	$AR_{it} = R_{it} - E(R_{it})$	Laksana and Taman (2014). Chandra, Anastasia (2014)
<i>Trading Volume Activity</i>	<i>TVA</i>	The Volume of trading Activity in comparison the number of shares <i>i</i> formulated traded at time <i>t</i> with the total number of shares	$TVA = \frac{\sum \text{saham } i \text{ yg diperdagangkan waktu } t}{\sum \text{saham } i \text{ yg beredar saat } t}$	Laksana and Taman (2014). Chandra, Anastasia (2014)

outstanding  
 when it.

Data analysis in this research will be done separately for each event announcement, first happened on 28 August 2017 and the second one occurred on 10 September. Prior to further testing will be conducted test of normality in order not to violate the basic assumptions of the statistical tools.

Statistical testing against abnormal return uses to see the significance of abnormal return in the period of event (event window). The statistically significant is not synonymous with zero (positive to negative for good news and bad news). Testing-t (t-test) is used for this purpose, one sample t-test to test at the moment T0, while to compare the abnormal return before and after the announcement of the anomaly and recovery of TELKOM-1 satellite service using paired samples t-test. To compare TVA before and after the announcement of the anomaly and recovery of TELKOM-1 satellite service also uses a paired sample t-test. To compare the abnormal return and TVA in anomaly event and recovery event between stocks TELKOM and bank shares performed using paired samples t-test.

In General, to test the zero hypothesis which States that the average abnormal return is equal to zero, the t test is used, whereas as standard use standardization of Abnormal Return (SAR). In this study, t tests were used to test the null hypothesis that explains that the average abnormal return equal to zero is as follows:

$$T_{\text{calculation}} = \frac{\beta}{\text{Error Stanadrd Estimation}}$$

or,

$$SAR_{it} = \frac{AAR_{it}}{\text{Error Standard Estimation}}$$

### 3.3 DATA

The data being used in this research is secondary data research. The information in the form of secondary data stock prices of TELKOM and major banks stocks (Mandiri, BRI, BNI, BCA and BTN) registered in BEI period August-September 2017. Such data will be used as the basis for calculating the variables that the researcher is already specified.

This study uses the data from Indonesia stock exchange with good liquidity and represents the whole of the stock that is on a list of shares in Indonesia stock exchange. In order to represent the entire activity then selected stocks TELKOM shares and banks that became the main TELKOM-1 satellite service such as: Bank Mandiri, BRI, BNI, BCA and BTN.

Table 2. Code of TELKOM Shares and 5 Banks

No	Code	Company Name
1	TLKM	PT Telekomunikasi Indonesia
2	BMRI	PT Bank Mandiri
3	BBTN	PT Bank Tabungan Negara
4	BBRI	PT Bank Rakyat Indonesia
5	BBNI	PT Bank Negara Indonesia
6	BBCA	PT Bank Central Asia

(Source: www.idx.co.id)

The samples are members of a population selected to involve in research, both for observed, given the treatment, nor asked for opinions that are being explored (Indrawati, 2015).

In this study, the method that is carried out for sampling is the purposive sampling, namely sampling based on certain criteria. The specified criteria are as follows:

1. the company which provided the sample is firm TELKOM and banking companies that are included in the main users of TELKOM-1 satellite service IE: Bank Mandiri, BRI, BNI, BCA and BTN in the period of August and September 2017 in successive – takes part in both events anomaly and recovery of TELKOM-1 satellite service. This is to keep the consistency of the results over these events.

2. The time period of occurrence (event period) of TELKOM and companies whose shares are included in the entrance of the main users of banking services of TELKOM-1 Satellite: Bank Mandiri, BRI, BNI, BCA and BTN in the period of August and September 2017 is not do a stock split, dividend announcements, mergers, right issues. So the sample selected this really shows that the later return the stock completely clean from cofounding effect brought about by the company.

The methods used in this research study, in which event is the event study is a study that examines the market reaction against an event (event) for which information is published as of the announcement. This research uses the method of market-adjusted model to find the value of your expected return is next used to calculate abnormal return. The first step to do is determine the research period. The research period is 21 days Exchange (t-10 to t + 10) with the announcement of the first happening on the 28th August 2017 and the second event occurred on 10 September 2017. Event identification used is presented in Figure 3.2 Figure 3.3 and as follows:

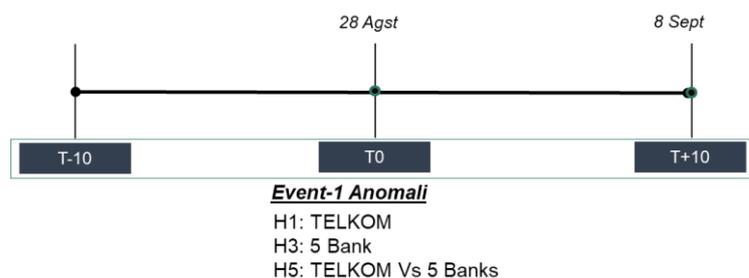


Figure 3. Identification Event Anomaly of TELKOM-1

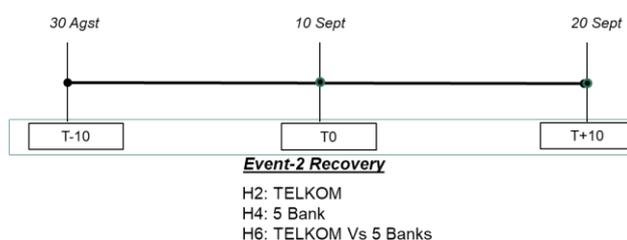


Figure 4. Identification Event Recovery Services of TELKOM-1

#### 4. RESULTS AND DISCUSSION

To avoid confounding effects, then the necessary data of companies that do a corporate action that is selected in this research the companies that there is no dividends release during the period of the Event. Telkom and the 5 banks are not included in the company's share dividend in the range of the event.

As for the number of shares of TELKOM and 5th of the bank is as shown in the table below.

Table 3. Number of TELKOM Shares and 5 banks in BEI

NO	Company	Code	Stocks	Remark	
1	TELKOM	TLKM	100,799,996,399	100,799,996,399	Telkom Stocks
2	Mandiri	BMRI	46,199,999,998	204,266,584,138	5 Banks Stocks
3	BTN	BBTN	8,623,285,575		
4	BRI	BBRI	122,112,351,900		
5	BNI	BBNI	15,121,201,105		
6	BCA	BBCA	12,209,745,560		

The percentage shares of TELKOM as a provider TELKOM-1 Satellite in bursa was 2.47% shares and the shares of Five major banks (the standalone (1.13% shares IDX), BNI (0.37% shares IDX), BRI (3% shares IDX), BTN (0.21% shares BEI and BCA (0.3% shares of IDX). A total of five Banks have a proportion of shares around 5% of the total number of shares that are on the BEI.

Table 3. Resume Statistics Test Results

	Variable	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
H1	AR	0.001961	0.009919	0.00313674	0.625	9	0.547
	TVA	-0.000030	0.000151	0.00004773	-0.629	9	0.545
H2	AR	-0.001113	0.012119	0.00383241	-0.290	9	0.778
	TVA	-0.000140	0.000310	0.00009790	-1.430	9	0.186
H3	AR	-0.001113	0.012119	0.00383241	-0.290	9	0.778
	TVA	-0.000054	0.000279	0.00008818	-0.612	9	0.555
H4	AR	-0.004254	0.012739	0.00402837	-1.056	9	0.318
	TVA	-0.000131	0.000435	0.00013763	-0.952	9	0.366
H5	AR	0.000889	0.011655	0.00254344	0.350	20	0.730
	TVA	-0.000306	0.000176	0.00003846	-7.948	20	0.000
H6	AR	-0.003146	0.009329	0.00203575	-1.545	20	0.138
	TVA	-0.000293	0.000280	0.00006119	-4.786	20	0.000

To test whether the variables are independent or not the Event significantly influential Events/partial bound against the dependent variable/Abnormal Return and Trading Volume of Activity, then testing that was done was the one sample t-test and followed with paired t test for the significance of before and after the event .

Based on statistical processing data in sub chapter 4.3, it can be stated that the independent variable Event has positive but not significant effect on dependent variable Abnormal Return and Trading Volume Activity. By statistical testing for the six hypotheses can be researched as in Table 3.

Differences in abnormal return both before and after the occurrence of no significant difference. It can be explained that TELKOM-1 Satellite anomaly service information is received by the society and responded well according to the announcement and clarification given by TELKOM and the government so that the society, especially market participants can anticipate the event well. So that the stock price changes but still follow the stock price trend change that occurred during the observation period. In the observation and test results also illustrated that there is no significant difference of Abnormal Return (AR) and Trading Volume Activity (TVA) on both events both in TELKOM and Bank shares.

Meanwhile, based on the result of statistical test of TELKOM share comparison and 5th share of Bank, it can be concluded as follows:

1. In the case of abnormal return difference between TELKOM shares and 5 banks shares there is no significant difference. It can be explained that TELKOM-1 Satellite anomaly service information received by the public is responded well according to the clarification announcement submitted by TELKOM and the government so that society, especially market players can anticipate the event well.
2. In the case of differences in trading volume activity (TVA) between TELKOM shares and shares of 5 banks there is a significant difference. This means that the market reaction to TELKOM shares is more significant compared to the shares of 5 banks. It should be a special note for TELKOM, because although there is no abnormal return difference before and after event, but in terms of stock trading volume there is a significant difference between TELKOM's share trading volume as a service provider compared to TELKOM-1 service user, these are the five banks. This is because the market reacts to TELKOM shares that are more directly related to TELKOM-1 anomalies, with the occurrence of larger stock transaction volumes, compared to the service users, in this case the five banks.

The results of this study align and support previous research conducted by: Danupranata and Afianingsih (2002), Research Tjandra, Ronowati. (2006), Yusuf et.al (2009), Yanti, Firga, (2012), Sentia and Putra (2013) and Chandra, at.al. (2014) which generally states that an Event will cause a difference between the average abnormal return before and during and after the announcement. While the abnormal return of shares in the couples before the period after it turns out there is no significant difference. The results of this test indicate that there is the same level of market expectations of the abnormal share returns. This means that in the period before the after event market ability to get abnormal return is the same. The same level of expectation shows that no public investor (new investor) has more information to get an abnormal return. This implies that the overall market does not react to the event.

The results of this study are not in line and support research conducted by Istanti (2013), Ramiah and Graham (2013), Sajid and Hassan (2014), Femianita and Asandimitra (2014) and Sedyoko (2017) respectively in his research concluded that there is a relationship between the event and the stock price on the Stock Exchange there is an effect of the event on the related stock price in the Stock Exchange.

With the results of research and discussion above then there are implications to some related parties as follows below.

#### **4.1. IMPLICATIONS FOR TELKOM**

This satellite anomaly event has a significant cost impact for TELKOM. TELKOM incurred a considerable cost of approximately 0.22% of TELKOM's revenue in group with the three major components of expenses arising from the incident of TELKOM-1 satellite anomalies are sequentially the cost of leasing foreign transponders (64% of cost), the cost of repointing antenna (18.5%) and Penalty Customer (9.5%).

Taking into account the results of the study which showed no significant difference in abnormal return and trading activity volumes before and after the event, but behind there are other costs borne by material ie lost customers, corporate image and customer and public trust on the planning and quality TELKOM services forward in this satellite service. The fulfillment of the SLA (Service Level Agreement) warranty becomes an illustration of TELKOM's commitment to fulfill service guarantee with a reliable system.

Evaluation and monitoring of system age is absolutely done by considering not only practice-based industry but also considering age based on the manufacturer's initial design. This is as one of the anticipated risks with the start of planning the preparation of satellites and replacement systems. TELKOM will launch a new satellite, TELKOM-4 in Q2 2018. While in December 2017 Telkom conducts mergers & acquisitions of satellite companies domiciled in Malaysia, in addition to increasing coverage as well in expanding into the international market.

In addition, the preparation of backup systems and continuing to modernize the network by not relying on satellites but switching to fiber-optic network systems and radio waves, especially for enabling areas, is a major consideration for future network development solutions. So the complexity that occurs during interruptions and anomalies can be reduced far below the conditions encountered at the time of satellite service anomalies.

#### **4.2. IMPLICATIONS FOR THE BANK**

For banks, these anomalous events have implications that communications systems are built, especially for direct customer access (generally via ATM), so as not to rely on a single communications service provider. In general the bank has a replacement support system that will take over the system when the main system is disrupted. In some location solutions using modem devices instead of VSATs are a better solution in terms of quality and availability, although there is a cost for setting up this model. Another location is done by repointing the antenna to be directed toward the new satellite position. Costs that also arise not least for this activity.

Setup backup system, especially with other service providers with other transmission mode if possible be a viable option and solution. Besides, along with technological developments, communicant system with modem by modernizing the network switch to fiber optic network and radio wave system, become the main consideration for solution development of next communication solution. Improving SLA contracts with service providers is crucial especially with regard to the articles dealing with backup systems and quality assurance and service reliability.

#### **4.3. IMPLICATIONS FOR INVESTORS**

For investors this incident indicates that what is done by TELKOM in doing recovery and publication of the incident and the process done become a picture of TELKOM response to this wide impact event.

Response made positive and good response by the market so that there is no fluctuation of differences between AR and TVA significant between before and after event. The key word in this incident is the response and communication from TELKOM.

## 5. CONCLUSIONS AND RECOMMENDATIONS

After conducting research and discussion of Investor Reaction to Anomaly Announcement and Recovery of Satellite Service TELKOM-1 (Case Study In Indonesia Stock Exchange for TELKOM Shares and shares of 5 banks), then hereinafter we conclude some things as follows:

1. Based on statistical processing, it can be concluded that the independent variable Event positive effect on the dependent variable Abnormal Return and Trading Volume Activity but not significant.
  - a. Differences in abnormal return both before and after the occurrence of no significant difference.
  - b. It can be explained that TELKOM Satellite anomaly service information is received by the society and responded well according to the announcement and clarification given by TELKOM and the government so that the society, especially market participants can anticipate the event well.
  - c. There were no significant differences in abnormal return (AR) and Trading Volume Activity (TVA) on both events both in TELKOM and Bank shares.
2. Based on the comparative statistical data processing of TELKOM's share test and the Bank's 5th Shares:
  - a. Differences in abnormal returns between TELKOM shares and 5 banks' shares are not significantly different.
  - b. It can be explained that TELKOM Satellite anomaly service information received by the public is responded well according to the clarification announcement submitted by TELKOM and the government so that society, especially market players can anticipate the event well.
  - c. There is a significant differences In TVA differences between TELKOM shares and 5 banks' shares. It can be explained that the market reaction to TELKOM shares is more significant compared to the 5 bank stocks on trading volume activity parameters in both events
3. TELKOM should consider the risk factors due to these satellite anomaly events with substantial cost impact by preparing more feasibly the feasibility of satellite operations and the preparation of backup systems that support the operation of satellite services, including the preparation of replacement satellites according to the required capacity.
4. Banks should set up backup systems, especially with other service providers with different transmission modes so that the level of service availability can be well maintained.

5. Investors are advised to continue to buy TELKOM shares as stocks with large market capital to get a gain with long-term investment.

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## THE EFFECT OF THE CONTROL ENVIRONMENT TO EFFECTIVENESS INTERNAL CONTROL SYSTEM (Research in PT XXX, Tbk)

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### ABSTRACT

*This research is motivated by the data not yet achieved the target of audit result of internal control in PT XXX, Tbk. Although there is no material weakness, there are still some records that need to be acted upon. This encourages us to examine the Control Environment as the most important component within the scope of the internal control system and is the foundation for other internal control components.*

*In this study, tested the principles of Control Environment and its effect on the effectiveness of internal control system. Control Environment has 5 (five) principles, namely: (1) commitment to integrity and ethical value; (2) responsible oversight; (3) the determination of structure, authority and responsibility; (4) commitment to competence; (5) enforcement of accountability. While the effectiveness of internal control system includes 3 (three) dimensions, namely: (1) effectiveness and efficiency of operational activities; (2) reliable financial and information reporting; (3) compliance with laws and regulations.*

*The data has been collected and then analyzed further, and the data processing technique using Partial Least Square (PLS) technique using SmartPLS software support 2. The result of the research on Control Environment principles indicates that the principle of Commitment to Integrity and Ethics and the principle of Accountability Enforcement have a significant effect on the effectiveness internal control system. Simultaneously, the Control Environment gives 75.3% influence on the Effectiveness of Internal Control System in XXX.*

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**Key Words:** COSO, Control Environment, Tone at the Top, Internal Control.

### 1. INTRODUCTION

As listed and traded listed on BEI and NYSE, in addition to complying with applicable laws and regulations in Indonesia, XXX also complies with the Sarbanes Oxley Act ("SOX") and other SEC regulations. At least, there are two SOX rules that are relevant to the company. First, SOX Section 404 which states that management is responsible for internal control over financial reporting, Internal Control over Financial Reporting (ICoFR), to ensure the reliability of financial reporting and preparation

of financial reporting. Secondly, SOX Section 302 requires management's responsibility for the creation, maintenance, and evaluation of the effectiveness of procedures to ensure that the information in the report complies with the provisions of the US Capital Market Regulation.

Internal control is a process undertaken by the Board of Commissioners, Directors, management and other personnel within an organization, designed to provide reasonable assurance, that the organization can achieve its objectives which are divided into three parts:

- a. Effectiveness and efficiency of operational activities
- b. Reliable, timely, and reliable company reporting
- c. Compliance with laws and regulations

On the other hand, XXX has implemented a transition of the COSO Internal Control Integrated Framework framework from the previous version of 2006 to the 2013 version that has been effectively implemented in 2014/2015, as shown below:

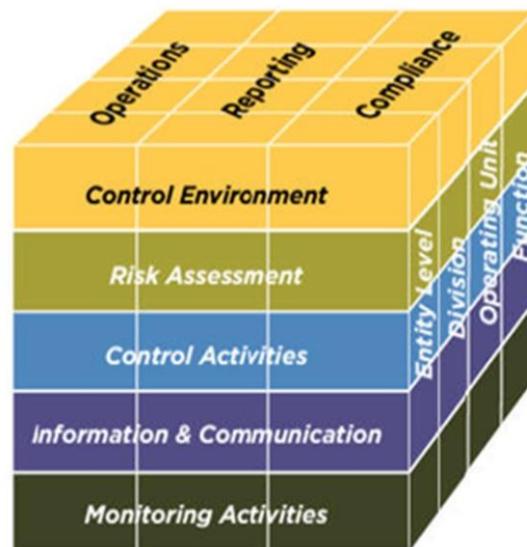


Figure 1. COSO Internal Control-Integrated Framework

One of the most important components within the scope of the company's internal control system in the drawings of the COSO framework and the foundation for other internal control components is the control environment reflecting the overall commitment, behavior, concern, and steps in implementing operational control activities company. In this context, the control environment is placed as a key factor for XXX in supporting an effective internal control system, in accordance with the following statement:

- 1) The control environment is the foundation of the discipline and structure of all other internal control components (Guy et al, 2002).
- 2) The principles embedded in the control environment component are essential to ensure the overall effectiveness of the internal control system (The Institute of Internal Auditors, 2011).
- 3) The control environment is a set of standards, processes, and structures that provide the basis for internal control throughout the organization (COSO, 2013).

- 4) The control environment shows sets or tones within an organization that affects the control consciousness of the people within the organization and is strongly influenced by the atmosphere created by the company leadership or tone at the top ( COSO, 2013).
- 5) The resulting control environment has a pervasive impact on the overall internal control system (COSO, 2013).

The implementation of internal control in XXX is still accompanied by the following phenomena: (1) identified several findings or findings in internal audit controls that are repeatable. This may indicate that 'management did not track whether deficiencies are remediated on a timely basis'. Management has difficulty in identifying the root causes of various gaps or audit findings; (2) There is an issue of indiscipline and a lack of support/ tone at the top for integrity at both management and staff levels; (3) Non-achievement of target of Directors and Board of Commissioner that is Zero Significant Deficiency in audit internal control for years. In the framework of COSO Internal Control-Integrated Framework (ICIF) 2013, it is deemed necessary to examine Control Environment as the foundation of internal control.

## **2. LITERATURE REVIEW**

COSO (2013) states, internal control is a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance. This definition reflects certain fundamental concepts. Internal control is:

- 1) Geared to the achievement of objectives in one or more categories-operations, reporting, and compliance.
- 2) A process consisting of ongoing tasks and activities-a means to an end, not an end in itself.
- 3) Affected by people-not merely about policy and procedure manuals, systems, and forms, but about people and the actions, they take at every level of an organization to affect internal control.
- 4) Able to provide reasonable assurance-but not absolute assurance, to an entity's senior management and board of directors.
- 5) Adaptable to the entity structure-flexible in an application for the entire entity or for a particular subsidiary, division, operating unit, or business process.

In the Chartered Accountant Module of the Indonesian Institute of Accountants, internal control is an applied process to provide reasonable assurance that control objectives can be achieved. The control objectives are:

- 1) Maintain assets, prevent or detect unauthorized acquisitions, use or deletion.
- 2) Ensure that the reports record and report the company's assets accurately and reasonably.
- 3) Provide accurate and reliable information.
- 4) Preparing financial statements based on predetermined criteria.
- 5) Encourage the achievement of compliance with managerial policies.
- 6) Compliance with applicable laws and regulations.

In accordance with the latest framework of COSO (2013), the control environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the

organization. The directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.

The variables of the control environment principle are as follows:

1. Commitment to integrity and ethical values
2. Responsible oversight that demonstrates independence in internal control
3. Determination of structure, authority, and responsibility
4. Commitment to competence
5. Enforcing accountability for internal control responsibilities

Rachmat (2006) stated that the elements of control environment influence significantly to the effectiveness of the internal control system. Elements of the control environment that have a significant influence are external factors, management directives, and human resources.

Gonen (2009) stated that there is a significant relationship between control environment and internal control.

Zaenuddin (2013) stated that integrity, structural and external control variables significantly influence internal control system. Human resource variable and management attention variable have not influence the internal control system.

Meanwhile, Kabir (2014) stated that all the control environment variables are highly rated by respondents, with the smallest number in 65% of respondents who believe that integrity and ethical values have been well executed.

### **3. METHODOLOGY**

#### **3.1 PARTICIPANTS**

Respondents are divided into groupings into three lines of defenses:

1. Respondents related to the implementation of internal control business processes, namely in business units and functional (first layer) as many as 52 employees.
2. Respondents related to internal control in terms of policy, corporate reporting, ethics, and risk (second layer) as many as 52 employees.
3. Respondents to units related to compliance supervision and evaluation of internal control, namely in legal and audit function (third layer) as many as 14 employees.

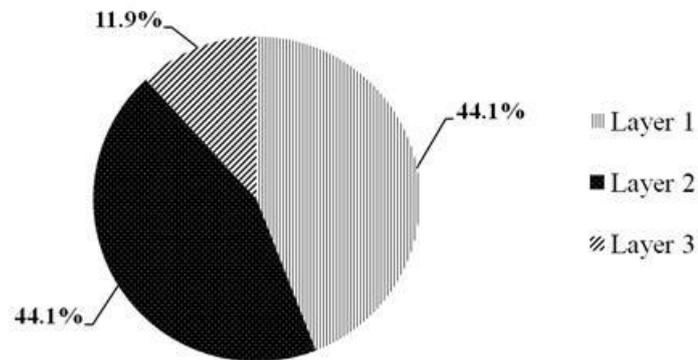


Figure 2. Percentage of Respondents

### 3.2 MEASUREMENTS

We decided to use PLS-SEM because of the number of respondents obtained in the 100employee range, and the main purpose of this study was to predict a pre-existing theory or framework on a new study object.

The Partial Least Square (PLS) model is defined to consist of two linear equations called the structural model (Inner model) and the measurement (Outer model). The structural model represents the relationship between latent variables that can not be measured directly, whereas the measurement model shows the relationship between latent variables and a group of manifest variables that can be directly measured.

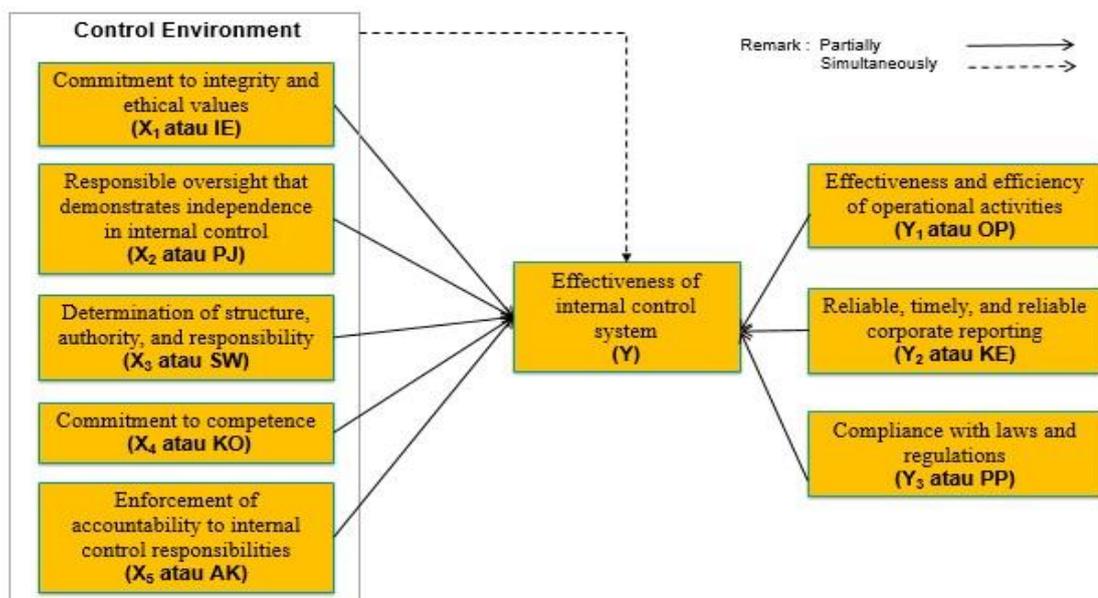


Figure 3. Inter-variable Relation Templates

This research model is described with 6 constructs, namely variable of control environment and variable of effectiveness of internal control system which will be further analyzed the influence and significance. Measurement models consist of 27 indicators used in this research.

The dependent variable consists of the principles of the control environment: (1) Commitment to integrity and ethical values; (2) Responsible oversight that demonstrates independence in internal control; (3) Determination of structure, authority, and responsibility; (4) Commitment to competence; (5) Enforcement of accountability to internal control responsibilities.

Independent variables used in this study is the effectiveness of internal control system consisting of indicators: (1) Effectiveness and efficiency of operational activities; (2) Reliable, timely, and reliable corporate reporting; and (3) Compliance with laws and regulations.

### 3.3 DATA ANALYSIS

In this study, data collection is done through an online questionnaire. The questionnaire was distributed via email, chat, and direct communication to the respondents who became the object of study. From the spread has been collected as many as 118 data of respondents. Respondents' answers are transformed into Likert 1 (strongly disagree) to 7 (strongly agree). Overall we do not do data reduction because all respondents fill the question completely, no answer bias and all data can be analyzed further.

### 4. RESULTS AND DISCUSSION

After done running model then obtained standardized value as presented in next picture.

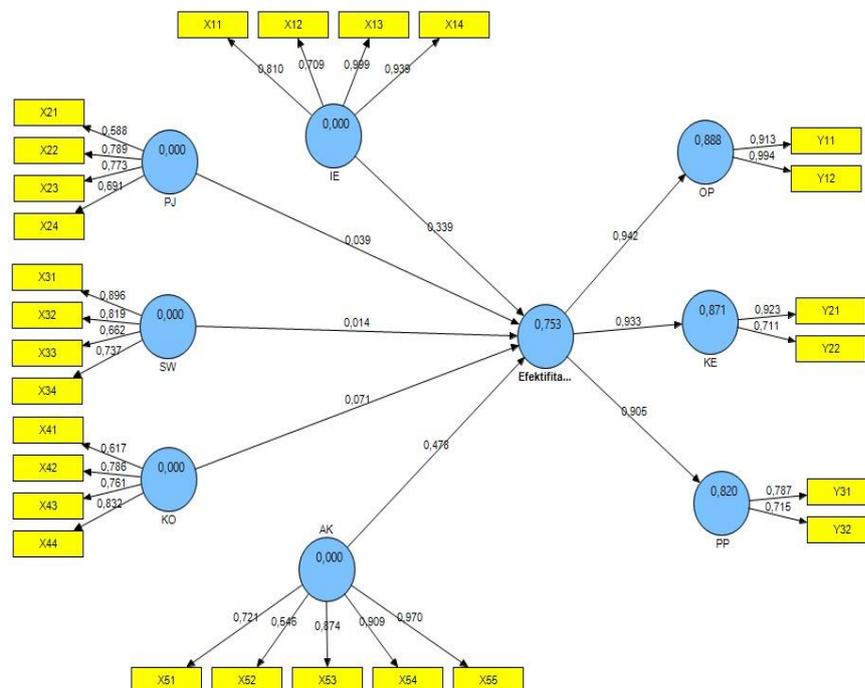


Figure 4. Smart Partial Least Square Analysis Analysis on Research Model

Table 1. Reliability

Variable	AVE	Composite Reliability	Cronbachs Alpha
IE (commitment to integrity and values of ethics)	0,760	0,926	0,887
PJ (responsible oversight)	0,511	0,805	0,893
SW (the determination of structure, authority and responsibility)	0,614	0,863	0,893
KO (commitment to competence)	0,567	0,838	0,842
AK (enforcement of accountability)	0,670	0,907	0,881
Effectiveness of internal control system	0,620	0,905	0,935

Table 1 shows the measure of Reliability for the measurement model, where each construct has a composite of reliability > 0.8, AVE > 0.5 and Cronbach Alpha > 0.6 so that all constructs have an adequate reliability value.

Table 2. Inner Model Evaluation

Variable	R Square	Q-Square
IE	-	0,542
PJ	-	0,527
SW	-	0,546
KO	-	0,439
AK	-	0,507
Effectiveness of Internal Control System	0,753	0,708

The value of R square > 0.67 (strong), and Q square (Stone-Geisser's) is greater than 0.35 (large), so it can be concluded that the inner model is fit.

Table 3. Calculation of Statistic Value

Relationship between Variables	Standardized Value (g)	SE (g)	t statistic	Structural Model
IE -> Effectiveness of Internal Control System	0,339	0,138	2,463*	$EF = 0,339IE + z_1$
PJ -> Effectiveness of Internal Control System	0,039	0,099	0,396	$EF = 0,039PJ + z_2$
SW -> Effectiveness of Internal Control System	0,014	0,113	0,124	$EF = 0,014SW + z_3$
KO -> Effectiveness of Internal Control System	0,071	0,143	0,498	$EF = 0,071KO + z_4$

AK -> Effectiveness of Internal Control System	0,478	0,123	3,873*	EF = 0,478AK + z <sub>5</sub>
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\* significant on  $\alpha=0.05$  (T table = 1.98)

Table 4. Hypothesis testing

Hypothesis		Parameter	statistic test	Conclusion
1	Control Environment -> Effectiveness of Internal Control System	0,753	62,50**	Ho rejected
2	IE -> Effectiveness of Internal Control System	0,339	2,463*	Ho rejected
3	PJ -> Effectiveness of Internal Control System	0,039	0,396	Ho accepted
4	SW -> Effectiveness of Internal Control System	0,014	0,124	Ho accepted
5	KO -> Effectiveness of Internal Control System	0,071	0,498	Ho accepted
6	AK -> Effectiveness of Internal Control System	0,478	3,873*	Ho rejected

\* significant on  $\alpha = 0.05$

\*\*F count (F Table = 2,295)

Table 4 shows that Hypotheses 1, 2 and 6 are significant at  $\alpha = 5\%$ . Hypothesis 1 shows that simultaneously the principles of Control Environment significantly influence the Effectiveness of Internal Control System with R<sup>2</sup> of 75.3%. While partially, only Commitment to Integrity and Values of Ethics (IE) and Enforcement of Accountability (AK) have a significant effect on the Effectiveness of Internal Control System, where Accountability Enforcement is more dominant influence with the effect coefficient of 0.478, compared to Commitment to Integrity and Ethics with influence coefficient of 0.339.

Simultaneously, the Control Environment gives 75.3% influence on Effectiveness of Internal Control System in XXX. This is in accordance with the statement that the Control Environment becomes the foundation of the Internal Control System, stated in COSO (2013), that "control environment is the foundation for the other control components. Reflects the tone set by top management and the overall governance, incentives, organization, and actions of the board of directors and management".

However, not all principles in the Control Environment have a significant effect on the effectiveness of the Internal Control System. There is a difference in the results of previous research, which is due to differences in the nature of the business, industry, culture, and COSO framework referred to.

The implications for XXX are:

- a. **Commitment to Integrity and Values of Ethics**

This principle has a significant influence on the effectiveness of the internal control system. Evaluation of compliance of standards of conduct for employees by Directors and senior leaders reflects the importance of this activity in XXX. It is fair, that as a large-scale business enterprise and have the obligation to comply with regulations, both national and international scale.

Against such deviations from such standards of business conduct or ethics, management is deemed necessary to identify problems and then make timely and consistent improvements. Directors and senior leaders must consistently demonstrate the importance of ethical integrity and values through their direction, actions, behaviors, and example as tone at the tops and always update behavioral or business ethical standards in accordance with best practice provisions stipulated by the Financial Services Authority (OJK) and US SEC, as a consequence XXX listed its shares in both stock markets.

Directors and senior leaders can articulate and demonstrate the importance of integrity and ethical value throughout the organization, using news services or corporate portals to reinforce the importance of integrity and ethical values. Particularly for employees or units running internal controls or preparing reliable financial and information reports, it may be necessary for management to define more firmly and communicate more in order to support the goal of providing reasonable assurance of financial and information reporting, in accordance with the business process carried out.

**b. Enforcement of Accountability**

This principle has a significant influence on the effectiveness of the internal control system. Evaluating individual performance and responsibilities for internal controls should be rewarded or disciplinary actions that reflect the importance of this activity in XXX, so that internal controls are deemed to be efficient and provide reasonable assurance of financial reporting. It is possible that the success or failure of internal control should also affect the employees who run it.

In establishing its responsibilities and performance, management must take into account the level of pressure it carries, as it relates to important goals in financial reporting. In addition, management defines the description of multiple roles to support internal responsibility for effective internal financial reporting.

Management defines performance benchmarks, incentives, and rewards and regularly evaluates the suitability of performance measures used to determine how employees respond to pressures, incentives, and rewards. Management designs objective evaluations of employees and compensation systems that periodically provide rewards or disciplinary action, as necessary.

**5. CONCLUSIONS AND RECOMMENDATIONS**

Based on the results of research that has been done, it can be concluded as follows:

1. Principle of Commitment to Integrity and Ethics and principle of Accountability Enforcement, as part of the principles of environmental control, have the significant effect on the effectiveness of the internal control system in XXX.
2. Principle of Responsible Oversight, principle of Determination of Structure, Authority, and Responsibility, and principle of Commitment on Competence, as part of the principles of control environment, have no the significant effect on the effectiveness of internal control system in XXX.

3. Simultaneously, the principles of Control Environment significantly affects the effectiveness of the internal control system in XXX. The value of influence is 75.3%.

This is in accordance with the statement and supports the theory that Control Environment becomes the foundation of the Internal Control System, stated in COSO (2013), that "control environment is the foundation for the other control components. Reflects the tone set by top management and the overall governance, incentives, organization and actions of the board of directors and management".

Based on the research conclusions that have been obtained, it is suggested as follows:

1. Directors and senior leaders must consistently demonstrate the importance of ethical integrity and values through their direction, actions, behavior, and role models as the realization of 'tone at the top', and always update the standards of conduct or business ethics in accordance with the terms and best practice. Directors and senior leaders can articulate in various methods including digital media being developed.
2. Management should define performance benchmarks, incentives, and rewards, and periodically evaluate the suitability of the performance measures used to determine how employees respond to pressures, incentives, and rewards. Management should design objective evaluation of employees and compensation systems that regularly reward or discipline, such as rewarding improved internal control, and so if otherwise.
3. In addition to this, we propose suggestions for the phenomenon mentioned in this study can be mitigated, through the following steps:
  - a. Step I, developing awareness, expertise, and alignment:
    - 1) Studying COSO Internal Control-Integrated Framework 2013.
    - 2) Building awareness.
    - 3) Understanding internal control requirements.
    - 4) Understanding deficiencies.
  - b. Step II, design an initial impact assessment:
    - 1) Re-mapping the business document design process.
    - 2) Re-mapping the business process implementation.
  - c. Step III, facilitating awareness, training, and comprehensive assessment:
    - 1) Rebuild awareness at the level of Directors and Board of Commissioners.
    - 2) Conducting Training.
    - 3) Implement a comprehensive self assessment.
  - d. Step IV, develop and implement the transition plan:
    - 1) Doing documentation and evaluation.
    - 2) Validation testing and remediation.
    - 3) Review by external parties.
  - e. Step V, driving continuous improvement:
    - 1) Customize 'tone at the top'.
    - 2) Make internal controls as part of the culture, business processes, and procedures.
    - 3) Improve control over reporting and communication.

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## THE INFLUENCE OF PERCEPTION ON CUSTOMER BEHAVIOR OF PRODUCT ADVERTISING THROUGH USEETV (CASE STUDY IN BALIKPAPAN CITY OF INDONESIA)

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### ABSTRACT

*Internet customers in Indonesia, especially Indihome's customers, experienced significant growth. Indihome National's customers at the end of December 2016 amounted to about 1,5 million customers. Indihome customers in Balikpapan at the end of December 2016 are about 23 thousand customers, at the end of December 2017 are 31 thousand so growth customer is 35%. Penetration of Internet users in Indonesia continues to grow along with technological developments. Telkom Indonesia launched Indihome product in early 2015, which is bundling product package with fiber optic access consisting of high speed internet service, fixed phone and IPTV by UseeTV brand. Telkom Indonesia launched Indihome product in early 2015, which is bundling product package by fiber optic access consisting of high speed internet service, fixed phone and IPTV, and the brand name is UseeTV. Some advantages of UseeTV Indihome Telkom Indonesia include clear picture and sound, TV service can be replay for 7 days backward, can be pause, many number of TV channel service and some other advantages.*

*At this time, the companies that promote their products through advertisements on TV media often use free-to-air, TV broadcasts to all TV owners. TV advertising is considered quite expensive and less effective because many target audience that is not a target market of the company's products. So it makes inefficient. Promotion to advertise the company's products on UseeTV is expected to be more effective with cheaper cost, because customer of UseeTV can be segmented according to its behavior, geographical segmentation and can be adjusted to the characteristics of the company product. Segmented promotion expected to more effectively attract customers through AIDA, to purchase products advertised by UseeTV.*

*The research data through questionnaires is distributed online using google docs application to customers of UseeTV Indihome in Balikpapan City for sports genre segment. Data analysis in this research using a simple linear regression statistic method (linear regression). The research got result that customer behavior seen from AIDA to advertised product influenced by consumer perception to advertisement through UseeTV for Indihome customer of sport genre in Balikpapan City equal to 39,66%, while 60,34% influenced by other factor. Linear relationship between variable X and variable Y in research can be formulated with linear regression equation  $Y = 9,406 + 0,3303X$ .*

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**Keywords:** UseeTV, Indihome, TV commercials, Telkom Indonesia, Sports genre, Balikpapan

## **1. INTRODUCTION**

### **1.1 BACKGROUND ISSUES**

Users UseeTV Indihome Telkom Indonesia is significant to be a target market for the marketing of other derivative products. Indihome National's customers at the end of December 2016 amounted to about 1,5 million customers. Indihome customers in Balikpapan at the end of December 2016 are about 23 thousand customers, at the end of December 2017 are 31 thousand so growth customer is 35% . Indihome Telkom Indonesia is a triple play product where is one of its services is IPTV by UseeTV brand. UseeTV as an IPTV product has many advantages including picture quality is clearer than analog TV, its can record TV live, its can be play back up to 7 days backwards, its have TV on Demand. UseeTV becomes one of the best choices for customers who want quality television service products in their homes.

At this time promotion of products through broadcast TV media is mass, so TV viewers who are not a target market of advertising products also see ads impressions. In addition, the broadcasting of TV ads is costly and therefore requires a huge advertising expense on TV commercials (wasteful).

In UseeTV products, customers (viewers) can be segmented according to the genre (grouping of TV shows) often watched by customers, one of the dominant genres is the sports genre. The activities of the customers that watching the UseeTV show can be identified, including the duration of watching the event type. Additionally UseeTV customers can also be segmented by geographic area, suppose customers Jakarta, Bandung, Surabaya, and so on. Thus this UseeTV customer segment can be the target market for the appropriate product. Customers UseeTV is a potential market for companies that will promote their products through UseeTV which will be more targeted (minimize promo messages are wasted) and will probably save more budget.

The city of Balikpapan is also known as a mining and trading city with major economic drivers such as mining, trade, fisheries and forestry / plantation. Balikpapan is a city in East Kalimantan Province in Indonesia by a very large Regional Budget. Balikpapan City by the number of customers Indihome Telkom mostly to number 4 in Kalimantan Island is a great opportunity to drive the economy, especially as the business drivers of Balikpapan. So, we need a study to measure the analysis of relationships between a consumer perceptions advertising through UseeTV and response in purchasing products for Indihome customers in Balikpapan City.

### **1.2 RESEARCH QUESTIONS**

By the background issues, research questions as follows:

1. How much the influence of consumer perceptions toward customer behavior viewed by AIDA (Awareness Interest Desire Action) ?
2. What is the formula of linear relationship of this research result ?

### **1.3 RESEARCH PURPOSES**

The purpose of this research is :

To know the influence of consumer perception on customer behavior from AIDA. In addition, to know whether there is a significant linear relationship between consumer perceptions of customer behavior will be advertised products through UseeTV in the genre of sports for Indihome customers in Balikpapan City.

#### **1.4 PROBLEMS IDENTIFICATION**

Advertiser companies have not utilized UseeTV media optimally to advertise their products, so as to provide great opportunities for advertising UseeTV to get the business opportunity. The customer's perception of advertisement through UseeTV in Balikpapan City is not currently known, nor is customer behavior to advertisement through UseeTV. So, it is necessary to conduct research related to the influence of perception on customer behavior of product advertising through UseeTV case study in Balikpapan city of Indonesia.

#### **1.5 RESEARCH METHODS**

This research is quantitative descriptive research. Descriptive research aims to describe the characteristics of the use of a product and know the user's perception of a product (Indrawati, 2015). Descriptive research in this study aims to describe the characteristics of variables in this study and used to answer research questions. Quantitative research is a method of research that attempts to accurately measure behavior, knowledge, opinions, or attitudes. Quantitative methods are widely used in research because of their compatibility to test models or hypotheses (Chew, 2007; Indrawati 2012). Research conducted by the writer is field research in case study which analyze about consumer perception toward advertisement through UseeTV (variable X) which is expected to affect customer behavior (Y variable) in product purchasing at genre sport event, where X is independent variable and Y is the dependent variable.

### **2. LITERATURE REVIEW**

#### **2.1 BASIC THEORY**

##### **2.1.1 MARKETING**

Kotler and Keller (2016 : 27), marketing is about identifying and meeting human and social needs. One of the good and short definitions of marketing is "meeting the needs in a profitable way".

##### **2.1.2 MARKET SEGMENTATION**

Kotler and Keller (2016: 268), consumer market segmentation is market segmentation to divide the market into well-defined slices. The market segment consists of groups of customers who share a similar set of needs and wants. The consumer market segmentation consists of :

- a) Geographical Segmentation
- b) Demographic Segmentation
- c) Psychographic Segmentation
- d) Behavioral Segmentation

##### **2.1.3 CONSUMER BEHAVIOR**

Kotler and Keller (2016 : 179) Consumer behavior accordingly is the study of how individuals, groups, and organizations choose, buy, use, and place goods, services, ideas or experiences to satisfy their needs and desires. That's explain by Figure 2.1.

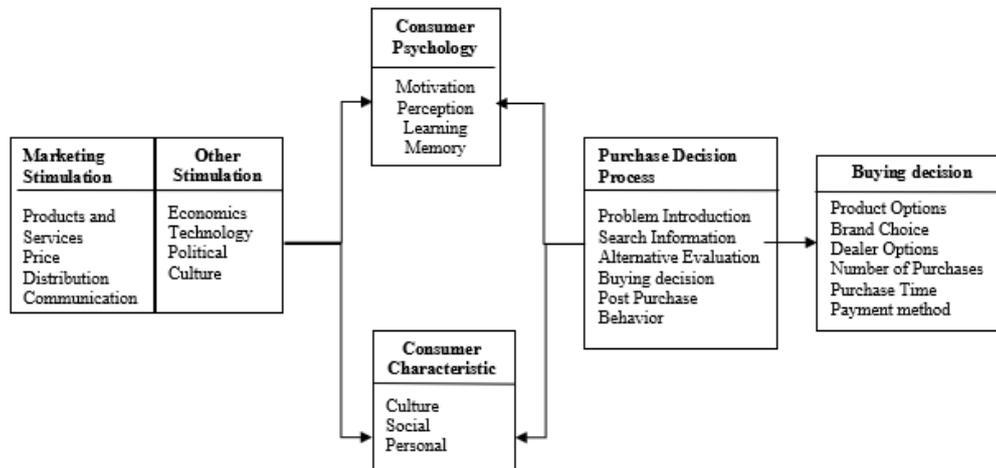


Figure 2.1. Consumer Behavior Model

#### 2.1.4 MARKETING MIX

Kotler & Armstrong (2008 : 62), marketing mix is a collection of tactically controlled marketing tools that the company combines to generate the desired response in the target market. That's explain by Figure 2.2.

<b>MARKETING MIX 8 P</b>	
<p><b>Marketing Mix Four Ps</b></p> <ol style="list-style-type: none"> <li>1. <i>Produk</i></li> <li>2. <i>Place</i></li> <li>3. <i>Promotion</i></li> <li>4. <i>Price</i></li> </ol>	<p><b>Modern Marketing Management Four Ps</b></p> <ol style="list-style-type: none"> <li>5. <i>People</i></li> <li>6. <i>Processes</i></li> <li>7. <i>Program</i></li> <li>8. <i>Performance</i></li> </ol>

Gambar 2.2. The Evolution Of Marketing Management

#### 2.1.5 PURCHASE PROSESSING

Kotler Keller (2016: 195) stated that basic psychological processes play a very important role in purchasing decisions by consumers. Five model consumer stage in making purchases can be seen in the following figure 2.3 :

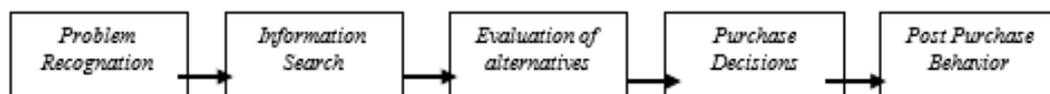


Figure 2.3 Five-Stage Model of the Consumer Buying Process (Kotler Keller 2016 : 195)

#### 2.1.6 MARKETING COMMUNICATION

Kotler Keller (2016:580) Marketing communications are which companies attempt to inform, persuade, and alert consumers directly or indirectly about the products and brands they sell. The marketing communications mix consists of eight main communication modes, which include :

Advertising), Sales Promotion), Event and Experiences), Public Relation and Publicity, Online and Social Media Marketing, Mobile Marketing, Direct and Database Marketing, Personal Selling.

### **2.1.7 ATTENTION, INTEREST, DESIRE, ACTION (AIDA) MODEL**

Kotler Keller (2016: 585) and Kotler Keller (2009:179) explain the theory Attention, Interest, Desire, and Action (AIDA) is a means of delivering a message that is quite ideal to consumers where through a stage consisting of Attention, Interest, Desire, Action.

## **2.2 PAST RESEARCH**

### **2.2.1 HERE'S THE BEEF : FACTORS, DETERMINANTS, AND SEGMENTS IN CONSUMER CRITICISM OF ADVERTISING**

Richard W Pollay and Banwari Mittal (1993) says that advertising is a very important social phenomenon in which will stimulate consumption, economic activity, lifestyle and value orientation. Richard W Pollay and Banwari Mittal also says the behavior that affects advertising includes 3 factors **personal uses** consist produk information, social role and image, and hedonic pleasure and 4 factors **social effects** consist good for the economy, materialism, value corruption, and falsity/no sense.

### **2.2.2 PUBLIC ASSESMENT OF TV ADVERTISING : FAINT PRAISE AND HARSH CRITICISM**

Banwari Mittal (1994) says that advertising is a very important social phenomenon in which will stimulate the level of consumption, economic activity, lifestyle and value orientation.

In this research Banwari Mittal offers and presents the 10 main dimensions used to measure these perceptions, ie ; Market Place Information, Buying Confidence, Social Image Information, Entertainment Value, Materialism, Value Convergence, Effects On Children, Economic Effects, Free Television, Manipulation.

### **2.2.3 INFLUENCE PROGRAM / GENRE / MAIN CONTENT TELEVISION AGAINST CUSTOMER BEHAVIOR**

Yanuar Nugroho , Dinita Andriani Putri, Shita Laksmi (2012:61) in their research entitled "A Joint Research Project of: Mapping The Landscape Of The Media Industry In Contemporary Indonesia " said that as the most influential media sector, the content of television does have a great impact on society. However, in the ratings show, the most watched types are drama content (soap operas) and sensational news. Inaya Rakhmani, (2014), in a study that is "Television Industry Practice and Trends in Indonesian Sinetron " in the Asian Journal of Social Science 42 (2014) 435-466, page 438 said that Indonesian commercial television is dominated by sinetron film production, which is 60% -70% .and most popular content by television stations (udience share and most popular content by television station) are sinetron, comedy, drama, music, sport, news, reality show, lifestyle, entertainment.

### **2.2.4 MIXED-STYLE PRINT ADVERTISING COMBINING FASHION PHOTOGRAPHY AND DIGITAL ILLUSTRATIONS: EXAMINING THE PRINT ADVERTISING OF CONSUMER PRODUCTS IN TAIWAN.**

Yu, Yi-Lin, Fwen Catholic University (2013) in their research states that this study reveals a new form of advertising design in the digital age. Attention-desire-desire-action (AIDA) psychological model used as a measuring tool for preparing a quantitative questionnaire to ask for responses / responses of consumers in purchasing products. The results of this study indicate that Art Nouveau's print advertising style, which combines fashion photography with digital illustrations, is very effective in attracting the attention of consumers, attracting them, and stimulating their desires.

## **2.3 FRAMEWORK OF THINKING**

The framework developed in this study refers to some of the theories already mentioned. The framework of thinking can be described as follows figure 2.4 ;

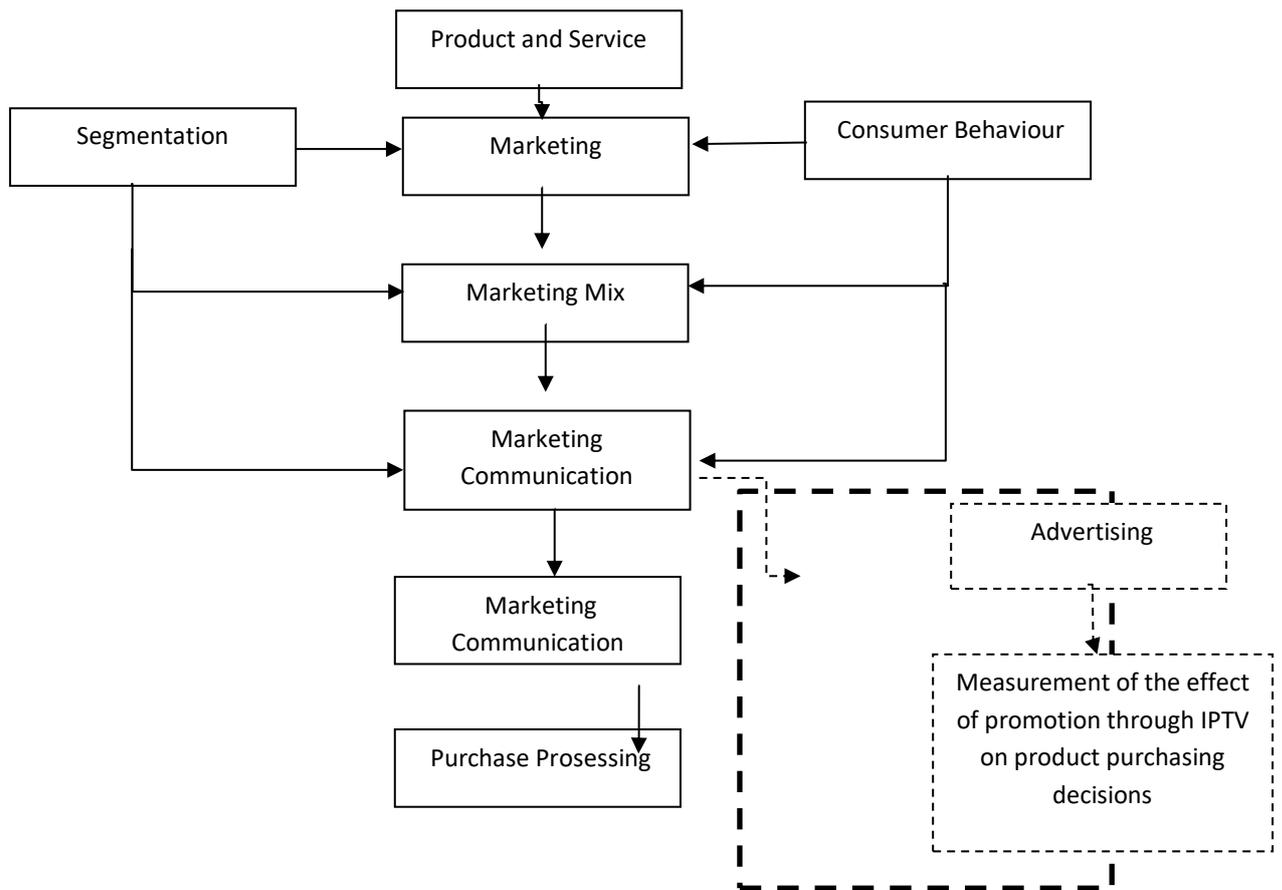


Figure 2.4 Thinking of Flow

## 2.4 RESEARCH HYPOTHESIS

In this research, hypothesis can be formulated as follows:

Ha1 There is influence of consumer perception simultaneously to customer behavior.

Ha2 There is a linear relationship between consumers perceptions and customer behavior of advertised products through UseeTV.

## 3. METHODOLOGY

### 3.1 RESEARCH QUESTIONS

By the problems identification can be described research questions as follows,

1. How much is influence of consumer perception simultaneously to customer behavior viewed from AIDA will be advertised product?
2. Such as whether the linear relationship between consumers' perception and customer behavior of advertised products through UseeTV?

### 3.2 MODELING VOLATILITY

Model can be described as follows figure 2.5 ;

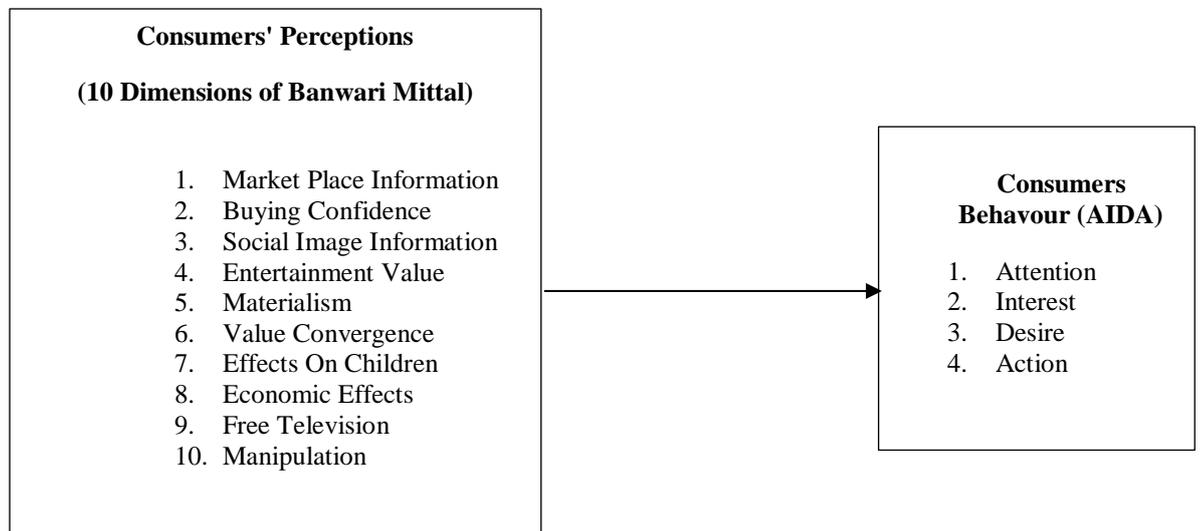


Figure 2.5 Riset Model

### 3.3 DATA

#### 3.3.1 POPULATION RESEARCH

The population in this study is Customer UseeTV Indihome in Balikpapan City.

#### 3.3.2 SAMPLE RESEARCH

The method used to determine the number of samples in this study is to use the formula Slovin (Cooper & Schindler, 2011) as follows :

$$n = \frac{N}{1+Ne^2} ,$$

n : samples

N : population

e : error tolerance

The sample in this research is Indihome customer in Balikpapan City. The number of sample are 400 customers.

#### 3.3.3 METHOD OF COLLECTING DATA

Data in this research include primary data and secondary data. Data collection method is as follows :

1. Primary Data, is data obtained from direct research Indihome UseeTV customers in the field that became the object of research.
2. Secondary Data, is a data collection conducted by reading, quoting from scientific literature book related to the topic to be studied, and the existence of reference material data from internal PT Telkom, Telecommunication Region in Balikpapan.

### **3.3.4 DATA COLLECTION TECHNIQUE**

In this study the questionnaire contains statements which are indicators of the level of influence of UseeTV advertising campaigns on product purchases. There are five options for each statement that strongly agree (SS), agree (S), Neutral (N), disagree (TS), and strongly disagree (STS). Scores for each positive statement are 5 for SS answers, 4 for answers S, 3 for answers N, 2 for TS answers, and 1 for answers STS. The score for each negative statement is 5 for STS answers, 4 for TS answers, 3 for answers N, 2 for answers S, and 1 for SS answers. Then the scores of each indicator for each variable are summed, and scores for a variable type are obtained.

### **3.3.5 RESEARCH VARIABLE**

In this research used one independent variable and one dependent variable :

#### **1. Independent Variable**

Consumer perceptions of advertising through UseeTV. There are 10 main dimensions of consumer perception of advertising on Television ie : Market Place Information, Buying Confidence, Social Image Information, Entertainment Value, Materialism, Value Convergence, Effects On Children, Economic Effects, Free Television, Manipulation.

#### **2. Dependent variable**

The dependent variable in this research is customer behavior of the product advertised, there are 4 dimension of AIDA ie ; Attention, Interest, Desire, Action.

### **3.3.6 RESEARCH INSTRUMENTS**

In this study, the questionnaires are grouped into three parts :

1. Profile of respondent,
2. Question about indicator of independent variable that is consumer perception to advertisement through UseeTV. There are 10 main dimensions of consumer perception of advertising on Television ie : Market Place Information, Buying Confidence, Social Image Information, Entertainment Value, Materialism, Value Convergence, Effects On Children, Economic Effects, Free Television, Manipulation.
3. Question about indicator of dependent variable in this research is customer behavior of the product advertised, that is 4 main dimension about response to TV advertisement Attention, Interest, Desire, and Action (AIDA).

### **3.3.7 VALIDITY AND RELIABILITY TEST**

Validity and reliability test of the data is done to check the consistency of the measuring tool and the validity of each questionnaire.

#### **3.3.7.1 VALIDITY TEST**

The calculations use the correlation formula of product moment from Karl Pearson, that is :

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

note :  $r_{xy}$  = internal consistency index for items to-i ,  
 n = count the subjects who were given a questionnaire,  
 X = items to-i ,  
 Y = total score

In this study validity test was conducted on October 3, 2017 until October 4, 2017 through an online questionnaire, by taking samples of test pilots each of 40 respondents. Measurement of convergence validity by measuring the correlation coefficient using calculation formula compared with r-table significance level of 1%. The result of all items of the questionnaire statement is > 0.4026. From the results of convergence validity testing known that the value of correlation coefficient between items for each variable Market Place Information, Buying Confidence, Social Image Information, Entertainment Value, Materialism, Value Convergence, Effects On Children, Economic Effects, Free Television, Manipulation, Attention, Interest, Desire, Action, all of them are greater than 0.4026. Thus it is concluded that the whole item statement in the instrument has met the criteria convergent validity.

### 3.3.7.2 RELIABILITY TEST

In this research used Alpha formula to perform reliability test, that is :

$$r_{11} = \frac{n}{n-1} \left[ 1 - \frac{\sum s_i^2}{s_t^2} \right],$$

with  $r_{11}$  = instrument reliability index,  
 n = number of items instruments,  
 $s_i^2$  = variance items to-i,  
 $i = 1, 2, 3, 4, \dots, n$  ,  
 $s_t^2$  = total score variance the experimental subjects obtained.

An instrument is said to be reliable if  $r_{11} > 0,7$ . Based on the pilot test as many as 40 respondents obtained the reliability test results of 10-dimensional measurement instrument Banwari Mittal obtained  $r_{11} = 0.94$ , the measurement instrument AIDA dimensions obtained  $r_{11} = 0.74$  ( $r_{11} > 0.7$ ). So these results indicate that the instruments used in this research are reliable.

## 4. RESULTS AND DISCUSSION

### 4.1 DATA ANALYSIS TECHNIQUE

From the data collection process will be obtained two groups of data representing variables X and Y, each of which interval scale. In this study, simple linear regression analysis is used, because it involves only one independent variable and one dependent variable. Analysis of data to be performed include ;

#### 4.1.1 CHARACTERISTICS OF RESPONDENTS B

Karakteristics of respondents in this research as follows table 4.1, figure 4.1, figure 4.2, and figure 4.3 ;

Table 4.1 Distribution of Respondent Characteristics

Personal identity	Respondents Distribution	Respondents	Amount Percentage (%)
-------------------	--------------------------	-------------	-----------------------

Gender	Man	296	74,00 %
	Women	104	26,00 %
	Amount	400	100 %
Age	15 s/d 25 Years	101	25,25%
	26 s/d 35 Years	150	37,50%
	36 s/d 45 Years	97	24,25%
	46 s/d 55 Years	46	11,50%
	56 s/d 65 Years	6	1,50%
	Amount	400	100,00%
Education	Senior High School	87	21,75%
	Bachelor of D1-D3	53	13,25%
	Bachelor degree S1	217	54,25%
	Master / Doctorate	43	10,75%
	Amount	400	100,00%

Source: Results of Questionnaire

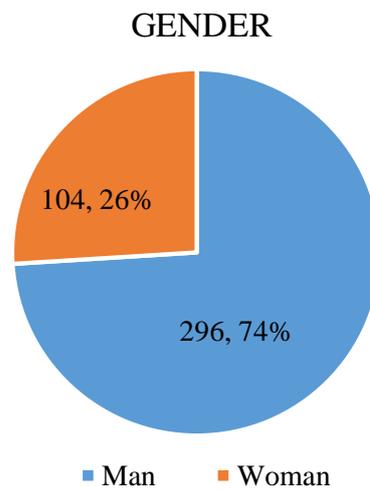


Figure 4.1 Graph of Respondent Characteristics by Gender

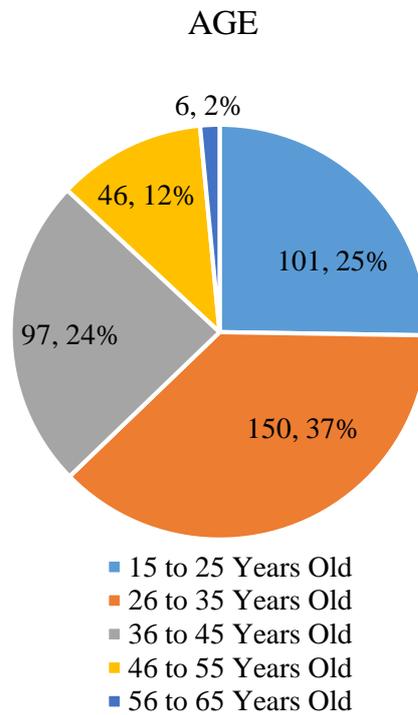


Figure 4.2 Graph of Respondent Characteristics by Age

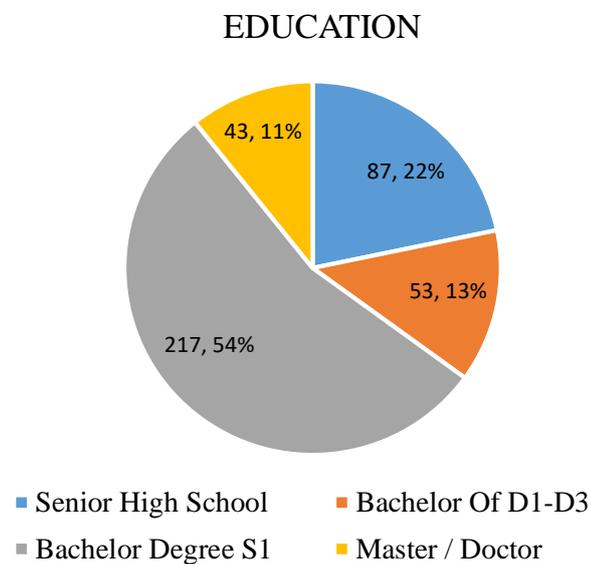


Figure 4.3 Graph Of Respondent Characteristics by Education

#### 4.1.2 DETERMINE SIMPLE LINEAR REGRESSION EQUATION

The linear relationship model between X and Y variables is seen in the following linear regression equation:

$\hat{Y} = a + bX$ , values a and b are determined by using a least square method, that is,

$$a = \frac{(\sum Y)(\sum X^2) - (\sum X)(\sum XY)}{n\sum X^2 - (\sum X)^2} \text{ and } b = \frac{n(\sum XY) - (\sum X)(\sum Y)}{n\sum X^2 - (\sum X)^2}$$

In This research data obtained linear regression equation is  $Y = 9,406 + 0,3303X$ .

#### 4.1.3 DETERMINING COEFFICIENT OF DETERMINATION

The coefficient of linear regression determination between X and Y, is presented by,

$$r^2 = \frac{JKR}{JKT}, \text{ then, } JKT = \sum Y^2 - \frac{(\sum Y)^2}{n}, \text{ } JKR = a(\sum Y) + b(\sum XY) - \frac{(\sum Y)^2}{n},$$

and  $JKG = JKT - JKR = 0,396606203$ .

In this research obtained part of the variations that occur in Y variable explained by the X variable through linear regression equation is equal to 0.396606203 or 39.66%. In the other words the X variable affect to Y variable is 39.66%, while the remaining 60.34% influenced by other factors.

#### 4.1.4 DETERMINING THE SIGNIFICANCE OF REGRESSION

To get the significance of regression used approach of variance analysis that is with test statistic  $F = \frac{RKR}{RKG}$ , with  $RKR = \frac{JKR}{1}$ , and  $RKG = \frac{JKG}{n-2}$ .

By the research data obtained  $F = 261,6024053$ , F table ( $F(0.05,1,398)$ ) = 3,84 so the value  $F > F(\alpha, 1, n - 2)$  obtained from the distribution F table, it can be concluded that linear regression between X and Y means (significant).

#### 4.1.5 DETERMINING THE SIGNIFICANCE OF REGRESSION COEFFICIENTS

To see the significance of regression coefficients used statistical t test by test statistic :

$$t = \frac{b}{s_b}, \text{ with } s_b = \sqrt{\frac{s^2_{y.x}}{\sum x^2}}, \sum x^2 = \sum X^2 - \frac{(\sum X)^2}{n}, \text{ and } s_{y.x} = \sqrt{\frac{JKG}{n-2}}.$$

From the calculation of research data obtained,  $t = 16,17412765$ , and t table t value ( $0.05,398$ ) = 1,654. The regression coefficient is said to mean (significant) because the value of  $t > t(n-2)$  obtained from the distribution table t.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 CONCLUSIONS

1. The behavior of customers from AIDA to the advertised product for Indihome customer of sports genre in Balikpapan City influenced by consumer perception on advertising through UseTV equal to 39,66%, while 60,34% influenced by another factor.
2. The Linear relationship between consumer perception and customer behavior for Indihome customer of sports genre in Balikpapan City in this research, can be formulated by linear regression equation  $Y = 9,406 + 0,3303X$ .

## 5.2 RECOMMENDATIONS

- 1 The development to further research related TV advertising through Indihome UseeTV (IPTV), especially for Indihome UseeTV customers in Balikpapan City, for other segmentation than sport segment.
- 2 In order to be maximized by PT Telkom Indonesia as an alternative source of revenue increase, by selling advertising content space through UseeTV in accordance customer segmentation.

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## **FACTORS AFFECTING ORGANIZATIONAL COMMITMENT IN PHARMACY INDUSTRY: THE ROLE OF COMPENSATION AND LEARNING CULTURE AS PREDICTORS.**

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### **ABSTRACT**

*The purpose of this study is to identify dynamic relationships among compensation, learning culture, and organizational commitment in one of the pharmacy company. This study uses 137 employees as participants. They answers the questionnaire with 47 items. Multiple regressions used to analyze the data and found that compensation and learning culture simultaneously and partially have significant positive relation with organizational commitment. This research provides insights for HR department in the organization to view compensation policy and learning culture as important variables that can affect organizational commitment. Therefore they could make use of both variables as part of their strategy to improve HR management and practices. While for future research scholars can develop broader study regarding learning culture and organizational commitment.*

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**Key Words:** *Compensation, Learning Culture, Organizational Commitment*

**JEL Classification:**

### **1. INTRODUCTION**

Human resources played an important role in organization's effort to achieve their target (Bartel, 2004). While Caruzo (2017) argued that the success of organizations depends not only on the effectiveness of utilizing financial and physical resources but also on human resources. Managing human resources is complex because people have diverse feeling and behaviour. One of the reason that people join the company is because they need a job. They can love their job but otherwise they donot like the company. Or vice versa, they love the company but hate their job. HR department have the responsibility to provide HR policy and practices which could drive both employee's job satisfaction and organizational commitment. In short, to maximize their contribution, employees need to love their job and their

organization. Hanaysha (2016) propound the importance of organizational commitment because when it is built, it would lead to various favourable organizational outcomes. Next research from Barton (2016) suggests that employees with affective commitment save the organization money and create positive cultures through supporting the company vision. There are many factors which become the antecedents of organizational commitment. They include organizational culture (Azizollah et al., 2016; Awadh & Saad, 2013), job satisfaction (Markovits et al., 2010; Borges, 2012), pay satisfaction (Abdullah & Ramay, 2012), work-life interface (Prasetio et al. 2017), effective leadership (Caykoylu et al., 2011), personal cultural value & company bonding (García-Cabrera & García-Soto, 2010), organization structure and job stress (Lambert et al., 2008). While the consequences of organizational commitment can include job performance, intention to leave, work effort, absenteeism, and turnover (García-Cabrera & García-Soto, 2010; Memon & Sathpathy, 2017; Nazari & Emami, 2012). It is clear that employee with high organizational commitment will contribute more to the organizations. Accordingly, organization need to develop plan to enhance employee's commitment. The purpose of this research is to investigate the effect of compensation and learning culture on organizational commitment of employees in a pharmacy business. The research will answer the questions regarding the relationships between compensation and learning culture on organizational commitment simultaneously and partially.

## **2. LITERATURE REVIEW**

Compensation is part of human resources management practices. And it is an organization obligation to setup strategic compensation policy. Strategic compensation means that organization need to adjust their compensation policy to meet their overall objectives (Armstrong, 2008). Different types of compensation along with the external and internal equity should be considered carefully. Strategic compensation practices help the organization to achieve its objectives by increasing commitment and motivation (Armstrong, 2008). Compensation became important mechanism which affect work attitudes and behaviors of employees. We can assume that effective compensation could generate positive work behavior and outcomes. Furthermore, Martocchio (2015) argued that compensation policy should be designed to achieve affective commitment as a strategic human resource management practices. Certain types of compensation plans may lead to higher affective organizational commitment. These statement is corroborated by Munap, Mohd, & Abdul (2013) who argued that proper compensation system may boost the workers' desire to stay with the organization, with job satisfaction and expectations, indirectly becoming higher. In the end, organizations that offer attractive and various compensation (financial, nonfinancial, benefit, normative, and company based) are perceived by employees as showing greater support and as being fair in their dealing with employees.

Yang (2003) explained learning culture as a concept that portrays organizational behavior in learning and development. Learning culture also defined as culture within the organization which has values, systems and practices that support and encourage organization to develop and enhance the knowledge, competencies and performance levels on an ongoing basis (Blackwood, 2014). Ponnuswamy & Manoharas (2014) define the learning organization culture as the characteristic of an institution that promotes continuous learning for sustainable improvement in teaching and learning. Inside the organization with strong learning culture, learning process become system or a habit and embedded in every activities. Organization should develop learning culture in order to excel in competition and lead to innovation. By developing strong learning culture organizations will benefit from efficiency, productivity, higher employee satisfaction, minimize turnover, and higher organizational commitment (Egan, et al., 2004; Rose et al., 2009). It is important to study the relation of learning culture and employee outcome.

The general concept of organizational commitment defined by Allen & Mayer (1996) as a psychological link between the employee and his or her organization that makes it less likely that the employee will voluntarily leave the organization. Organizational commitment also explained as the workers desire to stay with the particular organization and willingness to be involved towards achieving the organization goals (Bozlagan, Dogan, & Daoudov, 2010). Strong organizational commitment is undoubtedly important for organizations. Highly committed employees are the main sources for continued success and performance. Allen & Meyer (1996) conceptualized the construct into three dimensions, that is AC, continuance commitment and normative commitment. The importance of organizational commitment has been proved and discussed in various literatures. Organizations seem to be interested in to have highly committed employees, because it is commonly accepted that organizational commitment could lead to various organizational outcomes such as lower level of turnover, increased motivation, improved organization citizenship behaviour, and continuous organizational support (Kwon & Banks, 2004).

Having suggested that commitment can be linked to positive work attitudes and behaviors such as lower turnover intention, lower absenteeism, and also reducing counterproductive work behavior, it is necessary to study the relationship between variables which might have impact on enhancing the organizational commitment. By managing compensation practices and learning culture, organizations can improve organizational commitment.

#### ***Compensation and Organizational Commitment***

Previous literatures discussed the relation between compensation and organizational commitment. It is believed that organizations can increase employee emotional attachment to the organization by providing attractive compensation package. Alamelu et al. (2015) from India found that compensation had a significant and positive relation with organizational commitment. Still from India, Omotayo et al. (2014) also backed the finding from previous research. A study from Malaysia (Kee et al., 2016) showed the same pattern in banking industry. In food industry in Kenya, Milgo et al. (2014) revealed the positive effect from compensation on organizational commitment. Ogunnaike et al. (2016) recommend that organizations should ensure the design of compensation packages that are adequate because it will contribute to increased employee commitment and positive performance outcomes. Another study from Malaysia discover that organizations which provide such financial compensation as the strategy in human resource management could improve organizational commitment among the workers (Ahmad, Toh, & Bujang, 2013). Fiorito et al. (2007) mention that various compensation reductions (for example; direct cuts in pay and benefits) should diminish employee commitment because they felt lack of support from the employer. Several other studies from Pakistan (Nawab & Bhatti, 2011; Shafiq, et al., 2013), in Mexico and Malaysia (Llanos & Ahmad, 2017), and in Iran (Anvari et al., 2014) all support the significant and positive relation. While Paik et al. (2007) who conducted study in Mexico found two result. Compensation had significant positive relation with affective commitment, but had no significant relation with continuance commitment. Based on these findings, we propose the first hypothesis as follow;

*H<sub>1</sub>: Compensation will have a significant negative relationship effect on organizational commitment.*

#### ***Learning Culture and Organizational Commitment***

Research on learning culture and organizational commitment began to attract scholar's attention. Joo and Lim (2009) conducted study for employees in the manufacturing sector and found a positive association between learning culture and organizational commitment. Lau et al. (2016) in Malaysia

revealed that learning organization mediate the relation between organizational culture and affective commitment in three different industries (services, agriculture, and manufacture). Study in a government institution in China from Xie (2005) presents the significant and positive relation between learning culture and all the facets of organizational commitment (affective, continuance, and normative). Furthermore, Tsai (2014) argued in order to improve the service to the customer, hospital staff must engage in a process of continual learning to enhance their skills. By doing this, hospital can build a learning culture and enhance the organizational commitment of its nursing staff. A report from Taiwan (Hsu, 2009) noted that R&D professionals' perceptions of a high level of organizational learning culture has a positive effect on job satisfaction and organizational commitment. Next research from Dirani (2009) in Lebanon found a significant moderate relationship between learning organization culture seven dimensions and organizational commitment. Thus, the overall learning organization culture also positively influence organizational commitment. Several other studies from South Korea (Joo, 2010; Song et al., 2009; Lim, 2010), Turkey (Atak & Erturgut, 2010; Sahin, 2013), Pakistan (Islam et al., 2015; ), and Malaysia (Hanasya, 2016; Islam et al., 2014) support the positive relation between learning culture and organizational commitment. The correlation range from the lowest .190 to the highest of .830. Thus, we set the second hypothesis as;

*H<sub>2</sub>: Learning culture will have significant positive effect on organizational commitment.*

After the hypothesis for each relation was set, we also determined that compensation and learning culture simultaneously have significant relation with organizational commitment. Therefore the third hypothesis was

*H<sub>3</sub>: Simultaneously, compensation and learning culture will have significant positive effect on organizational commitment.*

### **3. METHODOLOGY**

#### **3.1 PARTICIPANTS**

We distributed the questionnaire to all of the employees (157) and get the respon rate of 86% (137 returned). The demographic characteristic include gender, age, education level, job position, length of service, and salary. Participant dominated by male who consist of 74%. The dominant age is between 30-35 years old (26%). 50% of the employee have been working in this company for more than 5 years. 36% of the respondents graduated have university background and 33% graduate from diploma school. Most of the participants (71%) is in the pay range of Rp. 3.000.000 – Rp. 6.000.000. In summary we have almost equal distribution in the demographic characteristic. Table 1 provide detail information regarding the characteristic.

**Table 1: Demographic Aspects**

	Category	No of Participants	Percentage
<b>Gender</b>	Male	102	74%
	Female	35	26%
<b>Age</b>	<20 years old	0	0%
	20-25 years old	29	21%
	>25-30 years old	31	23%
	>30-35 years old	36	26%
	>35-40 years old	19	14%
	>40-45 years old	12	9%
	>45-50 years old	7	5%
<b>Length of service</b>	>50 years old	3	2%
	<1 year	16	12%
	1-3 year	28	20%
	>3-5 year	25	18%
	>5-10 year	45	33%
<b>Education</b>	>10 year	23	17%
	High School	41	30%
	Diploma	45	33%
	Undergraduate	50	36%
<b>Salary</b>	Post Graduate	1	1%
	>3.000.000-6.000.000	97	71%
	>6.000.000-9.000.000	24	18%
	>9.000.000-12.000.000	10	7%
	>12.000.000-15.000.000	2	1%
	>15.000.000-20.000.000	2	1%
	>21.000.000	2	1%

### 3.2 DATA ANALYSIS

Multiple regression was used to analyzed the relation between variables. We tested the data to make sure there were no abnormality and heterocedasticity. This test was taken to make sure that the data is fit to be processed for linear regression.

### 3.3 MEASUREMENT

A questionnaire composed of 47 items were used in the study containing fourteen items for copensation, thirteen items for learning culture, ad twenty items for organizational commitment. All the items has five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items for compensation develop from Edison et al. (2016), learning culture items developed based on Dimension of Learning Organization Questionnaire from Watkins & Marsick (Larasati & Anggoro, 2016), and three facets of organizational commitment from Allen & Meyer (1996) was used. The reliability for compensation items were  $\alpha = .780$ , for learning culture were  $\alpha = .837$ , and for organizational commitment were  $\alpha = .799$ .

### 4. RESULTS AND DISCUSSION

The first part of the discussion will present the employee's perception towards the company policy on compensation, the implementation of learning culture, and the level of organizational commitment. The means for compensation was 3.19 which considered moderate, while the perception of learning culture was considered a bit high (3.47). Lastly, the organizational commitment still on moderate level (2.83). The result reflect there are still a lot to do by the human resources department in this company. The ultimate goals regarding organizational commitment of course to make them stronger or higher. The moderate level for the commitment raise the question about what factors could management use to boost the commitment. This research will llok into the role of compensation and learning culture as

the antecedent of organizational commitment. The next part of the discussion will answer that question. The multiple regressions analysis used to identify the relationship and the effect of the independent variable on dependent variable. Before conducting multiple regressions we must make sure the data met the requirement for linear regression. Table 2 showed the data passed the normality test ( $0.891 > 0.05$ ). Table 3 provide evidence that our data also passed the heterocedasticity test (the figure were above 0.05).

**Table 2: Normality Test**

	Unstandardized Residual
N	137
Kolmogorov-Smirnov Z	0.579
Asymp. Sig. (2-tailed)	<b>.891</b>

**Table 3: Heterocedasticity Test**

		COMPENSATION		LEARNING	Unstandardized Residual
Spearman's rho	COMPENSATION	Correlation Coefficient	1.000	.299**	-.066
		Sig. (2-tailed)		.000	<b>.443</b>
		N	137	137	137
	LEARNING	Correlation Coefficient	.299**	1.000	.068
		Sig. (2-tailed)	.000		<b>.431</b>
		N	137	137	137
Unstandardized Residual		Correlation Coefficient	-.066	.068	1.000
		Sig. (2-tailed)	.443	.431	
		N	137	137	137

Table 4 present the result of multicollinearity test which showed the tolerance value  $> 0.10$  and the VIF value  $< 10$ . There were no multicollinearity.

**Table 4: Multicollinearity Test**

Collinearity Statistics	
Tolerance	VIF
.937	1.067
.937	1.067

After confirming that the data met the linear regression criteria, we analyze the relation of independent and dependent variables. First, we compute the correlation value using SPSS. Table 5 showed the correlation between compensation and organizational commitment was 0.505. Since it was slightly just above 0.5 we can say the correlation was quite strong. Wegner (2016) argued that correlation value which closer to zero was reflects weak relationship. While the value closer to one, reflect strong relationship. According to the stateent of Rumsey (2011) 0.505 was grouped in the moderate category. Meanwhile, learning culture had positive relation but it was only 0.330, which considered weak relation. All the significance value showed 0.00 which mean the relation were significance.

**Table 5: Correlations**

		COMMITMENT	COMPENSATION	LEARNING
Pearson Correlation	COMMITMENT	1.000	.505	.330
	COMPENSATION	.505	1.000	.251
	LEARNING	.330	.251	1.000
Sig. (1-tailed)	COMMITMENT		.000	.000
	COMPENSATION	.000		.002
	LEARNING	.000	.002	

The next step of the analysis was about the result showed in the model summary report. The value of R (0.547) means that both independent variables simultaneously had a positive relationship with dependent variables. Compensation and learning culture had positive relationship with organizational commitment. When employees perceived that organization provide good compensation package and support learning culture, they will develop higher organizational commitment. The R square obtained from R value squared showed 0.299 which mean 29.9% of organizational development can be explain by compensation and learning culture. The value is below 0.5 which according to Wegner (2016) considered as weak.

**Table 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.547 <sup>a</sup>	.299	.289	.36347

Table 7 showed the significance value of 0.00 which confirm that there was a significance effect of both independent variables on organizational commitment. Table 8 revealed the partial relation of compensation and learning culture on organizational commitment. Partially both independent variables also had significant relation (significance value 0.00).

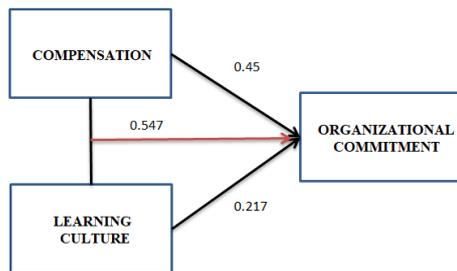
**Table 7: Annova**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.552	2	3.776	28.583	.000 <sup>b</sup>
	Residual	17.703	134	.132		
	Total	25.255	136			

**Table 8: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	1.450	.247		5.859	.000
	COMPENSATION	.398	.066	.450	6.028	.000
	LEARNING	.178	.061	.217	2.905	.004

Figure 1, regression model showed that the result answered all of the hypotheses. Simultaneously and partially, compensation and learning culture have significant positive effect on organizational commitment. Partially, the effect of compensation on organizational commitment was 0.45 (45%), while the effect of learning culture on organizational commitment was 0.217 (21.7%). The effect of both variables on the dependent variable was 0.547 (54.7%).



**Figure 1: Regression Model**

Those results affirm previous studies which found the significant relation between compensation and learning culture with organizational commitment. Previous studies from Paik et al. (2007) in Mexico, Nawab & Batthi (2011) and Shafiq et al. (2013) in Pakistan, Omotayo et al. (2014) and Alamelu et al. (2015) in India, Milgo et al. (2014) in Kenya, Anvari et al. (2014) in Iran, Ogunnaike et al. (2016) in Nigeria, Kee et al. (2016) in Malaysia, and Llanos & Ahmad in Mexico and Malaysia confirm the positive relation between those variables. There was only one finding from Paik et al. (2017) which also support the negative relations. This happened between compensation and one of the dimensions of organizational commitment (continuance). The average correlation value from these studies was 0.503 which is quite similar with the value obtained from this research (0.505). The comparison with previous studies discussing learning culture and organizational commitment deliver the same conclusion. Result from China (Xie et al., 2005), Taiwan (Hsu, 2009; Tsai, 2014), Lebanon (Dirani, 2009), South Korea (Joo & Lim, 2009; Song et al., 2009; Joo, 2010; Lim, 2010), Turkey (Atak & Erturgut, 2010; Sahin, 2013), Malaysia (Islam et al., 2014, Lau et al., 2016; Hanaysha, 2016), and Pakistan (Islam et al, 2015) all provide evidence that strengthen the positive relation between learning culture and organizational commitment. The average correlation value of those studies was 0.551 which is higher than the result of this study (0.330). Theoretically, it has been proven that companies can take advantage of management approach based on compensation and learning culture in order to enhance organizational commitment.

### **Managerial Implication**

This research uses only one department in a pharmaceutical company. For this particular company, the management could look at the improvement of their compensation policy to build stronger commitment. The combination of fixed and variable salary like they had already applied could be maintained. A salary survey can also be conducted to make sure that they manage the internal and external equity. Data obtained from this research showed that employees still perceive that the compensation provided by the company not quite give them satisfaction. The moderate level perceive by employees regarding the compensation gave insight that management could still have opportunity to make it better. They can provide allowances for house, travel, transportation, and education. Management could also improve benefit for employees (health care for family members, sabbatical leave for certain employees, better pension plan, and recreational need). This addition to the variation expected to improve the employee's perception and satisfaction toward the compensation policy. Regarding the learning culture, it seem that management already implemented quite appropriate treatment. At least employees perceive that the company nurture the learning culture. In this case, the management just keep maintain the learning activity by providing clear training and development program, rewarding the employee who contribute to the learning and sharing knowledge, promote the creation of new ideas and innovations, and eventually they implement knowledge management system in the organization. Since the results proved that both compensation and learning culture could give

impact to enhance organizational commitment, there is no reason to delay the program which could improve employee commitment. In addition, the company can also try other approaches such as job satisfaction (Gunlu et al., 2010), perceived organization support (Marique et al., 2012), work-life balance (Azeem & Akhtar, 2010), and the leadership style (Caykoylu et al., 2011). The organization fairness and career opportunity could also be managed because both of them were found to have influence on organizational commitment (Lamber et al., 2008). With comprehensive approach, the company can have flexibility in implementing a commitment-enhancing program. In addition, employees can also have the opportunity to evaluate each program and choose which one that suits their needs.

## 5. CONCLUSIONS AND RECOMMENDATIONS

All three hypotheses were answered and supported. Partially, compensation and learning culture have significant and positive relation with organizational commitment. Simultaneously, both independent variables also have significant positive relationship with organizational commitment. The present research supported the previous literatures which indicate that compensation and learning culture plays a crucial role in building commitment. These findings can be utilized by the company to strengthen organizational commitment which currently at a moderate level. Company especially human resources department are advised to implement various approach when dealing with the problem to build commitment such as, policy on work-life balance, provide positive leadership style, provide real support for employee, and also communicate a clear and measurable career ladder.

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## **KNOWLEDGE MANAGEMENT IMPLEMENTATION: A COMPARATIVE STUDY BASED ON EMPLOYEES' CHARACTERISTICS IN MARINE GEOLOGICAL INSTITUTE**

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### **ABSTRACT**

*Marine Geological Institute (MGI) Bandung recognizes that the implementation of Knowledge Management can provide benefits for the achievement of organizational success and sustainability. This study aims to find out how well the implementation of KM is in MGI and measure the significant differences in the implementation of Knowledge Management (KM) based on employee profiles. From the assessment results, the organization can formulate the strategy to improve the implementation of the next KM. This research uses the methods of maturity level model and quantitative descriptive. The focus of this research is the implementation of KM on the important elements of strategy, culture, technology, process, and people. Data were collected by distributing questionnaires to all employees of MGI Bandung. Data were analyzed using the techniques of descriptive statistics and inferential statistics.*

*The results of descriptive analysis reveal that the level of KM implementation based on the elements of people, strategy, process, culture and technology are categorized Quantitative Managed. The results also show that based on the characteristics of age, employee grades, working period and education level, there are significant differences in the implementation of KM. Therefore, in implementing KM, the four characteristics of the respondents should be differentiated.*

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**Key Words:** knowledge management, strategy, culture, process, technology, people, implementation

**JEL Classification:** C15, C83, D83

## 1. INTRODUCTION

The understanding of how important it is to develop and maintain a strong company from within in order to be able to continually adapt through rapid and precise responses to all the environmental changes it faces is a crucial thing to do by the company (Mulyadi and Sembiring, 2016).

One of the most strategic measures to sustain competitive advantage is knowledge, further more knowledge widely recognised as a strategic asset in improving organisational performance (Salwa and Susanty, 2016). Knowledge has a very important role for both short-term and long-term success and sustainability of an organization. Many successful organizations have excellence and uniqueness in terms of knowledge mastery which is actualized very diversely in the form of efficient work processes, more qualified products, excellent service and effective public policy (Nuraini, 2008). Knowledge also becomes a valuable organizational asset and strategic resource.

Even though some intellectual capital are transferable, internal knowledge is not easily copied because knowledge is anchored in peoples' (employees') mind. It is obvious that knowledge is slowly becoming the most important factor of production, next to labor, land and capital (Rasula et al., 2012). Knowledge as a competitive advantage of a company can not be seen and quantified (Salwa and Susanty, 2016). Knowledge is notional, intangible, inferred and to some extent, subjective (Dearnaley, 2013).

To gain the optimal benefits of knowledge, an organization must manage their knowledge. Through knowledge management, an organizations is able to identify their knowledge and use it to improve the performance and generate innovations. With the support of knowledge management, an organization can also actively identify and acquire the existing quality knowledge in the external environment of the organization (Munir, 2008).

Recognizing the importance of knowledge as an important asset and organizational strategic resource, the Agency of Research and Development for Energy and Mineral Resources (ARDEMR) has initiated the implementation of *knowledge management* through the organizational policies as outlined in the Strategic Plan year 2015 – 2019.

On the other hand, MGI still has problems in documenting the *knowledge*. This is because *knowledge* is very attached to the individuals. The knowledge is usually brought out at the time of employee mutations, rotations, and retirements. The policy in the framework of employee rotations and mutations is very influential for the employees who occupy new duties and positions. These employees usually take time to adapt when performing tasks in new places due to lack of supporting documentation. This will certainly cause problems for the organization in the form of delays in the completion of work in accordance with the deadline. Meanwhile, the transfers of knowledge from the retired employees to the next generation are still not optimally done.

Implementation of *Knowledge Management* can run well and successfully if the organization firstly assesses it. Based on a research of *British Telecommunication PLC*, the failure ratio of KM implementation within a company has reached an average rate of 70% (Tjakraatmadja et al, 2013). In order to avoid the failure, it is important for the organization to conduct a comprehensive assessment and in-depth study on the level of KM implementation it has run.

The present conditions faced by MGI are high rates of mutation, rotation and retirement (Figure 1). In the meantime, the organization has not effectively managed individual *knowledge* into the institution's

*knowledge*. This can hamper the long-term sustainability of the organization which will result in *knowledge loss* and impact on the decrease of organizational performance.

This study aims to measure how well the implementation of Knowledge Management is at MGI Bandung and to know the significant difference in the implementation of KM based on employee profile, so that the improvement strategy can be conducted for the implementation of *Knowledge Management* to improve the organizational performance.

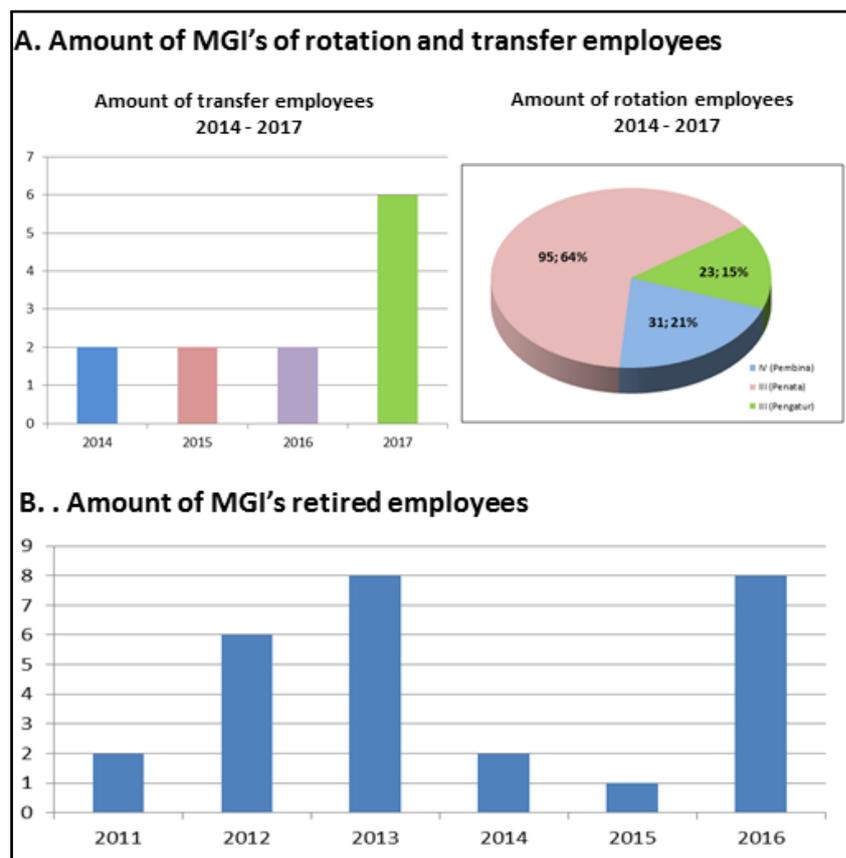


Figure 1. a. Amount of MGI's rotation and transfer employees, Year 2014 – 2017, b. amount of MGI's retired employees, Year 2011 – 2016 at MGI of Bandung

## 2. LITERATURE REVIEW

Knowledge management is the deliberate and systematic coordination of an organization's people, technology, processes, and organizational structure in order to add value through reuse and innovation. This coordination is achieved through creating, sharing, and applying knowledge as well as through feeding the valuable lessons learned and best practices into corporate memory in order to foster continued organizational learning (Dalkir, 2005).

Dalkir (2005) explains that knowledge content will be assessed in the transition from knowledge capture/creation to knowledge sharing and dissemination, knowledge content is assessed. Knowledge is then contextualized in order to be understood ("acquisition") and used ("application"). This stage

then feeds back into the first one in order to update the knowledge content. Ahmed *et al.* (2002) indicates that knowledge management is the coming together of organizational processes, information processing technologies, organizational strategies and culture for the enhanced management and leverage of human knowledge and learning to the benefit of the company (Figure 2).

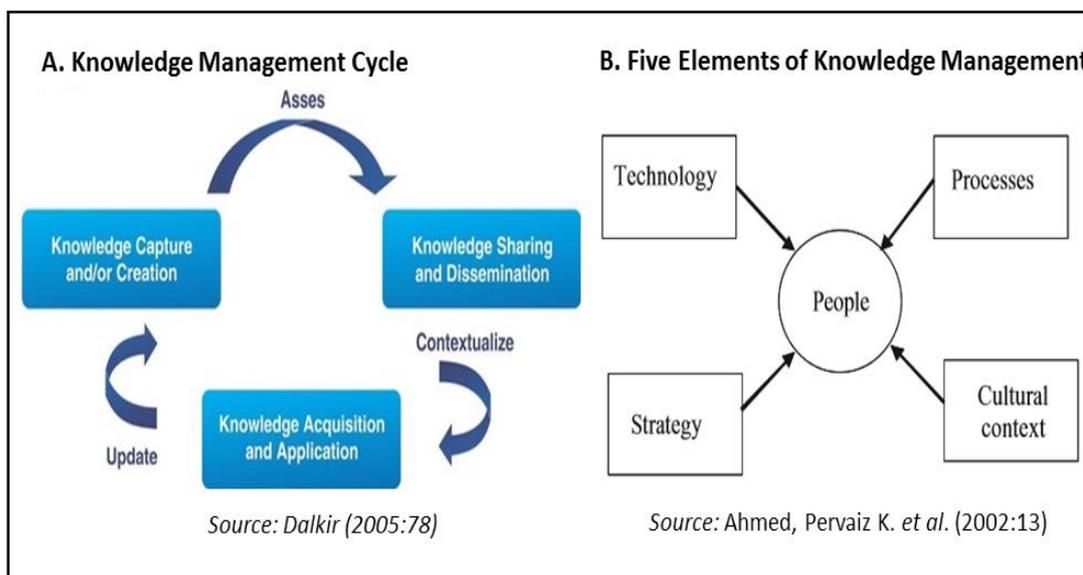


Figure 2. a. The Integrated Knowledge Management Cycle, and b. Key Elements of Knowledge Management

Knowledge Process Quality Model (KPQM) is one of the measurement models of maturity level of Knowledge Management application developed by Paulzen and Perc (Dalkir, 2005). KPQM has five levels i.e. Initial, Aware, Established, Quantitative Managed and Optimize (Table 1).

Table 1. The Level of Knowledge Management Maturity

Level	Name	Characteristics
1	<b>Initial</b>	Organizations have little or no intention at all to manage knowledge formally. In addition, knowledge management is not explicitly considered contributing significantly to long-term business achievement.
2	<b>Aware</b>	Organizations are aware or fully aware of the importance of knowledge management and intend to manage it formally, but they do not know how to do it. At this level, organizations often have various initiatives in the form of pilot projects to explore the potential of knowledge management.
3	<b>Established</b>	Organizations already have the basic infrastructure to support the implementation of knowledge management, where the management is actively promoting knowledge management initiatives by articulating knowledge management strategies, conducting training, and providing incentives. In such organizations, the processes of creating, capturing, sharing, and applying knowledge both formally and informally have been established. Some pilot projects are undertaken to explore the implementation of knowledge management at a higher level.

4	<b>Quantitative Managed</b>	The organization has linked KM to the organizational strategy and it is supported by enterprise-wide KM technology. Quantitative measurements have also been used to measure the effectiveness of ongoing KM implementations.
5	<b>Optimize</b>	The organization has already got a highly integrated KM system which supports the <i>key business activities</i> . The organization is characterized by the existence of a <i>knowledge sharing</i> culture in which every member of the organization is willing to share their unique and important knowledge for the achievement of organizational goals

Source: Adapted from Pee and Kankanhalli (2009) and recycled by Oktarina (2012)

Theoretical framework is the rationale of the synthesized research of the facts, observations and literary studies. Description in the frame of thinking explains the relationship and interrelationship between research variables.

The research variables are explained in depth and relevant to the problems studied so that they can be used as the basis for answering the research problem (Riduwan, 2014) as showed Figure 2.

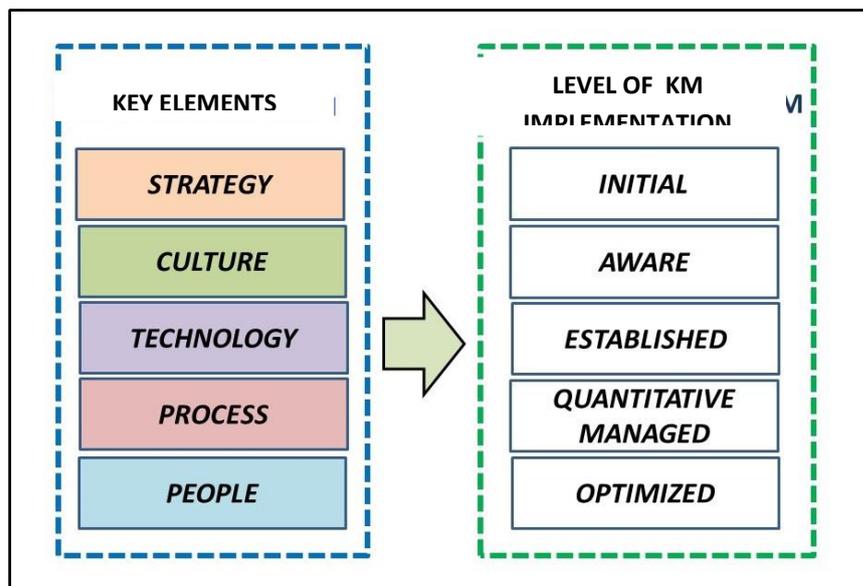


Figure 2. Theoretical Framework

The several previous studies conducted on the subject of Knowledge Management maturity level are as follows:

Ramadhani et.al (2012) have been studied at one of the largest global telecommunication hardware, software and service company in the world, which utilize APO's (Asian Productivity Organization) approach in assessing of KM maturity level through qualitative survey. The result shows the different maturity level for each type of gender, age, and job position, taken further to see the relation with the organization performance from its financial reports.

Kassim and Azmee (2014) have been researched at the telecommunication company in Malaysia that investigate the perception of KM maturity level focusing on KM strategy, leadership behavior, and people and network. The result shows no difference regarding KM strategy, leadership behavior, and people and network according to gender and working experience. The study also found that there are

positive, significant and moderate relationships between leadership behavior and people and network, between KM strategy and leadership behavior, and between people and network and KM strategy.

Bagheri et al (2013) have been studied at research organization in Iran which focuses on evaluating three areas of knowledge management development in organization. These areas include: people, process, and technology. This research have been done to investigate different job positions for vice president, managers, supervisors and technicians. The result of the study shows that the industry's KM maturity level was at level "2" for the people domain, at level "1" for the processes domain, and at level "2" for the technology domain. But the industry's total maturity level was at level "2". It is obvious that in order to promote the KM maturity level, it should be promoted in every empowering domain and given that the maturity level of the processes domain is lower than the other domains as well as KM's total level, therefore the priority should be for planning to promote this domain.

### **3. METHODOLOGY**

Research methodology mainly use five key elements adopted by Ahmed (2002) such as strategy, process, culture, technology and people. Meanwhile maturity level of knowledge management application in the study using Knowledge Process Quality Model (KPQM) developed by Paulzen and Perc (Dalkir, 2005) that has five levels i.e. initial, aware, established, quantitative managed and optimize.

Knowledge Process Quality Model (KPQM) based on the major tenets of quality management and process engineering. The underlying premise is that knowledge processes can be improved by enhancing the corresponding management structures. The maturity model makes it possible to implement a systematic or incremental KM application (Dalkir, 2005). Related to MGI, KPQM is applied to improve organizational performance and R&D results quality including technology services and marine surveys.

Data analysis techniques used in this study are descriptive statistic and inferential statistic. Descriptive statistic is a statistic used to analyze data by describing them as they are without intending to make any general conclusion or generalization (Sugiyono, 2017). While, inferential statistic (inductive) is the method used to know the population based on the sample by analyzing and interpreting the data into a conclusion. Inferential statistic aims to draw conclusions from some people, events and times for overall or generalization (Gunawan, 2016).

#### **Normality test**

Normality test is taken to determine whether the distribution of data is normal or not. This is important for the accuracy of statistical test selection to be used (Somantri and Muhidin, 2006). Furthermore, Gunawan (2016) says that the normal distribution is a central distribution form (mean, mode, and median are positioned in the middle). According to Sudarmanto (Gunawan, 2016) that if the probability value is  $\geq 0.05$  then the data are considered to be normally distributed, otherwise if the probability value is  $< 0.05$  then the data are declared abnormal.

#### **Comparative Test**

Ghozali (2014) describes the procedure for performing comparative test calculations:

- a. If each sample is normally distributed then it will be proceeded with the parametric statistical test, ie using T-test (for two-group comparative studies) or ANOVA Test (for comparative studies of more than three groups)
- b. If each sample group is not normally distributed, then nonparametric statistics is used, ie Mann Whitney U Test (for two-group comparative studies) or Kruskal Wallis test (for comparative studies of three or more groups)

In this study, the researchers use t-test, one-way ANOVA test and kruskal wallis

#### 4. RESULTS AND DISCUSSION

Of the total questionnaires distributed to 150 respondents, only 132 questionnaires returned. The characteristics of respondents are divided into gender, age group, employee grade, period of work, and education level. Based on gender, most of the respondents or 74.24% are male employees, and the rest 25.76% are female employees.

By age group, most respondents or 62.88% are > 40 years old, 23.48% are 31-40 years old, and the rest 13.64% are < 30 years old. Based on grade, the majority 62.88% of respondents are in the category of grade III, then 25.76% are of grade IV, and the remaining 11.36% are of grade II. Based on period of work, 46.21% of the respondents have worked for > 20 years, then 31.06% have worked for 11-20 years, and the rest 22.73% have worked for <10 years. Based on education level, most of the respondents or 43,18% have S-1 (under graduate) education, 24,24% have S-2 (graduate) education, 18.94% have high school education, 8.33% have diploma degree, and the rest 5.30% are educated S-3 (post graduate/doctoral).

The actual score for strategy variable is 5351 and the ideal score is 6600 with the percentage value obtained of 81.08%. The actual score for culture variable is 3518 and the ideal score is 4620 with the percentage value obtained of 76.15%, this is included into the category of *quantitive managed* because it is in the interval range of > 68% - 84%. The actual score for technology variable is 1403 and the ideal score is 1980 with the percentage value obtained of 70.86%, this is included into the category of *quantitive managed* because it is in the interval range of > 68% - 84%. The actual score for the process variable is 5798 and the ideal score is 7260 with the percentage value obtained of 79.86%, this is included into the category of *quantitive managed* because it is in the interval range of > 68% - 84%. The actual score for people variable is 4860 and the ideal score is 5940 with the percentage obtained of 81.82%, this is included into the category of *quantitive managed* because it is in the interval range of > 68% - 84% (Table 2).

Table 2. Total Respondent Response Recapitulation

Variable	Total	Score Actual	Score Ideal	%	Level of KM Maturity
Total Strategy Variable	1320	5351	6600	81,08	Quantitive Managed

Total Culture Variable	924	3518	4620	76,15	Quantitive Managed
Total Technology Variable	396	1403	1980	70,86	Quantitive Managed
Total Process Variable	1452	5798	7260	79,86	Quantitive Managed
Total People Variable	1188	4860	5940	81,82	Quantitative Managed

There is no significant difference between male and female employees on the overall level of KM implementation based on gender variable. These results reflect that male and female employees have an equivalent level of ability in the implementation of KM. However, for the variables of *culture* and *process*, the KM implementation level based on gender show significant differences (Table 3).

In *culture* variable, female employees have a higher implementation level equal to 81,68% compared with male employees which is 74,23%. While, In *process* variable, male employees have a higher KM implementation level at 82.19% compared with female employees which is 73.16%. These results indicate that male employees are better at implementing KM processes in their work activities.

Table 3. Level of KM Implementation based on Gender and The Difference Test Results

Variable	Level of KM Implementation based on Gender		The Difference Test Results
	Male (%)	Female (%)	
Strategy	80,45	82,88	p-value: 0,109
	quantitative managed	quantitative managed	Not Significant
Culture	74,23	81,68	p-value: 0,000
	quantitative managed	quantitative managed	Significant
Technology	71,02	70,39	p-value: 0,916
	quantitative managed	quantitative managed	Not Significant
Process	82,19	73,16	p-value: 0,000
	quantitative managed	quantitative managed	Significant
People	81,63	82,35	p-value: 0,238
	quantitative managed	quantitative managed	Not Significant
KM	<b>79,40</b>	<b>78,94</b>	<b>p-value = 0,648</b>
	<b>quantitative managed</b>	<b>quantitative managed</b>	<b>Not Significant</b>

The results of the overall KM implementation level assessment which have significant differences. It is shown that the age group of above 40 years has the highest level of KM implementation equal to 77.76%. This indicates that employees in the age group of above 40 years have the best level of KM implementation compared with the age group of ≤ 30 years and age group of 31-40 years. Furthermore, a significant difference is also shown in *strategy* variable in which the highest implementation level of KM element of strategy is in the age group of > 40 years amounted to 81.23% (Table 4).

Table 4. Level KM Implementation Based on Age group and the Difference Test Results

Variabel	Level of KM Implementation based on Age Group			The Difference test results
	Age ≤ 30 year	Age 31-40 year	Age > 40 year	
Strategy	69,33	78,97	81,23	p-value: 0,000
	QM	QM	QM	Significant
Culture	72,86	74,38	75,66	p-value: 0,512
	QM	QM	QM	Not Significant
Technology	69,63	72,04	73,49	p-value: 0,665
	QM	QM	QM	Not Significant
Process	71,11	72,02	73,84	p-value: 0,539
	QM	QM	QM	Not Significant
People	71,11	79,93	81,74	p-value: 0,314
	QM	QM	QM	Not Significant
KM	<b>70,86</b>	<b>75,95</b>	<b>77,76</b>	p-value: 0,01
	QM	QM	QM	<b>Significant</b>

Note: QM is quantitative managed

There is a significant difference in the overall implementation rate of KM elements in which grade IV employees (administrator) have the highest KM implementation level of 82.50%. Then, in the variable of *technology* it is also found that a significant difference is in the group of grade IV employees (administrator) which has the highest KM implementation rate equal to 82.35% (Table 5).

Furthermore, there is also a significant difference in the variable of *process* in which grade IV employees (administrator) have the highest level of KM implementation amounted to 83.80%. Likewise in the variable of *people*, it is found a significant difference with the highest level of KM implementation by employees of grade IV (administrator) equal to 83.92%. While the results of difference tests for the elements of *strategy* and *culture* show there is no significant difference.

Table 5. Level of KM Implementation Based on Employee Grade and the Difference Test Result

Variable	Level of KM Implementation based on Employee Grade			The Difference Test Result
	Grade II (Supervisor)	Grade III (Superintend)	Grade IV (Administrator)	
Strategy	81,33	81,61	82,12	p-value: 0,907
	QM	QM	QM	Not Significant
Culture	73,52	75,87	79,24	p-value: 0,209
	QM	QM	QM	Not Significant
Technology	71,11	73,90	82,35	p-value: 0,037
	QM	QM	QM	Significant
Process	65,58	78,42	83,80	p-value: 0,000
	<i>Established</i>	QM	QM	Significant
People	66,07	82,73	83,92	p-value: 0,000

	<i>Established</i>	QM	QM	Significant
KM	<b>71,43</b>	<b>79,40</b>	<b>82,50</b>	<b>p-value: 0,00</b>
	QM	QM	QM	Significant

The results of KM implementation level assessment with all elements have significant differences such as in period of work, the highest level of KM implementation is by the employees with working period over 20 years of 80.58%. In the variable of *technology*, there is also a significant difference in which the highest level of KM implementation is by the employees with the working period of > 20 years equal to 80.33% (Table 6).

Table 6. Level of KM Implementation based on Period of Work and the Difference Test Result

Variabel	Level of KM Implementation based on Period of Work			The Difference Test Result
	≤ 10 Years	11-20 Years	> 20 Years	
<i>Strategy</i>	78,80	79,85	80,98	p-value: 0,464
	QM	QM	QM	Not Significant
<i>Culture</i>	74,00	78,95	80,19	p-value: 0,125
	QM	QM	QM	Not Significant
<i>Technology</i>	68,67	79,51	80,33	p-value: 0,004
	QM	QM	QM	Significant
<i>Process</i>	76,42	77,96	79,91	p-value: 0,278
	QM	QM	QM	Not Significant
<i>People</i>	76,00	80,49	81,35	p-value: 0,739
	QM	QM	QM	Not Significant
KM	<b>75,92</b>	<b>79,29</b>	<b>80,58</b>	p-value: 0,047
	QM	QM	QM	Significant

The results of KM implementation level assessment involving all the elements have shown significant differences as in case of education level, the highest level of KM implementation takes place in S3 (post graduate) education level at 82.86%. Furthermore, the level of KM implementation in *process* variable also has significant difference in which the highest score is in S3 (post graduate) level of education at 82.86%. In addition to the variable of *process*, the variable of *people* has also a significant difference for the S3 (post graduate) level of education which is equal to 83.17%. While for the variables of *strategy*, *culture* and *technology*, there is no significant difference (Table 7).

Table 7. Level of KM Implementation based on Education Level and The Difference Test Results

Variable	Level of KM Implementation based on Education Level					The Difference Test Result
	High School	Diploma	S1	S2	S3	
<i>Strategy</i>	76,96	77,09	80,98	81,56	82,29	p-value: 0,224 ;

	QM	QM	QM	QM	QM	Not Significant
<i>Culture</i>	71,31	73,25	77,94	80,63	83,27	p-value: 0,051 ;
	QM	QM	QM	QM	QM	Not Significant
<i>Technology</i>	69,33	72,12	73,10	78,33	82,86	p-value: 0,139
	QM	QM	QM	QM	QM	Not Significant
<i>Process</i>	64,00	67,60	74,23	80,51	82,86	p-value: 0,000
	<i>Established</i>	<i>Established</i>	QM	QM	QM	Significant
<i>People</i>	62,04	68,48	76,18	80,97	83,17	p-value: 0,000 ;
	<i>Established</i>	QM	QM	QM	QM	Significant
<b>KM</b>	<b>68,48</b>	<b>71,50</b>	<b>76,92</b>	<b>80,73</b>	<b>82,86</b>	<b>p-value: 0,000;</b>
	<b>QM</b>	<b>QM</b>	<b>QM</b>	<b>QM</b>	<b>QM</b>	<b>Significant</b>

### Managerial Implications

Based on the results of descriptive analysis, it is found that the implementation rate of KM in MGI as a whole is rated *Quantitative Managed*. However, the organization still needs to make improvement strategy for the implementation of knowledge management in order to reach a higher level which is the level of *optimize*, because at the level of *optimize*, KM implementation will be more systematic and integrated with the *work process* and a stronger knowledge-based institution culture.

Based on the highest scores from the results of descriptive analysis on the five important elements of KM, the results obtained are: *People* (81.82%), *Strategy* (81.08%), *Process* (79.86%), *Culture* (76.15%), and *Technology* (70.86%). The highest rating result in MGI is on *People* element. This condition is a very strong basis for the successful implementation of KM because the in fact *People* is the heart of KM and KM is centered on humans (Tobing, 2016). The role of knowledge workers in the framework of knowledge-based organization has very high relevance to overall organizational performance (Kubo & Saka, 2002). The lowest result of KM assessment is the element of *Technology*. *Treatment* is needed to taken by improving the infrastructure of higher quality technologies such as providing access to information quickly, precisely and accurately for the parties in need, so that knowledge owned by the employees is always *up to date*. In addition, the use of technology infrastructure should be flexible and easy so that the communication processes among members of the organization in sharing knowledge can be more effective and efficient.

The level of KM implementation based on gender shows no significant difference between male and female employees. Meanwhile, the level of KM implementation based on age group, employee grade, working period, and level of education signify significant differences.

The implementation of KM by age group reveals that the lowest level is in the age group of  $\leq 30$  years. Therefore, it is necessary to more intensively disseminate KM to this age group in order to create the same perception, understanding and awareness about the importance of KM implementation for long-term organizational success.

The lowest level of KM implementation based on employee grade occurs in employee group of grade II (supervisor). Based on education level, the lowest level of implementation takes place in the level of high school education. This condition signifies that grade IV employees (administrator) should play an important role of becoming the *role models* for the subordinates, especially for those of grade II, and they also practically ought to provide exemplary examples of KM implementation in the workplace through *storytelling*, face-to-face meetings, and sharing knowledge through the utilization of information technology (*virtual*). As for the employees with high school level of education can be improved by providing educations and training on an ongoing basis formally and non-formally, technically and non technically, internally and externally which will be very useful to enhance and develop the knowledge, intellectuality and *skills* directly related to KM processes.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based on the formulation of the problem and the purpose of the research which was followed up with the analysis of data processing and discussion, it can be concluded that the implementation level of *Knowledge Management* in MGI Bandung on all elements of *strategy, culture, process, technology, and people* are in *Quantitative Managed category*. The results of the KM implementation assessment from the highest score to the lowest one are consecutively as follows: elements of *people* (81.82%), *strategy* (81.08%), *process* (79.86%), *culture* (76.15%) and *technology* (70.86%).

The difference of KM implementation based on employee profile is that it has generally no significant difference in the implementation of KM based on gender. But in *culture* element, there is a significant difference in which the rate of KM implementation of female employees is higher than that of male employees. Furthermore, in the *process* element, KM implementation rate of male employees is higher than female employees.

In general, there is a significant difference of KM implementation based on age group in which the highest rate of KM implementation is by the employees in the age group of  $> 40$  years and the lowest one is in the age group of less than 30 years. In the element of *strategy*, the highest level of KM implementation is in the age group of  $> 40$  years and the lowest is in the age group of less than 30 years.

There is a significant difference in the implementation of KM based on the employee grade in which the highest level of KM implementation is among the employees of grade IV (Administrator), while the lowest one is by the employees of grade II (Supervisor). In the element of *technology*, there is a significant difference in which the highest level of KM implementation is in the employee group of grade IV (Administrator) and the lowest is in the employee group of grade II (Supervisor). Similarly, on the elements of *process* and *people*, a significant difference is found in which the highest level of KM implementation is by the employees of grade IV (Administrator) and the lowest is by grade II (Supervisor).

Based on working period, there is a significant difference in KM implementation. The highest level of KM implementation is by the employees within a working period of over 20 years, the lowest is by the employees with tenure of less than 10 years. In the element of *technology*, there is a significant

difference in which the highest level of KM implementation is by the employees within a working period above 20 years and the lowest is by the employees with the tenure of less than 10 years

Based on the level of education, there is generally a significant difference in the implementation of KM in which the highest level is among the employees with the education level of S3 (post graduate), while the lowest level is among the employees with high school education level. Subsequently, there is also a significant difference in elements of *process* and *people* with the highest level of KM implementation by the employees with S3 (post graduate) education and the lowest level is by the employees with high school education.

This research is an initial identification to improve the implementation of KM. Further research can be carried out within different business fields such as manufacturing, service and others. Therefore, a more various results can be obtained to enrich the knowledge of KM. It is also necessary to conduct a *causal explanatory* research to examine the significant effects of important elements critically needed for successful implementation of KM on employee work motivation, performance, innovation, efficiency and effectiveness to improve organizational capability and *performance*.

From a practical aspect, the organization needs to give opportunity and authority to female employees in KM activities including as *knowledge leaders*. It is also needed to improve the quality of technology related to infrastructure and information system. The organization needs to create a *campaign* and promotional mechanism through *rewards* both financially and non-financially, and improve more intensive relationships between superiors and subordinates (verticals).

The organization needs to socialize the implementation of KM more progressively to the employees in age group of  $\leq 30$  years, grade II (supervisor), tenure years of  $\leq 10$  years and high school level of education to more equal perceptions about KM implementation in the workplace. Providing education and training related to KM both internally and externally for grade II (Supervisor) and high school level staffs to improve the knowledge and understanding on KM implementation.

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## THE INFLUENCE OF OVERTIME TO WORK-FAMILY CONFLICT AND JOB PERFORMANCE IN WITEL BOGOR OF PT TELKOM INDONESIA

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### ABSTRACT

*Overtime phenomenon occurs all over the world. Increased workload, work pressure and decreasing the boundary between work and home cause overtime to be reasonable for most employees. Overtime is often an effort to improve work performance. Various research proves the health implications of overtime implementation. In addition, overtime due to work demands leads to an inadequate personal time requirement that causes work-family interference (WFI).*

*Telkom as a telecommunication company in Indonesia face so many business challenges from time to time. This challenge resulted the needs to innovate and work quickly which causes the practical of overtime becomes natural. However, further analysis of the effects of overtime is needed, in this case on the work-family conflict and work performance.*

*The purpose of this study is examine the condition of overtime, work family conflict and work performansi in Telkom Bogor, and analyse the influence of overtime to work family conflict dan job performance. Descriptive analysis is used to examine variables condition while causal analysis with Causal Step followed by Sobel Test (Product Coefficient) is used to test the relationship between variables. The results showed that overtime has a positive effect on job performance where has no effect on work family conflict. However, work-family conflicts have a negative effect on work performance.*

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**Key Words:** overtime; work-family conflicts; job performance

**JEL Classification:** J24, D74, L25, O15, K38

## **1. INTRODUCTION**

Increasing workloads, job insecurity, pressures to perform, and the diminishing boundary between work and home have made overtime work common among many contemporary workers. (Beckers, 20018). Events of overtime deaths have been encountered in many countries. This phenomenon has its own terms in each country such as karoshi in Japan, gwarosa in South Korea and guolaosi in China. The medical causes of the death are heart attack, stroke, stress and hunger. In addition to providing direct health effects, overtime implementation will certainly reduce employee personal time. As many as 4 out of 10 employees have difficulty meeting work and personal needs, where jobs are more often interfere family than vice versa (Fallon-Hogan, 2013) resulting work-family interference (WFI). This interference will trigger work-family conflict (WFC).

Work-family conflicts arise when lines dividing work and personal or family activities become blurred. This conflict can caused by the home or work environment. Most work-family conflicts are caused by work. WFC has consequences for job stress and life stress which indirectly affects job performance and life satisfaction (Esson, 2004). This conflict not only affecting the personal lives of employees but also can affect the performance of employees in the workplace.

While additional working hours may reflect a worker's work ethic or commitment to the job, workplace, employer or labour force and the hope of attaining higher current or future earnings, at some point, longer working hours inevitably begin to create risks and time conflicts that interfere not only with the quality of non-work life, but also on-the-job performance (Golden, 2011). There are so works to do on a very short time so that the work schedule becomes less flexible than the personal schedule. This can lead to work-life conflict (Malik and Khan, 2008). Research that has been done in 18 manufacturing companies in the US shows that overtime implementation actually decreases the average employee productivity based on work output per working hour in almost all sectors of the industry (Shepard and Clinton, 2000).

## **2. LITERATURE REVIEW**

### **2.1 Job Performance**

Job performance can be defined as employee behavior in meeting job descriptions and needs in the workplace, which will help the company achieve success. Job performance affect how many contribution employee has to the organization. Job performance is often operationalized as the quality of work, the quantity of work and the amount of effort given.

There are three general criteria in evaluating job performance which are the result of individual task, work behavior and individual attitude. Quoted from the research conducted by Anshari and Sembiring (Anshari and Sembiring, 2017), there are several aspects of employee performance according to Ivancevich (2002) namely: Quantity of Work, Quality of Work, Knowledge of Job), Quality of Personal (Personal Qualities), Cooperation (Cooperation), Trustworthiness (Dependability), Initiative (Initiative).

### **2.2 Overtime**

Based on the dictionary of the European Foundation for the Improvement of Living and Working Conditions (2007), our definition of overtime work is: all work hours that an employee works on top of his/her contractual work hours (Beckers, 2008). Based on Undang Undang No. 13 Tahun 2003 about

Manpower, the working hours as stipulated in Pasal 77 Ayat 2 Point B are 8 (eight) hours 1 (one) day and 40 (forty) hours 1 (one) week for 5 (five) working days in 1 (one) week with overtime in Pasal 78 Ayat 1 Point B can only be made at most 3 (three) hours in 1 (one) day and 14 (fourteen) hours in 1 (one) week.

Overtime has various forms. Based on employee remuneration, overtime is divided into paid overtime and unpaid overtime. Paid overtime occurs when the addition of working hours is measurable and directly recasted with additional money. Unpaid overtime occurs when no extra money is earned by overtime employees another form of overtime based on control over overtime implementing is involuntary overtime and voluntary overtime. Involuntary overtime occurs when the employee loses control over overtime while voluntary overtime occurs where the employee voluntarily over his own desire overtime (Watanabe, M. and Yamauchi, K., 2016).

The main reason of working for a long time is to increase revenue for paid overtime to achieve job goals for unpaid overtime (Kodz, et al., 2003). Fallon-hoggan (2013) identifies factors that affect working hours, ie organizational factors include work intensity, work culture, organizational support, personal factors including job involvement and workaholism, as well as individual factors including the number of children or families with dependence on employees.

Based on the research findings that are related to some psychological theories of work, (Beckers, 2008) Beckers formulated heuristic models of overtime relationships with employee well-being. The model shows overtime characteristics in terms of quantity and quality. Based on several work psychological theories, Beckers selected central psychosocial (overtime) work characteristics that define the quality of overtime work: job demands, autonomy, variety, worktime control, the voluntary/involuntary nature of overtime work and rewards for overtime. Quantity of overtime work is measured by the number and frequency of overtime. Quantity and quality overtime is what will significantly affect employee well-being.

Based on 16 of 22 studies indicating that overtime is closely related to health, increasing the rate of occupational injury, increasing the number of sick employees to increasing mortality (Caruso, et al., 2004). Working in long hours does not produce as much output as expected. The lack of personal time of overtime employees, accompanied by tired and declining health conditions, leads to the fulfillment of personal needs often not achieved. This has led to the emergence of work interfering family (WIF) where work affects the lives of employee's family who have the potential to cause role conflict. Various problems arising from overtime will be accompanied by costs that must be borne by the company either due to increased risk of individual employees such as physical and psychological health but also the risk of the company.

### **2.3 Work Family Conflict**

Based on the definition of role conflict, the following definition of work-family conflict is offered: a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. This conflict occurs as a consequence of fulfilling the various roles of a person, as a couple, a parent, a career, where in certain circumstances there will be dominance of one of the roles that causes no fulfillment of the fulfillment of other roles.

Work-family conflict is built in two directions (work → family and family → work) asymmetrically and interrelated. WFC is divided into three forms: time-based conflicts, stress-based conflicts and behavior-based conflicts. Time-based and / or tense interference from this work has serious adverse consequences for the organization as well as for individual workers and their families, including physical

health (eg hypertension), mental health (eg stress, fatigue, substance abuse) and domain related output (eg dissatisfaction of work and family, and desire to quit the job) (Eby, et al., 2005). This interference will cause work-family conflict (WFC).

Based on a study conducted by Graham Lowe (2005) that work-family conflict has various consequences that can affect not only individuals and organizations but also society. As individuals, WFC will affect the health of employees both physically and mentally such as emotional fatigue, stress, dissatisfaction in life to chronic illness. In the organization, WFC will affect employee productivity, emotional fatigue, job stress, absence, desire for turnover, low organizational commitment and low job satisfaction (Esson, 2004). There are a range of other costs that employers can incur as a result of high levels of work-family conflict. These include recruitment and retention, individual productivity, employee attitudes and behaviour related to performance, and efficiency. (Lowe, 2005).

### **3. METHODOLOGY**

#### **3.1 Research Type**

The methodology used for this research is a descriptive analysis to examine the condition of variables and also causal analysis to test relationship among variables. Based on the analytical approach, this research uses quantitative approach to examine specific sample population, using research instruments with quantitative data analysis to examine the hypothesis that has been set. Through the hypothesis of overtime, work-family conflict, and job performance in accordance with the predefined framework, this research can be categorized as causal and verifikative research.

#### **3.2 Population and Sample**

Population is a generalization region consisting of objects or subjects that have certain qualities and characteristics set by researchers to be studied and then drawn conclusions. The population in this research is employees of PT Telkom Indonesia, Tbk. in Bogor city area, Bogor regency and Depok city consisting of 250 employees. The sampling technique used is probability sampling based on the employee's position band with a total of 181 employees.

#### **3.3 Variable Operationalisation**

Variables used in this study consisted of three groups of variables namely independent variables, dependent variables and mediation variables. The independent variable used in this research is overtime. The subvariables used in this study refers to the Beckers heuristic model [3] which consists of overtime quantity dimensions and overtime quality. The variable is influenced by the dependent variable either positive or negative. While the dependent variable is the dependent variable that is influenced by independent variables. Dependent variable used in this research is job performance variable. Mediation variable used in this research is work-family conflict influenced by independent variable and influence dependent variable.

The measurement scale used is the linkert scale, ie the scale used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena. This scale is used to measure a person's response to a social object. The linkert scale is designed to examine how strongly the subject agrees or disagrees with the statement on a 4-point scale with a score of 1 for Strongly Disagree (SD), score 2 for Disagree (D), score 3 for Agree (S) and score 4 for answers Strongly Agree (SS).

#### **3.3 Data Analysis Technique**

This type of research is a causal and verifikative research that will test the hypothesis of overtime connectivity, work-family conflict, and job performance in accordance with the predefined framework. Based on the measurement scale used, it is necessary to do a descriptive analysis to analyze the data by describing the data that has been collected as it is without intending to make conclusions that apply to the public or generalization.

This study uses a mediation variable that can theoretically influence the causal relationship between independent variables to the dependent variable. This variable lies between the independent variable and the dependent variable, so the independent variable does not directly affect the dependent variable. Therefore, this research uses regression analysis technique with mediation variable using Causal Step method and Product of Coefficient (Sobel test).

The steps in testing the hypothesis referring to the intervening role test procedures proposed by Baron and Kenny (1986) are as follows:

1. Creating an overtime regression equation (X) on job performance (Y). This regression analysis will produce coefficient  $c$ . The path is expected to be significant ( $t_c > t_{tabel}$ ,  $c \neq 0$ ,  $p_c < 0,05$ ).
2. Creating an overtime regression equation (X) against work-family conflict (Z). This regression analysis will produce a coefficient  $a$ . The path is expected to be significant ( $t_a > t_{tabel}$ ,  $a \neq 0$ ,  $p_a < 0,05$ ).
3. Creating an overtime regression equation (X) through work-family conflict (Z) on job performance (Y). This regression analysis will yield two predictive prediction values of Z and X. The prediction Z on Y we produce the coefficient  $b$ , whereas the prediction X against Y yields the coefficient  $c'$ . The  $b$  path is expected to be significant ( $t_b > t_{tabel}$ ,  $b \neq 0$ ,  $p_b < 0,05$ ), while path  $c'$  is expected to be insignificant ( $t_{c'} < t_{tabel}$ ,  $c' = 0$ ,  $p_{c'} > 0,05$ ). Line  $c'$  denotes the direct influence of X on Y while the  $ab$  path indicates the indirect effect of X on Y through Z. The variable Z is said to mediate X to Y if the indirect effect ( $a \times b$ ) is greater than the direct effect ( $c'$ ). The strength of the influence of the mediating variable needs to be proven by the test of the sobel where the expected calculation of  $z > 1.96$ .

Based on the framework that has been prepared, the hypothesis in this study are as follows

H1: There is a significant influence overtime (X) on job performance (Y)

H2: A significant influence overtime (X) on work-family conflict (Z)

H3: Work-family conflict (Z) mediates the effect of significant overtime (X) on job performance (Y)

#### 4. RESULTS AND DISCUSSION

Bogor witel employee perceptions of overtime, work-family conflict and job performance are known through descriptive analysis. This analysis is done by arranging frequency distribution table to know the number and percentage of research variable value. The analysis shows that the implementation of overtime and work-family conflict in Witel Bogor is in good condition while job performance is considered very good. Although the respondent's perception of overtime quantity is not good because respondents work longer than working hours and come home late during overtime but overtime quality is rated very well by respondents.

In the measurement of WFC perceptions, adjustment of descriptive analysis on work family conflict variables has been done, and the lower work-family conflict is interpreted well. Descriptive analysis

shows that Work to Family Conflict is considered good while Family to Work Conflict is considered very good by respondents. While for job performance assessment, overall it is in very good condition. Awareness to work together and have high initiative of respondents has the highest value compared to other job-performance subvariables.

The result of the research on the influence of overtime on work-family conflict and job performance is obtained through regression analysis with intervening variable where work-family conflict acts as intervening variable. Hypothesis test is done by using Causal Step method to test the influence among variables including intervening variables. Calculation of Product of Coefficient (Sobel test) conducted to test the strength of the influence of intervening variables. Regression analysis results can be seen in the Regression Diagram X against Y in Figure 1 and the Regression Diagram of Y through Z in Figure 2.

Based on the regression diagram in Figures 1 and 2 associated with the Causal Step Method, it can be seen that a variable can be said to be a mediator if the result is as follows,

- Line c is significant. This requirement is fulfilled on the regression calculation showing that X has significant effect to Y where  $t_c > t_{table}$ .
- Path a significant. This condition is not proven where the regression calculation that X has no significant effect on Z where  $t_a < t_{table}$ .
- Line b is significant. This requirement is fulfilled on regression calculation which shows that Z has significant negative effect to Y where  $t_b > t_{table}$ .
- Line c' is not significant. This requirement is not fulfilled on the regression calculation showing the positive significant effect of X to Y where  $t_{c'} > t_{table}$ .

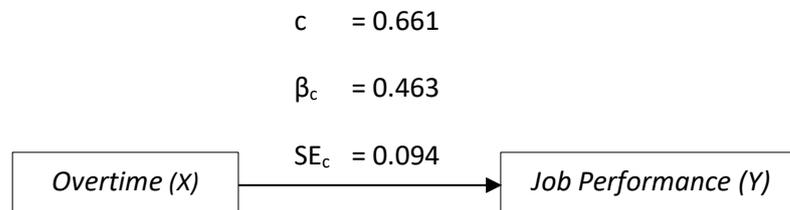


Figure 1 Diagram of Regression X to Y

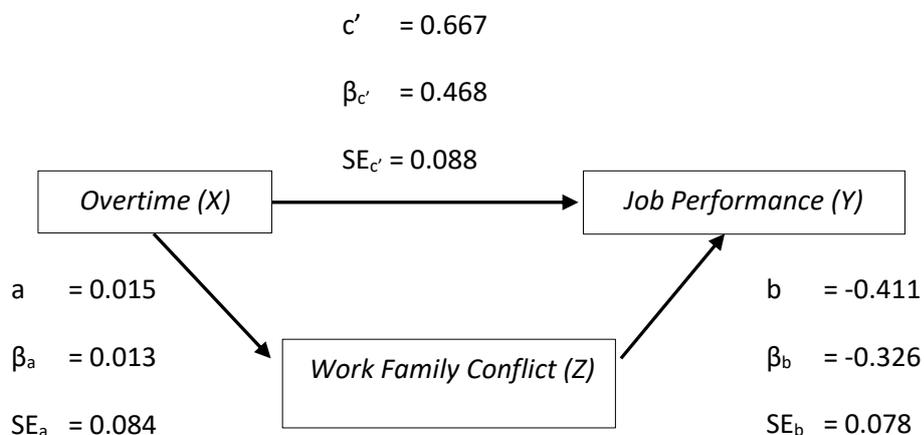


Figure 2 Diagram of Regression X to Y through Z

There is a difference of opinion about the role of mediation according to Shroul and Bolger (2002) in which a variable is said to mediate a relationship if it satisfies the terms of points b and c while paths a and b are significant. Points a and d are used to ascertain whether the intervening variable is in perfect role. Based on the results of the first analysis it can be seen that path b is not significant so it is proved that there is no significant influence overtime (X) on job performance (Y) through intervening work-family conflict (Z) variable.

From Figure 1 and Figure 2 it can be seen that the total overtime effect on job performance on line c is 0.661, the direct overtime effect on job performance on line c' is 0.667 and the indirect effect of knowledge to behavior (line ab) is  $0.015 \times -0.411 = 0.006165$ . Total effect is the sum of direct effects plus indirect effects ( $c = c' + ab$ ). Intervening variables are said to have an influence on the relationship of independent variables to the dependent variable if the indirect effect has greater than the direct effect. Since the total value of direct influence is greater than the value of indirect influence, the work-family conflict variable is not an intervening variable.

Intervention variable test is done by testing the strength of indirect effect of overtime (X) on job performance (Y) through work family conflict (Z). In calculating the significance of indirect effect, Product of Coefficient strategy is used by looking at the value of  $z > 1.96$  with significance level of 0.05. The test results obtained z-calculated value can be concluded that work-family conflict does not mediate the causal relationship between overtime and job performance.

#### **4.1 Overtime Influence on Job Performance (H1)**

Based on the regression analysis, there is a significant influence between overtime (X) on job performance (Y) so it can be concluded that H1 is accepted. Overall, overtime conditions that occur in the environment Telkom Witel Bogor quite good.

In terms of quantity, overtime condition is considered not good, where employees still frequent overtime until late at night, but the quality of overtime is quite good. Some parameters of overtime quality are so good that employees feel the need to be creative, learn new things, have high skills and work quickly to support their work.

Employees who have motivation in work tend not to feel fatigue during overtime. Telkom employees Witel Bogor overtime not to get compensation but to achieve the purpose of work as Kodz, et al. (2013) has proven in his previous research. This condition is in harmony with the positive overtime correlation to job performance in which the condition is considered very good.

#### **4.2 Overtime Effect on Work-Family Conflict (H2)**

The result of regression analysis shows that there is no influence overtime (X) on work-family conflict (Z) so that H2 is rejected. This analysis is in accordance with conditions in Witel Bogor which shows that the work-family conflict condition is good when high overtime.

Overtime conditions in Witel Bogor show good value because of good overtime quality. Overtime quality shows employees of Witel Bogor have good motivation in working and implementing overtime, thus affecting conflict management for individual employees. Another condition that supports a good overtime condition is the overtime implementation that does not happen every day. Although employees carry out overtime, it does not affect the conflicts that occur in employees.

However, it needs to be seen on the result of WFC analysis that shows the condition of family to work conflict is better than work to family conflict which means that the conflicts that happened to the employees come from office rather than home. This is in accordance with the results of research conducted by Colombo & Ghislieri (2007). Although classified as good, but the assessment is close to the lower limit of good score interpretation. Thus, further research is needed to identify what factors are causing this conflict to occur.

#### **4.3 OVERTIME INFLUENCE THROUGH WORK-FAMILY CONFLICT ON JOB PERFORMANCE (H3)**

Need for direct and indirect correlation analysis to identify the relationship of overtime (X) to job performance (Y) through work-family conflict (Z.) Indirect relationship is measured by analyzing the effect of overtime on work-family conflict previously analyzed and analysis of work-family conflict's influence on job performance. The regression analysis results show the negative effect of work-family conflict on job performance. While on the direct relationship also found a significant influence between overtime and job performance.

The mediation variable is said to have a perfect role when the indirect relationship is significant and the direct relationship is insignificant. Indirect effects have been analyzed indicating that overtime has no significant effect on work-family conflict although work-family conflict has a significant negative effect on job performance. Based on scores that have been calculated, the direct effect is greater than indirect which indicates the absence of a mediation role on the indirect relationship. Both analysis are proven on the result of the Sobel Test which shows the absence of WFC role as the mediation variable between overtime to job performance. Thus H3 is rejected.

Seeing the age characteristics of employees dominated by employees over the age of 50 indicates that the employee has experienced various conditions in the work so that both personal and family have adjusted to the condition. Another characteristic that supports this condition is male employees who become the majority of employees in Telkom Witel Bogor. In accordance with the results of research conducted by Fallon-Hogan (2013) that male employees tend to work longer than women. On the other hand, male employees tend to have no responsibility that is bound to the activity at home so that despite overtime, it does not trigger a work-family conflict that will affect job performance.

It should be noted, however, that the results of indirect effect testing indicate that work-family conflict has a negative effect on job performance. Thus, further analysis of the conditions that trigger this conflict to occur are need to be done in order to minimize the risk of job performance decrease.

#### **5. CONCLUSIONS AND RECOMMENDATIONS**

In general, the overtime condition of Telkom Bogor is quite good in line with the quality of overtime that is considered good. In fact, some overtime quality conditions are considered excellent such as awareness to be creative, learn new things, have high skills and work quickly. However, the overtime quantity is not good where employees often carry out overtime until late.

Witel Bogor employees experienced good work-family conflict condition where the value on working to family conflict condition was lower than the condition of family to work conflict. This shows the work is more influential on the conflicts that occur at home. They also have excellent job performance in all categories.

Overtime has a positive effect on job performance. This shows that the higher the overtime the higher the job performance. Overtime in this case is not only an overtime quantity but good overtime quality.

Overtime has no significance influence on work-family conflict while work-Family Conflict does not mediate overtime relationships to job performance.

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## FRAMEWORK FOR COMMUNITY OF PRACTICE FOR BLOOD CENTER

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### ABSTRACT

*Community of Practices plays many roles within the society. The interconnection of various entities in CoP enables the problem to be resolved and even anticipated. The Indonesian Red Cross, as an Institution, needs the support of many parties or entities in achieving its mission. Knowledge management will help to ensure the availability of knowledge in a timely and accurate manner so that it can be fully realized. This requires a continuous activity. Through each step in the knowledge management cycle, each entity in the community can contribute to collaborate and synergize by becoming a part of knowledge worker within the Community of Practices for blood donation center.*

**Key Words:** *Community of practices, knowledge management cycle, knowledge worker* **JEL Classification:** *I18, I19*

### 1. INTRODUCTION

Knowledge plays important roles since it is regarded as a highly valuable asset that is sited in a community, an institution, or even both. According to Kusuma and Devie (2013), the faster and the more precise the availability of knowledge possessed by organization, the better the performance of the organization will be. Therefore, knowledge sharing that is connected in a network is necessary to obtain better organization performance. Making connections through networking is one of important component in building social capital since connectivity between entities makes knowledge becomes more meaningful (Lesser and Storck, 2001). Knowledge possessed by community member can be in the form of expertise and experience. When knowledge is connected with other community entities, it would be helpful to solve problems or create new ideas so that problems can proactively be prevented before even exist.

One of the problems expected to be solved through the utilization of knowledge is humanity problem. One of problem regarding humanity that still exists in big cities is the availability of blood needed by hospitals for transfusing purposes which may result the condition that causes human victims, such as accidents or disasters. That problem might occur in big city in Indonesia including Bandung city. The city of Bandung is considered as a city that quite prone to natural disasters. Bandung has 2.490.662 population, 40 units of hospital, 75 units of community health centers, a local government effort to establish social security administer program—under the authority of department of health, and also Indonesian Red Cross. The role of Indonesian Red Cross is to assist the government in social humanity, especially handling tasks as they are required in the provisions of the Geneva Conventions of 1949. These provisions have been ratified by the government of Republic of Indonesia in 1958 through Law No. 59. Moreover, There is a National SAR Department—a

nongovernmental institution in which the Indonesian ministries is in charge of carrying out government duties in search and rescue. National SAR Department has a role in dealing with cruise and aviation calamity, as well as other disasters that are related to search and rescue effort. Handling of the calamity in question includes 2 main things which are search and rescue. The main task of the Department of Health is to execute some regional government affairs in health sector based on the regulation and principal of autonomy and assistance.

The problem of blood supply is critical to be solved since it could become a fatal thing for one's life. This makes a proactive engagement of all entities in a comprehensive way is important. The process of educating to encourage a humanitarian empathy, donation time, communication system, distribution, the involvement of personal or community to donate blood is important in order to prevent the unavailability of blood stock. Community of Practices in the field of health, especially in Bandung, is needed to improve the performance of the following entities namely, The Indonesian Red Cross, The National SAR Department, hospitals, Department of Health. A harmonious and solid interconnection between entities will affect the performance so that it has a high value.

Community of Practices is a group whose members regularly engage in sharing and learning, based on their common interests (Lesser and Storck, 2001). There are several communities in Bandung (can be categorized as NGO, student council, and University) such as '*Aleut*' Community, '*Aksara Kuna Nusantara*' Community, '*Reptil Bandung*' Community, *Bandung Liteter* Community, student council from across 136 Senior High School and 158 Universities. This group can be considered as potential resource for PMI. Empowerment needs to be done by linking these informal entities with existing formal entities (hospital, Red Cross Indonesia, and National SAR Department)

According to Lin (2007), knowledge sharing is an activity of transferring or disseminating knowledge from a person, group or organization to another person, group, or organization. Knowledge sharing can be interpreted as a way to live up CoP activity, with the existence of knowledge worker in every entity. The existence of knowledge worker becomes absolute. Knowledge worker is an individual who has a level of education and special abilities combined with skills in identifying and solving problems (Drucker, 1993). Every community and institution has knowledge workers who play a role in identifying and solving problems. Based on the number of communities and hospitals in Bandung as well as the roles of Indonesian Red Cross, National SAR Department, and Department of health, the health sector in Bandung needs to have a framework to ensure knowledge management cycle has been implemented well. This framework is created by the SECI method that can be used as a guide for implementing knowledge management. Knowledge management itself has a purpose for organizations. To be able to achieve business value, there must be a group of people who have a role in ensuring the existing cycle in KM cycle work.

## **2. LITERATURE REVIEW**

### **2.1 KNOWLEDGE**

Knowledge cannot be interpreted as knowledge alone, instead, it is a complex thing. Knowledge is a function of particular perspectives, goals, or positions held by individuals, and therefore different from information, knowledge relating to beliefs and commitments (Nonaka and Takeuchi, 1995). Knowledge is a combination of experience, value, contextual information, expert views and intuition that provides an environment and framework for evaluating new experiences and information (Tiwana, 1999).

Based on the opinions of some experts, it can be concluded that knowledge is a combination of data, information, and experience that can be used to improve the performance of an organization by evaluating experiences, decision-making tools, and learning tools. Knowledge is closely related to data and information that a person has to be able to express an opinion and a policy.

### **2.2 KNOWLEDGE MANAGEMENT**

Knowledge management plays a role in the process of managing and maintaining the knowledge used for decision-making processes and learning tools. Knowledge management is also an important part that an organization has because the effective use of knowledge management of assets and knowledge is able to assist organizations in innovating and responding to changing desires of customers (Dachler and Sandhawalia, 2010).

Organizations often find it difficult to get sufficient information to support the decisionmaking process so that it impacts the policies taken by the organization. Steps that organization must take in managing information and employee skills are a big challenge. Knowledge management has a share in creating added value for the organization by giving a big influence on employee performance. Documenting knowledge as a means of learning and decision making has a significant impact on organization performance.

### **2.3 KNOWLEDGE MANAGEMENT CYCLE**

Knowledge Management Cycle (KMC) is a process that forms a spiral and gets bigger when knowledge is being managed from time to time (Parikh, 2001). The continuous process can broadly be divided into 4 parts, namely knowledge acquisition, knowledge organization, knowledge dissemination, knowledge application. The research undertaken by Evans, Dalkir, and Bidian (2014) has largely covered the overall development of KMC that starts from a non-sequential cycle into successive cycles and has feedback loops. Figure 1 shows KMC based on research conducted by Evans, Dalkir, and Bidian (2014).

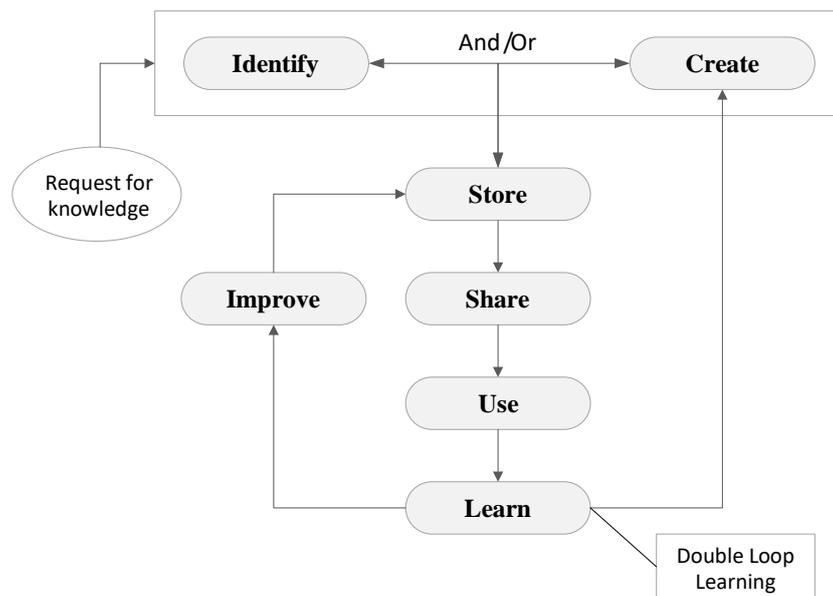


Fig 1. Knowledge Management Cycle Model (Source: Evans, Dalkir, and Bidian, 2014)

The KMC stage of Evans, Dalkir, and Bidian (2014) accommodates continuous improvement. KMC consists of 7 stages of identifying, creating, store, share, use, learn, and improve. The nature of the cycle is sequential and cyclical. This KMS model is sufficient to represent the KMC stage. However, there are two stages that are non-existent which are knowledge acquisition and knowledge retrieval. Knowledge acquisition is defined as a process for capturing or acquiring knowledge to add value to previous knowledge (Kurniawati, Samadhi, & Wiratmadja, 2016). Knowledge retrieval is defined as a process for managing, classifying, storing, positioning knowledge that has been obtained and can be accessed to optimize knowledge organization (Kurniawati, Samadhi, & Wiratmadja, 2016).

#### 2.4 SECI

The SECI method is one of the methods of Knowledge Conversion that can be used to transform Tacit Knowledge into Explicit Knowledge or vice versa. SECI consists of several processes namely Socialization, Externalization, Combination, and Internalization. The following is a SECI cycle process developed by Nonaka and Takeuchi (1995).

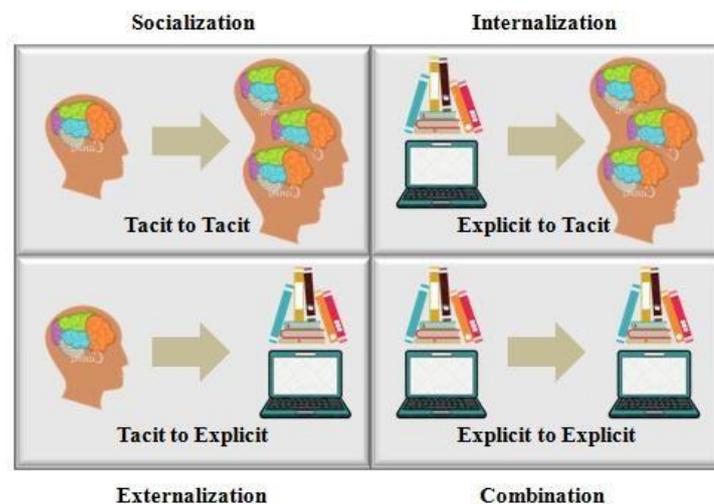


Fig 2. SECI Model (Source: Nonaka and Takeuchi, 1995)

Based on Figure 2 there are 4 knowledge conversion processes which are: Socialization, Externalization, Combination, and Internalization. Socialization is the process of converting knowledge from tacit knowledge to tacit knowledge. The process of knowledge sharing that happens in socialization is the experience or knowledge (tacit knowledge) owned by someone that is being distributed to others through socialization such as discussions, seminars, and interviews. Externalization is the process of converting knowledge from tacit knowledge to explicit knowledge. In externalization documentation of tacit knowledge that has been obtained from the process of socialization happens. Combination is the process of converting knowledge from explicit knowledge to new explicit knowledge. Combination is the process of collecting, uniting, and integrating the knowledge of each individual into the knowledge system (Nonaka, 1995). Internalization is the process of converting knowledge from explicit knowledge to tacit knowledge. In the internalization, the distribution of new knowledge to people happens.

## 2.5 COMMUNITY OF PRACTICE

Community of Practice (CoP) is a community of people who share a common desire for what they do and interact regularly to learn together in order to help their work (Wenger, 2004). This community is growing significantly because the transfer of knowledge between one individual and the other is considered to be effective in solving complex problems in their work. Through the existence of Community of Practice, the process of knowledge transfer can occur easily and impact the emergence of a number of benefits from the knowledge transfer process and allows entities in an organization to maximize the assets of the organization in order to have a positive impact on the development of the organization.

## 3. METHODOLOGY

### 3.1 RESEARCH QUESTIONS

Every community and institution has knowledge workers who play a role in identifying and solving problems. The problems that often arise in the field of humanity and health is the unavailability of blood bags in the hospital when patients seem to need them most. This can be caused by the lack of knowledge worker or there is no interaction between knowledge worker from an entity to another

entity in spreading knowledge and knowledge management cycle that is not implemented. Whereas utilizing the interaction between existing entities can be a way to prevent this from happening. This research has main objective that is to design a framework that can be used as a guide for implementing knowledge management. As indicated in the introduction, we have three major research questions. The first research question is how to encourage interaction between knowledge workers from an entity to another entity in spreading knowledge. The second one is how to make knowledge management cycle well implemented, and the last question is how is the framework to ensure knowledge management cycle has been implemented well.

### 3.2 RESEARCH MODEL

Figure 3 illustrates the illustration of this research regarding how to make entities in CoP connected to each other through the PIC of each entity to make the knowledge has a bigger meaning by using the concept of KM cycle and KM SECI. The entities are consist of Indonesian Red Cross, NGO, Hospital, National SAR Department, Department of Health, and University. PIC of University is Ministry of Research, Technology, and Higher Education of

Republic Indonesia, PIC of Department of Health is Ministry of Health of Republic of Indonesia, PIC of National SAR Department is Ministry of Transportation of Republic of Indonesia, PIC of Indonesian Red Cross is International Federation of Red Cross and RedCrescent Societies, PIC of Hospital is Hospital Association Indonesia, and PIC of NGO is Local Government.

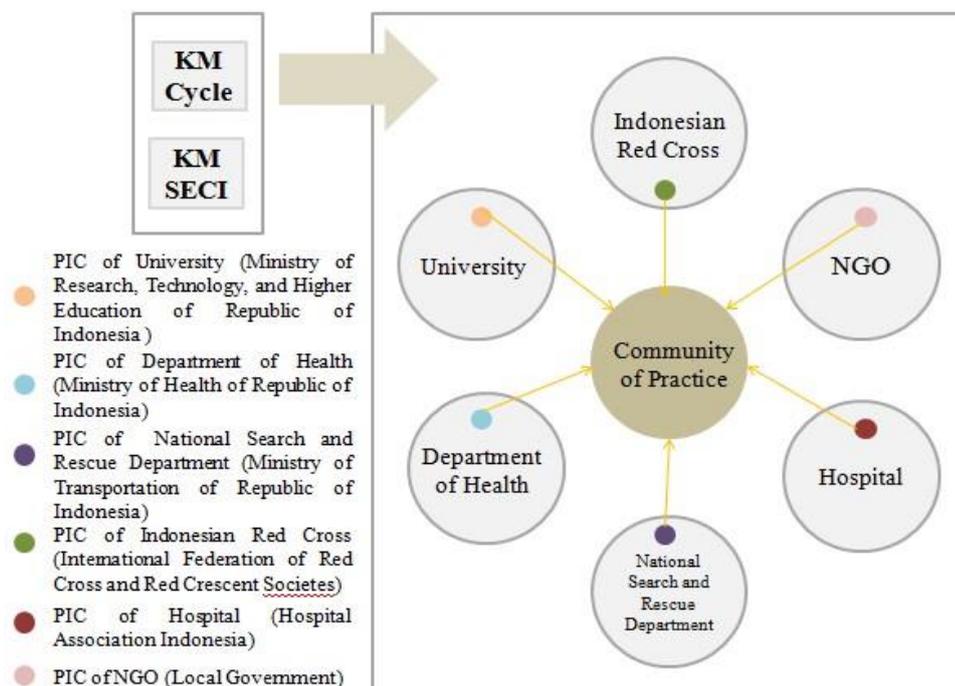


Fig 3. Conceptual Model

### 4. RESULTS AND DISCUSSION

A new community consists of various entities that require governance in order to streamline the collaboration of work. Table II shows the interaction between KM cycles and KM role. According to Dalkir (2005), KM roles are composed by several categories which are:

- Senior and middle management roles—Chief Knowledge Officer, Knowledge Manager
- Knowledge leaders, also referred to as KM champions, who are responsible for promoting KM within the organization
- Knowledge managers, responsible for the acquisition and management of internal and external knowledge
- Knowledge navigators, responsible for knowing where knowledge can be located, also called knowledge brokers
- Knowledge synthesizer, responsible for facilitating the recording of significant knowledge to organizational memory, also called knowledge stewards
- Content editors, responsible for codifying and structuring content, also called content managers; roles involving capturing and capturing and documenting knowledge—researchers, writers, editors
- Web developers, electronic publishers, intranet managers, content managers
- Learning-oriented roles such as trainers, facilitators, mentors, and coaches—including those with responsibility for developing information and knowledge skills
- Human resources roles with specific responsibility for developing programs and processes that encourage knowledge-oriented cultures and behaviors
- Knowledge publishers, responsible for internal publishing functions, usually on an intranet, also called Webmasters, knowledge architects, and knowledge editors
- Coaches and mentors, responsible for assisting individuals throughout the business unit or practice to develop and learn KM activities and disciplines
- Help desk activities, including the delivery of KM and information related to training, also called KSO (Knowledge Support Office)

Table I. Interaction Between KM Cycle and KM Role

Step	Category	Entity
Identify	Knowledge Leader	Department of Health (West Java)
		Indonesian Red Cross
		National Search and Rescue Department
		Hospital
Create	Knowledge Manager	Indonesian Red Cross
Store	Knowledge Navigator Knowledge Synthesizer Electronic Publisher	IT Expert

Share	Content Editors Managing Web Developers	Department of Health (West Java)
		Indonesian Red Cross
		National Search and Rescue Department
		Hospital
Use	Facilitators PIC	School
		University
		NGO/CoP
Learn Improvement	Mentors	Knowledge Worker or Knowledge Evaluator

Table 1 shows the interaction between KM cycle and KM role according to Dalkir (2005). In Knowledge Leader category there are several entities like Department of Health (West Java), Indonesian Red Cross, National Search and Rescue Department, and Hospital. Knowledge

Manager category has one entity that is Indonesian Red Cross. Knowledge Navigator, Knowledge Synthesizer, and Electronic Publisher are in one category and have one entity that is IT Expert. Content Editors Managing and Web Developers are in one category and have several entities like Department of Health (West Java), Indonesian Red Cross, National Search and Rescue Department, and Hospital. Facilitators and PIC are in one category and have several entities like School, University, and NGO or CoP. And the last category is Mentors which has one entity that is Knowledge Worker or Knowledge Evaluator. The interconnection of various entities in CoP enables the blood center in the future easier to get information from all entities and all the problems to be resolved and even anticipated.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The research provides a CoP framework for various entities formally or informally in The City of Bandung. The application of KM roles can make knowledge workers interact with each other in spreading knowledge of blood center. Blood center has several entities there are University, Indonesian Red Cross, NGO, Hospital, National Search and Rescue Department, and Department of Health. Each entity has a Person In Charge that will join in a Community of Parctice. This condition indicates that KM roles and KM cycle are well implemented. The combination of KM roles and KM cycles that are well implemented can create a framework for community of practice for blood centers which can be seen in Table I. The framework consists of KM Cycle steps, KM Roles roles, and entities from each step and category. All entities have their own roles and support each other's roles.

Further research will be focused on identifying or recognizing the characteristics of each community to get detailed description of each knowledge worker that should exist in each step of the knowledge management cycle. Furthermore, research be done by exploring every existing entity to build a Community of Practices scheme in the ease of access to data, information, and knowledge especially related to humanitarian concern.

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## RISK-MANAGEMENT BASED GOVERNMENT INFORMATION SYSTEM SECURITY USING OCTAVE ALLEGRO FRAMEWORK

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### ABSTRACT

*Maintaining information security by protecting confidential and sensitive electronic information assets from unauthorized access, misuse, disclosure, destruction, and modification. Kulonprogo Regency Government needs the protection of its information assets, which mostly manage confidential information services for the purpose of implementing e-government. This research implements OCTAVE Allegro framework to perform a risk assessment on information assets supporting information technology services at Kulonprogo Regency Government. The end result is the policy recommended by this study can lead the organization to consider Human resources and information technology services used.*

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**Key Words:** Information Services, Risk Assessment, OCTAVE Allegro, Information Security

**JEL Classification:** G32, D81, G32

### 1. INTRODUCTION

Information technology is no longer viewed as a separate tool from organizational tools, but is already considered one of the resources that have an equally important role with other resources such as finance, assets, and human resources (Kurniawan, 2012). Today many organizations have used information technology as a means to serve their business processes. The nature of information technology that is easily accessible and used is the main reason some organizations choose it to support their business processes.

Information is an important asset for organizations in their information technology services (Supradono, 2009b), this information security cannot be based solely on information security tools or technologies, but rather an understanding of the organization about what should be protected and determine the

exact solution that can address the problem of what information security needs (Alberts C. J., Behrens, S. G., Pethia, R. D. & Wilson, 1999). Therefore, information security must be well managed and structured.

Information security cannot only rely on tools or technologies, but it requires awareness in organizations on what needs to be protected and correct selection of solutions to deal with problems in information security needs. For this, a systematic and comprehensive information security management is essential. The need for information security must contain 3 important elements: confidentiality, integrity, and availability (Supradono, 2009b).

This research will observe information security based on application services in one of the government agencies. This study focused on the identification, analysis and risk assessment of Information Security based on application services at Kulonprogo Regency Government using OCTAVE Allegro method.

Kulonprogo regency government was chosen as the object of this study based on the regulation of Regent of Kulonprogo number 65 year 2012 about the implementation of risk management to local government that pursuant to the provision of Article 13 paragraph (1) Government Regulation Number 60 Year 2008 concerning Government Internal Control System, The Leader of Government Institution must conduct risk assessment of the application of information technology today as one of the supporting elements of the vision and mission of the organization, as well as the number of vulnerabilities present in its information security system. Such vulnerabilities include the risk of attacks on critical information assets related to local and online networks as a consequence of utilizing information technology. There is also the risk of theft and fire hazard to their physical assets because their electronic equipment is vulnerable to fire hazards due to the excess of unattended voltages; so they need surveillance cameras, heat sensors, fire extinguishers, and outdoor water sprayers, especially inside server rooms that store information assets.

From these observations, the initial conclusion is that the Kulonprogo Regency Government has not implemented an optimal information security policy and risk assessment on its critical information assets. To conduct a risk assessment, terms of reference are required. The OCTAVE method stands for Operationally Critical Threat, Asset, and Vulnerability Evaluation. The methods used are: confidentiality, integrity, availability. OCTAVE Allegro is a development of the OCTAVE method to evaluate information security risks that are comprehensive, systematic, directed, and self-directed (Farida, 2015). Keating (Keating, 2014) states the OCTAVE Allegro risk assessment method created by the Carnegie Mellon University Software Engineering Institute (SEI) has the ability to deliver robust risk assessment results, with relatively small investment in time and resources, even for organizations which do not have extensive risk management skills.

Information technology services Kulonprogo Regency Government is provided by the Communications and Informations Departments which fulfills its needs relies on information systems on each service that contains information assets. To know the process of applying the information security risk management of this Communications and Informations Departments, it is necessary to investigate how far the implementation of risk management of information system using OCTAVE Allegro method in Kulonprogo Regency Government. The results of this study are constructive recommendations to be used as a basis for decision-making in protecting government information security as well as its information assets.

## **2. LITERATURE REVIEW**

### **2.1 Previous Researches**

In 2009, B. Supradono(Supradono, 2009a) use first version of OCTAVE that has been developed by Software Engineering Institute, Carnegie Mellon University to evaluate information security risks that are comprehensive, systematic, directed, and self-directed. His approach is organized into a set of criteria that define the essential elements of an information security risk assessment. As a result, the OCTAVE Method provides a systemic and comprehensive guidance on information security risk management. This method further emphasizes the risk-based management of threats and vulnerabilities to organizational information assets including hardware, software, systems, information and people.

In 2015, Rosini Rachmaniah et al. (Rosini, Rachmaniah and Mustafa, 2015), assessed the risk of information vulnerability by using OCTAVE Allegro method against X library. OCTAVE method stands for Operationally Critical Threat, Asset, and Vulnerability Evaluation. The OCTAVE method performs risk assessment based on three basic principles of security administration, namely: confidentiality, integrity, availability. From the results of this risk assessment, what can be done is reducing or eliminating the risk (mitigate) as much as 21 areas of concern, transferring risk or mitigate as much as 16 areas of concern, defer the risk as much as 12 areas of concern, and accept the risk or delaying as much as 3 areas of concern.

### **2.2 Risk Management**

An information system asset is anything of value an organisation needs to utilise in order to accomplish its mission (Klinger, 2009). An asset can either be tangible or intangible (Theoharidou et al., 2005). Tangible assets include software, hardware and data while intangible assets include reputation, operations, trust and morale (Theoharidou et al., 2005). Information systems assets can be critical or non-critical depending on the importance of the operations each asset is supporting(Fallis, 2013), and these vary from organisation to organisation (Theoharidou et al., 2005). Information systems assets can be at risk, compromising information integrity, confidentiality and availability. A risk is the potential that a given threat will exploit vulnerabilities of an asset or group of assets to cause loss or damage to the asset (Klinger, 2009). In this regard, a risk is the potential for an unwanted event to occur and is a function of the likelihood of that unwanted event occurring and its consequences(Fallis, 2013). A risk arises from three conditions called risk factors (contextual problems), namely the existence of a threat (hazard), exposure of an asset to that threat and the vulnerability of the asset(Fallis, 2013). A threat is a natural or man- made occurrence, individual, entity, or action that has or indicates the potential to harm information, operations, the environment, and/or property(Karabacak and Sogukpinar, 2005). The existence of a threat implies that there exists the capability and intention of an adversary to undertake actions that could be detrimental to an organisation's interests(Karabacak and Sogukpinar, 2005). An information security exposure may be a system configuration issue, mistake in software or a problem according to some reasonable security policy that allows access to information or capabilities that can be used by an attacker as a stepping stone into the system or network(Rainer, Snyder and Carr, 1991). Vulnerability is a combination of the attractiveness of a facility as a target and the level of deterrence and (or) protection provided by the existing countermeasures(Fallis, 2013). Therefore, vulnerability is the degree to which the exposed elements of an information system will suffer a loss from the impact of a threat. All assets are exposed to some degree of risks which the owners of assets may be unaware of.

Risk management is a basic management activity that helps an organisation to meet its objectives through the allocation of resources to undertake planning, make decisions, and carry out productive activities (Fallis, 2013). Risk management differs from other management activities because it deals with uncertainties that an organisation faces. The uncertainties include the occurrence of harmful events and the value to the organisation of consequences of such events (Fallis, 2013).

The two major activities of risk management are risk assessment and analysis (Karabacak and Sogukpinar, 2005). Risk assessment is the process of identifying, characterising, and understanding risk; that is, studying, analysing, and describing the set of outcomes and likelihoods for a given endeavor (Shortreed, Hicks and Craig, 2003). Risk analysis involves further identification of security risks, determining their magnitude and identifying the corresponding areas that need safeguards (Klinger, 2009).

### 2.3 OCTAVE Allegro

Operationally Critical Threat, Asset, and Vulnerability Evaluation (OCTAVE) define the critical components in a comprehensive, systematic, context-driven manner of information security risk evaluation. Using the OCTAVE method, organizations can create risk-based information protection based on CIA (Confidentiality, Integrity, Authentication) for critical information technology assets (Jakaria and Informatika, 2013). OCTAVE is a methodology for identifying and evaluating information systems security risks. The use of OCTAVE is intended to assist organizations in the areas of (a) Developing qualitative risk evaluation criteria that describe the operational risk tolerance of an organization; (b) Identify key assets to achieve the organization's mission; (c) Identify the vulnerability and threats to the asset; (d) Determine and evaluate to deal with the consequences that occur in the organization if such threats occur (Jakaria and Informatika, 2013).

The OCTAVE method has three variants: OCTAVE, OCTAVE-S and OCTAVE Allegro. OCTAVE is a suite of tools, techniques, and methods for the assessment and planning of risk-based information systems security. OCTAVE Allegro is a simplified method with a focus on information assets. OCTAVE Allegro can be done with workshop-style and collaborative methods. OCTAVE Allegro consists of eight steps divided into four phases (Caralli et al., 2007).

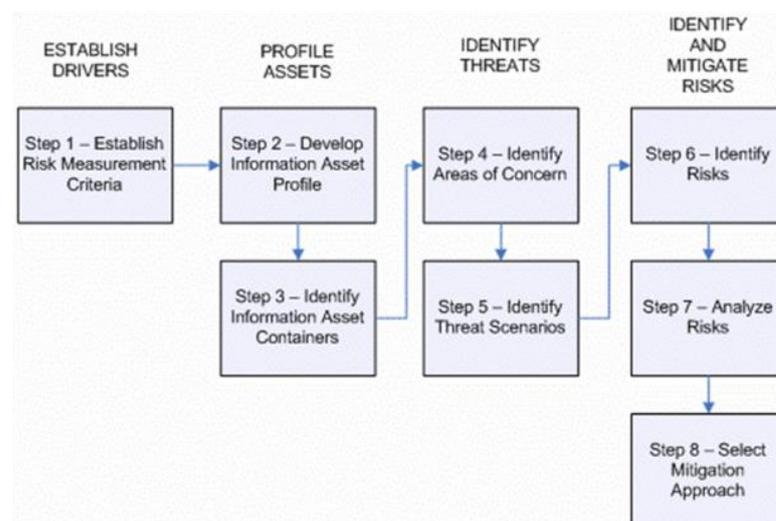


Figure 1 OCTAVE Allegro phases

### 3. METHODOLOGY

This study attempts to describe the results of the study of each stage adopted from the OCTAVE Allegro method in assessing potential vulnerabilities in Kulonprogo Regency Government through the Communications and Informations Departments. This research was conducted in accordance with the Figure 2 below.

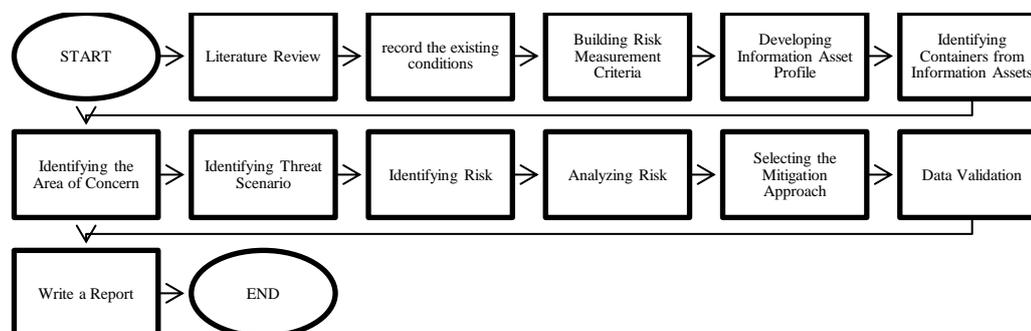


Figure 2 Research methodology

The measures taken in this research are mentioned below:

#### Literature Review

This measure was performed by reading and studying papers related to this research. The objective of this measure was to seek for references and also understanding the stages in risk management evaluation and implementation of OCTAVE Allegro.

#### Record The Existing Conditions

This measure was performed by discussion with the Head of Department KOMINFO to determine the condition of current IT services that have been done, the data can be obtained by interviewing and studying documents related to applicable policies. In addition, it is also necessary to know about the current state of information security IT governance in the Office KOMINFO. After this phase will proceed with collecting all data related IT services based on information security with OCTAVE Allegro method.

#### Building Risk Measurement Criteria

Beginning with building organizational drivers used to evaluate the impact of risk on mission and business objectives, as well as identifying the most important impact areas. There are two activities, Activity one is to create a qualitative size definition that is documented in the Risk Measurement Criteria Worksheets. Activity two performs the priority assignment of the impact area using Impact Area Ranking Worksheet.

#### Developing Information Asset Profile

Identification of information asset then doing a structured risk assessment to the critical asset. This activity is collecting information on critical information asset then continued by making documentation of the reasons for the selection of critical information assets. This stage make the description of critical information asset then identify the ownership of the critical information assets, fills security needs for confidentiality, integrity, and availability, and identifies the most important security needs for information assets.

### **Identifying Containers from Information Assets**

There is only one activity in step three, note three important points related to the security and concept of the information asset container that is how the information assets are protected, the level of protection or the safeguard of information assets and the vulnerability as well as threats to the container of the information assets.

### **Identifying the Area of Concern**

This measure begins with developing a risk profile of information assets by exchanging ideas to locate threat components from situations that may threaten information assets. By referring to Information Asset Risk Environment Maps and Information Asset Risk Worksheet documents then the area of concern can be recorded. Guided by the Information Asset Risk Worksheet document do a review of the container to create an Area of Concern and document every Area of Concern.

### **Identifying Threat Scenario**

In this step, this documented areas of concern that could affect This information asset. Area of concern are expanded into threat scenarios that further detail the properties of threat. To expand areas of concern into threat scenarios, This must first understand the basic components of a threat.

### **Identifying Risk**

Activity in this step is to determining the documented threat scenario in the Information Asset Risk Worksheet so it can have an impact on the organization. This determine how the threat scenarios that This have recorded on each Information Asset Risk Worksheet could impact This organization.

### **Analyzing Risk**

This activity should be referring to the documentation contained in the Information Asset Risk Worksheet. Activity one begins by reviewing the risk measurement criteria followed by the second activity by calculating the relative risk value that can be used to analyze the risk and decide the best strategy for dealing with risk.

### **Selecting the Mitigation Approach**

Activity one in step eight is to sort every risk that has been identified based on the value of the risk. This is done to assist in the decision making of risk mitigation status. Activity two takes a mitigation approach for each risk based on conditions unique to the organization.

### **Validating Data**

At this stage the validation/checking of the documentation of interviews and workshops is performed in information security risk management using OCTAVE Allegro. Checks are intended to determine whether the data obtained from interviews and workshops is complete and in accordance with OCTAVE Allegro framework or not.

### **Write a Report**

The last stage is research report writing. At this stage the conclusions are drawn based on the results of research that has been done. The recommendations proposed based on research results are described at this stage.

#### 4. RESULTS AND DISCUSSION

Prior to initiating risk assessment, researchers have contacted key persons associated with risk management at the KOMINFO Office of Kulonprogo District. These individuals are: department head, staff in the IT division, and head of the administration division. These people are contacted to get the required data. The next step is to conduct interviews to obtain information about existing conditions and operational assets that are considered important for the organization. Data is presented in the appendix.

In this research we use the method of interview and data collection as well as the prevailing policy. Data collection is based on the OCTAVE Allegro Process Assessment Model by following the guidelines on activities to determine the level of ability. This survey is used to determine the level of risk management capability with a question form.

The team of analysts performs initial identification with current security practices. From the result, it is found that Kulonprogo Regency did not have awareness to operational practices / standard operating procedure (SOP) in maintaining documented security. While the results of the evaluation of current security practices are still focused on technical factors that are undocumented and focused on authentication: i.e., user and password to log on access to information systems, there is no firewall, encryption, IDS / IPS (intrusion detection system / intrusion protection system) and manageable switch device.

Identification of areas of concern has been obtained by reviewing each container to see and determine potential areas of concern. Areas of concern are extended to get a threat scenarios and then documented to see if they affect security requirements. Areas of Concern obtained are listed in Table I below:

Table I Areas of Concern

No	Area of Concern
1	A Leak of access password transaction information service by the operator who have access.
2	Easy access to the server room can lead to unauthorized access to the server.
3	Security holes in management information system portals can be exploited by outsiders.
4	Halt of service occurs when the power outages because it does not have backup power to the server room.

Based on the results of the existing data collection we distribute, we can obtain and analyze the risks that exist in the information security of the district government of kulonprogo by calculating the level of capability in the form of Relative Risk Score for each area of concern based on the governance / management practices and the resulting output.

OCTAVE Allegro has focused on risk management related of information security within the organization. This information security is related to the business process that runs in Kulonprogo District Government. Summary of achievement of relative risk score based on area of concern for OCLAVE Allegro Framework can be seen in Table I.

Table II Summary of Risk Analysis Assessment

Area of Concern	Risk			
A Leak of access password transaction information service by the operator who have access	Consequences	Halt of services due to irresponsible parties may unauthorized access to application services.		
	Severity	Impact Area	Value	Score
		Reputation and customer trust	Moderate	8
		Financial	Low	3
		Productivity	Moderate	4
		Security and Health	High	15
		Fine and Penalty	Low	1
		Relative Risk Score		

The calculation result of relative risk score is obtained from calculating the score of each concern of area mentioned in the above table. In the case of a leak of access password transaction information service by the operator who have access, have value relative risk score 31, therefore need to do Mitigation.

Based on the results of the assessment, The mitigation approach is how Communications and Informations Department will decide to address its risks. OCTAVE Allegro provides a selection of mitigations that can be selected: accept, mitigate, and defer. Table III shows an grouping mitigation steps based on Relative Risk Matrix, in table IV is a grouping of mitigation steps, table V is an risk mitigation by area of concern.

Table III Relative Risk Matrix

Risk Score		
30 to 45	16 to 29	0 to 15
Pool 1	Pool 2	Pool 3

Table IV Mitigation Approach

Pool	Mitigation Approach
Pool 1	Mitigate
Pool 2	Mitigate or Defer
Pool 3	Accept

Table V Mitigation by Area of Concern

Risk Mitigation	
Area of Concern	A Leak of access password transaction information service by the operator who have access

Action	Mitigate
Container	Control
Database Module information service	Using encryption, digital certificates, web secure / SSL / https when going to web portal login application.
Application Operator and Communications and Informations Department (KOMINFO)	Good Password Management: (Changes every 30/60/90 days, made minimum standard of characters and unique for password, admin using password generator, prohibits use of admin login as login demo etc).

## 5. CONCLUSIONS AND RECOMMENDATIONS

This study has produced an analysis of the risks that can occur in the Information Service database system within the server which consists of applications used by SKPD. Applying OCTAVE Allegro method has resulted in impact system mapping with the result of Mitigation Approach for Information Service database system in the server at pool 1 that is mitigated. These results can recommend top-level management to change the work patterns of service operators to further raise awareness of data confidentiality.

The study offers the following recommendations :

Security Awareness and Training. Safety concerns and training are conducted periodically. Understanding of staff documented and compliance with documents that have been made periodically verified.

Security Strategy. Create a master plan / strategic plan for security development and risk management of information security and conduct a security audit once every year.

Security Management. Kominfo Pemkab Kulonprogo establishes policies and appropriate procedures to prevent, detect and identify risks to the confidentiality, integrity and availability of information services.

Security Policies and Regulations. Kulonprogo regency should have process documents for evaluation and ensuring compliance with information security policies, laws and rules and insurance requirements and Establish uniform rules of enforcement on security policies.

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## INCREASING AUDIT QUALITY IN INDONESIA

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### ABSTRACT

*The purpose of this study is to determine the effect of dysfunctional audit behavior on audit quality. This study uses survey method applied on Public Accounting Firm in Indonesia. Data collection of this study is done through applying questionnaires and interviews which addressed to respondents are auditor manager and partner. Hypothesis testing is done by simple linear regression analysis. The results showed that dysfunctional audit behavior has a negative effect on audit quality in Indonesia. In order to increase audit quality, the Public Accounting Firm has to strive to minimize dysfunctional audit behavior that is done by auditor through providing optimal control and supervision.*

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**Key Words:** *audit, audit quality, audit behavior, dysfunctional audit behavior*

### 1. INTRODUCTION

Audit Quality is necessary to ensure the credibility of the financial statement. The credible financial statement will increase the financial statement user's confidence on decision making. The audit quality can be achieved principally if the auditor implements auditing standards, be objective without taking part either side (independent), obeys the law and complies code of professional ethics (Al Kautsar, 2014).

Audit quality according to Cook and Kelley (1998) stated: "Audit quality is relative degree to which the audit conforms to applicable auditing standards". Related to the statement above, the auditor is required to do audit assignment based on the standards, other that it could give confidence to the users of financial statement who are believe and sure that the company's financial statement is reliable (Soltani, 2007: 446).

Through a survey conducted by International Forum of Independent Auditor Regulators (IFIAR), it was concluded that audit quality in Indonesia is still low. Some problems that occur in the governance of public accounting profession based on 5 (five) main issues, namely (1) Competence level and professional staff of Public Accounting Firm that is not evenly in the same range; (2) quality control system of Public Accounting Firm; (3) enforcement of sanctions on violations of professional standards and indecisive rules and regulations; (4) low awareness of responsibilities and competences of financial statement preparation by management entity; and (5) price wars in determination of audit service fee.

Auditors as a professional one are obliged to use their professional skills accurately and thoroughly in conducting the audit (SPAP, 2013). In addition, auditors are required to have an adequate accounting knowledge and skill as well as personal quality (SPAP, 2013). According to Kelley and Margheim (1990) said that the personal quality will be reflected from its profession behavior, where one of public accountant professional behavior manifested in the form of avoidance dysfunctional audit behavior. Behavior in question is dysfunctional audit behavior that deviates in implementing audit assignment which can reduce the quality of audit results. Implementation of audit procedures accurately and thoroughly can be done as an outline in audit program which helps Public Accounting Firm to produce quality audit services (Malone & Robert, 1996).

Survey results that has been conducted by several researchers about dysfunctional audit such as that study conducted by Donnelly et al., (2003) to auditors of "Big 4" Public Accounting Firm showed that 89% respondent had received and engaged in several forms of dysfunctional audit behavior (eg premature sign off). A study by Otley and Pierce (1996) to senior auditors of big six Public Accounting Firm in Irlandia, showed that 28% respondent had received and engaged in several forms of dysfunctional audit behavior (eg premature sign off). In addition, found on average 37% of respondent had received weak client explanation (Outley and Pierce, 1996). Coram et al., (2003) conducted a survey in Australia that found 63% conducting several forms of dysfunctional audit behavior.

In addition, it has finding on average 37% of respondents received weak client explanation (accepted weak client explanation) (Outley and Pierce, 1996). Coram et al., (2003) conducted a survey in Australia that found 63% of all forms of dysfunctional audit behavior.

Several previous studies have also shown that audit quality is probably influenced by dysfunctional audit behavior where dysfunctional audit behavior can have a direct or indirect impact on audit quality (Halil Paino, et al., 2010; Donnelly, et al., 2003). The acceptance that affects the audit directly, is the completion of too early audit steps without completing the whole procedure (premature sign-off audit steps without completion of procedure), alter the procedures that has been established in the running audit (Otley and Pierce, 1996; Shapeero et al , 2003), inaccurate processing (Raghunathan, 1991).

Based on the explanation of the problem and the relevance of the concept above, it can be stated that audit quality is the main goal of every engagement done by the public accounting firm. The quality of audit has not been optimal yet, is the implication of dysfunctional audit behavior. It is necessary to prove how much the influence of dysfunctional audit behavior on audit quality in Indonesia. This research is expected able to contribute in an effort to improve audit quality in Indonesia

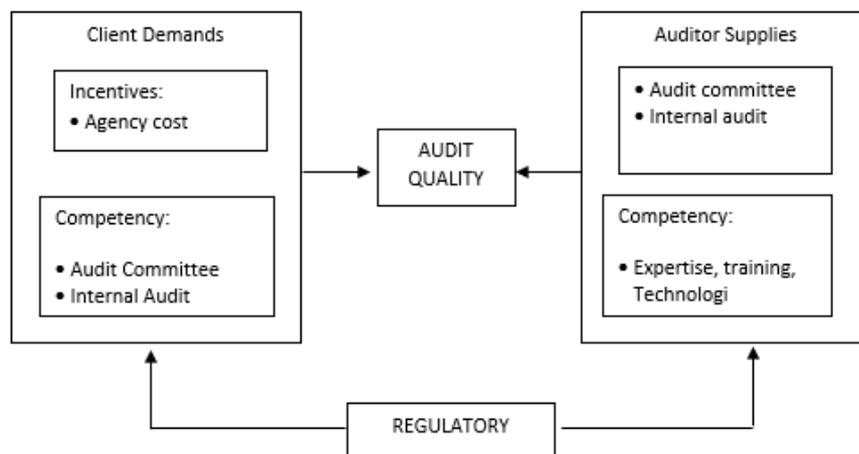
## 2. LITERATURE REVIEW

### 2.1 Audit Quality

Audit quality has several definitions which are diverse and multidimensional expressed by some experts. Cook and Kelley (1988) state "Audit quality is the relative degree to which the audit conforms to applicable auditing standards". This definition is similar to Soltani statement (2007:446) that the quality of a good audit in principle can be achieved if the auditor follows the audit standars, being free without being impartial, obeying the law and obeying the professional code of ethics. Thus, audit quality can be achieved if the auditor follows audit standards on conducting a process of auditing.

General accepted auditing standars are divided into three categories, Aren et al (2016), the standars are general standards, field of work standards and reporting standars. (1) General standards require competent and independent auditors, (2) field standars require auditors to plan and supervise, understand the client industry nd obtain sufficient evidence, (3) reporting standards require the auditor's report to disclose that the financial statements are appropriate with the principles of accounting generally accepted.

According to De Fond and Zhang (2013: 14) "Audit quality is the degree of assurance that the accounting standasds are applied in a manner that faithfully represents the client's underlying economic activities". Client demand requires expected audit quality depending on the competencies as reflected in factors such as audit committee and internal audit function. The supply of auditor provides expected audit quality which comes from reputation and litigation as well as depending on the competencies as reflected in factors such as training, skills and expertise. We can see more clearly on this chart:



Source: De Fond and Zhang (2013;14-15).

Image 2.1 *Audit Quality*

The same point is expressed by Carcello et al. (1992) about audit quality, he states that to assess audit quality can be done based on perception of auditor, provider (prepare) and user (user). Using 12 audit quality components, Carcello et al. (1992) suggests that there are 4 most important components in determining audit quality. These components include the audit team and the company's experience with clients and industry understanding (expertise), responsiveness that is given to client needs, and obedience to generally accepted auditing standards (GAAS) such as competence, independence, and due care.

The Expertise Auditor can be identified such as the understanding and experience of the auditor in a particular field of industry based on the training and practical experience which is gained from the audit in a particular industry (Gramling and Batu, 2001). Expertise gained through training and experience will improve auditor abilities in detecting financial report errors (Libby and Frederick, 1995). In addition, the research shows that auditors with training skill or experience in a specialized field will be more excellent than those who without training skill or experience (Libby and Frederick, 1995).

In addition, research shows that auditors with training skill or experience in special areas will outperform those who have no training skill or experience (Libby and Fredrick, 1995).

The auditor should be able to provide confidence that the financial statements presented by the client are correct and appropriate with applicable accounting standards, (Boynton and Johnson, 2006:226). The quality of the audit depends on the ability of the auditor as the executor of the audit, this means that if the auditor is a high quality person in carrying out the work based with its function, it will produce a high quality output as well, being able to find and report the diversion that occurred in the client accounting system (De Fond and Zhang, 2013:14).

Based on some definitions that have been disclosed, so it can be synthesized that audit quality is a level where the implementation of audit appropriate with the standards established to provide a guarantee that the client's financial statements are appropriate with the accounting standards and able to detect and report material misstatements.

## **2.2 Dysfunctional Audit Behavior**

Auditors have to use their professional ability carefully and thoroughly when conducting an audit because they are role as professional (SPAP, 2013). The using professional proficiency carefully and thoroughly requires an auditor to conduct their skepticism of professional and should reasonably occur the real company's condition as an auditee based on evaluation of the evidence which is obtained during the auditing implementation. In the effort to get competent and sufficient evidence of audit, before conduct the audit, the KAP should make and arrange the program of audit in written notes. Because as long auditing process, the procedures and technic there in audit program.

In addition on auditing standards, auditors are required to have adequate accounting knowledge and skills as well as appropriate personal qualities (SPAP, 2013). Such personal qualities will be

reflected in their professional behavior. Professional behavior of public accountant can be represented and embodied in the form of avoiding dysfunctional audit behavior (dysfunctional audit behavior). Dysfunctional auditing behavior in this case is auditor behavior that deviates from auditing standards on carrying out auditing assignments (Kelly and Margheim, 1990).

According to Herrbach (2001) put expresses the definition of dysfunctional behavior of auditing: *"Dysfunctional Behavior is the poor execution of an audit procedure that reduce the level of evidence gathered for the audit, so that the collected evidence is unreliable, false or inadequate quantitatively or qualitative"*

And then we can see, the technically implementation which is run weakly on the audit procedure effect to the implementation audit during the time can not be reliable, wrong, or even isn't appropriate both in quality and quantity.

Furthermore, Paino, et al. (2010) reveals that the dysfunctional behavior of audit has a direct or indirect impact on audit quality. *"Dysfunctional Audit behavior can, in turn, have both direct and indirect impact on audit quality. Behavior that directly affects audit quality includes premature signing-off of audit steps without completion of the procedure. A second, behavior that indirect is under reporting of the actual time or specific audit task."*

According to Kelley and Margheim, (1990) say it reveals the same thing that dysfunctional audit behavior has four types that can reduce audit quality. *"Dysfunctional Audit behavior has four types such as reduce amount of work performed on audit step, accepting weak client explanations, failing to research an accounting principle and made superficial reviews of client document. The Type of behavior has reduced audit quality"*.

Premature sign-off is a public accountant's activity against termination of required steps of audit procedures which may affect audit quality. Premature sign-off has a direct impact on audit quality that ultimately affects the reliability of audit reports that create the basis of opinion. Therefore its existence must be pushed down as much as possible. Premature sign-off behavior is indicated by falsely sign-off the required step of audits, which is not changed by the other step, without complete the assignments or nothing omission of procedure (Kelley And Margheim, 1990; Otley & Pierce, 1996; Pierce and Sweeney, 2004; Halil Paino, 2010).

Meanwhile the behavior of underreporting time is a behavior that indirectly affects audit quality. Underreporting time reflects a circumstance that indicates the auditor completes the audit work using personal timing and does not report the real time they have, which will impact on the low time budget for the next year and errors in auditor performance measurement. Underreporting can be done by coming early in a few hours, still working at lunch time or on weekends without writing these extra hours on time sheets. Underreporting negatively impacts the public accounting firm and the public accountant itself, although it does not have an impact directly on audit quality. (Otley & Pierce, 1996; Halil Paino, 2010).

The finding from developing studies which is conducted by Kelley and Margheim (1990), Otley and Pierce (1996), Malone and Robert (1996), and Pierce and Sweeney (2004) Paino et.al (2010) show premature sign off that has been done by auditor in the performing of an audit program which potentially reduces audit quality. Such actions include:

- 1) A superficial review of client document. An act by the auditor with not paying sufficient attention to the accuracy and validity of the client's document. (Pierce and Sweeney, 2004; Paino et al, 2010).
- 2) Acceptance of weak client explanation. An action the auditor undertakes by accepting the client's explanation as a substitution or substitution of an audit evidence not obtained during the audit (Pierce and Sweeney (2004); Paino et al, 2010).
- 3) Do not conducting research of application accounting principles by client. An action performed by the auditor by not further examining the suitability of the accounting treatment applied by the client to the accounting principles. (Pierce and Sweeney, 2004; Paino et al., 2010).
- 4) Reduced application work of audit on a lower level than what have been required in the audit program. An action performed by the auditor by reducing the audit work performed from what it should be carried out in accordance with the audit program, (Joworski and Young, 1992).

### **3. METHODOLOGY**

#### **3.1 Participants**

In this research, the object of research is dysfunctional behavior of audit and audit quality. The purpose of this research is to know how much the influence of dysfunctional behavior of audit on audit quality in Indonesia. The research method for this research is survey method, data collection that has been done by questioner and interview. The population is the Public Accounting Firm in Indonesia with the respondents of this method are manager and its partner. Sampling of this research uses probability sampling technique. The sample size for this study, conducted by the Rule of thumbs, Mueleur and Hancock, (2005) says that *"The ratio of sample size to parameters to be estimated should be at least 5:1 preferably larger"*

#### **3.2 Measurements**

The hypothesis proposed for this study is the dysfunctional behavior of audit affected to the quality of audit. The research instrument uses in this study is a questionnaire which continue to test the validity and reliability test. Hypothesis testing was done by using simple linear regression.

#### **Data Analysis**

The dimension and indicator which is used in this variable research is Quality Audit (DeFond and Zhang, 2013; Behn et al., 1997)

- a) Client Demand
  - Audit Committee
  - Internal audit
- b) Supply Auditor
  - Expertice
  - Education
  - Sharing
  - Quality assurance

Dysfunctional Audit Behavior (Pierce and Sweeney, 2004; Paino et al., 2010)

- a) Premature sign off
  - Superficial review
  - Assertion management
  - Accounting principle
  - Documentation
  
- b) Indirect reduce audit quality
  - Actual time
  - Use others time

#### **4. RESULTS AND DISCUSSION**

##### **4.1 DYSFUNCTIONAL AUDIT BEHAVIOR AND AUDIT QUALITY**

The results showed that dysfunctional audit behavior of both premature sign off and underreporting time are included to the low category with a mean score of 31.6%. Means still occur of gap of 31.6% of ideal expected condition. This thing showed that there are still finding of auditors who perform dysfunctional behavior. Based on additional information obtained from respondents, the review of previous documents and audits is sometimes difficult to undertake due to difficult communication with the previous auditor and unavailable documents or data, so auditing review has not been conducted optimally. Documentation problem is sometimes difficult to obtain in accordance with expectation. Underreporting time where the respondent's audit time did not report the hour's number of working and sometimes the time for a particular client is used to work for other clients. This is related to the deadline some of works that has to be done so there is some works to take precedence.

The result of audit quality is included to the category enough with mean score of 79.8% so that gap still occurs 20.2% from expected ideal condition. This showed the quality of audit has not been optimal yet, both from client demand and auditor supply. Additional information obtained from respondents about audit quality, as we can see below:

- 1) Audit committee at auditee companies is not always expert in their fields, so audit committee is more passive on carrying out their functions.
- 2) Understanding of the client's business, which is not always every client handled has an accordance with the experience gained so that the auditor keeps trying to find information about the client's business that is being handled. This leads to take time in performing audit assignments.
- 3) Training and discussion are unfully done routinely, but usually only when the work is not solid in a tight schedule or after the audit has completed.

##### **4.2 INFLUENCE OF AUDIT DYSFUNCTIONAL BEHAVIOR ON AUDIT QUALITY**

The writer proposes the hypotesis in this study that dysfunctional behavior of audit has a negative effect on audit quality. The following test results show the significance of the hypothesis through statistical hypothesis as follows:

$H_0 = 0$	Dysfunctional audit behavior does not effect on audit quality in KAP.
$H_a \neq 0$	Dysfunctional audit behavior has a negative effect on audit quality in KAP.

Based on the calculation results obtained  $t_{count}$  (-11.17) smaller than  $t_{critical}$  (-1.96). Because the value of  $t_{count}$  is smaller than  $t_{critical}$ , then at the level of error 5% decided to reject  $H_0$  so that  $H_a$  is accepted. So based on the test results can be concluded that the dysfunctional behavior of audit has a negative effect on audit quality in KAP. Dysfunctional audit behavior has a negative effect on the quality of audit. It means more often the auditor's dysfunctional behavior is conducted in audit assignment, it will decrease the quality of the audit, otherwise if the dysfunctional behavior of auditing is done rarely by the auditor, it will improve audit quality.

The phenomenon of low quality on audit is shown in this research, because it is influenced by dysfunctional audit behavior. the results of the research indicate a gap of 31.6% of ideal conditions, where respondents in reviewing previous documents and audits are sometimes difficult to do because of difficult communications with previous auditors and documents or data are not available, so auditing review has not been done optimally. In addition, documenting problems that should be done, sometimes difficult to obtain in accordance with expectations because of gapping communication between the latest auditor with on doing auditor unsupportive documentation as an auditing evidence. It is caused the process of reviewing audit hasn't optimal. This is consistent with the statement revealed by Kelley and Margheim, (1990); Otley and Pierce, (1996); Halil Paino (2010) the behavior that reduces the quality of audit is directly done through some actions; such as discontinuation of audit procedures premature, superficial review of client documents, refraction in sample selection, not extending test scope even when irregularities were detected, and not examining suitability of treatments, accounting applied by clients.

Furthermore, based on the results of the research, respondents are still conducting *underreporting time* behavior where the time of the implementation of the audit respondents does not report the number of working hours used and sometimes uses the time for a particular client but uses it for other clients. This is related to the deadline of targeting that has to be done so there is some work to take precedence. *Underreporting time* behavior may affect audit quality indirectly (Paino, et al., 2010). The implementation of the audit practice is an auditor's action of unreporting the entire audit time that has used to perform the audit task. In the literature auditing action by manipulating or not reporting the actual audit time is called *underreporting time* behavior (URT) (Halil Paino, 2010; Otley and Pierce, 1996).

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 CONCLUSION

Dysfunctional audit behavior has an effect on audit quality. The lack of optimization audit quality is indicated by the low compliance with the established standards, because:

- a) A review of the previous audit has not been totally done.
- b) Unexactly the documentation that has been done in providing audit evidence as a material to give opinion

- c) Uncompletely reporting the of actual working hours that are used in the audit assignment.

## 5.2 RECOMMENDATION

On the way of improving audit quality, KAP should strive to minimize dysfunctional audit behavior through:

- a) The focus attention on the importance of the review on the previous audit implementation as a basic for improving the audit implementation for the better one.
- b) Improving understanding of what issues and how to do the correct documentation on audits so as to minimize incorrect documentation in providing audit evidence as a matter of opinion.
- c) Maximizing the continuous training program to improve competence, in addition to obtain information benefits in the development of audit quality
- d) *Underreporting time* can be suppressed by always performing supervision and optimal supervision.

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## RISK MANAGEMENT EVALUATION IN LIBRARIES BASED ON COBIT 5

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### ABSTRACT

*Along with the increasing role of information technology (IT), the need of IT governance in organizations also increases. Therefore, an evaluation needs to be performed to discover the actual condition of IT management in the organization aforementioned. The importance of IT in an organization is to aid business activities. Universitas Ahmad Dahlan (UAD) has four campuses supported with library and therefore implements integrated libraries system that connects the library of all four campuses. However, the IT service provided for users is yet to be improved. The questions in the IT library service include policy, procedure, activities and documentation related to risk management. UAD library has to ensure that risk management available is appropriate for its necessities and business activities. UAD library also hopes that every problems meets its solution. This research aims to understand the condition of risk management applied in UAD library related to IT using COBIT 5 framework in process domain EDM03 (Ensure Risk Optimisation). In order to obtain data accuracy, raw data was collected through questionnaire, direct observation and interview with the people involved in the field. Results show that EDM03 was at level 2. This research also provides process practice recommendation and its activities that aid UAD library in its IT service.*

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**Key Words:** risk management, capability level, IT governance, COBIT 5, EDM03

**JEL Classification:** O32

## 1. INTRODUCTION

IT governance is highly needed as a result of the rapid development of technology. This factor encourages many organizations to utilize IT in its own governance. The increasing role of IT is proportional to the increasing investment made by the organization in the IT field. Therefore, a fine IT governance that is suitable for the organization's necessities is urgently needed (Diharja, 2013).

Utilization of IT in education system is required to support its productivity, effectivity, and efficiency. University, as one of the institutions involved in higher educational system, experiences the high social demand following globalization. One of the demands proposed to universities is IT development (Effendi, 2008).

Risks involved in IT development in university are damage, loss, or dysfunction of IT infrastructure. In spite of its applicable features, IT system frequently causes problems and risks to the university (Innike et al., 2014). The risks of implementing IT system are latent, therefore, detection and understanding of the problems by the university becomes a necessity because damage and loss, either financial or operational, can be anticipated (ISACA, 2013). A fine risk management will provide institutional competitive advantage. The purpose of risk management is to ensure that every possible risk can be identified and managed so that business activities can run adequately (Indah et al., 2014).

Risk management in libraries is a comprehensive study which needs analysis of potential threats. Those threats may become risks if not properly treated by the parties involved (Ali, 2016). UAD libraries need to take accurate actions to address those risks.

Ahmad Dahlan University currently has been utilizing technology quite well. UAD maximizes the use of technology for planning, management, operations, and evaluation. With the good governance and planning, technology implementation will run efficiently and effectively. The information system at UAD will continue to be developed in accordance with the needs and existing business processes.

In UAD library there are two information system, i.e. digital library and SIMPus UAD. Digital library is a service that can be accessed through [www.digilib.uad.ac.id](http://www.digilib.uad.ac.id). Library member are able to download the collection on this website. SIMPus UAD is a dedicated service for UAD librarian. This information system is used to manage the book collection database, manage visitor data, manage library members, manage borrowing, and create various types of reports that can be useful as an evaluation material.

After observation on risk management, some analysis of current condition is as follows:

1. There has been no research on the application of IT, especially in the UAD library, with the aim to be in line with business processes.
2. The absence of SOPs and documentation on handling when there is a risk. Until now the process of handling risk is only based on experience and habits.
3. The making of information system in UAD library is developed by programmer from BISKOM UAD, so that when problems occur on the system can be handled immediately.

One of the framework that can be applied to evaluate risk management related to IT in UAD libraries is COBIT 5, process domain EDM03 in particular (Ensure Risk Optimisation). Process domain EDM03 was chosen in this research because this domain discusses specific details in risk identification related to IT. This research conducted a measurement of the UAD libraries readiness in risk management in term of IT service.

## **2. LITERATURE REVIEW**

### **2.1 PREVIOUS RESEARCHES**

Previous researches relevant to this research are mentioned below:

1) Research done by Amirul Iqbal titled "Evaluasi Business Continuity Plan Menggunakan COBIT 5 (Studi Kasus: DSSDI Universitas Gadjah Mada)". This research employs COBIT 5 in order to identify and evaluate Business Continuity Plan (BCP) in Direktorat Sistem dan Sumber Daya Informasi (DSSDI) UGM. The author compared some of the IT governance frameworks available and chose COBIT 5 as the framework employed in the research. Consideration in regards to COBIT 5 includes utilization rate, completeness, IT governance measurement, best practice support, simplicity in utilization, manual, framework creation availability, and document template. Results showed that IT governance, particularly in BCP has been implemented. However, the implementation needs to be improved because most of the capability processes are at level 1 (performed) and 2 (managed).

2) Research done by Khairul Sani titled "Evaluasi Governance Pada Layanan Akademik Perguruan Tinggi Menggunakan COBIT 5 (Studi Kasus BISKOM UAD)". This research focused on capability measurement of IT governance employed by BISKOM UAD. Generally, this research resulted in two types of recommendations. First recommendation is for the IT governance to be consistent with the strategy and business processes in UAD, particularly improving student academic service. Second recommendation is for the change of SOP with the involvement of IT consistent with the business processes in UAD.

### **2.2 RISK MANAGEMENT**

Risk management is a set of complete policy and procedure owned by an organization to manage, monitor, and control the exposure of risks (Setia, 2015). Risk management functions to overcome risks which comprises management process, measurement, and risk assessment. The main purposes of risk management is to reduce negative impact and to avoid risks, to accommodate some or all of the risk consequences, or to divert risks to other parties.

### **2.3 COBIT 5**

COBIT (Control Objective for Information and Related Technology) is a framework and IT governance standard. It is also a set of measurement that is generally acknowledged for management processes and IT governance. This framework was first arranged by Information Systems and Audit and Control Association (ISACA) and now is managed by IT Governance Institute (ITGI). In 2012, ITGI issued IT governance COBIT 5. COBIT 5 is the newest version of COBIT framework which provides end-to-end business description from IT governance. COBIT 5 was developed from COBIT 4, integrated with Val IT 2 and Risk IT from ISACA, BMIS, ITIL, and relevant standard from ISO (ISACA, 2012).

ISACA (2012) explains that there are 7 phases which have to be performed according to COBIT 5 implementation life cycle:

1. Initiate Program, identification process which triggers changes such as trend condition, performance, software implementation, current issues and organization's objectives that encourage changes.

2. Define Problems and Opportunities, an alignment process between the objectives of IT application and risk, and or organization's strategies.
3. Define Road Map, a target determination program to enhance improvement and followed by gap analysis to determine potential solutions.
4. Plan Program, plans feasible and practical solutions by defining projects supported by justifiable business cases and developing a change plan for implementation.
5. Execute Plan, provides for the implementation of the proposed solutions into day-to-day practices and the establishment of measures and monitoring systems to ensure that business alignment is achieved and performance can be measured.
6. Realized Benefits, focuses on sustainable transition of the improved governance and management practices into normal business operations and monitoring achievement of the improvements using the performance metrics and expected benefits.
7. Review Effectiveness, reviews the overall success of the initiative, identifies further governance or management requirements and reinforces the need for continual improvement. It also prioritizes further opportunities to improve COBIT.

#### 2.4 MANAGEMENT RISK FOCUS DOMAIN

According to COBIT 5 framework, there are 2 processes interrelated to risk management identification and communication. One of the processes is EDM03 whose objective is to ensure that the risk level and tolerance exposed to the organization is acceptable, understood, articulated and communicated. Another objective of EDM03 is to ensure that IT-related risks are identified and monitored. EDM03 process is classified into three attributes:

1. EDM03.01 Evaluate Risk Management
2. EDM03.02 Direct Risk Management
3. EDM03.03 Monitor Risk Management

### 3. METHODOLOGY

This research was conducted in accordance with the Figure 1 below.

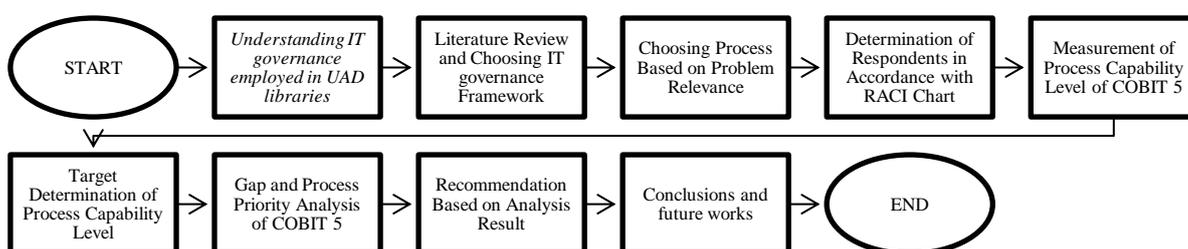


Figure 1 Research methodology

The measures taken in this research are mentioned below:

1. Understanding IT governance employed in UAD libraries

This measure was taken by conducting interview with the Head of the Library of UAD to determine the scope of risk management evaluation and current IT governance employed by UAD library.

2. Literature Review and Choosing IT governance Framework

This measure was performed by reading and studying papers related to this research. The objective of this measure was to seek for references and also understanding the stages in risk management evaluation and implementation of COBIT 5.

3. Choosing Process Based on Problem Relevance

General description of organization, vision and mission, general description of IT systems that are employed in the processes involved in COBIT 5. Based on the discussions with the UAD library, a decision was made to conduct an evaluation based on Enterprise Goals COBIT 5 relating to the continuity and availability of the organization's business services. From the mapping using the Goals Cascade in COBIT 5, we obtained some COBIT 5 process that suits the needs of the UAD library, as can be seen at Table I below.

Table I Mapping of Enterprise Goals, IT-related Goals and relevant primary processes

Enterprise Goals	IT-related Goals	COBIT 5 Process
07. Business service continuity and availability	04. Managed IT-related business risk	EDM03 Ensure Risk Optimisation
		APO10 Manage Suppliers
		APO12 Manage Risk
		APO13 Manage Security
		BAI01 Manage Programmes and Projects
		BAI06 Manage Changes
		DSS01 Manage Operations
		DSS02 Manage Service Requests and Incidents
		DSS03 Manage Problems
		DSS04 Manage Continuity
		DSS05 Manage Security Services
		DSS06 Manage Business Process Controls
		MEA01 Monitor, Evaluate and Assess Performance and Conformance
		MEA02 Monitor, Evaluate and Assess the System of Internal Control
		MEA03 Monitor, Evaluate and Assess Compliance With External Requirements

4. Determination of Respondents in Accordance with RACI Chart

This stage consist of respondent determination based on role and authority in RACI Chart. A RACI chart is a matrix of all the activities or decision-making authorities undertaken in an organisation set against all the people or roles. Based on this, we can determine the proper

respondent. Total respondents in this study are 6 people, consisting of the head librarian, technical coordinator of the library, and other employees.

5. Measurement of Process Capability Level

Assessment of process capability level using COBIT 5, EDM03 process domain in particular. Capability level in COBIT 5 are categorized into six levels: Level 0 (Incomplete), Level 1 (Performed), Level 2 (Managed), Level 3 (Established), Level 4 (Predictable), and Level 5 (Optimizing). Assessment starts from level 0, in accordance with the criteria of Process Assessment (PA) in COBIT 5. If assessment level 1 gets percentage 85% (Fully Achieved), then the assessment will continue to the next level.

6. Target Determination of Process Capability Level

This stage consist of target determination of process capability level that desired to be accomplished. Interview was used as a method to obtain data from the people in the institution involved in the IT governance. Results from this stage is target capability level.

7. Gap and Process Priority Analysis of COBIT 5

Analysis of gap and process priority was conducted at this stage.

8. Recommendation Based on Analysis Result

By knowing the capability level from result of identification and data analysis, we will be able to know the activity that required but not yet fulfilled by organization. Therefore, this recommendations is based on best practice according to COBIT 5.

9. Conclusions and Future Works

After analysis, we will get a conclusion that should be in align with the purpose of this research. The conclusions to be generated are the level of capability and activity recommendations. Future works are more directed to the next researcher to consider the scope of the study.

#### **4. RESULTS AND DISCUSSION**

In this study we used questionnaire method based on COBIT 5 Process Assessment Model by following the guideline at activity to determine the capability level. The survey was used to determine the level of risk management capability level with the form of questions.

Based on the results of the questionnaires that we distributed, we can calculate the level of capability for each process based on governance/management practice and the resulting output.

The EDM03 process has a focus on risk management and risk tolerance associated with information systems services in organizations. This information system deals with the business processes that run in the library. A summary of achievement of capability level for EDM03 process can be seen in Table II.

At first we calculate the level of capability level 1, it was found that EDM03 gets score 88,9% or Fully Achieved. Therefore, the assessment proceeds to level 2 and EDM03 gets score 84,5% at PA 2.1 and 58% at PA 2.2. Based on those score, assessment does not advance to level 3 because PA 2.1 and PA 2.2 did not fullfill the criteria.

Table II Summary of EDM03 process capability assessment

<b>Objectives</b>	Ensure that IT risk in the organization does not exceed the company's capability and tolerance to accept risks, identify and manage the impact of IT risks on corporate values, and reduce the occurrence of failures										
<b>EDM03 Ensure Risk Optimisation</b>	<b>Level 0</b>	<b>Level 1</b>	<b>Level 2</b>			<b>Level 3</b>		<b>Level 4</b>		<b>Level 5</b>	
		<b>PA 1.1</b>	<b>PA 2.1</b>	<b>PA 2.2</b>	<b>PA 3.1</b>	<b>PA 3.2</b>	<b>PA 4.1</b>	<b>PA 4.2</b>	<b>PA 5.1</b>	<b>PA 5.2</b>	
<b>Percentage</b>		88,9%	84.5%	58%							
<b>Criteria</b>		<i>Fully Achieved</i>	<i>Fully Achieved</i>	<i>Largely Achieved</i>							

Table III Detailed assessment of EDM03 prcess Level 1

<b>EDM03</b>			
<b>Governance Practice</b>	<b>Outputs</b>	<b>Exist</b>	<b>Score</b>
<b>EDM03.01 Evaluate risk management</b>	Risk appetite guidance	Y	100%
	Approved risk tolerance levels	Y	
	Evaluation of risk management activities	Y	
<b>EDM03.02 Direct risk management</b>	Risk management policies	Y	66,6%
	Key objectives to be monitored for risk management	N	
	Approved process for measuring risk management	Y	
<b>EDM03.03 Monitor risk management</b>	Remedial actions to address risk management deviations	Y	100%
	Risk management issues for the board	Y	
<b>Average</b>			88,9%

Based on the results of the assessment, it was found that EDM03 process in UAD library has reached level 2 with Fully Achieved (F) in Process Assessment (PA) 2.1 Performance Management and Largely Achieved (L) in PA 2.2 Work Product Management.

Detailed measurements of the level capability level of the Level 1 EDM03 process can be seen in Table II. Then the details of the level capability level of EDM03 process level 2 - PA 2.1 Performance Management and PA 2.2 Work Product Management can be seen in Table IV and Table V.

Table IV Detailed assessment of EDM03 process Level 2 – PA 2.1 Performance Management

<b>2.1 Performance Management</b>		
<b>Generic Practices</b>	<b>Exist</b>	<b>Score</b>
GP 2.1.1 Identify the objectives	Y	75%

GP 2.1.2 Plan and monitor the performance	Y	83%
GP 2.1.3 Adjust the performance	Y	100%
GP 2.1.4 Define responsibilities and authorities	Y	66%
GP 2.1.5 Identify and make available	Y	83%
GP 2.1.6 Manage the interfaces	Y	100%
<b>Rata-rata</b>		<b>84.5%</b>

Table V Detailed assessment of EDM03 process Level 2 – PA 2.2 Work Product Management

<b>2.2 Work Product Management</b>		
<b>Generic Practices</b>	<b>Exist</b>	<b>Score</b>
GP 2.2.1 Define the requirements for the work products	Y	66%
GP 2.2.2 Define the requirements for documentation and control	Y	66%
GP 2.2.3 Identify, document and control	Y	50%
GP 2.2.4 Review and adjust work products	Y	50%
<b>Rata-rata</b>		<b>58%</b>

Based on the results of the assessment, it was found that EDM03 process in UAD library has reached level 2 with Fully Achieved (F) in Process Assessment (PA) 2.1 Performance Management and Largely Achieved (L) in PA 2.2 Work Product Management.

Detailed measurements of the level capability level of the Level 1 EDM03 process can be seen in Table II. Then the details of the level capability level of EDM03 process level 2 - PA 2.1 Performance Management and PA 2.2 Work Product Management can be seen in Table III and Table IV.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 CONCLUSIONS

In this paper, we have evaluated the risk management in the library of Universitas Ahmad Dahlan using the COBIT 5 frameworks, it can be summarize as follows:

1. In this risk management evaluation using COBIT 5 framework process, especially EDM03 (Ensure risk optimization), the capability process of this domain is level 2 (managed process), which means identification, planning, and communication activity about risk management has been managed and its work has been determined, monitored, and managed appropriately.
2. The gap between the current level of capability and the target level to be achieved is 1 level, from level 2 to level 3.
3. A recommendation has been made based on COBIT 5 framework with a summary:
  - a. there are 7 activity and 6 output to comply with Process Assessment 2.1 Performance Management
  - b. there are 4 activity and 4 output to comply with Process Assessment 2.2 Work Product Management

## 5.2 RECOMMENDATION FOR PROCESS EDM03 PA 2.1

To reach capability level 3 from level 2 on EDM03 process, UAD library should reach 85-100% percentage point on generic practices (GPs) and generic work products (GWPs). In the Process Assessment 2.1 Performance Management UAD library is recommended to perform generic practices as follows:

1. Identify the objective when making risk appetite guidance. The objective should be well understood, defined, and communicated. The identification of this objectives is suggested to include the evidence of targets such as milestones, required activities, and schedules.
2. Knows clearly when communicating information activities related to risks IT begin and when the activity is considered complete.
3. Plan, monitor, and record the performance of risk profiles. It aims to see how far the performance of risk management in achieving the purpose of the library.
4. Adjust the performance of the process of identification and communicating information about IT risks. When the activity is not in achieved with the plan, it is necessary to identify the problem and make adjustment of plans and schedules as appropriate.
5. Define responsibilities and authorities for performing the risk identification. The key responsibilities and authorities for performing the key activities of the process are defined, assigned and communicated. The need for process performance experience, knowledge and skills is defined.
6. Identify and make available resources to perform the risk identification according to plan. Resources and information necessary for performing the key activities of the process are identified, made available, allocated and used
7. Manage the interfaces between involved parties for risk identification. The individuals and groups involved with the risk identification are identified, responsibilities are defined and effective communication mechanisms are in place.

Besides doing the generic practices, UAD libraries must have generic work products:

1. Documentation about risk definition and communication process risks that occur.
2. Details of the risk identification performance.
3. Record risk identification and communication process performance
4. Details of action taken when identification risk is not achieved.
5. Documentation about risk identification should provide details of the process owner and who is responsible, accountable, consulted and/or informed (RACI).
6. Documentation should provide details of the process communication plan.

### 5.3 RECOMMENDATION FOR PROCESS EDM03 PA 2.2

In the Process Assessment 2.2 Work Product Management UAD library is recommended to perform generic practices as follows:

1. Define the requirement and criteria for the risk identification process, and then these requirement are reviewed and approved.
2. Define the requirement for documentation and control of the risk identification process. These needs include identification, approval from relevant parties, and trace ability of the process.
3. Identifying, documenting, and controlling the record of reviews that has been made on the risk identification and risk communication process. These activities are need to be done including when problem occur and has been resolved, also the record must be exist.
4. Review and adjust risk profile to meet the defined requirements. Risk profile are subject to review against requirements in accordance with planned arrangements and any issues arising are resolved.

Besides doing the generic practices, UAD libraries must have generic work products:

1. Documentation that provide details of identification and communication about risk management, including the organizational structure and level of satisfaction that is expected.
2. Documentation of internal control matrix that identifies the risk that exist within the business process.
3. Quality plan for the identification and communication about risk management and should present the outline procedure. This plan is supposed to help version controls and change controls that applied to risk appetite guidance.
4. Quality records of risk identification and communication should provide a trace of an audit review undertaken.

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## IMPORTANCE- PERFORMANCE ANALYSIS OF TELECOMMUNICATION INDUSTRY

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### ABSTRACT

*Customer satisfaction helps to retain the customer which leads to success of the business. In this paper, attempt was made to measure the satisfaction level of the customers using services provided by the mobile network providers. Study was carried out by conducting survey among 200 respondents with a usable questionnaire of 193 having a response rate of 96.5%. Respondents demographic profile was analyzed to see whether there is any significant difference exists between the place of residence using Chi-square test. Exploratory Factor Analysis (EFA) was carried out to identify various factors influencing while purchasing SIM card. Using 23 statements based on SERVQUAL model was also administered to find out the satisfaction level among the respondents with the help of Importance-Performance Analysis (IPA). Result revealed that only income among the demographic variables is significance for both locations. Seven factors were identified which influence the buying behaviour viz., Payment, Customer care, Price related factor, Additional services, Technical factor, Promotional and Other factors. Finally, customers are not happy with the services provided by the mobile network operators as 16 statements have negative gap and also 11 statements are significant. Thus, study reveals very low service quality of the telecommunication industry in Goa and needs serious efforts before the existing service provider's customer base shift to another high level quality service provider.*

**Keywords:** Customer Satisfaction, Telecommunication, Importance Performance Analysis, Goa.

**JEL Classification:** C12, C19, M31, M38, M39

## 1. INTRODUCTION

The Indian market of mobile network providers is growing rapidly due to low traffic, various availability of new scheme, falling handset price, etc. India is the second largest market of mobile network providers in the world and there is intense competition among existing players. In such a competitive market, customer satisfaction becomes a key issue. Telecommunication services are classified into two broad categories i.e. fixed line and mobile communication services. A mobile service provider is a company that offers transmission services to users of wireless device (Smartphone's and tablet PCs) through radio frequency (RF) signals rather than through end-to-end wire communication.

Cell phones have become indispensable for people and moved beyond their fundamental role of communication. They have become a major source for gaming, getting information, shopping, banking and much more. India is the biggest market for telecom service provider. Hence competition is huge for acquiring market. Because of the competition, large numbers of options are available for customer for selecting or choosing the service provider. Also frequency of changing the service provider has also increased. Since the Indian mobile phone operator market is overcrowded, customers have many choices of mobile phone operator.

Thus, in this paper an attempt is made to study the consumer behaviour, viz., the customers of mobile service users in the state of Goa and the services provided by various mobile service providers. The main focus of the paper is to (1) identify whether there is any significant difference exists among the consumers and their place of residence with the help of Chi-Square Test, (2) explore and identify various factors which influences the buying behaviour at the time of choosing the mobile service providers using EFA, and finally (3) to measure the satisfaction level of the consumers based on SERVQUAL Model there by identifying the gap existing in the services provided using IPA Matrix, hence making this study unique. Therefore, present study fills the gap by adding valuable knowledge to the existing literature, new perspectives, and presents possibilities for consideration. The paper offers valuable inputs for different stakeholders of telecommunication industry; various mobile service providers, the academic institutions, academicians, government, and also NGO's in the region under study.

## 2. LITERATURE REVIEW

### 2.1 Background

The present study reviewed the existing literature available on customer satisfaction in telecommunication industry. Keyword used to find the research paper include telecom services, telecommunication, mobile network, mobile services in India, etc. various source was used for collecting these papers from Emerald full text, Science direct, JSTOR, SSRN and Google scholars. Present study collected and analyzed 50 research papers published during the period of 1995-2016. Literature review provided basic answer for three fundamental questions, i.e., research gap with respect to the study carried out in telecommunication study; source and methods of collecting data used in those studies; and finally various tools and techniques used for analyzing the data. The results of literature review show that, 63% of research work has been carried out during the year of 2010- 2015, majority (36%) of the paper have been published by one and two authors. Though 48% research work is carried out in India, no research paper has been carried out in the state of Goa. Majority of the research work were empirical in nature (53%), using primary data (51%) collected through offline questionnaire (58%) with a sample size of 50-200 (43%). Based on this information, present study was conducted using

structured offline questionnaire administered to 200 respondents across the state of Goa based on convenience sampling. With respect to techniques used for data analysis were EFA (15%) and t-test (11%). The present study also used Exploratory Factor Analysis, and added two additional techniques, viz., Chi-Square Test and IPA Matrix. Since no study has been carried out with respect to the telecommunication industry service providers and assessed their customer satisfaction using the IPA Matrix, makes the present study unique. Subsequent section will provide the informations regarding the development of research questions and related hypothesis, followed by the analysis and discussion, finally the conclusion.

## 2.2 Customer Profiling

Customer perception is the process to assess how customers perceive services, how they assess, whether they have experienced quality service and whether they are satisfied or not. Customer perception is directly related to customer expectation. Due to the dynamic nature of expectation, perception of any person may also shift over time, person, place or culture. Customers perceive service in terms of the quality of the service and how satisfied they are overall with their experiences (Gupta, 2015). Consumer preferences / profiling is used primarily to mean to select an option that has the greatest anticipated value among a number of option by the consumer in order to satisfy his/her needs or desire. Preferences indicates choices among neutral or more valued option available. The preference of the customer is the result of their behaviour they show during searching, purchasing and disposing the products (Rajpurohit and Vasita, 2011).

Person who uses the services of the mobile network provider is their customer. It must be remembered that all customers do not require all the services, i.e., miss call alerts, news alerts, etc. Since services are used by the customers, studying their behaviour and socio-economic background is very important as all customers does not require all services. Different customers have different needs and thus demographic profiling of the customer provide an insight whether there are any significant different exists between the customer residing in different localities, hence the development of the first Research Question (**RQ 1**) and the first Hypothesis (**H<sub>1</sub>**);

**RQ 1:** Is it possible to identify the demographic profile of customers using services provided by mobile network operators in the state of Goa

*H<sub>1</sub>: There is no significant difference exists between the Location among the customers with respect to Gender, Age, Education, Income, Marital status and Occupation.*

## 2.3 Factors Affecting Buying Behaviour

It is really important for the marketers of Mobile Phone Operators to understand and analyze the preferences of customers. Study showed consumer behavior in respect to the three factors, Price, Quality and Promotion determine the purchase behavior of consumer (Singh, Chawla, Singh and Pal, 2015) and the price of any product or service also determines the buying behavior and intentions of customers. It was also seen that customers prefer cheaper prices than the products high quality. This is because of low income levels and also several other alternatives wherein they are able to find the desired product at a cheaper price. There is an association between social influence, price, economy and beliefs to understand this specific mentality of customers.

Kim (2004) revealed that the customer satisfaction towards mobile service provider is strongly supported by call quality, value-added services and customer support, and also found that these factors are very important while choosing a service operator. Customers generally make their choice of a mobile service provider by considering five factors: connectivity, coverage, tariff, value added services and customer care. These factors cannot be neglected because in telecommunications industry the four critical factors – customer care services, call rates, promotion and availabilities, are the most important factors considered by customers before utilizing the services of a Mobile Service Provider.

Vijay and Krishnaveni (2016) revealed that majority of the respondents have given top preference to service quality, value added service and customer care service and least preference to promotional offers in preferring the network service providers. Present study tried to identify the factors considered by the users, which were identified taken past studies as base. Thus, the following Research Question (**RQ 2**) was developed.

**RQ 2:** Is it possible to identify the factors considered by the users while purchasing the mobile network.

## 2.4 Customer Satisfaction

Customer satisfaction generally means customer reaction to the state of fulfillment, and customer judgment of the fulfilled state (Oliver, 1997). There are many benefits for a company from a high customer satisfaction level. It heightens customer loyalty and prevents customer churn, lowers customers' price sensitivity, reduces the costs of failed marketing and of new customer creation, reduces operating costs due to customer number increases, improves the effectiveness of advertising, and enhances business reputation. Kim et al (2004) indicated in their study that satisfaction may be assessed by a customer's rating of the brand, which is based on all the encounters and experiences of the customer with the brand.

For a long term relationship to sustain between a company and its customers, customer satisfaction is an important factor. Turel and Serenko (2006) also stated that there is a positive relationship between perceived quality and person's satisfaction, and also leads to loyalty. Lin and Wang (2006) also worked on the relationship between service quality, customer satisfaction and loyalty in mobile commerce. In their model, perceived value and trust have positive influence on customer satisfaction, and then influence customer loyalty. While perceived value and trust have significant effect on service quality, the effect on satisfaction will also be indirectly effective. Kuo (2009) found that service quality has positive effect on both perceived value and customer satisfaction, while perceived value has a positive effect on customer satisfaction in mobile services.

Customer expectation depends on personal needs, prior experience and their perception about the service. In order to retain the customer, the telecom industry / mobile network providers must analyze and fill the gap between the customer expectation and perception. Thus, the gap analysis using IPA is performed based on five dimension of SERVQUAL, viz., tangibles, reliability, responsiveness, assurance and empathy. The following Research Question (**RQ3**) and Hypothesis (**H<sub>2</sub>**) was developed;

**RQ 3:** Is it possible to identify the level of satisfaction of the users of mobile network.

*H<sub>2</sub>: There is no significant difference exists between what the customer perceived and experienced with respect to services provided by the mobile network providers.*

### 3. Methodology

The purpose of the study was to investigate customer's perception towards different mobile service providers in Goa. The study was carried out from December 2016 to March 2017. Using convenience sampling, a structured questionnaire was administered to 200 respondents. The total usable responses were 193 with a response rate of 96%. The data was collected from students, businessman, employed and unemployed people and also from housewives.

The data was collected using a structured questionnaire which was divided into three parts. The *first* part tried to assess the respondent's demographic information, i.e. Gender, Age, Education, Marital Status, Income, Occupation and Location. The *second* part related to various factors considered by subscribers while purchasing the SIM card. Here, 27 statements were extracted from past research and respondent were asked to rate the extent to which they strongly disagree (1) to strongly agree (5) with each statement on a 5-point Likert's scale. The *third* part deals with satisfaction level of subscribers towards services provided by mobile network providers. Here, 23 statements were designed using SERVQUAL model and respondent were asked to identify what was their expectation before purchasing the particular service and what they experienced after purchasing the service on a 5 point Likert's scale, 1 for strongly disagree and 5 for strongly agree. Chi-square test is used to find out the answer for first research question, where association between location and demographic characteristics was carried out to see whether there is any significant difference exists between consumers of mobile service providers with respect to the location of stay. For second research question exploratory factor analysis (EFA) was carried out to find out the motivational factors while choosing mobile service providers. And, finally importance-performance analysis (IPA) was carried out to find the answer for final research question. IPA allows to measure the gap between the expectation and experience to assess whether customers are satisfied with the services provided by mobile network providers.

### 4. ANALYSIS AND DISCUSSION

#### 4.1 Demographic Profile

In this section a cross tabulation of customer's demographic variables is performed with that of location, i.e., North Goa and South Goa is being carried out to see if there exists any significant difference among the customers across the state of Goa. **Exhibit 1** shows that majority of the respondents belong to female category (52.8%) with respect to North Goa whereas male category (60%) are more in case of South Goa. In both the cases, age profile indicates the majority falls under 20-29 years of age (56.5% for North Goa and 68.2% for South Goa). Majority of the respondents are having college education (71.3% for North Goa and 75.3 for South Goa). In case of marital status, majority are coming under unmarried category (69.4% for North Goa and 78.8% for South Goa). Majority of the respondents falls under the category of middle and lower income category (88% for North Goa and 95.3% for South Goa). With respect to occupation, two categories respondent are students (31.5% for North Goa and 42.4% for South Goa) and also falls under employed category (62.9% for North Goa and 54.1% for South Goa).

Exhibit 1: Demographic Profile of Customers (N=193)

Demographic Characteristics		$\chi^2$ value (p)	Location			
			North Goa		South Goa	
			#	%	#	%
Gender	Male	3.117 (0.078)	51	47.2	51	60.0
	Female		57	52.8	34	40.0
Age	Up to 20	4.972 (0.290)	23	21.3	17	20.0
	20 – 29		61	56.5	58	68.2
	30 – 39		17	15.7	7	8.2
	40 – 49		5	4.6	3	3.5
	50 and Above		2	1.9	0	0.0
Education	Up to 10 <sup>th</sup>	6.209 (0.286)	10	9.3	12	14.1
	Up to 12 <sup>th</sup>		24	22.2	20	23.5
	Graduation		53	49.1	44	51.8
	Post-Graduation		19	17.6	8	9.4
	Doctoral		2	1.9	0	0.0
	Professional		0	0.0	1	1.2
Marital Status	Married	2.152 (0.142)	33	30.6	18	21.2
	Unmarried		75	69.4	67	78.8
Annual Family Income	Less than Rs. 1 Lakh	13.181* (0.001)	42	38.9	55	64.7
	Rs. 1 Lakh – Rs. 5 Lakhs		53	49.1	26	30.6
	More than Rs. 5 Lakhs		13	12.0	4	4.7
Occupation	Student	3.120 (0.682)	34	31.5	36	42.4
	Own Business		16	14.8	13	15.3
	Employed (Govt.)		31	28.7	18	21.2
	Employed (Private)		21	19.4	15	17.6
	Unemployed		2	1.9	1	1.2
	Housewife		4	3.7	2	2.4

Source: Primary data

\* Significant at 0.05

Though it is seen that except with respect to gender, both North Goa and South Goa respondents are having same characteristic features, but based on Chi-square test result it can be concluded that except for annual family income ( $\chi^2= 13.181$ ,  $p= 0.001$ ), all other demographic variables (gender, age, education, marital status and occupation) are insignificant, hence the formulated hypothesis ( $H_1$ ) of RQ1 that “There is no significant difference exists between location among the customers with respect to Gender, Age, Education, Income\*, Marital status and Occupation” is accepted, with an exception of annual family income, which clearly corroborates with similar studies carried out earlier (Gupta, 2015; Rajpurohit and Vasita, 2011), which can be used effectively by the mobile service providers in the state of Goa while revising their strategic marketing plans. The subsequent section tries to identify the influencing factors which are considered by the customers while selecting the mobile service providers.

#### 4.2 Factor Analysis

A total of 27 motivational factors were identified based on earlier studies (Singh, Chawla, Singh and Pal, 2015; Rajput, 2012; Kim, 2004; Sandhir, 2004; Neeraj and Girish, 2007; Vijay and Krishnaveni, 2016) and customers are requested to identify these statements and an EFA was carried out. The result of the analysis was grouped into seven factors using an Eigen value cut off at 1.0 (**Exhibit 2**). The overall reliability of 27 variables gave a satisfactory value, which is considered as acceptable ( $\alpha = 0.890$ ). Individual factor reliability was also found acceptable, and named as **(F1)** payment related ( $\alpha = 0.731$ ), **(F2)** customer care related ( $\alpha = 0.729$ ), **(F3)** price related ( $\alpha = 0.718$ ), **(F4)** additional services related ( $\alpha = 0.6600$ ), **(F5)** technical related ( $\alpha = 0.663$ ), **(F6)** promotional related ( $\alpha = 0.558$ ) and **(F7)** others ( $\alpha = 0.542$ ). Though **F6** and **F7** resulted in less than 0.80 Cronbach's alpha, these two factors are also being considered for analysis as these are crucial for assessing the significance of purchase behaviour. KMO measure of Sampling Adequacy showed 0.830 which indicates that the data is sufficient for exploratory factor analysis. The 7 factor explained 58.98% of the total variance which is considered as acceptable.

The first critical factors which are considered most important by the customer's while choosing mobile service providers were falling under technical related (**F5**), which are having the highest loading. The other factor in the order of merit which influences more is the customer care related (**F2**), payment related (**F1**), price related (**F3**) and additional services related (**F4**). The least important factor for the customers is the promotional related (**F6**) and others (**F7**). Among the 27 variables, most critical variable customers consider as the most influential one is "*people you know being in same network*" (26<sup>th</sup> statement of Exhibit 2) with a loading of 0.871, this may be due to the fact that the age old marketing strategy of "words of mouth" still holds true, hence making every mobile service provider to ensure that they are focusing on providing full spectrum of services to the existing customers so that it leads to complete satisfaction among the customers. This is in fact crucial because customers will have some expectations before choosing any mobile service provider and if their expectations are not realised or experienced at a later stage after purchasing, customer base shifting takes place from one service provider to the other in anticipation of better services. Hence it is equally important that customer satisfaction is measured on a regular basis before the customer shifts their base, which is being analysed in the next section.

Exhibit 2: Factor Analysis

FACTOR ANALYSIS ( $\alpha = 0.890$ , $n=27$ )	F1	F2	F3	F4	F5	F6	F7
<b>F1- Payment (<math>\alpha = 0.731</math>)</b>							
1. Less monthly charges (postpaid services)	.695						
2. After sale technical support	.684						
3. ISD tariff plans	.570						
4. Availability of 3G/4G plans at lower rate	.496						
<b>F2 - Customer Care (<math>\alpha = 0.729</math>)</b>							
5. Helpline facility		.725					
6. Warranty		.678					
7. Quick response to customer complain		.676					
8. Brand image		.533					

9. Availability of various Offers and schemes			.432				
10. Availability of service center			.408				
<b>F3 - Price Related (<math>\alpha = 0.718</math>)</b>							
11. Availability of value added service at reasonable price			.712				
12. Reasonable Calling charges			.642				
13. Price is cheaper as compared to other service provides			.633				
14. Network converge of service provider			.516				
<b>F4 - Additional Services (<math>\alpha = 0.660</math>)</b>							
15. Missed call information, bonus card, etc				.655			
16. Availability of combo pack (postpaid service)				.649			
17. Reasonable and low data plan				.520			
18. Facility of making online billing				.474			
<b>F5 - Technical Factor (<math>\alpha = 0.663</math>)</b>							
19. Initial subscription cost					.769		
20. Voice call clarity (echo, background noise)					.701		
21. Easy availability of recharge voucher					.509		
22. Easy Process of purchase and activation of service					.438		
<b>F6 - Promotional (<math>\alpha = 0.558</math>)</b>							
23. Network connectivity (call to 3rd party at first)						.693	
24. Level of advertisement and promotion						.647	
25. Companies participation in charity						.556	
<b>F7 - Other factors (<math>\alpha = 0.542</math>)</b>							
26. People you know being in same network							.871
27. Profitability of the company							.483
KMO Measure Of Sampling Adequacy	0.830						
Eigen Value	7.312	1.897	1.674	1.370	1.309	1.226	1.138
Number of items	4	6	4	4	4	3	2
Variance Explained	27.08	7.028	6.199	5.072	4.849	4.540	4.214
Total Variance Explained	58.98%						

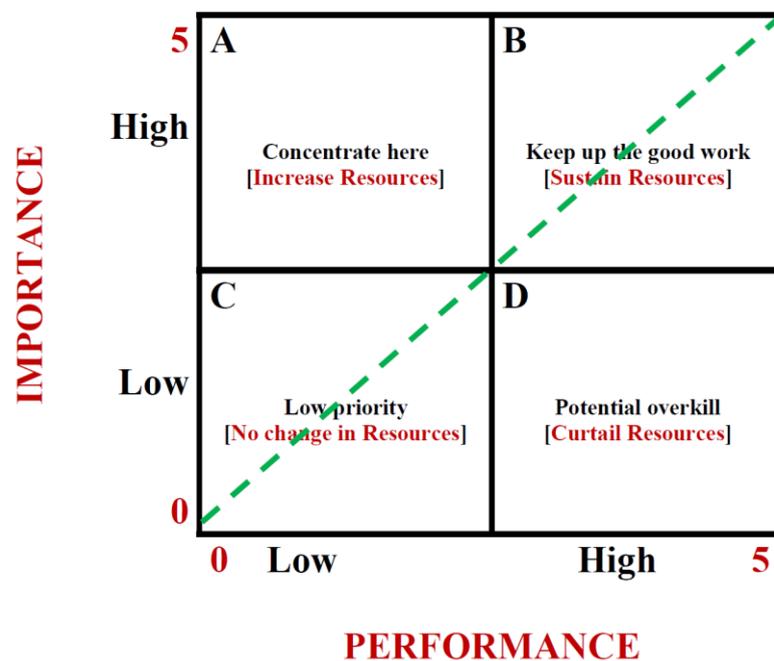
Source: Author's own compilation based on primary data

### 4.3 Importance Performance Analysis

As it is evidenced from the earlier EFA that customer satisfaction is critical for maintaining the existing customer base as well as capturing the potential and prospective customers in future also. Keeping this point in mind, in this section an attempt is made to find out the present status of the customer satisfaction among the mobile users in the state of Goa. Though there are many methods developed for assessing the service quality and satisfaction; viz.; IPA Matrix, SERVQUAL, SERVPERF, and HOLSAT; in this section IPA Matrix is used.

The original importance performance analysis (IPA) developed by Martilla and James (1997) suggested that customer satisfaction can be measured by the difference between a consumer's expectation of a product or service and his/her actual experienced after service delivered, based on the importance given and performance resulted by using various services offered by the mobile service providers. The result is then plotted in a two-dimensional grid having four quadrants (Joppe et al., 2001, Kozak and Nield, 1998; Pizam and Ellis, 1999; Ryan, 1995). Following analysis shows the result shown in four quadrants named as A, B, C, and D; where variables falling under A needs to be taken care of while assessing customer satisfaction (Exhibit 3).

Exhibit 3: Importance-Performance Matrix



Source: Importance-Performance Matrix (Chen, 2014)

The modified IPA matrix (Abalo et al. 2007, Deng, 2007; Azzopardi and Nash, 2013; Chen, 2014) also used in the present study where the matrix is diagonally divides in to two, the upper side above the diagonal line (shown as A, which needs more concentration) and the lower side below the diagonal line (shown as B, potential over kill).Here, importance performance analysis is carried out to find out the customer satisfaction with respect to services provided by mobile network operators.

Exhibit 4: Importance Performance Analysis

Variables	Importance (I)	Performance (P)	Gap (P-I)	P	Original	Diagonal
1. Pamphlets/ catalogues are good and easy to understand	3.24	3.56	0.32	.001*	D	B
2. Easy to communicate with knowledgeable employees	3.50	3.51	0.01	.874	D	B
3. Customer service centers are located at convenient places	3.53	3.35	-0.18	.034*	C	A
4. Easy to reach the appropriate employee	3.76	3.38	-0.37	.000*	A	A
5. Company always keep up their promise	3.58	3.53	-0.04	.560	B	A
6. Customers problem are solved sincerely	3.60	3.39	-0.20	.033*	A	A
7. Company provides its services right the first time	3.60	3.35	-0.24	.008*	A	A
8. Provides its services at the time they promised to do so	3.52	3.52	0.00	.100	D	B
9. Employees are always willing to help customers	3.38	3.61	0.22	.056	D	B
10. Employees gives prompt services to customers	3.52	3.43	-0.09	.302	C	A
11. Employees usually avoid using technical jargon	3.47	3.59	0.11	.239	D	B
12. Employees are never busy to respond to customers request	3.54	3.32	-0.21	.021*	C	A
13. Employees provides accurate and reliable information	3.73	3.40	-0.32	.000*	A	A
14. Employees have knowledge to answer customer questions	3.70	3.48	-0.22	.020*	A	A
15. Employees have ability to convey trust and confidence	3.77	3.51	-0.25	.008*	B	A
16. Employees have technical knowledge to solve problems	3.54	3.41	-0.12	.135	C	A
17. Company gives customer individual attention	3.69	3.66	-0.03	.754	B	B
18. Their operating hours are convenient to all customers	3.63	3.47	-0.16	.078	A	A
19. Company provides 24 hours customer care services	3.74	3.48	-0.26	.004*	A	A
20. Company provides customize offers and schemes	3.65	3.60	-0.05	.583	B	B

Variables	Importance (I)	Performance (P)	Gap (P-I)	P	Original	Diagonal
21. Excellent company should have less installation problems	3.38	3.40	0.02	.794	C	A
22. It should have less technical and hardware problems	3.68	3.50	-0.18	.035*	B	A
23. It should have less signal problems	3.50	3.59	0.08	.416	D	B

Source: Author's own compilation based on primary data

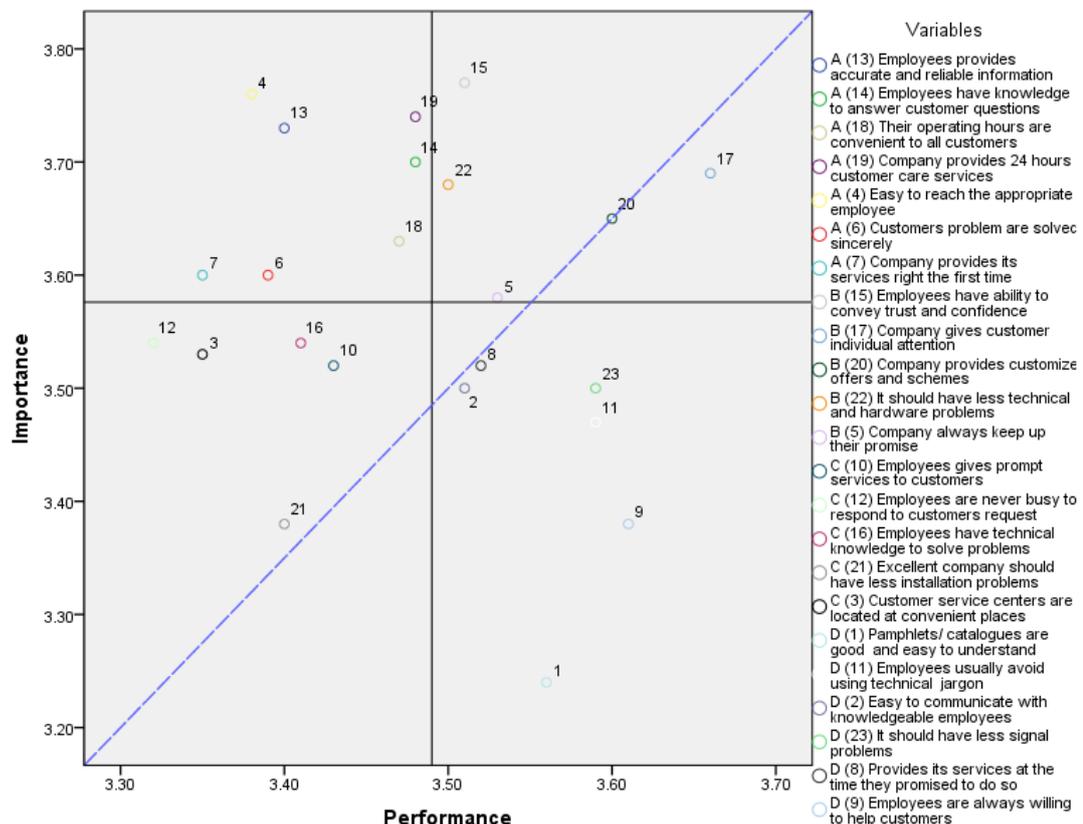
Results of IPA are obtained in the form of Original IPA as well as Diagonal IPA, the result of which is given in the following **Exhibits 4** and **5**. In the original IPA, the entire matrix is divided into four quadrants. These quadrants are named as follows, **Quadrant A** is termed '**Concentrate here**' and elements in it are rated very important, but the level of satisfaction is rated below average therefore action/efforts & resources are required here. It is a critical area for research allocation with the goal being to achieve customer satisfaction. **Quadrant B** is termed '**Keep up the good work**' and elements in it are considered most important and satisfaction level is above average and mobile network providers must work as well as continue to invest resources to maintain quality of these areas. **Quadrant C** is termed **Low Priority** and elements in it are rated least important and the level of satisfaction is below average. Usually nothing is done about this area until some point when respondents begin to view this area as more important. **Quadrant D** is termed '**Possible Overkill**' and elements in it are rated above average on satisfaction, but are rated below average on importance and usually the areas require no action or improvement and no further investment of resources. The findings will indicate the areas where customers are satisfied and also provides those areas which require improvement on priority basis. The modified IPA (Abalo et al., 2007, Deng, 2007, Azzopardi and Nash, 2013, Chen, 2014) diagonally divides the elements under study into two, those above diagonal comes under *Category A* (more concentration is required) and those below the diagonal comes under *Category B* (Low Priority).

The overall reliability statistics of all the 23 statements is acceptable with respect to **importance** (0.945) and **performance** (0.897). The complete result of the IPA is shown in **Exhibit 4 and 5**, which clearly showed the satisfaction level of the users. Of the total 23 variables; only 7 are in Quadrant A; 5 are in Quadrant B; 5 in C and 6 are in Quadrant D. If the Gap is verified in detail (**Exhibit 4 and 5**), 16 out of 23 variables gap is negative, which indicates customers are not happy with the services provided by the telecom. This clearly shows that the mobile service operators need to focus on improving service quality in order to maintain or sustain the existing customer base and also for attracting potential customers.

The result of the modified IPA Matrix shows that almost 15 variables out of 23 are falling under area above the diagonal line (named as A), clearly indicating the sad state of the existing customers of mobile service providers. Complete dissatisfaction is seen among the customers, but still they continue to use the mobile services provided by various players. The only option available for the customers is switching over between service providers either by exercising mobile number portability (MNP) wherein they migrate from one service provider to another one by keeping the same mobile number allotted, or simply stop using the existing number and going for a new connection with a new service provider with a new number.

This is a clear indication that almost all the mobile service providers (both the government owned and private players) are taking customers for granted assuming that whatever service quality is provided to the customers, they are going to remain with them. Even if few customers move away, other customers moving away from different service providers come for the service. In fact, this is what is being happening, customers are keeping on moving from one to the other to the other as and when they feel the service provided is not satisfying their requirements. This is in fact a serious case of violating customer rights; i.e.; not providing the promised services, but customers feel that there is no point in going for litigation as it takes time for them to get justice in the existing legal system prevailing in India. Another striking issue with respect to getting a new connection in any state in India is that customer has to wait for one to two days for getting the connection activated, which is quite time consuming specially for those people who comes to India as tourists from other countries. Where as in most of the other countries, by providing the passport and visa copy, mobile connectivity is activated instantly, which is completely opposite and the services are almost provided as promised also.

Exhibit 5: Importance Performance Matrix (Original and Modified Grid Analysis)



## 5. CONCLUSION

Telecommunication industry in India has been growing at very fast speed during last two decades, wherein the two categories of services provided in India are fixed line and mobile communication service. Though fixed line came before but still in existence but now a day's mobile communication service is gaining more importance. The demographic profile of the customer base in Goa is almost

identical, except there is significant difference exists with respect to income level. Customers choose to have the mobile service provider closer to their location. Study also revealed that the customers consider technical related aspect as the most crucial factor while deciding about which service provider to be selected. The least importance is given to promotional schemes provided. One of the most crucial variable which customers consider is the word of mouth from the known people using the mobile services. Customers feels that satisfied customers recommendation will always be good rather than blindly following promotional schemes offered from time to time, as most of the customers do not believe in the promotional offers given by the mobile service providers. This in a way is true as the satisfaction level of customers with respect to the mobile service provided in the state of Goa is very poor. Though the original IPA Matrix shows only 7 variables out of 23 SERVQUAL variables as unsatisfactory, 16 of the gap values are negative which clearly indicating the bad service quality provided by the mobile operators. To verify the status again, modified IPA Matrix was prepared which resulted in an increase from 7 to 15 variables out of 23 SERVQUAL variables falling under unsatisfactory category which needs to be taken care of by the mobile service providers. The sad state of the service provided by the mobile service operators is reflected in the study, which needs to be taken care of either by the government or by the regulatory agencies of mobile service else it becomes very clear that a new player will capture all the market share by providing the basic quality service to the existing customers. One such case already taken place when the Reliance Jiocommercially launched its services on 5 September 2016. Within the first month, Jio announced that it had acquired 16 million subscribers. This is the fastest ramp-up by any mobile network operator anywhere in the world. Jio crossed 50 million subscriber mark in 83 days since its launch, subsequently crossing 100 million subscribers on 22 February 2017. By October 2017 it had about 130 million subscribers (Wiki, 2018), and by now it must have crossed 160 million subscribers which makes Jio the largest migration from free to paid services in history (Khan, 2017). If the existing service providers are not taking care of the quality of services, more and more such entry of quality service providers can be seen which will ultimately benefit the customers.

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## FACTORS AFFECTING ENTREPRENEUR CHARACTERISTICS: A STUDY OF SMALL MEDIUM ENTERPRISE IN GARUT

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### ABSTRACT

*The aim of this study was to identify factors which affect the characteristic of entrepreneur in small medium enterprise in Garut. Proportional random sampling was used to select participants from 4 region in Garut. The study used 54 traditional cap crafters in Garut who has been in the business in the last 5 years. We used descriptive and factor analysis to analyze the data. The result showed that traditional cap crafters had good entrepreneur characteristics. Based on factor analysis, the initial 27 variables can be reduced to 8 variables and form new construct consist of three factors which had correlation above 0.5. Such factors were (1) innovativeness in producing new knitted products, able to develop new ideas and keep up with the industry trends, (2) eager to take risks which consists of high independency, not affraid to face price competition, and able to manage the workers, and (3) focus on profit which reflected on two variables of pursuing profit and not easily satisfied.*

**Keyword:** entrepreneurship characteristics, inovation, leadership, high risk taker

### 1. INTRODUCTION

Small medium enterprises had important and strategic role in supporting a nation's economic. They employed workers and distributed the development. They also had the advantage to be able to survive the crisis. Indonesia has million of such small medium enterprises (SME), but such numbers will not contribute to the nation's economic if their scope of business was not develop (Zuraida, Ramdhani, &

Amin, 2008). Nowadays, every industries face fierced competition. Business owners tried to double their profit, which indirectly can affect SME. Therefore, SME should be ready to compete and preserve their business by optimizing their resources.

Garut as one of Kabupaten in West Java Province has abundant resources. One of them was industrial potential. Such industrial potency located in Samarang, Pasirwangi, Bayongbong, and Tarogong Kidul. Home industries with main business in producing knitted cap already develop their market abroad. Facing the tight competition, the knitted cap crafters faced problem in capital adequacy. This problem is very common for SME in Indonesia. Inadequacy of capital can affect the smoothness of their business. Without adequate capital, crafters can not independently and easily set the selling price and buy sufficient materials. These affect their ability to get more profit. They could not overcome the fluctuation of the price for raw materials which in the end affecting their profit since they cannot easily raise their selling price. Other disadvantage was they can not produce in a large number which affect their ability to meet the customers demand. Despite the caapital problem, crafters also found it difficult to get a skilled employees since they only can offer limited salary. Most of locals found jobs outside Garut or outside the local industries which offer bigger salary and opportunity.

These obstacles caused some SMEs to failed in running their business, while others could survived and even develop the business. Those who succeed turn out to have stable entrepreneurship profile. They step over the weaker and less optimistic entrepreneurs. The entrepreneur characteristics proved to be a crucial factors, since studies found that 15% of entrepreneur success was related to their education background, while the other 85% related with their attitude, mental ability, and personality (Schriber in Alma, 2017).

Based on the above discussion this study will identify entrepreneur characteristics of knitted cap crafters in Garut and to identify which factors that form the entrepreneurship characteristics in knitted cap crafters in Garut.

## 2. LITERATURE REVIEW

### 2.1 ENTREPRENEURSHIP ATTITUDE

Dayakisni (2003) explained that attitude is a function of believed regarding the possibility of the consequences when somebody determined their attitude, both negative and positive. They will expresses their attitude in their behavior. They will evaluated every consequences that might come out. Furthermore, Barata (2004) defined attitude as a set of emotion, believe, and behavior tendency of an individual, oject, and group. Ajzen (2005) defines attitude as a tendency to react positively or negatively to an object, people, institution, or a moment. Meanwhile, according to Suryana & Kartib (2014) entrepreneurship attitude is individual readiness to consistently respond to show self confidence, task oriented, rist taker, facing challenges, focus on leadership, originality, and future mindset. Meredith, 1982; Meredith, 2000) explained in detail;

Tabel 1. Entrepreneuruship Characteristic

Characteristics	Attitude
1. Self confidence	Believe, independency, optimist

<b>Characteristics</b>	<b>Attitude</b>
2. Task oriented	Need for achievement, persistent, hard working, strong will, energetic, and initiative
3. Risk taking	Eager to take risks and not afraid to face challenges
4. Leadership	Act as leader, extraversion, open to critics and suggestions
5. Originality	Innovative, creative, flexible, resourceful, various ability, abundant of knowledge
6. Future mindset	Having vision and future perspective.

Source: (Meredith,1982; Meredith,2000)

Based on the above review we understand the attitude of the entrepreneur (qualitative) is behavior tendency of an individual (quantitative) to manage the business or activities that create and implement certain ways to do the job in order to maximize profit.

Entrepreneur attitude variables seek and defined according to the business situation, then the potential variables analyzed using factor analysis to form new factors which were not yet known how many they were.

### **3. METHODOLOGY**

This study using exploratory method which aimed to gather information that support the effort to identify the problem (Ramdhani & Ramdhani, 2016). The population in this study is 60 knitted traditional cap crafters who had been in the business for more than 5 years, operated in 4 different areas in Garut. Using Slovin formula with 5% error we had 54 participants as samples. The proportional random sampling used to get equal participants from 4 areas.

Data collected from parties who were expert and have sufficient knowledge regarding the research topic. Primary and secondary data used in this study. Data collection conducted by literature study and field study through observation, interview, and questionnaire.

Likert scale was used to measure the result and the data was interpreted using exploratory factor analysis which aimed to defined the structure of matrix data and to analyze the correlation between variables. These defined variables will summarized or reduced to form a new factor, which doesnot diminish its meaning. The formed variables easier to control (Ghozali, 2016; Ramdhani & Ramdhani, 2016).

### **4. RESULT AND DISCUSSION**

51 participants (94%) was male entrepreneur, which is in line with the traditional view that regard man as the ultimate provider for his family by working or doing business (Mazzareol et al, 1999). No wonder in Garut we identify that there are more men conductng business compare to women.

We also identify that participants was dominated by entrepreneurs who were more than 50 years old. Previous research explained the relation between age and business success (Kristiansen, Furuholt, &

Wahid, 2003). Entrepreneur over the age of 25 years old usually more successful than the younger one. Age might be related with maturity and also experience. Older entrepreneur assumed to have more experience and mentally more ready to do the business. Though it was not rule out the possibility that younger person could become successful entrepreneur.

From 54 participants there were 63% (43 persons) who had only secondary education level (SD). This showed that education of the knitted traditional cap crafters level is still low. 8 participants (14.81%) received junior high school education and only 3 (5.56%) who had senior high school education background. Entrepreneur who had junior and senior high school education continue to run their parent's business and become second generation of the family business. Though also it does not rule out the possibility for several of them who started their own business. BPS Garut mentioned that Garut society had low level of participation in education. This view supported by 2015 data which discuss the average years in education was only 6.85 in 2015. Schriber dalam Alma (2017) argued that education had only 15% impact for the success of the entrepreneur. Harry Matlay (2008) mention that entrepreneur's education has no affect on the entrepreneur ability, knowledge, and attitude. Nevertheless education still needed to support entrepreneur in developing their business.

There were negative attitude in fulfilling the demand. On certain occasion such as in time of Rajab, Syakban and Ramadhan, the knitted traditional cap demand was high. The increased demand cause several entrepreneur overwhelmed. It depends on prowess of these entrepreneur and to manage their employees to accept the order. Besides their own primary business crafters also get contract as outsource for other company. To avoid certain fined most of them decline the opportunity. They were not certain whether they could meet the demand.

The entrepreneur's ability to produce the new knitted products and develop new ideas was not good. Most of them rarely came out with fresh ideas. Most of them just copied good and marketable products. They done it without add modification. One of the obstacle to implement new ideas is that they have to call the mechanic to set their machine according to the new model. They also didnot develop cocreation.

The respond from 54 participants towards 27 variables formed entrepreneur attitude of traditional knitted cap crafters in Garut. 43,28% participants were strongly agree, 40,60% were agree, 14,33% reluctantly agree, 1,37% disagree, and 0,41% were strongly disagree. The average score was 228,93 and still categorized as very good.

### **Factor Analysis**

After four iteration in processing data we got 8 variables by reducing 19 variables from the initial of 27. The final KMO value for MSA (*Measure of Sampling Adequacy*) was 0,700 which bigger than 0,50. In this case, factor analysis considered appropriate to measure data in form of correlation matrix because there were enough samples. *Barlett's Test of Sphericity* showed the Chi-Square value of 216,138 (df = 28) and sig. value of 0,000 which is less than 0,5. This means those variables were correlated and feasible to use in further analysis.

Based on *Anti-Image Corelation*, we got MSA value bigger than 0,5. We do not have to conduct re-test. This also showed that 8 variables need no more reduction because all of them correlated and met the requirement.

Factoring process run by extracting a group of variables using *Principial Component Analysis* (PCA) method and obtain *communalities* value. *Communalities* was the numbers of variance (in percentage)

from initial variable that can be explained by the existig factor. We got the *extraction* value on *comunalitis* (X2) independency 0,622; (X7) profit oriented 0,636; (X12) not afraid to take risk 0,648; (X18) able to manage employees 0,789; (X21) ability to develop new knitted product Sebesar 0,912; (X22) ability to develop new ideas 0,876; (X23) ability to cope with industry trend 0,735; and (X27) not easily satisfied 0,744. Such numbers showed how big the variance in every variables can be explained by the formed factors. The bigger the *comunalities* value on variable the tighter the relationship with formed factors.

*Total Variance Explained* show positive result to summarized initial variables to become new factors which consist of 8 variables (*component*). Then factor analysis used to process each variables which had 1 varians. The first factor can explained 44,029% of varians, the second factor explained 17,230% varians, and the third factor explained 13,262%. All three factors explained 74,520% of variability from thr 8 original variables.

Based on the output of *rotated component matrix* we get factor loading value, to determine which section such factors will be categorized. Table 2 showed the correct place for the ne factors:

Tabel 2. New Factors

New Factors	Variable	Factor loading
Faktor 1	X21 Develop new knitted product	0,937
	X22 Develop new ideas	0,906
	X23 Ability to cope with indutry newest trends	0,851
Faktor 2	X2 Independency	0,783
	X12 not affraid to compete in price	0,741
	X18 Ability to direct employees	0,800
Faktor 3	X7 profit oriented	0,595
	X27 not easily satisfied	0,788

Source: Data procesing output, 2017

The factor analysis result reduced the 27 variables to become only 8 and form three factors;

- Factor 1 consist of variables (X21) develop new knitted product, (X22) develop new ideas, and (X23) ability to cope with newest industry trends. This factors named as innovativeness.
- Factor 2 consists of variable (X2) independency, (X12) not affraid to compete in price, and (X18) ability to direct employees. These attitude help crafters to overcome business obstacles, we called the second factor as daring to take risks.
- Factor 3 consists of variable (X7) focus on profit and variable (X27) not easily satisfied, this factor named as profit oriented.

Table 3. *Component transformation matrix*

Component	1	2	3
1	<b>0,799</b>	0,594	0,092
2	-0,590	<b>0,804</b>	-0,066

Component	1	2	3
3	-0,113	-0,001	<b>0,994</b>

Source: Data processing output, 2017

Based on the tabel of *component transformation matrix*, we can safely said that three factors (*component*) is right. They had very strong correlation in each component with the value above 0.5 (0,799, 0,804, and 0,994 respectively).

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based on the responses from 54 participants regarding the related variables to the factors which form the entrepreneurial attitude, we conclude that the crafters entrepreneur attitude can be classified as very good. Initial 27 variables can be reduced to 8 variables and form 3 factors, innovativeness, daring to take risks, and profit oriented.

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## **DOES RAPIDLY GROWING REVENUES ALWAYS PRODUCE AN EXCELLENT COMPANY'S VALUE? DCF & P/E VALUATION ASSESSMENT ON HOSPITAL INDUSTRY**

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### **ABSTRACT**

*The investment opportunities of the health sub-sector business in Indonesia are still wide open, because capacity of all hospitals in Indonesia is only able to serve 3.25% of the total potential patients, there is still 96.75% potential market that equivalent to 9,501,350 customers. Because of this enormous chance to gain more revenue, absolutely attract investor to make an investment. Not much choice to investing in healthcare business in Indonesia, there is MIKA, SAME, SILO and SRAJ, all of them will be evaluating using DCF and Relative Valuation, to know their fair value. This fair value becomes essential when investors want to make investment decisions, which they will not want to buy stocks if their prices is too high, and not trusting to buy stocks whose prices are falling. This research are meant to be done searching fair value of those company.*

*This research begin with collecting financial statement for 5 years between 2013 and 2017, using it as the historical aspect to generate forecast for next 5 years 2018-2022. Every income and cost are carefully calculated to create ratio using geometric or arithmetic average. The purpose of forecast is to estimate potential free cash flow that can be produce in the future. This valuation is reveal how good each company to produce more money in the future, no matter how much they growth revenue it self, because in this research we can see company with less revenue growth can make more money than the big one.*

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**Key Words:** valuation, healthcare industry, hospital, DCF, relative valuation, FCFF, P/E

## 1. INTRODUCTION

Valuation is a measurement of the actual value of the company, because the company's value was not merely the total amount of assets or number of shares accumulated since its establishment. The real value lies precisely in the potential of the company is generating (or lose) money in the future. The next question is, why companies need a valuation? The answer is simple, it is usually because the company will be traded, for the seller to know what the minimum price they should receive, and for buyers need to know what the maximum price they can offer. But today, valuation not only applied for buying and selling companies, the valuation can be used to: (1) measure performance, (2) to estimate whether the investment measures that they will undertake can add value to the company in the future, (3) to see the market response to the current performance reflected by fluctuations in stock prices, meaning that the stock price exceeds the company's fair value, the market responds well to the company's performance and expects its financial condition to be better in the future, when it is lower meaning the market does not believe in the company's performance and has a tendency to attract its investment.

DCF one of the favorite valuation methods used by practitioners of financial analysis, the approach is about to predict how this company able to generate cash flow in the future, to reveal possibility to generate sufficient profits for the owners. The greater the profit potential of the company, the higher the value of the company (Damodaran, 2002). Many practitioners are proving the accuracy of this method (French, 2013). DCF also offers a sensitivity that enables the analyzer to apply certain scenarios in order to adjust with market growth (Jumono, 2007). It's talk about how to adjust the revenue ratio of the projection.

Relative valuation is no less accurate than the DCF method (Ahmed Sayed, 2016), Basic calculations by measuring and comparing the value of the company's shares in the market and the value of the company based on total revenue, for total revenues is reflecting the fair value of the company (Hartono, 2008), another advantage, that this method is very easy to use and understand even by non-financial reader (Jumono, 2007), Relative valuation has three variants (Jumono, 2007) Price to Earnings Ratio (P/E), Price to Book Value (PBV), and Enterprise Multiple.

The company's value is closely related to the company's net profit, (Penman, 2013) if income increases, the value of companies has also increased. Speaking profit means talking about the free cash money available for companies or for the owner. DCF operational variables involve fundamental data like income statement, balance sheet and capital structure. DCF sensitivity plays role to estimate company's growth is (1) greater than expected - an optimistic scenario; (2) normal growth - moderate scenario; and (3) smaller growth than forecast - pessimistic scenario.

Previous research (Oded, Michel and Feinstein, 2011), Analyzes that the DCF method will be very accurate when companies has a constant capital structure, unchanging composition. Another research applied to 14 manufacturing using the DCF and DDM (Yulfita, 2011) were discovered four of them undervalued, and the rest of it overvalued. Banking (Satjawidjaja, 2012), conducted the valuation using P/E, PBV, DCF indicates the object is undervalued, while using the DDM method stated that object is overvalued. In the mining industry (Hutapea, Poernomoputri and Sihombing, 2012) FCFE results that the value of the company Rp 1,866, higher than its share value of Rp 1,570. P/E and DCF method, have been tested to building construction company (Gheivary, 2013) the result is undervalued. Still in the building construction industry with the same method (French, 2013) support the statement that DCF is an accurate valuation methods. On the other hand in the telecommunications industry (Kramna, 2014), Said that the key is in the accuracy projection and at least 5 years using empirical data. It has been

tested on 392 companies (Ahmed Sayed, 2016), agree the DCF and P/E method are accurate, because tolerance induced errors are not significant between prediction and actual.

## 2. LITERATURE REVIEW

This study is meant to Valuating Indonesian's Healthcare sector in 2018 using Discounted Cash Flow Method and Relative Valuation. The value of the company (Tandelilin, 2010) is defined as the perception of investors on the level of the company's success in managing its resources on the present and reflected in stock prices next year. Because stock prices do not always reflect the true value of a company it is necessary to find the true value or intrinsic value. Method to find intrinsic value is called valuation.

Stock (Hartono, 2008) is proof of ownership of capital in a company and is clearly stated nominal value, the name of the company, the rights-holder obligations. Furthermore, shareholders can receive benefit ownership of stock by dividends or capital gains. Dividends paid by a company issuing shares to the shareholders, the amount varies by consensus, meaning that (Damodaran, 2002) not all company profits should be distributed to dividends. Capital gains obtained when investors are able to sell their shares at a higher price than when purchased.

The value of the company will be considered by the investors in investing. In measuring the value of the company, there are two sources of data that can be processed, i.e. technical analysis uses data chart and fundamental analysis of stock movements using the company's financial condition data of the balance sheet, income statement, statement of changes in capital.

Discounted cash flow (DCF) is a valuation method that uses the concept of time value of money. The theory underlying this method (Koller, Goedhart and Wessels, 2010) is all the money that flows in the company of the future (future value), then discounted them to find the fair value of the shares (present value). Discounted cash flow is calculated from the company's earnings (Jumono, 2007), So that the DCF valuation focuses on free cash flow, which is revenue subtract by all costs. Free cash flow is the right of all capital owner, like creditors lenders, bondholders and shareholders. How to calculate discounted cash flow is through following steps (Damodaran, 2002), (1) Predict free cash flow for the next five to ten years, (2) Determine the appropriate discount rate, to Free Cash Flow to Firm (FCFF) using the Weighted Average Cost of Capital (WACC), (3) Next calculate Terminal Value (TV), which is the present value of all projected free cash flow on a predetermined period. Formula to calculate DCF:

$$DCF = \sum_{n=1}^t \frac{CF_n}{(1 + WACC)^n} + \frac{TV_t}{(1 + WACC)^t} \quad (1)$$

FCFF is cash money or equivalents that available to the company, which can be reinvested or distributed to shareholders and owners of the debt. In financial calculations, FCFF refers to EBIT to be tax deductible, reduced by working capital, subtract by capital expenditures, and added by value of depreciation amortization (Damodaran, 2002):

$$FCFF = EBIT(1 - Tax) + DA - CAPEX - \Delta WC \quad (2)$$

Investors expect a return of funds already invested, to measure the rate of return in the future through the discount with the calculation of Weighted Average Cost of Capital (WACC). (Damodaran, 2002):

$$\text{Firm Value} = \sum_{t=1}^{t=\infty} \frac{FCFF_t}{(1 + WACC)^t} \quad (3)$$

Weighted Average Cost of Capital (WACC) is funding composition made by a company to conduct its operations (Brigham and Houston, 2009), can be derived from the equity or debt. Weight ratio of capital is important factor for the valuation.

$$WACC = w_d r_d (1 - T) + w_{ps} r_{ps} + w_s r_s \quad (4)$$

Relative valuation also called an asset valuation method by comparing the market value of similar assets. Can be said to measure the value of a company by comparing it to other companies in the same industry. Some Relative Valuation approaches that can be used is the Price to Earnings Ratio (P/E), Price to Book Value (PBV), and EBITDA Multiple. Here is the explanation.

Assess a company can open from the perspective of the stock price compared with promised Earning per Share (EPS). The point is how much money should be paid by investors to get every single profit. P/E in modern financial analysis refers to the history of the S&P 500, as low as 5.31 times at December 1917 and highs in May 2009, median is about 14.68 and now currently stable at 26.46 (Shiller, 2018), So many valuation analysts conclude that: undervalued if the P/E value below 14, Fair if the P/E value between 14 and 26, overvalued when the value of P/E over 26 and is called Bubble when it is more than 40. How to calculate the P/E equation as follows (Damodaran, 2002):

$$PER = \frac{\text{Price}}{EPS} \quad (5)$$

Where EPS is derived from (Brigham and Houston, 2009):

$$EPS = \frac{EAT}{\text{Shares}} \quad (6)$$

To find a P/E that dividends is growing over years, first calculate value Dividend Per Share (DPS) using the formula (Brigham and Houston, 2009):

$$DPS = \frac{\text{Dividen}}{\text{Shares}} \quad (7)$$

P/E formula thus becomes (Brigham and Houston, 2009):

$$P/E = \frac{\frac{DPS_{t+1}}{EPS_{t+1}}}{k - g} \quad (8)$$

P/E can also be calculated using the value of equity in lieu of the stock price and net income EAT as a substitute for EPS (Hartono, 2008), So that the equation will be like this:

$$P/E = \frac{\text{Value of Equity}}{\text{EAT}} \quad (9)$$

Valuation itself have three methode, (1) DCF, (2) Relative, (3) Options. This research will use DCF and Relative, because both methods can be interlinked and compared the accuracy of each. DCF method and the Relative itself has components of the approach is different, in this study the DCF method will use the component approach FCFF is to calculate the amount of cash a company has, while the Relative Valuation using the component approach P/E which measures the ratio of costs to be paid for the investor to get each one profit.

This study starts from the collected data from the Indonesia Stock Exchange, because there's the source of comprehensive information of public company. Healthcare industry with four hospital, the code MIKA, SAME, SILO and SRAJ. All of them will be valuating in order to find their fair value, based on audited financial statements between 2013 and 2017, using the DCF method through FCFF approach and Relative Valuation through P/E ratio, for 2018 to 2022 projections.

DCF method relies on the assumption that is built to perform projection or estimate of the future. Just like a forecast in common, the results can exceed or less than actual. So many factors can affect revenue, for example, emerging products and replacement service from competitors, new policy of the government, customer's culture, etc. Then it needs comparison scenarios, if it is growing much better than that it has been estimated or otherwise even worse than that.

Relative Valuation there are three method of calculation, (1) Price to Earnings Ratio (P/E); (2) Price to Book Value (PBV); (3) Enterprise Multiple. This study will use the P/E, as a comparison value by DCF.

Financial projections in the future will be done with three scenarios: (1) Optimistic; (2) Moderate; (3) Pessimistic. This scenario is built on the understanding that forecasting can not absolutely accurate, there are always three possible outcomes in making predictions, (1) the result of higher than expected, (2) the same result with the prediction, (3) the result of lower than expected. That is why for (1) higher result than expected it call optimistic scenario; (2) same results as expeted called moderate scenarios; (3) the lower one called pessimistic scenario.

FCFF approach DCF method chosen to determine the company's cash flow. Many practitioners of finance including investors prefer cash money as standard, because this is what they call a real investment returns, the cash that can be share as dividends or reinvested as business expansion.

Company meant to be doing business for long lasting, so that forecast valuations can also be calculated for a period of infinity, it is obviously difficult, we need to limit the period of valuation by targeting a particular year, that's why Terminal Value, which is the last value in the last year were targeted. To search for Terminal Value described in the following equation:

$$TV = \frac{FCFF_{n+1}}{WACC - g_n} \quad (10)$$

In this study conducted forecast for the next 5 years from 2018 to 2022, the value of Terminal Value is placed on a projection of 2022. Calculation value growth during 2018 up to 2022 will be discounted to the current value in 2017. The accumulation of value FCF and TV is representing the value of the company today.

$$FV = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + WACC)^t} + \frac{TV}{(1 + WACC)^n} \quad (11)$$

### 3. METHODOLOGY

#### Participants

Research is an attempt to predict, discover or verify the truth. This research operates by processing secondary data, collecting history of corporate financial reports that become the object of research, stock prices related research also empirically collected. All of them are then processed based on valuation theories, to test and get the real value. Therefore, according to Uma Sekaran (Sekaran, 2013) this research is classified as a verification research. This study itself using Postpositivism, where it assumes that every study is influenced by laws or theories, then the theory is carefully tested through supporting data. Methodologically, it is a more detailed procedure on how to conduct a study (Sekaran, 2013). There are two: (1) quantitative method using common data from many objects of research and generating generalizable conclusions; and (2) qualitative method that focuses more on a little object of research but research is done deeply in exploring a problem down to the details. This research uses quantitative methodology.

#### Measurements

Variables are defined as attributes of a particular scientific field, then to conduct research, these variables are formulated operational definitions. In this study the variable is the intrinsic value of shares based on the fundamental value of the company. The data collected are the annual financial statements of each of the audited companies, their share prices, and other financial instruments if necessary. Data is taken from the Indonesia Stock Exchange site, the period 2013 to second quarter 2017. Operated by DCF valuation method and Relative Valuation.

#### Data Analysis

Before entering the FCF calculation, the preparation that must be done is to simplify the financial statements of each company, at this stage which is summarized balance sheet and income statement. The income statement is simplified to look for ratios of costs and revenues compared with the level of

sales (revenue). This ratio is made from a history of the statement of income for 5 years, the average result is used to determine the projected next 5 years. To help facilitate the understanding of the projected ratio, see Table 1.

Each issuer made the calculation of the ratio, starting from the year 2013 until 2016, then compute the average to develop the estimates in 2017 Q3, as the financial statements in 2017 Q3 only to the month of September 2017, the financial statements are incomplete, only 9 month, would be mistaken if directly accumulated with previous years, amounting to 12 months. Therefore, to make the calculation becomes balanced, the income (revenue) in 2017 Q3 divided by 0.75, equivalent to 9 per 12 months.

Table 2. Financial Ratios

	MIKA	SAME	SILO	SRAJ
<b>revenue</b>	6.52%	22.53%	21.49%	24.17%
<b>Cost Of Goods Sales</b>	51.91%	48.06%	66.47%	68.09%
<b>operating Expense</b>	14.89%	1.73%	21.07%	1.44%
<b>Other Operating Expense</b>	0.20%	20.40%	0.00%	32.47%
<b>EBITDA</b>	32.78%	29.75%	12.41%	-3.02%
<b>Depreciation Amortization</b>	4.41%	7.24%	7.57%	16.70%
<b>EBIT</b>	28.35%	21.97%	4.74%	-20.05%
<b>other Income</b>	1.20%	0.04%	-1.03%	0.43%
<b>Finance Income</b>	5.42%	-2.73%	0.21%	2.95%
<b>Finance Cost</b>	0.60%	5.97%	1.04%	8.76%
<b>EBT</b>	34.53%	12.00%	2.99%	-26.56%
<b>tax</b>	20.54%	12.64%	38.81%	10.11%
<b>EAT</b>	28.04%	10.14%	1.91%	-25.90%

Once completing ratios throughout 2013 to Q3 2017, the ratio is geometrically join all the terms of all its components is positive, if there is negative then use average calculation. From here we obtained respective ratios to revenue, cost of good sales, operating costs, depreciation amortization (DA), interest of debt and taxes (tax).

From this ratio can be described that how MIKA doing business is most effectively than other companies, from it performance EBITDA highest among the other, this is reflected in the actual performance of companies that not affected by other income and other expenses outside it core business. Cost of Goods Sales hospital is came from purchasing medicine, salaries of medical experts, the operation of medical devices, and various issues related to medical consumption.

Hospital's operating expense for MIKA and SILO is salary employees who are not medical experts, the general costs such as electricity, water, transportation, and building maintenance and other non-medical equipment, while according to the SAME and SRAJ it is a marketing expense. Conversely in the financial statements SAME and SRAJ, other operating expenses is the employee's salary and non-medical expenses, while MIKA and SILO record it as a marketing expense.

In an ideal projection according to a history of the financial statements of each of the issuer, the ratio using the figures in the table. But in industries exposed to many external factors, difficult to obtain accurate results with ideal conditions, therefore it is necessary to replace the scenario that the ratio of revenue growth (revenue) company with the industry growth rate. Prediction growing healthcare

industry in the world is increasing (Deloitte, 2017) particularly in Asia and Australia from 4.18% to 5.00% by 2020. Thus the reference to be used in conducting the scenario projected revenues are 5.00% of the number of publications by Deloitte in year 2017.

Scenario optimistic obtained from the predicted growth of the industry, plus the difference between a history of the company's growth and history of industrial growth, plus half of the difference in the history of industrial growth and predicted growth of the industry, taken in half because it is considered the probability of growth of the industry is not all affect the full at any one company, but there contributed to the growth of other companies in the same industry.

Moderate scenario obtained from industrial growth predictions, plus the excess of the company's growth history and history of industrial growth.

Pessimistic scenario obtained only from industrial growth projections, without taking into account factors that historical growth of the company which are usually always higher than the industry growth.

*Table 3. Revenue Growth by Scenario*

Company	Scenario	Revenue
MIKA	Optimist	7.75%
	Moderate	7.34%
	Pessimist	5.00%
SAME	Optimist	23.76%
	Moderate	23.35%
	Pessimist	5.00%
SILO	Optimist	22.72%
	Moderate	22.31%
	Pessimist	5.00%
SARJ	Optimist	25.40%
	Moderate	24.99%
	Pessimist	5.00%

#### 4. RESULT AND DISCUSSION

The calculation of these scenarios apply to companies whose growth higher than the industry, such as in this study, does not apply to companies whose growth is lower than the industry. Simplified balance sheet to find the total current assets and total current liabilities. Total current assets (CA) minus total current liabilities (CL), will generate working capital (WC). Changes or growth in working capital ( $\Delta WC$ ) from year to year will be a critical component projected FCFF calculation. Of the balance sheet or cash flow statement can be obtained also in total fixed asset investment expenditure (capital expense, CAPEX). FCFF formula so that the components can be obtained here is  $\Delta WC$  and CAPEX. At this stage, all of the components to construct the projected FCFF is complete.

*Table 4. Forecast FCFF*

Company	Scenario	Forecast FCFF (in milion)				
		2018	2019	2020	2021	2022
MIKA	Optimis	2,653,473	2,859,030	3,080,511	3,319,150	3,485,108

<i>Company</i>	<i>Scenario</i>	<i>Forecast FCFF (in milion)</i>				
<b>SAME</b>	Moderat	2,643,376	2,837,313	3,045,479	3,268,918	3,432,364
	Pesimis	2,585,829	2,715,121	2,850,877	2,993,421	3,143,092
	Optimis	940,632	1,164,152	1,440,785	1,783,154	1,872,312
<b>SILO</b>	Moderat	937,516	1,156,451	1,426,513	1,759,642	1,847,624
	Pesimis	798,031	837,932	879,829	923,820	970,011
	Optimis	7,022,867	8,618,300	10,576,180	12,978,845	13,627,787
<b>SARJ</b>	Moderat	6,999,403	8,560,809	10,470,529	12,806,263	13,446,576
	Pesimis	6,008,921	6,309,367	6,624,836	6,956,078	7,303,881
	Optimis	773,316	969,710	1,215,979	1,524,792	1,601,032
	Moderat	770,788	963,379	1,204,091	1,504,948	1,580,195
	Pesimis	647,533	679,910	713,905	749,601	787,081

Calculating WACC is seeking costs arising from the composition of capital. Capital consists of two sources, equity capital and debt capital. Each source has its own cost, equity capital cost depends on the agreement between the directors and commissioners, and the capital of the debt cost is called interest on the long term debt. Composition and capital cost of the four issuers can be seen in table 4 below.

*Table 5. WACC Comparison*

	<b>MIKA</b>	<b>SAME</b>	<b>SILO</b>	<b>SRAJ</b>
Debt	-	446,915	418,199	116,070
Equity	3,691,081	918,553	3,159,017	1,724,049
Total Capital	3,691,081	1,366,413	3,577,217	1,798,647
Weight Debt	0.00%	32.78%	4.57%	5.92%
Weight Equity	100.00%	67.22%	95.43%	94.08%
Cost Debt	0.00%	11.98%	11.50%	12.50%
Cost Equity	16.84%	18.90%	20.70%	18.39%
<b>WACC</b>	<b>16.84%</b>	<b>15.65%</b>	<b>20.08%</b>	<b>17.96%</b>

MIKA has no debt, equity capital structure only. SAME composition greatest debt, but the interest on the debt is paid relatively small compared to the others. SRAJ composition of small debts, but most large debt interest costs. For the board of directors to manage the company they certainly pleased with the numbers small WACC as SAME, which means that their capital not required much cost. Instead the investor side, they always want the maximum return of any money paid as capital.

#### **Value of Firm**

Discounting FCFF from the beginning of the year valuation until last year valuation with WACC, including Terminal Value in recent years. Then all results are summed and discounted value of the company or Firm Value. Enterprise value shown in Table 5 is accumulated cash flow forecast during the period valuation, not including the additional cash that has been owned in the last year before 2017, has not been reduced as well with the repayment of long-term debt in the same year.

Table 6. Firm Value by Scenario

Company	Scenario	Firm Value
MIKA	Optimist	22,107,505,752,801
	Moderate	21,822,871,131,253
	Pessimist	20,256,015,789,039
SAME	Optimist	1,116,305,354,674
	Moderate	1,102,471,601,875
	Pessimist	358,405,148,590
SILO	Optimist	15,053,606,986,043
	Moderate	14,858,663,380,779
	Pessimist	3,735,192,954,577
SARJ	Optimist	(68,646,341,425)
	Moderate	(67,863,165,809)
	Pessimist	(37,420,141,843)

### Value of Equity

Equity value indicates the company property in the form of cash flow after the added cash in the last year before the valuation, and reduced long-term debt was left at that. Ideally, this figure shows how much cash flow that can be distributed to the owners of equity. Table 6 below shows how much of the equity owned by each issuer during the valuation period.

Table 7. Value of Equity

Company	Scenario	Equity Value
MIKA	Optimistic	23,192,974,052,705
	Moderate	22,908,339,431,157
	Pessimistic	21,341,484,088,943
SAME	Optimistic	697,581,492,987
	Moderate	683,747,740,188
	Pessimistic	(60,318,713,097)
SILO	Optimistic	13,934,561,570,259
	Moderate	13,739,617,964,995
	Pessimistic	2,616,147,538,793
SRAJ	Optimistic	335,527,737,991
	Moderate	336,310,913,607
	Pessimistic	366,753,937,573

Its value becomes invalid if there is a change in capital structure, because it could be the changing composition of capital will impact the value of the WACC. Assumed cash flows incurred for investment spending stabilized in accordance with the ratio of growth has been built, then this value becomes invalid if the middle of the valuation period there was a large capital investment for example like to acquire another hospital or build a new hospital.

SRAJ which initially had negative corporate value, then became positive on this equity, because SRAJ has large current assets of cash equivalents, although its debt costs are high but because of its small composition it can be covered by cash. If the condition of the inability to generate new cash flow is continuous for a long time, it can be assured that the current assets of SRAJ's cash equivalent will be exhausted for operational cost.

### P/E Ratio

Price to Earnings Ratio, also known as the P/E ratio or P/E, shows how comparisons stock price compared to the company's earnings. This result also indicates how much investors are willing to pay every penny of income of the company. In this study P/E obtained from the equity value divided EAT early years of valuation. The Table 7 shows the value of each issuer according P/E respectively. Companies that have a healthy financial ratios corresponding financial theory as MIKA, SAME and SILO will generate P/E measurable and can be analyzed according to the theory applies. While the company that it EAT always negative as SRAJ will also produce negative P/E ratio so that it becomes difficult to analyze.

Table 8. P/E Ratio

Company	Scenario	P/E
MIKA	Optimistic	31.79
	Moderate	31.52
	Pessimistic	30.02
SAME	Optimistic	6.10
	Moderate	6.00
	Pessimistic	-0.62
SILO	Optimistic	47.24
	Moderate	46.74
	Pessimistic	10.37
SRAJ	Optimistic	-2.00
	Moderate	-2.02
	Pessimistic	-2.62

There is interesting about SAME, although EBIT and EAT is positive, but the value of purchases of investment assets (CAPEX) is high at 32.78% of revenue, force SAME to grow their revenue at least 10% in order to be able to pay off long-term debt and have less cash flow for shareholder welfare.

Table 9. Fair Value & P/E Ratio

PER Analysis	PER Actual	PER Valuation	Company	Fair Value	Current Value	DCF Analysis
<b>MIKA</b>						

Overvalued	52.96	31.79	<b>Optimist</b>	Rp 1,593.94	Rp 1,810	Overvalued
Overvalued	52.96	31.52	<b>Moderate</b>	Rp 1,574.38	Rp 1,810	Overvalued
Overvalued	52.96	30.02	<b>Pessimist</b>	Rp 1,466.69	Rp 1,810	Overvalued
<b>SAME</b>						
Overvalued	339.81	6.10	<b>Optimist</b>	Rp 591.17	Rp 595	Overvalued
Overvalued	339.81	6.00	<b>Moderate</b>	Rp 579.45	Rp 595	Overvalued
Overvalued	339.81	-0.62	<b>Pessimist</b>	-Rp 51.12	Rp 595	Overvalued
<b>SILO</b>						
Overvalued	124.43	48.33	<b>Optimist</b>	Rp 10,959.79	Rp 9,575	Undervalued
Overvalued	124.43	47.81	<b>Moderate</b>	Rp 10,807.38	Rp 9,575	Undervalued
Overvalued	124.43	18.97	<b>Pessimist</b>	Rp 3,680.89	Rp 9,575	Overvalued
<b>SRAJ</b>						
	-20.4	-2.02	<b>Optimist</b>	Rp 30.94	Rp 242	Overvalued
	-20.4	-2.03	<b>Moderate</b>	Rp 31.01	Rp 242	Overvalued
	-20.4	-2.62	<b>Pessimist</b>	Rp 33.69	Rp 242	Overvalued

The actual price in Table 8 is taken from the closing of stock at [www.idx.com](http://www.idx.com) at the end of December 29, 2017. DCF shows how much the fair price is, seen from all three companies overvalued, only SILO worth more value than it should on the stock market. It may be that market opinion about the company's reputation plays a role in boosting or weakening a company's share, negative news about the quality of service, could become viral, when it is viral could have a fatal impact on hospital stock price, this could be a future research opportunity. As well as SRAJ, in the last 5 years always losing money, suitable for the object of research about financial distress.

Obstacles that arise when data processing is issuers sub health sector is still relatively new as public company, only SRAJ who have a history of financial statements which have been audited for 5 years because SRAJ have IPO since 2011, SAME and SILO has IPO since 2013, the lastes IPO is MIKA 2015. Thus, to form the assumption that the ideal of a history of 5 years on a comparable basis, the financial statements were used from 2013 to 2017, the lucky MIKA has published financial reports from 2013 as well, however in the 2017 financial report can of the acquisition while in the 3rd quarter, last September 2017.

Constraints arising from the 2017 third quarter is a number in this report is still incomplete 12 months, its value will be wrong if compared with previous years. How to overcome it to be divided by a constant revenue 0.75 stated 9 months out of 12 months, and the ratio of costs could be taken from the geometric mean year 2013-2016.

The other problem comes from the SRAJ financial statements, showing the negative FCF value. In such a losing financial condition it is difficult to say that the company has free cash flow, the key is free cash flow or FCF, if the company does not have free cash flow means that DCF cannot be applied here.

In this case, SAME has little bit different situation, they have a pretty good EBITDA growth of more than 29%, but their financial cost is suffering enough to repay long-term debt maturities, EAT grind until the remaining less than 11%. Actually EAT 10.14% is enough to produce free cash flow, as long as revenue grow is not lower than 10%.

The steady growth of MIKA's revenue in the range of 6.52% is the smallest among others which reaches more than 20%, however MIKA is very effective in managing its operations, proving the highest 32.78% EBITDA among its competitors, even its EAT can be maintained at 28.04% of revenues. According to its financial statements, MIKA does not have long-term debt, its capital composition is 100% of equity, so the WACC expense only comes from the return expected by shareholders of 16.84%. The fair value of MIKA according to this valuation is Rp 1.466 to Rp 1,593 depending on the scenario, when compared to the stock price at the closing year of 2017 worth Rp 1,810 then DCF valuation this time stated overvalued. With respect to the PER results when compared to the health industry, the results are also overvalued, meaning investors expect that in the future MIKA value can still be higher, according to the sensitivity of this valuation, if MIKA's revenue growth reaches 10.5%, then its P/E will become 53.40 in fair value category based on the industry average of Indonesia's healthcare industry.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to find the fair value of the companies in the healthcare sub-sector, the method used by the DCF and relative valuation approach with the P/E ratio. Matrix presented in table 8 shows the results of the valuation of MIKA, SAME, SILO and SRAJ valuation period 2018 to 2022, in which the projection is based on assumptions about the financial history of the previous 5 years. MIKA, SAME, SILO shows the results according to the theory of valuation, while SRAJ difficult to analyze because of its financial performance cannot produce enough cash flow.

Before dive too far doing valuation, first thing to do lets to check company's financial statements which will be object of the research, high light in the income statement. If from here found that EAT or even its EBIT have negative value, which means that companies is losing money, and valuation using DCF method should not be continued. Projections should use a complete financial statement 12 months, preferably audited. Estimates report 2017 3rd quarter as in this study is rather risky to do, income can be divided by the constant 0.75 in order to get estimates of the full 12 months, but ratios such as current assets, non-current assets, current liabilities and other debts too risky to be called accurate.

An important analysis of the actual price difference of stocks with the fair price lies in the corporate image in the community, especially investors. A good image of the hospital is reflected in the patient's confidence to rely on his recovery at the hospital, meaning that the patient believes that the hospital's treatment will receive the best possible medical service so that the illness will heal. This big trust is what attracts investors to keep pouring funds. Vice versa, when the medical service is tarnished due to a practice mall case, which is clearly detrimental to the patient, especially if the case is sticking to the surface, exposed by the media, then the investor's reaction will panic, they are afraid the stock will drop

so the loss on sale, they flocked to sell the stock while the price is still high. But when the selling volume is high, stock prices will weaken, because those who want to sell more than those interested to buy, according to supply and demand theory.

From the results of analysis in this study revealed findings that can only be obtained through the valuation calculation, the findings can be drawn some conclusions:

1. High revenue growth does not guarantee a company can have a high value. Judging from its ability to generate future flows for equity holders.
2. The key to obtaining the company's cash flow lies in how competently they manage the operational costs, meaning the more effective and efficient, the greater the cash flow that can be generated.
3. Applies to all companies, especially those on services such as hospitals, good rating becomes very sensitive, once the customer is massively exposed to events that reduce the rating of the company then to recover the fair price takes a long time. Can be seen in hospitals whose value is undervalued.

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# ANALYSIS DETERMINED AUDIT DELAY (AN EMPIRICAL STUDY ON MINING COMPANIES LISTED IN INDONESIAN STOCK EXCHANGE DURING 2012-2016)

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## Abstract

*Companies that have gone public in general will issue financial statements in accordance with a predetermined time. However, there are still some companies that experienced a delay in issuing the financial statements. Delay in issuing financial statements that have been audited by independent auditors is one indication that the company experienced a problem.*

*This study aims to examine the effect of Profitability, Leverage, Complexity of Company Operation, Reputation of Public Accounting Firm to the Audit Delay at Trade, Mining Company listed on Indonesia Stock Exchange (BEI) in the period 2012-2016. The data used in this study was obtained from financial statement data.*

*The population in this study are Mining Company listed on the Stock Exchange. Sample selection technique used is purposive sampling and acquired 30 company with the 2012-2016 study period. Methods of data analysis in this research is panel data regression analysis using Eviews software version 9.*

*The results showed that simultaneous Profitability, Leverage, Complexity of Company Operation, Reputation of Accounting Public Firm have a significant effect on Audit Delay. While partially, Leverage and Reputation of Auditor significant positive effect on Audit Delay, Profitability significant negative effect on Audit Delay. While Complexity of Company Operation has no effect on Audit Delay.*

*Based on the results of the research that has been done. The author wants to give advice to pay attention to management management in achieving profit, the level of debt and pay attention in the election KAP big four / non big four. And the last is recommended to maintain the adjustment of human resources used to prepare the financial statements of companies that tend to complex or have many subsidiaries, because it can prevent the occurrence of delay in the delivery of financial statements.*

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**Key Words:** Profitability, Leverage, Complexity of Company Operation, Reputation of Accounting Public Firm, Audit Delay.

## 1. INTRODUCTION

Companies that issue shares in the stock exchange are required to submit their financial statements and not later than the end of the 3rd (third) month or 90 days after the close of the book. It is stated in the Decision of the Chairman of Bapepam and LK Number: KEP-346 / BL / 2011 that the Annual Financial Statement must be submitted in the form of Audited Financial Statement, at the latest at the end of the 3rd (third) month or 90 days after Annual finance report.

The level of delay in financial reporting that tends to fluctuate, in 2012-2014 has increased and decreased but the number is not significant. However, in 2015 the mining sector has increased from the previous year but the number again dropped drastically in 2016. For the size of a large sector let alone the mining sector which is one of the largest contributors of state revenues, the fluctuation value illustrates the quality condition of troubled financial performance.

This study aims to determine how the conditions and whether there is a simultaneous relationship between profitability, leverage, complexity of corporate operations and reputation of KAP to Audit Delay. In addition to know whether there is a partial influence between profitability to audit delay, leverage to audit delay, the complexity of corporate operations to audit delay, and also the reputation of KAP against audit delay.

## **2. LITERATURE REVIEW**

### **2.1 AUDIT DELAY**

Audit delay is the length of days required by the auditor to complete the audit work, as measured from the closing date of the financial year to the date of the issuance of the audit financial statements. The time frame (Audit Delay) required by the auditor to submit the financial statements based on the Decision of the Chairman of Bapepam and LK Number: KEP-346 / BL / 2011 that the Annual Financial Statement must be submitted in the form of Audited Financial Statement at the latest at the end of the 3rd month third) or 90 days after the date of the Annual Financial Statement.

And at the latest Regulation of the Financial Services Authority No. 29 / POJK.04 / 2016 states the same that the Issuer or Public Company is required to submit the Annual Report to the Financial Services Authority by the end of the fourth month after the end of the financial year. Associated with audit delay.

### **2.2 PROFITABILITY**

According to Kashmir (2014: 196) profitability ratio is the ratio to assess the ability of companies in the search for profit. Profitability can describe the company's ability to generate profits (profit) at the level of sales, assets and equity in a certain period. Thus the company not only pay attention to efforts to enlarge profit but also efforts to enhance profitability, because high profitability reflects the high effectiveness as well.

In this research, profitability measurement used is Return On Asset Ratio (ROA). The ratio gives an indication of how much profit a company can make by utilizing its owned assets. It can be used to understand the cause of a company's performance as it is now and foresee the direction it will lead. ROA is measured by the following equation:

$$\text{ROA} = (\text{Net Income}) / (\text{Total Assets})$$

### **2.3 LEVERAGE**

According to Hery (2015: 166-170) [4] leverage ratio or solvency ratio, is a ratio that describes the ability of the company in fulfilling all its obligations. Similar to liquidity ratios, leverage ratios are also required for the benefit of financial risk analysis

In this study the ratio used to measure the level of debt (leverage) is Debt To Asset Ratio the higher the percentage ratio of debt to assets, tend to be greater financial risks for creditors. Debt To Asset Ratio is formulated in the following equation:

$$\text{DAR} = (\text{Total Debt}) / (\text{Total Assets})$$

## **2.4 THE COMPLEXITY OF THE ORGANIZATION**

The complexity of the organization or operation is the result of the formation of departments and the division of work that focuses on the number of different units. An increasingly complex dependence occurs when organizations of all kinds or numbers of jobs and units create more complex managerial and organizational problems (Martius, 2012: 12). The number of work or complex units can be reflected in the number of subsidiaries owned. A subsidiary or subsidiary is a company controlled by a parent company.

## **2.5 REPUTATION OF PUBLIC ACCOUNTING FIRM**

Public Accounting Firm is a form of public accountant organization licensed in accordance with legislation, which seeks in the field of providing professional services in the practice of public accountants (Kartika, 2011). The Big Four is a group of four largest professional and accounting firms that handle the majority of audit work for both public and private companies. (Widhiasari, 2015). Big Four's Big Four include Deloitte & Touche, Ernst & Young, Price Waterhouse Coopers, and KPMG.

The use of the Big Four category as a measure of reputation for KAP is due to the auditors who are shaded by the Big Four KAP is an auditor who has expertise and high reputation compared to non-Big Four auditors. Therefore, the Big Four auditor will seek to sustain its market share, public trust, and reputation by providing protection to the public (Sanjaya, 2013).

## **3. METHODOLOGY**

### **3.1 PARTICIPANTS**

The population used as the material of this study are all mining companies listed on the Indonesia Stock Exchange in 2012-2016. The total sample used in this study is 150 samples consisting of 30 companies in the mining sector with a period of research for 5 years ie from the year 2012 - 2016.

### **3.2 MEASUREMENTS**

This research takes secondary data collected by using documentation method and literature study, following explanation:

1. Documentation, which is Collecting data of mining sector companies listing consistently on BEI and companies issuing audited company's financial statements from 2012 to 2016 which are sampled through the official website of Indonesia Stock Exchange ([www.idx.co](http://www.idx.co.id) .id)
2. Library study, through scientific journals, writings, scientific articles, literature and other data sources related to research to gain an understanding of the definitions and concepts related to profitability, leverage, complexity of company operations, and reputation of KAP in order to support the research process, data processing until the making of research report.

### 3.3 DATA ANALYSIS

This research includes quantitative research. The sampling technique used purposive sampling technique which obtained 30 samples within 5 years so that obtained 150 units of this research including quantitative research. The sampling technique used purposive sampling technique that obtained 30 samples within 5 years so that obtained 150 units of samples of mining sector companies listed in Indonesia Stock Exchange period 2012-2016. Data analysis method in this research is panel data regression by using Software Eviews 9.0. Equations of panel data model analysis used in this study are as follows:

$$Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + e$$

Information :

Y = Audit Delay

$\alpha$  = Constants

$\beta_1, \beta_2, \beta_3, \beta_4$  = Coefficient of regresi each independent variable

X1it = Profitability

X2it = Leverage

X3it = Complexity of Company Operations

X4it = KAP Reputation

e = Error term

## 4. RESULTS AND DISCUSSION

### 4.1 DESCRIPTIVE STATISTICS ANALYSIS

The results of descriptive statistics of profitability (ROA), leverage (DAR), complexity of company operations, reputation of KAP and dividend policy proxied by DPR are shown in Table 3.1 below:

**Table 4.1 Descriptive Statistics Testing Results**

Description	Audit Delay	Profitabilitas	Leverage	Complexity Operations	Reputation of Public Acc Firm
Mean	77,43	0,016	0,481	5	0,533
Maximum	273	0,300	1,89	20	1
Minimum	17	-0,721	0,007	1	0
Std. Dev	29,55	0,124	0,287	4	0,500

Source: Secondary data processed, 2018

Based on the above descriptive statistical test table shows that each dependent variable that is audit delay has a mean value of 77.43. The average is greater than the standard deviation of 29.55. This shows that the audit data delay company 2012 - 2016 group or can be said the data tend not to vary. On the profitability variable has a mean value of 0.016. The average is smaller than the standard deviation of

0.124. This shows that the company's profitability data for 2012-2016 varies. In the leverage variable has a mean value of 0.481. The average is greater than the standard deviation of 0.287. This indicates that the company's leverage data for 2012-2016 are grouped. In the variable complexity of the company's operation the mean value of 5. The average is greater than the standard deviation of 4. This shows that the data complexity of the company's operations 2012-2016 grouped. On the KAP reputation variable the mean value is 0.533. The average is greater than the standard deviation of 0,500. This shows that the company's auditor's reputation data for 2012-2016 is in groups.

#### 4.2 REGRESSION EQUATIONS OF PANEL DATA

Based on test results of two models that have been implemented (chow test and hausman test), then the fixed effect model is the appropriate model for this research. Tests in this study were conducted to determine the relationship between independent variables to the dependent variable. This test uses a significance value of 0.05. In table 3.2 will present the results of fixed effect test using Eviews 9.0 software.

**Table 4.2 Statistical Test Results Using a fixed effect model**

Dependent Variable: AUDITDELAY				
Method: Panel Least Squares				
Date: 03/03/18 Time: 17:25				
Sample: 2012 2016				
Periods included: 5				
Cross-sections included: 30				
Total panel (balanced) observations: 150				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	56.78610	12.90914	4.398906	0.0000
PROFITABILITAS	-51.56031	18.66475	-2.762443	0.0067
LEVERAGE	25.57129	12.59546	2.030199	0.0446
KOMPLEKSITAS	-0.231222	1.452110	-0.159232	0.8738
KAP	19.57900	8.963963	2.184191	0.0310
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.624474	Mean dependent var	77.43333	
Adjusted R-squared	0.517644	S.D. dependent var	29.55428	
S.E. of regression	20.52600	Akaike info criterion	9.077550	
Sum squared resid	48872.73	Schwarz criterion	9.759961	
Log likelihood	-646.8162	Hannan-Quinn criter.	9.354792	
F-statistic	5.845464	Durbin-Watson stat	2.274677	
Prob(F-statistic)	0.000000			

Source: Output Eviews 9.0 (Data processed author, 2018)

#### 4.3 HYPOTHESIS TESTING

##### 4.3.1 HYPOTHESIS TESTING RESULTS SIMULTANEOUSLY (TEST F)

Based on Table 4.2, the statistic F has a Prob value (F-statistic) of 0.000000 < 0.05 or below 0.05. Thus, from this result it can be concluded that H01 is rejected and accept Ha1, which means there is a significant simultaneous relationship between profitability, leverage, complexity of company operation and reputation of Accountant Public Firm with audit delay.

##### 4.3.2 HYPOTHESIS TESTING RESULTS PARTIALY (TEST T)

Based on Table 3.2, T test results (partial) then it can be concluded as follows:

1. Probability value (T-statistic) Profitability is 0.0067. The value shows that  $0.0067 < 0.05$ , it can be concluded that  $H_02$  rejected and  $H_a2$  accepted so that Profitability partially significant effect on audit delay.

2. The probability (T-statistic) Leverage value is 0.0446. The value shows that  $0.0446 < 0.05$ , it can be concluded that  $H_03$  rejected and  $H_a3$  accepted so that leverage partially significant effect on audit delay.

3. The probability (T-statistic) value of the Company's Operating Complex is 0.8738. The value shows that  $0.8738 > 0.05$ , it can be concluded that  $H_04$  accepted and  $H_a4$  rejected so that the company's operating complexity partially has no effect on audit delay.

4. The value of probability (T-statistic) KAP's reputation is 0.0310 The value indicates that  $0.0310 < 0.05$ , it can be concluded that  $H_05$  is rejected and  $H_a5$  accepted so that the KAP reputation partially affects audit delay.

#### **4.4 DISCUSSION OF RESEARCH RESULTS**

##### **4.4.1 EFFECT OF PROFITABILITY ON DELAY AUDITS**

Based on the value of probability (T-statistic) profitability of 0.0067. The value is below the level of significance of 0.05 or 5%, and the regression coefficient of -51.56031 which indicates if the company increased profitability then there is a decrease audit delay of -51.56031, and vice versa if the company decreased profitability then variable audit delay has increased. So it can be concluded that  $H_02$  rejected and  $H_a2$  accepted so that profitability partially significant effect on audit delay with the direction of negative influence. This is in line with the hypothesis that has been built by the author stating that profitability negatively affect audit delay.

Profitability has a significant negative effect on audit delay. This is because, for companies that have a high level of profitability will publish audited financial statements tend to be faster because they want to deliver good news as soon as possible to the public. As for companies that experience losses, the company also provides reasons for the auditors tend to be more careful in doing auditing.

The results of this study are in line with the results of Ningsih and Widhiyani (2015) [9] studies that profitability has an effect on audit delay. In line with the results of research Riyanto (2014) which states the existence of a negative influence between profitability to audit delay.

##### **4.4.2 EFFECT OF LEVERAGE ON AUDIT DELAY**

Based on the probability (T-statistic) leverage value is 0.0446. The value is below the level of significance of 0.05 or 5%, and regression coefficient of 25.57129 which indicates if the company increased leverage then increased audit delay of 25.57129 and vice versa if the company decreased, leverage then variable audit delay so it can be concluded that  $H_03$  is rejected and  $H_a3$  accepted so can be said leverage partially have positive influence to audit delay. This is in line with the hypothesis that has been built by the author who states that leverage positive effect on audit delay.

Leverage has a significant positive effect on audit delay. This is because, for companies that have a high level of leverage will increase the company's failure so that auditors will increase the notion that there is a possibility of financial statements less reliable by users of financial statements. Firms with high leverage portray high financial risks, requiring longer attention and checks. While a company with low leverage describes not having a significant problem in the company's performance resulted in all the

running of the business either without a meaningful obstacle will reveal reports keuangannya faster to provide a positive signal and a good impression for the company to the public.

The results of this study are in line with the results of research Ratmono and Septiana (2015) states that the leverage ratio has a significant positive effect on audit delay. And in Devi Eka's (2015) study [13] also mentioned that leverage proxied with debt to asset ratio has a positive effect on audit delay.

#### **4.4.3 EFFECT OF COMPLEXITY OF COMPANY OPERATIONS TO AUDIT DELAY**

Based on the probability (T-statistic) value of the company's operating complexity is 0.8738. The value is above the level of significance of 0.05 or 5%. So it can be concluded that Ho4 accepted and Ha4 rejected so that the company's operating complexity partially has no effect.

to audit delay. This is not in line with the hypothesis that has been built by the author stating that the complexity of the company's operations have a positive effect on audit delay.

The complexity of the company's operations has no effect on audit delay because although more audit sources from subsidiaries that require audit checks tend to be longer, companies generally anticipate it with greater resources so that operational complexity is not something that reduces the timing of financial reporting. In addition, the auditor would adjust the amount of more resources to be deployed in auditing more complex firms, so that the audit process remains timely.

The results of this study are in line with the results of research conducted by Angruningrum and Wirakusuma (2013) which explains that the complexity of the company's operations does not significantly affect audit delay in addition to the research Darmiari and Ulupui (2014) who also found the company's operating complexity has no effect on audit delay.

#### **4.4.4 EFFECT OF ACCOUNTING PUBLIC FIRM'S REPUTATION TO AUDIT DELAY**

Based on the value of probability (T-statistic) Accounting Public Firm reputation of 0.0310. The value is below the level of significance of 0.05 or 5%, and regression coefficient of 19,5790 which indicates if the company is audited by KAP (Public Accountant Office) big four then there will be an increase audit delay of 19,5790 or 19 days, and vice versa if companies audited by Public Accounting Firm non big four, then variable audit delay will also decrease. Then it can be concluded that Ho5 is rejected and Ha5 accepted so that the KAP reputation partially significant effect on the audit delay with the direction of positive influence. This is contrary to the hypothesis that has been built by the author stating that the reputation of Accounting Public Firm negatively affect audit delay.

Accounting Public Firm 's reputation has a significant positive effect on audit delay. That is because, big four Accounting Public Firm will always try to be on time to maintain its reputation. A KAP with a reputable auditor will provide quality audit work that is effective and efficient, so that the audit can be completed in a timely manner. However, the existence of problems in the company also allows the big four to conduct a review of the audit process for the second time if necessary.

The results of this study are in line with the results of research Ariyani & Budhiartha (2014) and Sri Astini & Wirakusuma (2013) stating that the reputation of the Accounting Public Firm has a positive effect on audit delay. In addition to the research Mantik and Sujana (2013) states that the auditor's reputation variable has a significant effect on audit delay.

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 CONCLUSIONS

In this study the dependent variable or dependent used is Audit Delay and independent or independent variables are Profitability (ROA), Leverage (DAR), Complexity of Company Operation, Reputation KAP. As for the sample used in this study consists of one hundred and fifty (150) Companies in the mining sector listed on the Indonesia Stock Exchange 2012-2016. Based on the results of analysis using descriptive statistics and panel data regression testing, obtained some conclusions as follows:

1. Based on descriptive statistical analysis, it can be concluded that:

a. The delay audit of mining companies listed on the Indonesia Stock Exchange in 2012-2016 has an average value of 77.43 and from the number of companies of 30, there are 9 companies experiencing delays (more than 90 days) from 2012 to 2016. Value a maximum of 273 days is owned by PT Bumi Resources Tbk (BUMI) and a minimum value of 17 days is owned by PT Central Omega Resources Tbk (DKFT). The delay audit has a standard deviation of less than the mean value which means grouped or homogeneous data.

b. Profitability in mining companies listed in Indonesia Stock Exchange 2012-2016 has an average value of 0.016 and from the number of companies as many as 30 companies, there are 24 companies that during 2012 to 2016 continue to get Return On Asset above average. Maximum value of 0.300 and a minimum value of -0.721 profitability has a standard deviation greater than the mean value which means the data varies.

c. Leverage at mining companies listed in Indonesia Stock Exchange 2012-2016 has an average value of 0.481 and from the number of companies as many as 30 companies, there are 18 companies that during 2012 to 2016 continue to get debt to asset ratio above average. Max value of 1.89 and minimum value of 0.007. Leverage has a standard deviation of less than the mean value which means grouped or homogeneous data.

d. The Company's operating complexity at mining companies listed on the Indonesia Stock Exchange in 2012-2016 has an average value of 5 and from the number of companies of 30 companies, there is 1 sample company which has a subsidiary of a maximum of 20 subsidiaries. Meanwhile, there are 17 sample companies that have 1 subsidiary. Maximum value of 20 subsidiaries and minimum value of 1 subsidiary. The complexity of the firm's operations has a standard deviation of less than the mean value which means grouped or homogeneous data.

e. Accounting Public Firm 's reputation in mining companies listed in Indonesia Stock Exchange 2012-2016 has an average value of 0.533 and from the number of companies of 30 companies, there are 80 sample companies audited by KAP big four, while there are 70 sample companies audited by KAP non big four. Maximum value of 1 and a minimum value of 0. Accounting Public Firm 's reputation has a standard deviation smaller than the mean value which means grouped or homogeneous data.

2. Simultaneously or together Profitability (ROA), Leverage (DAR), Complexity of Company Operation, and Reputation of KAP have a significant effect to Audit Delay of mining company listed on BEI period 2012-2016

3. Profitability (ROA) has a negative effect on Audit Delay mining companies listed on the IDX period 2012-2016

4. Leverage (DAR) positively affects the audit of Delay mining companies listed on the BEI period 2012-2016

5. The Company's Operating Complexity has no effect on the Auditing Delay of mining companies listed on the IDX for the period 2012-2016

6. The reputation of Accounting Public Firm has a positive effect on the Audit Delay of mining companies listed in the period 2012-2016.

## **5.2 RECOMMENDATION**

Based on the results of the research that has been done. The author would like to advise the following :

### **1. Theoretical aspects**

#### **a. For academics**

It is expected that this research can provide knowledge and information to the reader, as well as to contribute to the development of science, especially the field of audit, especially on Profitability (ROA), Leverage (DAR), Company Operation Complexity, Accounting Public Firm Reputation and Audit Delay in mining companies 2012-2016 .

#### **b. For the next researcher**

This research is expected to be used as literature reference for the next researcher especially those related to the problem of Profitability (ROA), Leverage (DAR), Company Operation Complexity, Accounting Public Firm Reputation and Audit Delay in mining company 2012-2016. And can develop independent variables used by substituting variable measurement proxies, and can add some other independent variables that are considered to have an effect on audit delay.

### **2. Practical aspects**

#### **a. For Auditor Profession**

Auditors are advised to consider the profitability, leverage and reputation of Accounting Public Firm in mining companies in considering auditing decisions. This is considering that these three variables are factors affecting audit delay.

#### **b. For the Company**

In order for the company to avoid audit delay. Companies are advised to pay attention to management management in achieving profit, debt level and pay attention in the election of big four / non big four Accounting Public Firm. So the company can increase any factors that negatively affect audit delay and minimize factors that have a positive effect on audit delay. Finally, the researcher recommends the company to maintain the adjustment of human resources used to compile the financial statements of companies that tend to be complex or have many subsidiaries, because it can prevent the occurrence of delay in the delivery of financial statements.

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## SINGLE INDEX MODEL IN DETERMINING OPTIMAL PORTFOLIO COMPOSITION OF JAKARTA ISLAMIC INDEX (JII)

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### Abstract

*The aim of this study is to select the securities from Jakarta Islamic Index (JII Index) into Optimal Portfolio using Single Index Model. This research is using descriptive analysis with quantitative approach. The sample of this study is 29 companies in Jakarta Islamic Index year 2018. The results shows that the optimal portfolio selection is consist of 12 securities that are PWON (11.8%), UNVR (24.4%), TPIA (16.3%), BPRT (7.6%), AKRA (8.8%), ICBP (2.9%), ADRO (7.6%), INCO (2.3%), UNTR(11.3%), MYRX (3.1%), WSKT(3.2%) and PTBA (0.6%). The monthly return of Portfolio is 1.86 % and the risk of portfolio is 0.08%. The risk of portfolio is smaller than individual securities.*

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**Key Words:** Optimal Portfolio Selection, Single Index Model, Jakarta Islamic Index  
**JEL Classification:** C22, G11

### 1. INTRODUCTION

Investment is a delay of current consumption for use in efficient production over a certain period (Jogiyanto, 2016). There are two forms of financial assets, direct investment and indirect investment. Direct investments are made by purchasing the financial assets of a company directly either through intermediaries or by other means. Indirect investment is made by purchasing shares from an investment company with a portfolio of financial assets from another company. Direct investment can be made by purchasing financial assets that can be traded in the money market, capital market, or in the derivative market (Jogiyanto, 2016). In making investment decisions, investors are always faced with returns and risks from each financial assets where the returns and risks of each asset vary, starting from the lowest return that is savings, bonds and stocks.

Return is the result obtained from the investment while the risk is a deviation from the expected average results. In maximizing the return on investment, investors can diversify their assets to reduce their investment risk by forming a portfolio. A portfolio is a collection or combination of financial assets or securities such as stocks, bonds, and cash equivalents in a unit held or created by an investor, investment company or financial institution (Jogiyanto, 2014). In the capital market, the formation of a portfolio can consist of stocks from different types of industries. The problem arises when conducting the selection of stocks that will be included in the portfolio, considering a lot of stocks that can be selected. There are two kinds of Portfolio that are efficient portfolio and optimal portfolio. The optimal portfolio can be determined using single index model (Jogiyanto, 2016). According to Husnan and Pudjiastuti (2004), The use of single index model in optimal portfolio formation is based on two reasons. First, input portfolio analysis using single index model. Second, the use of single index model can be used for estimation purposes by using beta.

The portfolio selection can be started by selecting company that belong to a specific index such as the Jakarta Islamic Index (JII). JII Index is the average stock price index for the type of stocks that meet the criteria of sharia. According to Gumanti (2011), JII is a 30 sharia liquid stocks traded on the Indonesia Stock Exchange so that securities in JII are eligible to be used as a reference in the formation of a portfolio of the many shares in the Indonesia Stock Exchange.

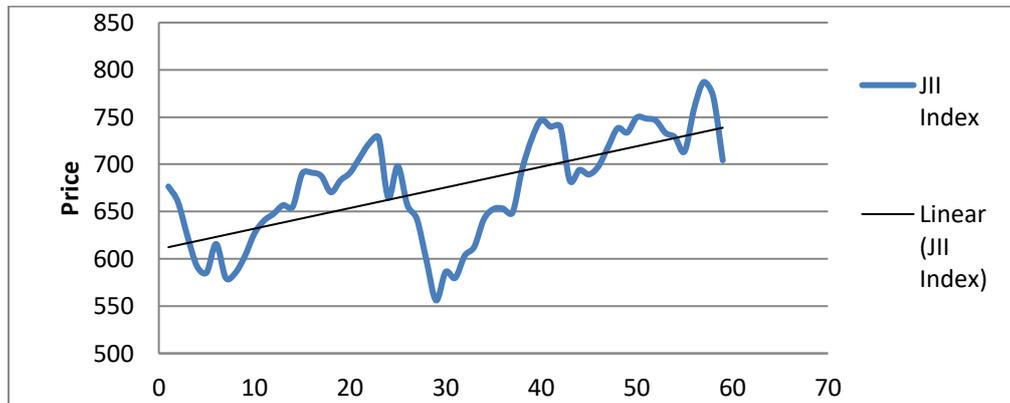


Figure 1.1 The Performance of Jakarta Islamic Index Year 2013-2018

Source : Data Processed from [www.yahoofinance.com](http://www.yahoofinance.com) (2018)

From Figure 1.1, it can be seen that the movement of JII Index is very volatile but the long term trend line of JII is increasing from 2013 to 2018. Thus, the JII Index could be a reference to investor to performing optimal portfolio. Jayati et al (2017) and Zulfiana (2017) use single index model to form the optimal portfolio from the stocks listed in Index IDX 30 and LQ45. The result shows that the risk of optimal portfolio is smaller than individual stocks. Thus, the Single Index Model can be used to perform the optimal portfolio. The objective of this research is to select the securities to forming an optimal portfolio by using single index model and to calculate the return and risk of portfolio.

## 2. LITERATURE REVIEW

### 2.1 INVESTMENT

Investment is investment is a commitment to a number of current funds at the moment to gaining some profit in the future (Tandelilin, 2017). The fundamental thing in the investment decision process is understanding the relationship between expected return and investment risk. Risk is the return variability of an asset (Ahmad, 2004). Expected Return is an expected profit by an investor in the future from the amount of funds it has placed (Fahmi, 2012). Risk is the possibility of difference between actual return and expected return (Fahmi, 2012). In making investments, investors can reduce the risk to a minimum by establishing a portfolio to diversifying the risk (Fahmi, 2012). Investor can reduce the risk by using Single Index Model to forming an optimal portfolio (Jogiyanto, 2016).

### 2.2 SINGLE INDEX MODEL

A single Index model was introduced by William Sharpe (1963). Single index model is based on the observation that the prices of securities fluctuate in the direction of the market price index (Jogiyanto, 2016). The calculation of security return involves two main components that are : (1) Component return associated with the uniqueness of the company, denoted by  $\alpha_i$ , (2) Component return associated with the market, denoted by  $\beta_i$  (Tandelilin, 2017). The calculation to determine the optimal portfolio is based on excess return to beta ratio. This ratio is (Jogiyanto (2016) and Elton et al (2007)):

$$ERB_i = \frac{E(R_i) - R_{BR}}{\beta_i}$$

### 2.3 SYARIAH INDEX

Syariah Index was first introduced in 1st January 1995. Sharia index was first launched by Indonesia Stock Exchange in cooperation with Sharia Supervisory Board of PT. Danareksa Investment Management. Sharia index criteria are based on Islamic sharia. The sharia index consists of 30 stocks. (Umam, 2013).

### 3. METHODOLOGY

The objective of this paper is to select the securities in Jakarta Islamic Index (JII) in forming the optimal portfolio and also to calculate the return and risk of portfolio.

In this paper, we use Single Index Model to find out the optimal portfolio. Single index model is a technique to calculate the return and risk of portfolio. The model assumes that the stock return movement is only correlated with the market movement (Zubir, 2011). The calculation to determine the optimal portfolio is based on excess return to beta ratio.

This study uses secondary data in the form of time series for the period 2013-2018 which consists of companies in Jakarta Islamic Index 2018 that has complete data in monthly closing, IHS index closing price as market index and BI rate as risk-free rate. Data is obtained from Indonesia Stock Exchange ([www.idx.co.id](http://www.idx.co.id)), Bank Indonesia ([www.bi.go.id](http://www.bi.go.id)). The population is companies in Jakarta Islamic Index period 2018. This research is using purposive sampling technique. The criteria used in sample selection is companies which have complete data from May 2013- March 2018.

**Table 3.1 Research Sample: Jakarta Islamic Index (JII) 2018**

Code	Company	Code	Company
ADRO	Adaro Energy Tbk	AKRA	AKR Corporindo Tbk
ANTM	Aneka Tambang (Persero) Tbk	ASII	Astra International Tbk
BRPT	Barito Pacific Tbk	BSDE	Bumi Serpong Damai Tbk
CTRA	Ciputra Development Tbk	EXCL	XL Axiata Tbk
ICBP	Indofood CBP Sukses Makmur Tbk	INCO	Vale Indonesia Tbk
INDF	Indofood Sukses Makmur Tbk	KLBF	Kalbe Farma Tbk
LPKR	Lippo Karawaci Tbk	LPPF	Matahari Department Store Tbk
LSIP	PP London Sumatra Indonesia Tbk	MYRX	Hanson International Tbk
PGAS	Perusahaan Gas Negara (Persero) Tbk	PTBA	Tambang Batubara Bukit Asam (Persero) Tbk
PTPP	PP (Persero) Tbk	PWON	Pakuwon Jati Tbk

SCMA	Surya Citra Media Tbk	SMGR	Semen Indonesia (Persero) Tbk
SMRA	Summarecon Agung Tbk	TLKM	Telekomunikasi Indonesia (Persero) Tbk
TPIA	Chandra Asri Petrochemical Tbk	UNTR	United Tractors Tbk
UNVR	Unilever Indonesia Tbk	WIKA	Wijaya Karya (Persero) Tbk
WSKT	Waskita Karya (Persero) Tbk		

Source : www.idx.co.id (2018), Yunita (2018)

### 3.1 RESEARCH STEPS

The calculation to determine the optimal portfolio is based on excess return to beta ratio. This ratio is (Jogiyanto, 2016 and Elton et all (2007):

$$ERB_i = \frac{E(R_i) - R_{BR}}{\beta_i}$$

ERBi = excess return to beta securities-i

E(Ri) = Expected return

RBR = Risk Free Return

$\beta_i$  = Beta Security-i

The optimal portfolio will contain assets with high ERB ratios. Assets with low ERB ratios will not be incorporated into the optimal portfolio. Thus, it takes a limiting point (Cut-Off Point) that determines what ERB value limit is said to be high. The magnitude of the limiting point can be determined by the following steps:

1. Sort securities based on the largest ERB value to the smallest. Securities with the largest ERB are candidates to be incorporated into the optimal portfolio.
2. Calculate the values of Ai and Bi for each of the securities as follows:

$$A_i = \frac{\{E(R_i) - R_{BR}\} \beta_i}{\sigma_{ei}^2}$$

$$B_i = \frac{\beta_i^2}{\sigma_{ei}^2}$$

$\sigma_{ei}^2$  = Variant of residual I-securities error that is a unique risk or risk is not systematic.

Calculate the value of  $C_i$

$$C_i = \frac{\sigma_m^2 \sum \frac{\{E(R_i) - R_{BR}\} \beta_i}{\sigma_{ei}^2}}{1 + \sigma_m^2 \sum \frac{\beta_i^2}{\sigma_{ei}^2}}$$

4. The amount of Cut off Point ( $C^*$ ) is the  $C_i$  value where the last ERB value is still greater than  $C_i$  value.
5. Securities that form the optimal portfolio are securities that have ERB values greater than or equal to the value of ERB at point  $C^*$ . Securities that have smaller ERBs with ERB point  $C^*$  are not included in optimal portfolio formation.
6. Calculate the proportion of each securities in the optimal portfolio. The amount of proportion for the  $i$ -th security is as follows:

$$w_i = \frac{x_i}{\sum x_i}$$

$$x_i = \frac{\beta_i}{\sigma_{ei}^2} (ERB_i - C^*)$$

7. Calculate return of portfolio

Return of portfolio is weighted average return of securities in portfolio. The formula is (Jogiyanto, 2016):

$$E(R_p) = \alpha_p + \beta_p \cdot E(R_m)$$

8. Calculate risk of portfolio

Risk of portfolio is variances return of security in portfolio. The formula is (Jogiyanto, 2016):

$$\alpha_p^2 = \beta_p^2 \cdot \sigma_M^2 + \left( \sum_{i=1}^n w_i \cdot \sigma_{ei}^2 \right)^2$$

#### 4. RESULTS AND DISCUSSION

Excess return to beta measures the excess return premium to a single unit of non-diversifiable risk as measured by beta. The value of ERB is used as the basis for determining the stock that includes the optimal portfolio. A high value ERB is a candidate for optimal portfolio. The RBR is the average monthly BI Rate from 2013-2018, that is 0.52%.

**Table 4.1 The Result of ERBi,**

No	Code	Expected Return	Excess Return	Bi	$\sigma_{ei}^2$	ERBi
1	AKRA	0.0206	0.0205	0.7478	0.0131	0.0275
2	ADRO	0.0207	0.0207	0.9421	0.0137	0.0219
3	ASII	0.0028	0.0027	1.4131	0.0044	0.0019

4	BPRT	0.0604	0.0552	1.8335	0.0427	0.0301
5	BSDE	-0.0001	-0.0002	1.8602	0.0069	-0.0001
6	CTRA	0.0038	0.0038	2.3874	0.0165	0.0016
7	EXCL	-0.0067	-0.0068	0.7148	0.0100	-0.0095
8	ICBP	0.0153	0.0153	0.6231	0.0281	0.0245
9	INCO	0.0137	0.0136	0.7554	0.0258	0.0180
10	INDF	0.0019	0.0018	0.8769	0.0046	0.0021
11	KLBF	0.0013	0.0013	0.9696	0.0036	0.0013
12	LPKR	-0.0151	-0.0151	0.0672	0.0093	-0.2248
13	LPPF	0.0015	0.0015	0.8752	0.0092	0.0017
14	LSIP	0.0018	0.0018	0.3148	0.0176	0.0057
15	MYRX	0.0069	0.0068	0.3982	0.0093	0.0172
16	PGAS	-0.0081	-0.0082	1.4403	0.0149	-0.0057
17	PTBA	0.0122	0.0122	1.3017	0.0188	0.0094
18	PTPP	0.0141	0.0140	1.6393	0.0130	0.0086
19	PWON	0.0155	0.0154	0.0735	0.0101	0.2096
20	SMRA	0.0000	-0.0001	2.3582	0.0147	0.0000
21	SCMA	0.0019	0.0018	0.7874	0.0074	0.0023
22	SMGR	-0.0069	-0.0069	1.3720	0.0052	-0.0051
23	TPIA	0.0537	0.0536	0.6337	0.0240	0.0846
24	UNTR	0.0132	0.0131	0.7487	0.0050	0.0176
25	UNVR	0.0094	0.0094	0.1037	0.0028	0.0905
26	WIKA	-0.0013	-0.0014	1.6529	0.0131	-0.0008
27	WSBP	-0.0069	-0.0070	0.1195	0.0097	-0.0582
28	WSKT	0.0236	0.0236	2.0249	0.0173	0.0116
29	TLKM	-0.0013	-0.0014	0.7739	0.0036	-0.0018

Source : Data Processed (2018), Yunita (2018)

After ERB was sorted from the highest to lowest, then determine a cut off point. Cut off point (C \*) can be done by determining the value of  $A_i$ ,  $B_i$ , and  $C_i$ . Value C \* is the last  $C_i$  value that has ERB value  $> C_i$ . The candidate of portfolio optimal are securities that have ERB values greater than or equal to the value

of ERB at point C\*. Securities that have smaller ERBs with ERB point C \* are not included in optimal portfolio formation.

**Table 4.2 The Result of Ci and C\***

No	Code	ERBi	Ai	Bi	$\sum A_i$	$\sum B_i$	Ci	
1	PWON	0.2096	0.1115	0.5322	0.1115	0.5322	0.00014	candidate
2	UNVR	0.0905	0.3449	3.8114	0.4564	4.3436	0.00055	candidate
3	TPIA	0.0846	1.4162	16.7430	1.8726	21.0866	0.00222	candidate
4	BPRT	0.0301	2.3723	78.7903	4.2449	99.8770	0.00461	candidate
5	AKRA	0.0275	1.1680	42.5385	5.4129	142.4154	0.00562	candidate
6	ICBP	0.0245	0.3384	13.8170	5.7513	156.2324	0.00589	candidate
7	ADRO	0.0219	1.4215	64.8488	7.1728	221.0812	0.00688	candidate
8	INCO	0.0180	0.3977	22.1003	7.5704	243.1814	0.00711	candidate
9	UNTR	0.0176	1.9783	112.6947	9.5487	355.8762	0.00811	candidate
10	MYRX	0.0172	0.2934	17.0968	9.8421	372.9730	0.00824	candidate
11	WSKT	0.0116	2.7584	236.9056	12.6004	609.8786	0.00881	candidate
12	PTBA	0.0094	0.8455	90.3319	13.4460	700.2105	0.00884	candidate*,C*
13	PTPP	0.0086	1.7737	207.0286	15.2196	907.2391	0.00881	
14	LSIP	0.0057	0.0319	5.6286	15.2515	912.8677	0.00880	
15	SCMA	0.0023	0.1937	83.6585	15.4453	996.5262	0.0085	
16	INDF	0.0021	0.3486	166.8962	15.7938	1163.4225	0.0080	
17	ASII	0.0019	0.8872	457.1192	16.6810	1620.5417	0.0068	
18	LPPF	0.0017	0.1382	83.1179	16.8192	1703.6596	0.0067	
19	CTRA	0.0016	0.5424	344.8008	17.3616	2048.4604	0.0061	
20	KLBF	0.0013	0.3480	263.5080	17.7096	2311.9684	0.0057	
21	SMRA	0.0000	-0.0164	378.9343	17.6932	2690.9027	0.0050	
22	BSDE	-0.0001	-0.0474	499.6290	17.6458	3190.5317	0.0044	
23	WIKA	-0.0008	-0.1731	208.7796	17.4727	3399.3113	0.0041	

24	TLKM	-0.0018	-0.2947	166.4319	17.1780	3565.7432	0.0039	
25	SMGR	-0.0051	-1.8371	362.9613	15.3409	3928.7046	0.0032	
26	PGAS	-0.0057	-0.7902	139.5289	14.5507	4068.2335	0.0030	
27	EXCL	-0.0095	-0.4859	51.1142	14.0647	4119.3477	0.0028	
28	WSBP	-0.0582	-0.0855	1.4701	13.9792	4120.8178	0.0028	
29	LPKR	-0.2248	-0.1093	0.4862	13.8699	4121.3040	0.0028	

Source : Data Processed (2018)

From the table above, the Cut of Rate ( $C^*$ ) is 0.00884, that is PTBA with ERB 0.0094. The stocks on optimal portfolio is the stock that has ERB more and same with  $C^*$ , that are PTBA, WSKT, MYRX, UNTR, INCO, ADRO, ICBP, AKRA, BPRT, TPIA, UNVR and PWON. The proportion of each stocks on portfolio is on the table below:

**Table 4.2 The Result of  $X_i$  and  $W_i$**

No	Code	$C_i$	$X_i$	$W_i$
1	PWON	0.00014	1.458704	11.8%
2	UNVR	0.00055	3.023027	24.4%
3	TPIA	0.00222	2.017032	16.3%
4	BPRT	0.00461	0.939626	7.6%
5	AKRA	0.00562	1.092992	8.8%
6	ICBP	0.00589	0.360235	2.9%
7	ADRO	0.00688	0.941337	7.6%
8	INCO	0.00711	0.285249	2.3%
9	UNTR	0.00811	1.401419	11.3%
10	MYRX	0.00824	0.382888	3.1%
11	WSKT	0.00881	0.397751	3.2%
12	PTBA	0.00884	0.077484	0.6%
		$\sum X_i$	12.37774	100%

Source : Data Processed (2018)

From Table 4.2, the proportion of each stock is : PWON (11.8%), UNVR (24.4%), TPIA (16.3%), BPRT (7.6%), AKRA(8.8%), ICBP (2.9%), ADRO (7.6%), INCO (2.3%), UNTR(11.3%), MYRX (3.1%), WSKT(3.2%) and PTBA (0.6%).

**Table 4.3 The Result of Return Portfolio**

No	Code	$W_i$	$\beta_i$	$\alpha_i$	$\beta_p$	$\alpha_p$
1	PWON	0.1178	0.0735	0.0152	0.0087	0.0018
2	UNVR	0.2442	0.1037	0.0090	0.0253	0.0022
3	TPIA	0.1630	0.6337	0.0236	0.1033	0.0038
4	BPRT	0.0759	1.8335	0.0419	0.1392	0.0032
5	AKRA	0.0883	0.7478	0.0129	0.0660	0.0011
6	ICBP	0.0291	0.6231	0.0276	0.0181	0.0008
7	ADRO	0.0761	0.9421	0.0135	0.0717	0.0010
8	INCO	0.0230	0.7554	0.0254	0.0174	0.0006
9	UNTR	0.1132	0.7487	0.0049	0.0848	0.0006
10	MYRX	0.0309	0.3982	0.0091	0.0123	0.0003
11	WSKT	0.0321	2.0249	0.0170	0.0651	0.0005
12	PTBA	0.0063	1.3017	0.0184	0.0081	0.0001
					0.61996	0.01606
E(Rm)					0.00407	
E(Rp)					0.01859	

Source: data Processed (2018)

**Table 4.4 The Result of Risk Portfolio**

No	Code	$w_i$	$\sigma_{ei}^2$	$(\sum W_i \cdot \sigma_{ei}^2)$	$\beta_p^2$	$\sigma_M^2$
1	PWON	0.121962	0.010138	0.0012	0.439368	0.001218
2	UNVR	0.176886	0.002821	0.0005		
3	TPIA	0.238433	0.023982	0.0057		
4	BPRT	0.092097	0.042668	0.0039		
5	AKRA	0.089833	0.013147	0.0012		

6	ICBP	0.028554	0.028099	0.0008	
7	ADRO	0.076155	0.013688	0.0010	
8	INCO	0.021336	0.025818	0.0006	
9	UNTR	0.10366	0.004974	0.0005	
10	MYRX	0.023426	0.009273	0.0002	
11	WSKT	0.027401	0.017308	0.0005	
12	PTBA	0.000259	0.018757	0.0000	
$(\sum W_i \cdot \sigma_{ei})^2$				0.0003	
$\alpha_p^2$					0.0008

Source: data Processed (2018)

From the table above, it can be seen that the monthly return of Portfolio is 1.86 % and the risk of portfolio is 0.08% that is below the risk of all individual stock in portfolio.

## 5. CONCLUSIONS AND RECOMMENDATIONS

In conducting an investment analysis, investors can use the single model index method when determining the stock to be selected into the portfolio and should not to invest in only one stock but to form an optimal portfolio that can provide a low risk without reducing the expected return

Based on this result research, the optimal portfolio selection by using single index model is consist of 12 companies in Jakarta Islamic Index such as PWON (11.8%), UNVR (24.4%), TPIA (16.3%), BPRT (7.6%), AKRA(8.8%), ICBP (2.9%), ADRO (7.6%), INCO (2.3%), UNTR(11.3%), MYRX (3.1%), WSKT(3.2%) and PTBA (0.6%). The monthly return of Portfolio is 1.86 % and the risk of portfolio is 0.08% that is below the risk of all individual stock in portfolio.

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# INDONESIA COOPERATIVE MEMBER WELFARE: DETERMINANT ANALYSIS OF BUSINESS PROFIT ON INDONESIAN COOPERATION

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## Abstract

*This study was conducted to investigate the factors that affect business profit (profit) cooperative in Indonesia. The sample used are all cooperatives in all provinces in Indonesia in 2000-2015. The dependent variable is business profit, while the independent variables are equity, outside capital, total assets, Total Members and business volume. The research used multiple linear regression analysis approach. The results showed the factors that determine cooperatives business profit is their equity, business volume and Total Members. On the other hand, outside capital and total assets have no significant effect.*

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**Key Words:** Business Profit, Equity, Outside Capital, Total Assets, Business Volume, Total Members  
**JEL Classification:** G32,H62

## 1. INTRODUCTION

Many studies have revealed that in recent decades the cooperatives could be a business entity as well as the organization that has the potential to encourage economic and social development to reduce poverty (Bibby & Shaw, 2005; Birchall, 2003, 2004; FAO, 2012; Munkner, 2012; UN, 2011; Vicari & De Muro, 2012 in Borda-Rodriguez & Vicari, 2014).

For example, in Africa, the emergence of liberalization in the 1990s has provided an opportunity for cooperatives to evolve as an organization controlled by members and business oriented, which in turn has improved the welfare of people who are vulnerable to poverty (Wanyama, 2013 in Borda-Rodriguez

& Vicari, 2014). International Cooperative Alliance (World Cooperation Organization) have 300 cooperatives in the world, which is responsible for the overall turnover reached more than one billion USD per year (International Cooperative Alliance, 2012b in Goel, 2013).

In Indonesia's economic, the cooperative is expected to become a pillar of Indonesia's national economy. This requires a role as a popular economic movement and also as a business entity which creating society prosperous, advance, and progressive. It is expected to establish itself strengthening and independent so it can act as a pillar of Indonesian economy. This objective is explicitly stipulated in Law No. 25 of 1992.

The success of cooperatives in improving the economic welfare of members can be measured from the increase in economic activities undertaken by members. These activities have done together with cooperatives, will have an impact on improving the ability in obtaining profit. Profitability is the ability to generate profits during a certain period by using productive assets or capital, both overall capital and equity (Van Horn and Wachowicz in Sumarthananyasa & Gede, 2013). In the context of Indonesian cooperatives, cooperative profit is called Business Profit (SHU) (Arifin, 2013).

The purpose of this study was to investigate the factors that affect business profit on Indonesian cooperatives in period 2000-2015.

## **2. LITERATURE REVIEW**

### **2.1 DEFINITION OF COOPERATIVES**

Based on Law of Republic of Indonesia No. 25 of 1992, Chapter I, Article 1, Paragraph 1, Cooperative is a business entity consisting of a single person or legal entity with activities based on the principles of cooperation as well as society's economic movement by the kinship principle.

The above definition using formal judicial approach or the realm of science cooperative called essentialist approach. Another approach that can be used to understand the cooperative is nominalist approach, which defines cooperative based universal traits. The characteristics are as follows (Hanel, 2005):

- 1) A number of individuals who unite in a group on a minimum one interest or similar purposes (cooperative groups),
- 2) Members of individual cooperative groups are committed to realizing their objective of improving economic and social situation through joint action and mutual assistance (independent group of cooperatives),
- 3) As an instrument (mode) to realize company owned and managed jointly (cooperative company),
- 4) The cooperative company is assigned to support the members' interests by providing/offering the goods and services needed in economic activities, i.e. in the company/business or household respectively (the purpose/task or member promotion principle).

Understanding of cooperatives seems to be more complete if it also included the definition proposed by the cooperative organizations of the world, International Cooperative Alliance (ICA), which is an integral part of "The ICA Statement on The Cooperative Identity (ICIS)". The formulation has containing the identity of cooperatives as accepted and ratified by the Congress of ICA to 100 in Manchester,

England in September 1995. ICIS is based on the understanding of the identity of cooperatives can be seen from the three cases, the definition, values and principles (Goel, 2013).

- 1) Definition of Cooperatives: Cooperatives are autonomous association of persons united voluntarily to meet shared needs and aspirations of economic, social and culture through a company owned jointly and democratically controlled,
- 2) Values: Cooperatives work based on independent values, self-responsibility, democracy, togetherness, justice and solidarity. In the tradition of its founders, the members believe in the values of honesty, openness, social responsibility and care for others,
- 3) Principles: The cooperative principle is the guiding line used by cooperatives to implement values. The principles are: voluntary and open membership, democratically controlled by members, economic participation, autonomy and freedom, education, training and information, cooperation among cooperatives and community concerns.

From these definitions could be seen fundamental difference between cooperatives and other forms of enterprise. If the other companies put capital as very important goal, so that the main motivation underlying such companies is the possibility for shareholders to make a profit on their investment in the business. While the main incentives for cooperative is the satisfaction of social and economic needs of its members (Bruque et al., 2003 in Gupta, 2014). Another similar understanding of cooperatives is that cooperatives are owned and democratically controlled by their members, then each contributing to cooperative activities and receiving a fair share related on the risks and benefits (Benson, 2014, Ajates Gonzalez, 2017).

## **2.2 BUSINESS PROFIT**

Business Profit (SHU) is the difference between the income earned during a certain period and sacrifices incurred for income (Kusumarini & Tisnawati, 2015). According to Ramudi Arifin (2013), SHU is the result of efficient use of cooperative budgets that should be returned to members. Meanwhile, according to Cooperative Act No. 25 of 1992 article 16, business profit is the income earned within the cooperative financial year reduced by costs, depreciation, and other liabilities, including taxes in the fiscal year concerned.

Alfred Hanel said (2005) business results and success of cooperatives do not happen by itself. But as a result of a vigorous cooperative effort, which depends on effective cooperation and the members' contribution to the cooperatives development and solidarity level or loyalty. In general, the cooperative's success can be measured from the profits gain (Birchall & Simmons, 2004, Borgen, 2004) or in the context of Indonesian cooperatives called business profit (SHU). It earned on a regular basis as well as the increasing trend is a very important factor, which required attention in assessing the benefit of cooperative. Its stability demonstrated the ability to use capital efficiently so as to obtain huge profits.

Several studies of the factors that affect among SHU. Ni Kadek Dewik Sumita, who examined the factors that influence on cooperative SHU in North Kuta, Badung. It revealed that total members, the number of deposits, the amount of the loan and working capital has significantly influence on SHU (Dewik & Jember, 2016). Sigit Puji Winarko examines the influence of equity, total members and assets to the rest of the business results on cooperative in Kediri. The results showed equity, total members and assets affect partially on SHU (Winarko, 2014). Monica Tria Cahyani examines the influence of total members to Business Profit through member participation as an intervening variable in the savings and loan

cooperatives WisudaGunaRaharja Denpasar (Cahyani, 2015). FerlineAriesta examines the influence of total members and member savings to business profit(SHU) increase at PKP-RI (Indonesian Civil Servants Cooperative Center) West Sumatra (Ariesta & Yolamalinda, 2014).A number of other researchers reveal many causative factors of business profit, but no one has studied the causes of cooperatives business profit nationally in Indonesia(Kusumarini & Tisnawati, 2015; Pariyasa, Zukhri, & Indrayani, 2014; Lestari & Ni'mah, 2008; Rusmana, Bagia, & Yudiaatmaja, 2014; Suputra, Susila, & Cipta, 2016; Nurul Ramdhani, 2013;Azhar, Malik, & Fitri, 2010; Azhar et al., 2010).

According to the literature reviews have given, the main explanatory variables are identified to reveal the causal factors of SHU change. These variables are Equity, Outside Capital, Total Assets, Business Volume, and Total Members.

*H1. There is a positive/negative relationship between SHU with Equity, Outside Capital, Total Assets, Business Volume, and Total Members.*

### **2.3 THE INFLUENCE OF EQUITY TO SHU**

As a business entity, cooperatives require capital in carrying out its activities. Cooperative capital can be obtained from two sources that is sourced from members (hereinafter referred to as Equity) and sourced from loans (Law No. 25 of 1992).Equity can come from basic contributions and mandatory deposit of members, reserve funds and grants. According to Tiktik(2009), Capital which is namely equity is a capital that bears the risk. Otieno et al., (2013)said that cooperatives are economic units in which members mobilize their financial resources through savings or deposits made by active members. Agrawal et al. (2002) found that member funds have a central role in cooperative performance.

Capital is used in cooperative business activities in serving the needs of its members and other community needs. These activities are expected to generate profits for cooperative efforts.The limited capital that exists in the cooperative causes the difficulty of developing business units, which are expected to improve the welfare of its members. In addition, the use equity will have an impact on low capital costs(Endrikse & Eerman, 2000).

*H2. There is a relationship positive/negative between SHU with Equity*

### **2.4 INFLUENCE OF OUTSIDE CAPITAL TO SHU**

In addition to equity, to foster cooperative capital that comes from outside, i.e. loan capital. Loan capital may come from outside members, other cooperatives and/or its members, banks and other financial institutions, the issuance of bonds and other debentures, and legitimate sources. Besides the cooperative can also perform capital accumulation derived from capital investments (Law No. 25 of 1992). The position of loan capital is the same as equity, but in loan capital, the cooperative is required to pay interest on the loan received regularly, both the amount and time(Thamrin, 2013).

*H3. There is a positive/negative relationship between SHU and Outside Capital.*

### **2.5 THE INFLUENCE OF TOTAL ASSETS ON SHU**

Assets are resources controlled by the entity as a result of past events and future economic benefits, which is expected to acquire (ETAP Financial Accounting Standards, 2009).

The assets should affect business profit, since assets reflect the working capital used.The increase in assets mean additional working capital which in turn caused business profit increasing. However, this

may depend on the ability of the cooperative to perform cost efficiency, as well as the ability of the cooperative to operate and manage the available assets so that it can be used by members.

*H4. There is a positive/negative relationship between SHU and Total Assets.*

## **2.6 EFFECT OF BUSINESS VOLUME TO SHU**

According to Suwandi (1988:38 in Suputra et al., 2016), said that "business volume is the totality of activities reflected in money value form and as the central point of the various changes interaction in the cooperative. So it is as measurement of the total activities amount in money as well as to provide what can do over a period of time".

Activity or business conducted by the cooperative could benefit as much as possible, especially for members and society in general. Businesses or activities that do can be seen from the large business volume will affect the profit or called business profit (Arifin Sitio and Halomon Tamba, 2001: 142 in Ariesta & Yolamalinda, 2014).

*H5. There is a positive/negative relationship between SHU with Business Volume.*

## **2.7 INFLUENCE OF TOTAL MEMBERS TO SHU**

As an association, the cooperative will not be formed without the member. When it has more members so more solid the position of it. Because that are managed and financed by members. Meanwhile, the members' control over the course of a cooperative effort is reflected in one vote for each member (Laidlaw, 1989 dalam Özdemir, 2005). A number of studies indicate that the resilience of cooperatives depends on the identity, commitment and cohesion of members, (Birchall, 2011; Mazarol et al., 2011; Munker, 2012 in Borda-Rodriguez & Vicari, 2014). Member participation is a key strategy for achieving cooperative benefits (Birchall & Simmons, 2004).

Activeness of participating members can be shown in the transaction of business activities and also in cooperative financing in the form of savings, mandatory savings, voluntary savings and utilization of business potential services provided by cooperatives will increase the capital of cooperatives, especially working capital turnover and cooperative efforts. This will certainly make the cooperative grow better and will benefit the members especially by progressing business profit. Winarko (2014), said that the growth in the members number has a positive and significant role to business profit (SHU).

To do this, it need a viable business model. A cooperative can collect the investment of members, which can create a better market position than individual members, and may decide to spend profits on things that are important to members (Van Oorschot, de Hoog, van der Steen, & van Twist, 2013).

*H6. There is a positive/negative relationship between SHU and Total Members.*

## **3. RESEARCH METHODS**

The purpose of this study was to explore the factors that affect SHU in Indonesian cooperatives. The sample used all cooperatives located in 30 provinces in Indonesia during the period between 2000 and 2015. It used multiple linear regression analysis to test the most important factors identified in the literature on SHU. These factors include: Equity (MS), Outside Capital (ML), Total Assets (TA), Business Volume (VU) and Total Members (JA). The choice of these factors is motivated by previous empirical literature which shows its influence on cooperatives' SHU.

### 3.1 SAMPLES

The data used in this study is panel data (panel pooled data) which is a model that states between time series and cross section data (cross section). The data taken are all cooperatives in 30 provinces in Indonesia in the period of 2000 - 2015. Data obtained from the Ministry of Cooperatives and SMEs Republic of Indonesia website.

### 3.2 ANALYSIS TECHNIQUE

The dependent variable in this study is business profit. The analysis technique used in this research is multiple regression analysis, which is a simultaneous regression model contained causality modeling presented in the form of tiered causality. A valid relationship equation or BLUE Best Linear Unbiased Estimator can be obtained when the model meets the basic assumptions of the classic Ordinary Least Square (OSL). The tests performed are normality, a valid relationship equation or BLUE Best Linear Unbiased Estimator can be obtained when the model meets the basic assumptions of the classic Ordinary Least Square (OSL). The tests performed are normality, multicollinearity, and heteroscedasticity. Regression model used is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

Information :

$Y =$  *Business Profit*

$\alpha =$  *Constants*

$X_1 =$  *Equity*

$X_2 =$  *Outside Capital*

$X_3 =$  *Total Assets*

$X_4 =$  *Business Volume*

$X_5 =$  *Total Members*

$\beta_1 \beta_2 \beta_3 \beta_4 \beta_5 =$  *Regression Coefficient*

The coefficient of determination (R<sup>2</sup>) is used to measure the ability of the model in explaining the variation of the dependent variable. A value close to one means the independent variables provide almost all the information needed to predict the variation of the independent variable (Ghozali, 2006). Adjusted R<sup>2</sup> value is used to evaluate the regression model.

The statistical test F basically indicates whether all the independent variables included in the model have jointly influence on the dependent variable. (Ghozali, 2006). F test is used to answer hypothesis H1. The statistical test t basically shows the influence of one independent variable individually in explaining the variation of the dependent variable. (Ghozali, 2006). The t test is used to answer the hypothesis H2, H3, H4, H5, H6.

## 4. RESULTS AND DISCUSSION

#### 4.1 CLASSICAL ASSUMPTION TESTING RESULTS

Descriptive statistical results as listed in Table 1, describe the total observations, the highest and lowest values, the mean and standard deviation of the research variables. Equity is in the range of between 7.49 to 14.31 with an average of 12.71 and has a standard deviation of 1.52. The value of a relatively small standard deviation describes the distribution of its equity data tends to be homogeneous.

**Table 1. Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Equity	480	7,49	17,31	12,7093	1,51969
Outside Capital	480	7,97	17,16	12,8114	1,55427
Total Assets	480	8,45	17,71	13,4994	1,50997
Business Volume	480	8,31	18,46	13,6480	1,55414
Total Members	480	10,61	15,87	13,0726	1,14400
SHU	480	6,81	15,73	10,8591	1,47664
Valid N (listwise)	480				

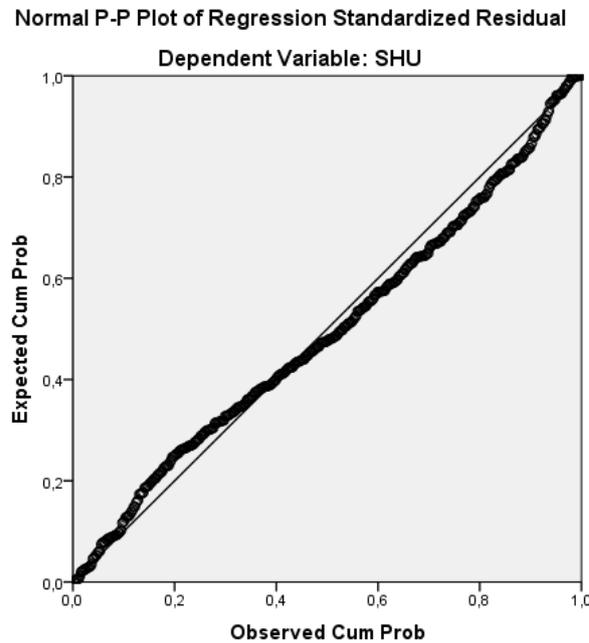
To test sample has a normal distribution of data used to test the P-P Normal Plot regression and non-parametric statistical tests Kolmogorov-Smirnov (K-S).

**Table 2. One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		480
Normal Parameters <sup>a,b</sup>	Mean	,0E-7
	Std. Deviation	,66534735
Most Extreme Differences	Absolute	,053
	Positive	,053
	Negative	-,052
Kolmogorov-Smirnov Z		1,156
Asymp. Sig. (2-tailed)		,138

a. Test distribution is Normal.

b. Calculated from data.



**Figure 1. Normality Test Result with Normal Probability Plot**

The test results in Table 3 and Figure 1 showed that the data is normally distributed with dots that spread around and follow the diagonal line. Kolmogorov-Smirnov non-parametric statistical test results (K-S) showed a value of 1.156 with a significance value of 0.138. Due to the significance value is well above 5%, then the data are normally distributed residual or pass the normality test. The multicollinearity test is shown by the VIF value of the independent variable in Table 3. The test results show that only the business volume variables, own capital and total members are freed from multicollinearity. Model freed from multicollinearity if VIF <10.

**Table 3. Multicollinearity Test Results**

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Business Volume	,155	6,463
Equity	,164	6,097
Total Members	,263	3,805

Source: Data Processed

To detect the presence or absence of symptoms heteroscedasticity is to look at the graph plot between the predicted value of the dependent variable (ZPRED) with residual (SRESP) at the level of significance as shown in Figure 2. In the graph plot appears to be no clear pattern and point spread above and below the numbers 0 on the Y axis, then there are no symptoms of heteroscedasticity.

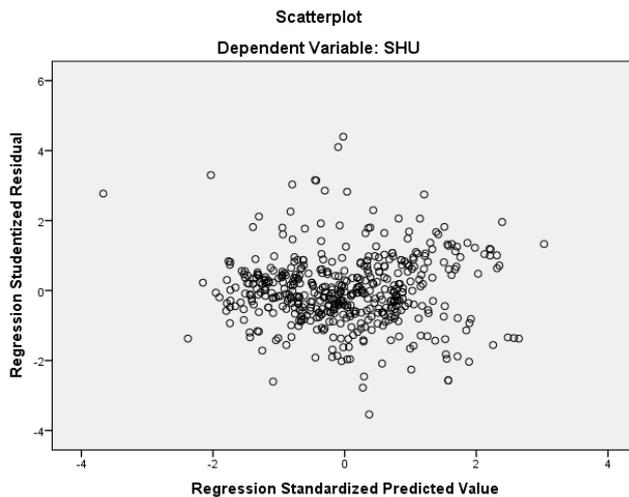


Figure 2. Heteroscedasticity Test Results

#### 4.2 RESULT OF TESTING RESEARCH MODEL AND HYPOTHESIS

Results of testing the model using multiple linear regression with stepwise method produces three regression models. But only one model is used fit between the three, the model that produces the largest R-Square. From the five independent variables of research, which can be included in the research model are only three variables, namely: Business Volume (VU), Equity (MS) and Total Members (JA). From table 5, the model taken is model C (number 3). The resulting research model is as follows:

$$SHU = 0,089 + 0,707 VU + 0,282 MS - 0,189 JA$$

Table 4. Variables Entered/Removed<sup>a</sup>

Model	Variables Entered	Variables Removed	Method
1	Business Volume	.	Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
2	Equity	.	Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).
3	Total Members	.	Stepwise (Criteria: Probability-of-F-to-enter <= ,050, Probability-of-F-to-remove >= ,100).

a. Dependent Variable: SHU

Tabel 5. Model Summary<sup>d</sup>

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	,884 <sup>a</sup>	,781	,781	,69108	
2	,890 <sup>b</sup>	,791	,790	,67593	
3	,893 <sup>c</sup>	,797	,796	,66744	1,024

a. Predictors: (Constant), Business Volume

b. Predictors: (Constant), Business Volume, Equity

c. Predictors: (Constant), Business Volume, Equity, Total Members

d. Dependent Variable: SHU

The multiple linear regression equation in Table 6 showed that the constant value is 0.089. This value indicates that without the influence of independent variables consisting of Business Volume, Equity and Total Members amounted to 0.089. While the coefficient value of each independent variable in multiple linear regression equation is as follows: Business Volume variables have a regression coefficient of 0.707. This means that any change of one unit on Business Volume variable will result in an increase of 0.707 Business Profitvariable. Equity variable has a regression coefficient of 0.282. This shows that every change of one unit in Equity variable will lead to an increase of 0,282 Business Profitvariable. Total Members' variable value regression coefficient of -0.189. This suggests that any change of one unit in Total Members' variable would lead to a decline of -0.189 Business Profitvariable.

**Tabel 6. Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,089	,356		,250	,803
Business Volume	,707	,050	,744	14,179	,000
Equity	,282	,050	,291	5,698	,000
Total Members	-,189	,052	-,146	-3,636	,000

a. Dependent Variable: SHU

The result of the multiple linear regression test of the empirical model shows that the adjusted R<sup>2</sup> (R Square) value is 0.797 or 79.7% (Table 5). This means that Business Profit is affected by 79.7% by the three independent variables: Business Volume, Equity and Total Members while the remaining 20.3% is influenced by other variables.

F test results show that simultaneously independent variables have an influence on the dependent variable. This can be proven from the value of F arithmetic of 622.849 with probability 0.000. Since the probability is much smaller than the 5% significance level used, the regression model can be used to predict changes in Business Profit. Thus it can be concluded that Business Volume, Equity and Total Members simultaneously affect the Business Profit, hypothesis H1 accepted.

**Tabel 7. ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	832,395	3	277,465	622,849	,000 <sup>d</sup>
3 Residual	212,047	476	,445		
Total	1044,442	479			

a. Dependent Variable: SHU

d. Predictors: (Constant), Business Volume, Equity, Total Members

The value of  $t_{table}$  in this study is 1.965. T test results showed that the value of  $t_{count}$  is greater than  $t_{table}$  value for each Business Volume variable 14.179, 5.698 for Equity variable and -3.636 for Total Members variable, with a significance level of each independent variable is 0,000. Regression model was significant because the P-Value <0.05 or  $t > t_{table}$ . H2, H5 and H6 are accepted.

#### 4.3 DISCUSSION

After multiple linear regression analysis is accompanied by the classical assumption test to the research variables, it is known that there are some variables that cannot be included in the research model that is the Total Assets and Outside Capital variables, so that the research variables are focused on the other three independent variables namely Equity, Business Volume, and Total Members.

Stepwise method produces three models, namely: (1) SHU influenced by business volume, (2) SHU influenced by Volume of Business and Equity, and (3) SHU influenced by Total Members. From the three models, the most fit model is the third model with the highest R-Square that is 0.797.

After F test, it is known that simultaneously the independent variables (Business Volume, Equity and Total Members) affect the dependent variable (SHU). This result is in line with previous research findings as presented Dewik & Jember (2016), Winarko, (2014), Cahyani, (2015), Pariyasa et al., (2014), and Suputra et al., (2016).

The result of t test on Business Volume variables shows that this independent variable has an effect on SHU. This is evidenced by the value of  $t_{count}$  greater than its  $t_{table}$  value. The direction of positive influence indicates that the increase of Business Volume will be followed by the increase of SHU. Research by similar the results presented by : Suputra et al., (2016), Pariyasa et al., (2014).

The result of t test to the variable of Equity indicates that this independent variable has an effect on SHU. This is evidenced by the value of  $t_{count}$  greater than its  $t_{table}$  value. Directions positive effect shows that the increase of Equity will be followed by the increase of SHU. Research with similar results was put

forward by: Suputra et al., (2016), Pariyasa et al., (2014), Ariesta & Yolamalinda (2014), Aziar et al., (2010), Putra, Artana, & Indrayani (2014). Specific findings in this study are in Total Members variable with a coefficient  $-0.189$ ,  $t_{\text{count}}$  value is greater than its  $t_{\text{table}}$  value meaningful that in partial Total Members negatively affect SHU. This can be interpreted as increasing Total Members will reduce the number of SHU earnings. This study certainly contradicts the theory and some researches have been done, such as: Dewik & Jember (2016), Winarko (2014), Cahyani (2015), Pariyasa et al., (2014), and Ariesta & Yolamalinda (2014).

## 5. CONCLUSION

From the data processing has been done, it is known that the most fit model is SHU influenced by Business Volume, Equity and Total Members. The results obtained are: simultaneous Business Volume, Equity and Total Members variables have effect on it. While partial Business Volume variable and Equity variable showed a positive influence, and Total Members variable negatively affect SHU.

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## RELATIONSHIP AUTHENTIC LEADERSHIP TO COACHING EFFICACY ANALYSIS

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### Abstract

*Increasing business conditions in the second quarter of 2017 and the number of businesses in Indonesia that increase each year, make the competition tighter and increase the number of competitors. In order to compete and survive in the fierce competition, an effort is needed that can help solve the problem. One of the solutions is to find people who can help in deal with problems and exchange ideas to grow the business. In this context, a business coach is the person. Business coaches will help to develop self-potential and become coach as well as companion in exchange of knowledge and information. Thus, will open his mind and be able to issue ideas that can grow his business. However, there are still many who do not believe in the role of a coach who can help to develop self-potential. Thus, the trust between the coach and his client must be built first. The trust between these coach-clients can be obtained from authentic leadership perceived or owned by a coach.*

*This study aims to determine the relationship of authentic leadership to coaching efficacy. The population in this study is business coaches in Indonesia and the sample is 100 business coaches. The research method used is quantitative method. Study results indicate authentic leadership has a positive relationship to coaching efficacy. Business coaches are expected to improve self-awareness and technique during business coaching sessions.*

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**Key Words:** Business Coaching; Authentic Leadership; Coaching Efficacy

**JEL Classification:** C12, M21, M29

### 1. INTRODUCTION

The number of businesses in Indonesia, especially Micro, Small and Medium Enterprises (MSMEs) increased from year to year. Based on the latest data from the Ministry of Cooperatives and MSMEs and Bappenas in 2014, the number of MSMEs that continue to increase over the years is seen in Table 1.

**Table 1. The Number of MSMEs in Indonesia**

Year	2011	2012	2013	2014
The Number of MSMEs (million units)	55,2	56,5	57,9	59,3

**Source:** The Ministry of Cooperatives and MSMEs and Bappenas.

Based on table 1, the growth of MSMEs from 2011 to 2014 has increased by 4.1 million units or 7.4%. According to the table, by 2012 the number of MSMEs has increased by 1.3 million units or 2.3% from the previous year. In 2013 and 2014, there was an increase of MSMEs number by 1.4 million units or 2.4% from the previous year.

The increasing number of businesses resulting in tighter competition and increment number of competitors. Every business will compete with each other in order to survive as well as striving to best its competitors. This moment, it takes business companions who can develop their own potential and develop the business. One that can be a business companion is a business coach.

Business coach is a professional coach who has been trained and has business experience that oversees, assists, and guides Micro, Small and Medium Enterprises (MSMEs) in developing, starting and growing their business. Business coaches help MSMEs clarify goals, business goals, and help develop skills and determine the resources needed to become successful companies. Business coaches meet clients directly or use phone to conduct business coaching sessions. The meeting aims to discuss business issues and help clients to achieve the desired goals. The result is what experience the client gains about what success and meaning means in achieving that success (Clason, P., 2001, p.5).

President Director of IBM Indonesia, Gunawan Susanto revealed that every leader needs a coach on a talk show held with Coaching Indonesia Academy on July 23, 2016. He revealed the statement because he still has a coach and mentor, who helped him exchange ideas in developing the organisation. Coaching and mentoring that has been entrenched in the organisation is believed to be able to accelerate the birth of new talents to offset the growth of the market.

“Business coaches support clients/coachee to improve their personalities and professional effectiveness in a variety of businesses” (Gale, Lijenstrand, Pardieu & Nebeker, 2002; in Gatling et al., 2013, p.337). Many styles of leadership that can be applied by business coach, one of which is authentic leadership. Authentic leadership is perfect if applied by a business coach. Because building authentic leadership refers to a leadership style in which leaders demonstrate to others genuine and honest desires to understand their leadership in order to serve others more effectively (Walumbwa et al., 2008; in Gatling et al. , 2013, p.337).

Previous research written by Gatling et al. (2013), explained that authentic leadership is a crucial factor in the context of business coaching. There were four components in authentic leadership, namely self-awareness, balanced processing, internalised moral perspective, and relational transparency. The self-awareness of a business coach refers to the extent to which the coach is aware of his strengths, limitations and how coaches affect his client/coachee. Balanced processing is how a coach takes into consideration all the options and sees from different points of view before making important decisions. Internalised moral perspective, the extent to which the business coach establishes standards for moral and ethical execution. Finally, relational transparency that requires business coach to be open to feedback by giving others the opportunity to express opinions and issue ideas.

Business coaches can help businesses grow their business. It proves that a business coach should have an authentic leadership style. Because a coach must show his coachee/clients a genuine and honest desire to understand their role in guiding and coaching more effectively. This will build trust between coach and client. The result of previous research by Gatling et al. (2013), stated that authentic leadership was significantly related to coaching effectiveness. The effectiveness of coaching is measured by three variables, namely coaching efficacy, business efficacy, and personal efficacy. Researcher wanted to know whether there is a relationship between authentic leadership to coaching efficacy. Thus, the researcher wanted to focus more on one variable that measures the effectiveness of coaching, namely coaching efficacy.

## **2. LITERATURE REVIEW**

The definition of business according to Griffin and Ebbert (2007) was "Organisations that provide goods or services with the intention of making a profit". Griffin and Ebbert (2007) defined earnings as the difference between income and business expenditures that encourage people to open and expand businesses. In addition, Griffin and Ebbert (2007) said that "Businesses produce most of the goods and services that people consume and employ many people."

Every businesses must have a leader who leads the business. A leader applied leadership in business and daily life. There were several definitions of leadership. The first definition was "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (Northouse, 2007; in Bishop, 2013, p.1). Next, "Leadership is quality of the behavior of individuals whereby they guide people or their activities in organised effort" (Novicevic, Davis, Dorn, Buckley, & Brown, 2005; in Bishop, 2013, p.1). Meanwhile, according to Vroom and Jago in Chatman & Kennedy (2010), leadership is the process of motivating people to cooperate collaboratively to achieve something great that is embedded in the minds of leaders and followers. It can be concluded that leadership is an individual process that influences a group of people while also motivates them to achieve certain goals.

One of the leadership styles that may be used by business owners is authentic leadership. According to Gatling et al. (2013), authentic leadership is defined as a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical culture through four factors that support positive self-development: self-awareness, balanced processing, internalised moral perspective and relational transparency. Walumbwa et al. (2008) encompasses authentic leadership into four important dimensions, as follows:

### **1. Self-awareness:**

Self-awareness refers to demonstrating an understanding of how a person acquires and interprets the meaning of the world and how the interpretation of meaning impacts the way a person views himself or herself over time. It also refers to showing an understanding of one's strengths and weaknesses; impact on others; and evaluate his own behavior. Self-awareness is very important because it shows that one realizes one's strengths and weaknesses, helps one sincerely, and is very important to be authentic.

### **2. Relational transparency:**

Relational transparency refers to presenting a person's authentic self (as opposed to a fake or distorted self) and the actual behavior to others. Such behavior encourages trust through disclosures involving information disclosure, expressing thoughts and feelings while trying to minimize the

appearance of inappropriate emotions in order not to mislead or deceive anyone about who they are.

3. Balanced processing:

Balanced processing refers to leaders who show that they objectively analyze all relevant data regardless of their personal assumptions or point of view before making a decision.

4. Internalised moral perspective:

Internalised moral perspective is the form of internalisation (the process of entering values on a person who shapes his mindset in seeing reality) and integrated self-organisation. This self-regulation is controlled by the moral standards and values of groups, organisations, and societies and the results are expressed with decision-making and behavior consistent with the values internalised. Internalised moral perspective involves the inner urge of leaders to achieve behavioral integrity (e.g. consistency between values and actions).

Authentic leadership in the context of business coaching is an important factor in coach relationships with clients or coachee in which the leader demonstrates genuine and honest desire to understand their leadership in order to serve others more effectively. Researchers, organisations, and business owners begin to appreciate the role played by coaching in daily leadership activities.

Authentic leadership is the behavioral pattern of leaders who utilize and enhance positive psychological capacity and positive ethical culture through four factors that support positive self-development: self-awareness, balanced processing, internalised moral perspective, and relational transparency. Self-awareness of a business coach refers to the consciousness and coach's belief in personal values, feelings, motives, and cognitions as well as an awareness of the personal aspects inherent in the conflict, which can affect coach's feelings, actions and behaviors (Ilies, Morgeson, & Nahrgang, 2005 in Gatling et al., 2013). Balanced processing is a core of integrity and personal character of coach as it influences their decisions and actions (Gavin, Quick, & Cooper, 2003 in Gatling et al., 2013). Business coaches considered to have internalised moral perspective are considered morally authentic. Such coaches will gain more influence and will increase the positive effects on others (Hannah, Lester, & Vogelgesang, 2005 in Gatling et al., 2013). Finally, relational transparency requires business coach's willingness for inspection and feedback, thus facilitating a more effective leadership style (Chan, Hannah, & Gardner, 2005 in Gatling et al., 2013).

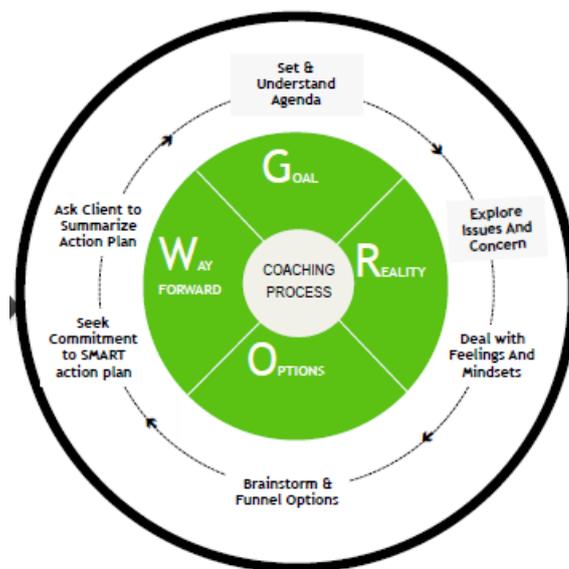
Based on the results of previous research by Gatling et.al. (2013), "There was statistically significant evidence that authentic leadership as measured by a 15-item revision of the ALQ scale is a valid construct in business coaches." It can be inferred that authentic leadership was used in the context of business coaching. A business coach can apply authentic leadership in an effort to help improving or developing a business. Authentic leadership is also predicted to have an impact on coaching effectiveness. The effectiveness of coaching is measured by looking at three factors, namely coaching efficacy, business efficacy, and personal efficacy (Gatling et al., 2013).

Based on previous research, described business coaching is a combination of the processes, techniques and structures utilised in coaching delivered by persons having previous business experience (Crompton, 2012, p.23). The popular and published literature to date has separated coaching and mentoring, usually reporting it as two separate functions. However, it seems universally that no one has agreed on the definition of coaching. Therefore, it is very important in this regard to describe the origin, definition, role, research and application of coaching.

The term coaching is better known in sport as one of the training methods, but as time progresses, coaching begins to be implemented in everyday life, business, and other more specific matters (Salim, 2014, p.1). Coaching is how to help someone find what they want from the position where he is now, by exploring what resources are needed, the mental attitude to be built and the appropriate techniques in implementing it. Coaching can also be translated into someone who can facilitate coachee to achieve better performance than the present situation by asking the right questions (Salim, 2014, p.2). "Coaching is a useful way of developing people's skills and abilities, and of boosting performance. It can also help deal with issues and challenges before they become major problems." (Editorial Team, 2017). The role of coaching in business, explores business with questions about financial issues, vision and mission, processes, resources, systems and marketing (Salim, 2014, p.127). While the role of a coach is as a mirror that became an example or role model for people who were given coaching (Dunamis Program Overview, 2016).

As mentioned earlier, business coaching is a combination of coaching processes with techniques conveyed by a coach who has business experience. Here is a picture of the coaching process:

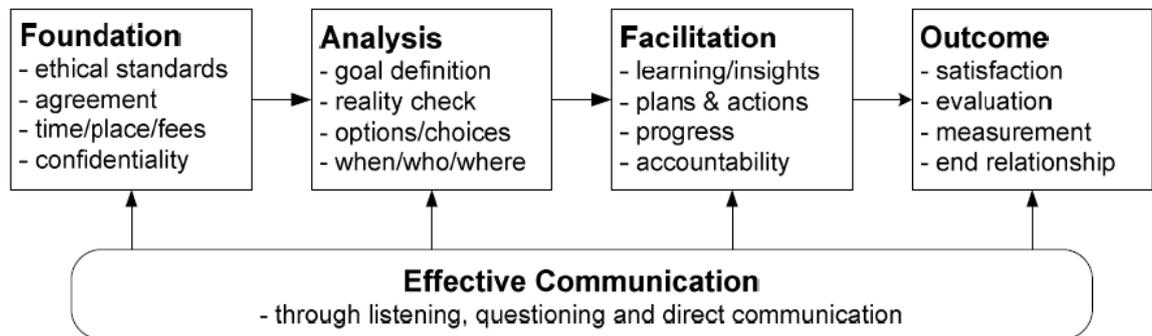
**Figure 1.** Coaching Process



**Source:** Dunamis Program Overview, 2016

Simple analogy of the above model is there are 4 main stages are Goal, Reality, Options, and Way forward. Goal is the objectives to be achieved, the coaching process done is to set and understand the agenda. The second stage is Reality, there are two processes of explore issues and concerns and deal with feelings and mindset. The third stage, options is how to achieve goals, can be done with the process of brainstorming & funnel options. The fourth or final stage is Way Forward, the stage where there is a willingness to start moving towards the goal to be achieved, with the process of seeking commitment and determining the smart plan and summarizing the action plan. The coaching process when combined with the delivery technique of the coach, it will be a business coaching process described as follows:

**Figure 2.** Business Coaching Process Framework



**Source:** Crompton, B. M., 2012

Coaching efficacy is a concept or idea that has implications or impacts on coaching effectiveness. This is supported by the opinion of Feltz et al. (1999) in Kavussanu et al. (2008, p.384) which stated that "A construct that has implications for coaching effectiveness is coaching efficacy". In addition Feltz et al. (1999) in Kavussanu et al. (2008, p.384) defined coaching efficacy as to what extent coaches believe they have the ability to influence the learning and coachee performance or their clients. Coaching efficacy suggests that coaches with high efficacy rates may be more effective than those with low efficacy rates.

Coaching will certainly work if coaches empathize, support, and confident but do not demand perfection and try to tell what to do (Maltis, R. L., 2010 in Dewi, 2015, p.5). According to Feltz et al. (1999) in Kavussanu et al. (2008) coaching efficacy has four dimensions, as follows:

1. Motivation:

Motivation refers to the trust of coaches to their ability to influence their psychological skills and coachee circumstances(keadaan).

2. Game strategy:

Game strategy is trust coaches on their ability to train and lead their teams to achieve efficacyful performance within a competition. In business coaching, coach trust is required to achieve efficacyful performance in business competition.

3. Technique:

Technique relates to the coaches's beliefs about the skills in giving instructions and their diagnostic abilities.

4. Character building:

Character building concerns the coaches's belief in their ability to influence their self-development coachee and positive attitudes. In business coaching, coach trust is needed to influence self-development of coachee and their positive attitude toward business.

The result of study was written by Gatling, Castelli, & Cole (2013), titled Authentic Leadership: The Role of Self-Awareness in Promoting Coaching Effectiveness, gave conclusion as follow:

This study examined the relationship between authentic leadership and coaching effectiveness in a sample of business coaches. The purpose of this study was to determine the extent to which business coaches perceived that they possess the qualities of authentic leadership and if authentic leadership is related to coaching performance measured as the coaches' perceived effectiveness in obtaining the client's personal and business goals. First, there was statistically significant evidence that authentic leadership as measured by a 15-item revision of the ALQ scale is a valid construct in business coaches. This served as foundation for the subsequent analysis of authentic leadership's impact on coaching effectiveness, results of which indicate that authentic leadership can function as a predictor of coaching effectiveness. Research should continue to examine the impact of authentic leadership on coaching effectiveness since authentic leadership appears to be a salient factor in further enhancing the performance of business coaches seeking to be effective in obtaining goals set by the client and the coach.

The study examined the relationship between authentic leadership and coaching effectiveness with a sample of business coaches. The purpose of the study was to determine the extent to which the business coaches feel that they have the qualities of authentic leadership and authentic leadership related to coaching effectiveness in achieving the personal and business goals of the client. Confirmatory Factor Analysis (CFA) was used to measure the validity of the concept of authentic leadership in the context of business coaching. The result of the concept of authentic leadership in the context business coaching was valid and proven authentic leadership has a significant relationship to coaching effectiveness.

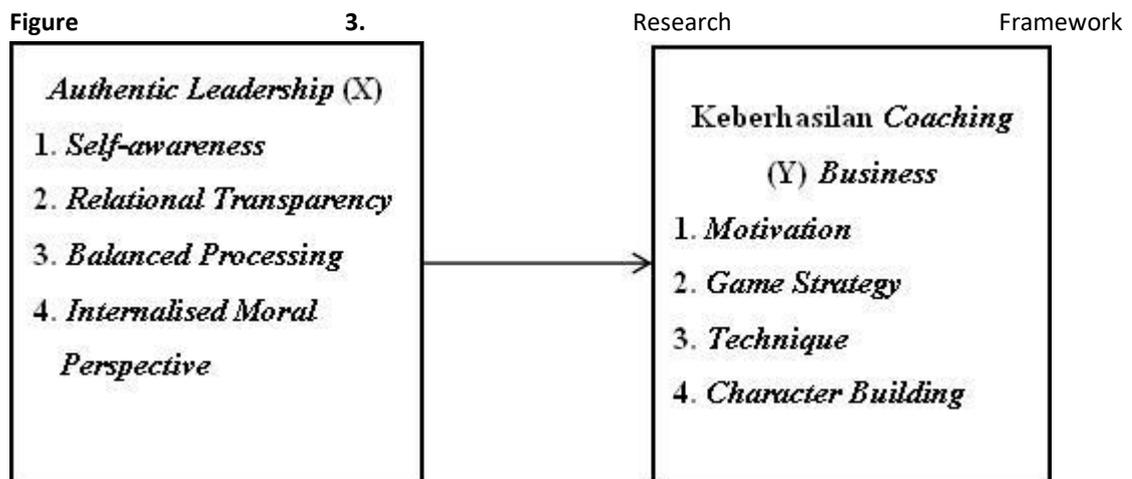
Another study was written by Kavassanu et al. (2008) entitled coaching efficacy and coaching effectiveness, the results indicated that coaching experience has a positive relationship with coaching efficacy that provides further support for coaching efficacy model. The coaching efficacy dimension corresponds to an important component of effective coaching. Coaches who want to improve coaching efficacy need to improve their experience in coaching. This study refers to the concept or model of coaching efficacy used in research written by Kavassanu et al. This study seeks to broaden the literature by investigated the coach's perceptions of coaching effectiveness in the four dimensions of coaching efficacy.

Other research may expose the variables that can improve coaching effectiveness, presented by Santi Riana Dewi (2015) in JBBE, taking the following conclusions:

There is a positive direct effect of transformational leadership on coaching. This means that improvements in the quality of transformational leadership will lead to improvements in coaching. Thus transformational leadership has a role to increase coaching effectiveness.

It is explained that transformational leadership has a role to increase coaching effectiveness. Based on the results of this research, researcher want to know the contribution of other variables besides transformational leadership, that is whether authentic leadership also has a role in increasing coaching effectiveness measured by coaching efficacy.

Based on the previous research model and theoretical model that have been described previously, researcher described the frame of thought which serves as a mindset in solving this research problem. The framework of this research is illustrated in the form of diagrams shown in Figure 3.



Source: Gatling et al. (2013) and Kavussanu et al., 2008

After establishing the framework, the hypothesis is then formulated. According to Zikmund, Babin, Carr, & Griffin (2010), hypothesis is a formal statement that explains some empirically testable results and propositions. In its simplest form, hypothesis is an approximation. This study aims to examine the relationship between authentic leadership to coaching efficacy. To test the statement, the researcher made hypotheses that can be tested empirically. Hypotheses used in this research are as follows:

H0: There is no relationship between authentic leadership towards coaching efficacy.

H1: There is a relationship between authentic leadership towards coaching efficacy.

### 3. METHODOLOGY

#### 3.1 PARTICIPANTS

This research has two major research questions. One of them is to find out whether authentic leadership has relationship with business coaching efficacy or not. And the other question is to know whether business coach need to have authentic leadership characteristics to achieve coaching efficacy or not. Data collection was used quitionares with likert scale to be processed and answer the research questions. Participants for this study were randomly selected from the population of business coaches in Indonesia. The convenience sampling technique was used for sampling and sample results are 100 business coaches. The sample were mostly moslems (85 per cent) and male (63 per cent), with 39 per cent in the age range of 30–44 years old, and with a graduate degree (61 per cent).

#### 3.2 MEASUREMENTS

The method used in this study was quantitative method because the supporting data obtained from this research was in the form of quantitative data. "The quantitative method is a method which enable the findings using statistical procedures or other means of quantification (measurement)" (Sujarweni, 2015, p.39). Various studies based on method, objectives, type of investigation, setting of researcher, research setting, unit of analysis and execution time had been described (Indrawati, 2015, p.113). Characteristics of this study are excavated in Table 2. below:

**Table 2.** Research Characteristics

No	Characteristics of Research	Type
1	Based on method	Quantitative
2	Based on objectives	Descriptives
3	Based on type of investigation	Corellational
4	Based on researcher involvement	Does not interfere with data
5	Based on analysis units	Individual
6	Based on the time of implementation	Cross sectional

**Source:** Authors, 2018

Authentic leadership variable was measured by Gatling et al.'s (2013) 15-item Authentic Leadership Questionnaire(ALQ). Authentic Leadership Questionnaire measured authentic leadership with the four dimensions of self-awareness (4 items), relational transparency (5 items), balanced processing (3 items), and internalised moral perspective (3 items). Each items was asked the business coach to judge the frequency of authentic leadership applied with 5-point Likert scale, Likert scale used to measure Authentic Leadership is shown in the table below.

**Table 3.** Likert Scale for Independent Variable

Description	Score
Not at all	1
Once in a while	2
Sometimes	3
Fairly often	4
Frequently	5

**Source:** Authors, 2018

While the coaching efficacy variable was measured with the four dimensions of motivation (7 items), game strategy (7 items), technique (6 items), and character building (4 items). Each item was asked the business coach to judge how much confidence percieved with 5-point Likert scale and Likert scale used to measure coaching efficacy are as follows:

**Table 4.** Likert Scale for Dependent Variable

Description	Score
Not very confident	1
Not confident	2
Neutral	3
Confident	4
Very Confident	5

**Source:** Authors, 2018

### 3.3 DATA ANALYSIS

“Validity indicates the extent to which a measuring device can measure what it wants to measure, so the higher the validity of a measuring device, the more it shows what should be measured” (Indrawati, 2015, p.146). Validity test for variable in the study used product moment pearson correlation technique

with SPSS 20.0 software. According to Sugiyono (2014), the validity of an item can be known by comparing  $r$  arithmetic with  $r$  table, as described below:

- if the value of  $r$  arithmetic  $<$   $r$  table, then the item is declared invalid

- if the value of  $r$  arithmetic  $>$   $r$  table, then the item is declared valid

Before doing the test,  $r$  value were looked from the  $r$  table.  $R$  value of table can be seen in table  $r$  statistic, with value  $df = N-2$ . Adjusted with the number of respondents as many as 30 people ( $df = 30-2$ ,  $df = 28$ ) and  $\alpha = 0.05$ . Then, the  $r$  value of the table was 0.361. Validity test results can be seen in table 5.

**Table 5.** Validity Test

Authentic Leadership Variable			
Item Codes	$r$ arithmetic	$r$ table	Conclusion
AL 1	0,390	0,361	Valid
AL 2	0,537	0,361	Valid
AL 3	0,717	0,361	Valid
AL 4	0,638	0,361	Valid
AL 5	0,409	0,361	Valid
AL 6	0,469	0,361	Valid
AL 7	0,625	0,361	Valid
AL 8	0,473	0,361	Valid
AL 9	0,551	0,361	Valid

(cont.)

(cont.)

AL 10	0,682	0,361	Valid
AL 11	0,589	0,361	Valid
AL 12	0,694	0,361	Valid
AL 13	0,744	0,361	Valid
AL 14	0,676	0,361	Valid
AL 15	0,560	0,361	Valid
Coaching Efficacy Variable			
Item Codes	$r$ arithmetic	$r$ table	Conclusion
CE 1	0,855	0,361	Valid
CE 2	0,696	0,361	Valid
CE 3	0,853	0,361	Valid
CE 4	0,704	0,361	Valid
CE 5	0,838	0,361	Valid
CE 6	0,882	0,361	Valid
CE 7	0,867	0,361	Valid
CE 8	0,867	0,361	Valid
CE 9	0,920	0,361	Valid
CE 10	0,893	0,361	Valid

CE 11	0,751	0,361	Valid
CE 12	0,797	0,361	Valid
CE 13	0,872	0,361	Valid
CE 14	0,822	0,361	Valid
CE 15	0,776	0,361	Valid
CE 16	0,783	0,361	Valid
CE 17	0,779	0,361	Valid
CE 18	0,731	0,361	Valid
CE 19	0,790	0,361	Valid
CE 20	0,797	0,361	Valid
CE 21	0,798	0,361	Valid
CE 22	0,836	0,361	Valid
CE 23	0,835	0,361	Valid
CE 24	0,791	0,361	Valid

Source: Authors, 2018

In addition to testing the validity, also tested the reliability using Cronbach Alpha technique. Alpha-Cronbach coefficient of at least 0.70 indicates that the questionnaire has a fairly good level of reliability. Level of reliability based on Alpha coefficient value, can be seen in Table 6.

**Table 6.** Reliability Level Based on Alpha Coefficient Results

Alpha Coefficient	Reliability Level
< 0,60	Bad Reliability
0,60 - 0,70	Fair Reliability
0,70 - 0,80	Good Reliability
0,80 - 0,95	Very Good Reliability

Source: Zikmund et al., (2010, p.306)

Reliability is measured using SPSS 20.0 software. The result of measured reliability can be seen in Table 7.

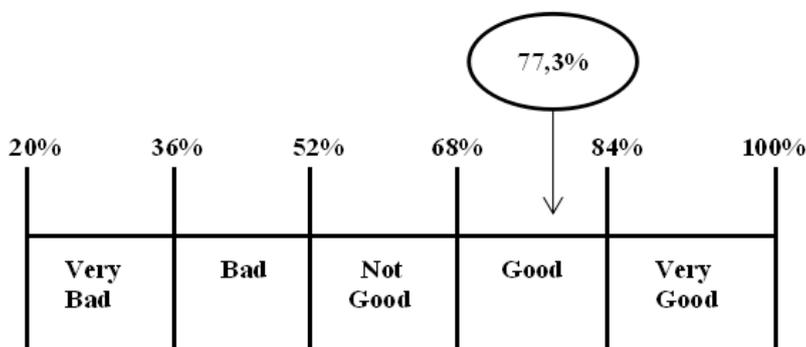
**Table 7.** Reliability Test

Variable	Alpha-Cronbach	N of Items	Description
Authentic Leadership	0,844	15	Very Good Reliability
Coaching Efficacy	0,978	24	Very Good Reliability

Source: Authors, 2018

The results in the table above show that both variables have excellent reliability. Furthermore, descriptive analysis was conducted to see business coach assessment on both variables, namely authentic leadership and coaching efficacy. The result of descriptive analysis showed the assessment percentage based on business coach's opinion who are respondent to authentic leadership variable is 77,3%. Such numbers were included into good criteria. The number for authentic leadership variable, if being drawn into continuum line, the result will be as follows:

**Figure 4.** Authentic Leadership Continuum Line

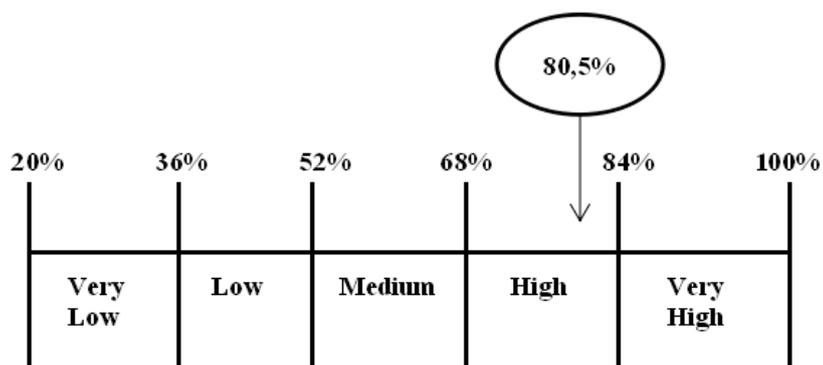


**Source:** Authors, 2018

Such number was obtained through respondents' response on 15 items statement on four dimensional authentic leadership variable. The response, if were to be sorted descending from the highest number of percentage starting from balanced processing dimension (80,2%), relational transparency dimension (77,1%), internalised moral perspective dimension (76,5%), and self-awareness dimension (76,2%).

Based on the opinion of the business coach who is the respondent for the coaching efficacy variable, obtained the percentage of assessment in the amount of 80.5%, the value was included in the high criteria. The value for the coaching efficacy variable, if being drawn into continuum line, the result will be as follows:

**Figure 5.** Coaching Efficacy Continuum Line



**Source:** Authors, 2018

The value was obtained through respondents' response on 24 items statement on four dimensions of coaching efficacy variable. Response of respondents to four dimensions of coaching efficacy, if were to be sorted descending from the highest number of percentage starting from character building dimension (84.7%), game strategy dimension (80.3%), motivation dimension (79.5%), and technique dimension (79.3 %).

Cross tabulation in this research was used to analyze the relationship of authentic leadership to coaching efficacy and both variables were checked thoroughly and simultaneously. Cross tabulation showed the frequency distribution and distribution in the percentage of the two variables studied. The

following is the distribution percentage table for authentic leadership variable and coaching efficacy variable.

**Table 8.** Percentage of Authentic Leadership Distribution with Coaching Efficacy

Coaching Efficacy (Dependent)	Authentic Leadership (Independent)										Total	
	TSS		S		KK		LS		STTS			
	f	%	f	%	f	%	f	%	f	%	f	%
STPD	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
TPD	0	0%	0	0%	0	0%	1	1%	0	0%	1	1%
N	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
PD	0	0%	0	0%	7	7%	1	1%	0	0%	8	8%
SPD	0	0%	4	4%	40	40%	47	47%	0	0%	91	91%
<b>Jumlah</b>	<b>0</b>	<b>0%</b>	<b>4</b>	<b>4%</b>	<b>47</b>	<b>47%</b>	<b>49</b>	<b>49%</b>	<b>0</b>	<b>0%</b>	<b>100</b>	<b>100%</b>

Source: Authors, 2018

Description:

TSS : Not at all	STPD : Not Very Confident
S : Once a while	TPD : Not Confident
KK : Sometimes	N : Neutral
LS : Fairly Often	PD : Confident
STTS : Frequently if not always	SPD : Very Confident

Table 8 shows that 91 respondents stated that they were very confident in coaching efficacy and 49 respondents stated fairly often in authentic leadership applied. In addition, cross-tabulation results showed a great sense of confidence in coaching efficacy perceived by business coaches to be greater for respondents who fairly often applied authentic leadership compared with once a while in implemented authentic leadership. This was demonstrated by the comparison of the results obtained, the comparison between 47% of all respondents (business coach) who applied authentic leadership quite often and only 4% of all respondents (business coach) who applied authentic leadership once a while who felt very confident with coaching efficacy perceived.

Correlation analysis aims to determine whether between two or more variables there is a relationship, and if there is a relationship, how the relationship direction and how big the relationship (Taniredja and Mustafidah, 2012, p.95). Technique of corelation that used in this paper is Spearman Rank correlation. Spearman Rank correlation was used to test the hypothesis of authentic leadership relationship to coaching efficacy. Here is the hypotheses tested in this study:

**Hypotheses:**

H0: There is no relationship between authentic leadership towards coaching efficacy.

H1: There is a relationship between authentic leadership towards coaching efficacy.

**Hypothesis Testing Criteria:**

1.  $\rho (r_s) = 0$ , then  $H_0$  is accepted and  $H_1$  is rejected.

2.  $\rho (r_s) \neq 0$ , then  $H_1$  is accepted.

Hypothesis testing was done with the help of SPSS 20.0 software. The results can be seen in Figure 6.

**Figure 6.** Spearman Rank Correlation Results

			Authentic_Leadership	Keberhasilan_Coaching
Spearman's rho	Authentic_Leadership	Correlation Coefficient	1.000	.484**
		Sig. (2-tailed)	.	.000
		N	100	100
	Keberhasilan_Coaching	Correlation Coefficient	.484**	1.000
		Sig. (2-tailed)	.000	.
		N	100	100

Source: SPSS 20.0

Based on Figure 6, Spearman Rank correlation coefficient value (0.484)  $\neq 0$ , then  $H_1$  was accepted. Thus, there was a relationship between authentic leadership towards coaching efficacy. Because the result of correlation coefficient value obtained positive which indicate the direction of direct relationship. This means, the higher the perception of business coach towards authentic leadership, the higher the coaching efficacy perceived by the business coach. The result of the correlation coefficient was then interpreted to see as strongly as the relationship. Interpretation of the correlation coefficient results in accordance with the table below.

**Table 9.** Interpretation of Correlation Coefficients

Coefficient Interval	Relationship Level
0,00 - 0,199	Very Low
0.20 - 0.399	Low
0.40 - 0.599	Moderate
0.60 - 0.799	Strong
0.80 - 1,000	Very Strong

Source: Authors, 2018

Based on table 9, the result of correlation coefficient obtained is 0.484 has a moderate level of relationship. Thus, the level of authentic leadership relationship to coaching efficacy is moderate.

After conducting spearman rank correlation analysis, analysis continued by calculating the coefficient of determination. The calculation coefficient of determination as follows:

$$KD = (r_s)^2 \times 100\%$$

$$KD = (0,484)^2 \times 100\%$$

$$KD = 0,234 \times 100\%$$

$$KD = 23,4\%$$

Based on the above calculation, the result of determination coefficient is 23,4%. This figure shows the contribution of authentic leadership to coaching efficacy of 23,4%, the rest equal to 76,6% contribution from other variable which is not included and discussed in this research. The percentage results also show that authentic leadership variables can have little effect on coaching efficacy. However, this is only a mere prediction, because different tests are necessary to know whether there is an influence or not.

#### 4. RESULTS AND DISCUSSION

Results of descriptive analysis showed the percentage of assessment based on business coach opinion. The assessment of the respondent for authentic leadership variable was 77.3%, the value was included into the good criteria. Response of the respondents to the four dimensions of authentic leadership, when sorted from the largest percentage of the value starting from the dimension of balanced processing (80.2%), then the relational transparency dimension (77.1%), then internalised moral perspective dimension (76.5%), and self-awareness dimension (76.2%).

Responses of respondents to balanced processing were good which indicated that respondents' attitude (business coach) in analyzing data objectively regardless of their personal point of view before making good decisions. Respondents' responses to the relational transparency were good, indicated that the respondent (business coach) is open in giving information, expressing thoughts, and displaying emotions according to the circumstances well. Respondents' responses to internalised moral perspective were good, indicated that the respondent (business coach) involves a moral standards to achieve good behavioral integrity. Respondents' responses to the self-awareness were good, indicated that the respondent (business coach) is aware of one's strengths and weaknesses and behaves as well.

Based on the opinion of the business coach who was the respondent for the coaching efficacy variable, obtained the percentage of assessment is 80.5%, the value was included into the high criteria. Response of respondents to four dimensions of coaching efficacy, when sorted from the largest percentage value starting from the character building (84.7%), game strategy (80.3%), motivation (79.5%), and technique (79.3 %).

Respondents' responses to character building were very high, indicated that the respondents (business coach) may be very effective in their ability to influence self-development of coachee and positive attitudes toward the business. Respondents' responses to the game strategy dimension were high, indicated that the respondent (business coach) may be effective in his ability to coach and lead coachee to achieve successful performance. Respondents' responses to motivation dimensions were high, indicated that the respondent (business coach) may be effective in his ability to influence psychological and coachee skills. Respondents' responses to technique dimensions were high, indicated that respondents (business coach) may be effective in their ability to provide instruction and diagnosis.

Based on the results of cross-tabulation analysis, indicating a relationship, the more often the business coach implements the authentic leadership in the coaching session, the greater the confidence in the

coaching efficacy perceived by the business coach. However, the relationship in the results of the analysis on cross tabulation has not been able to prove the hypothesis in this study.

Hypothesis in this research, that authentic leadership have relationship towards coaching efficacy. To prove the hypothesis, the hypothesis that has been described in section 3.3 Data Analysis was tested. Correlation analysis results showed that there is a positive relationship between authentic leadership towards coaching efficacy. This is evidenced by the result of correlation value of +0.484 which indicates a relationship with the direction of a positive relationship and the level of authentic leadership relationship to coaching efficacy is moderate.

In addition to proving the hypothesis, the results of correlation analysis also answered the research question which is the purpose of this study. The result of analysis showing the relationship between authentic leadership to coaching efficacy in business coaching session has answered the question in this research. This study also aimed to determine whether a business coach needs to have authentic leadership characteristics to achieve business coaching efficacy. Based on correlation analysis, a business coach needs to have authentic leadership characteristics, but does not have to apply authentic leadership to achieve coaching efficacy because of the great contribution of authentic leadership to the efficacy of coaching is still small, that is equal to 23,4%. In addition, there are still 76.6% contributions from other variables that were not discussed in this study. So, the next researcher is expected to measure the contribution of authentic leadership to other variables that may be able to contribute more.

The results of this study supported previous research written by Gatling, et al. (2013) indicating a significant relationship between authentic leadership and coaching effectiveness. In contrast to previous research, this study was focused only on authentic leadership relationships on coaching efficacy. The efficacy of coaching is one of the variables that can measure the effectiveness of coaching (coaching effectiveness).

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 CONCLUSIONS**

After analyzing the relationship of authentic leadership to coaching efficacy by using descriptive analysis, cross tabulation, and correlation analysis. The following conclusion could be drawn:

1. The business coaches' perception of the authentic leadership variable was good and the perception of the coaching efficacy variable was high. Thus, it can be concluded that there is no bad or low perception assessed by business coaches against the variables of authentic leadership and coaching efficacy.
2. There was a positive relationship between authentic leadership towards coaching efficacy which is 0.484. It indicated the direction of positive relationship and belonging to the moderate category. The positive relationship means that the higher the perception of business coaches toward the authentic leadership applied, the higher the coaching efficacy rate perceived by the business coaches. Authentic leadership contributes 23.4% to coaching efficacy. The calculation results of these contributions, can be a prediction that authentic leadership can have little effect on business coaching efficacy.

## 5.2 RECOMMENDATIONS

Suggestions given by researcher for further research, as follows:

1. The next researcher is expected to investigate further about the influence of authentic leadership on the efficacy of business coaching, because this research has proved the relationship between the two variables but cannot test the effect because of the limitation of the research.
2. The next researcher is expected to do research with discussion about business coaching, because currently, research on business coaching in Indonesia is still very rare.

This study shows that business coaches perception toward authentic leadership has a value of 77.3% which belongs to both criteria and business coaches' perceptions of coaching efficacy rate of 80.5%. Business coaches are expected to increase self-awareness during business coaching sessions. This is because the statement that the attitude of business coaches in the coaching session, described their abilities to have the lowest value on the authentic leadership variables. So, business coaches are also expected to apply authentic leadership well, to arise a sense of trust between coach and coachee.

In addition, business coaches are expected to increase confidence in their ability to give instructions and their diagnostic abilities. This is because the statement that was made by the coach who felt confident in detecting skill errors in coachee has the lowest value in the coaching efficacy variable. Business coaches are also expected to increase their confidence in coaching efficacy, so business coaching sessions may become more effective.

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# COMPARATIVE PERFORMANCE ANALYSIS OF TELECOMMUNICATION COMPANY IN INDONESIA USING ECONOMIC VALUE ADDED (EVA) AND VALUE ADDED (MVA) METHOD IN CASE STUDY AT PT. TELKOM, PT. INDOSAT AND PT. XL FOR THE YEAR 2011 - 2016

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## Abstract

*EVA is a financial performance analysis that measures the company's ability to generate added value for investors, MVA (Market Value Added) is the difference between the market value and the capital invested by the investor. This study aims to assess the financial performance and to determine the difference in financial performance among Telecommunication Companies Go Public on the Jakarta Stock Exchange by using the concept of EVA and MVA for the period 2011 to 2016.*

*The research method used is descriptive quantitative method. The sample is taken by purposive sampling technique with criteria: (1) Telecommunication companies Go public. (2) Telecommunication companies having complete Annual Report and Financial Report data for five consecutive years from 2011-2016.*

*The conclusion from the research that during the period of 6 years the value of EVA for PT. Telkom is positive while for PT. Indosat and XL Axiata have positive and negative fluctuating EVA values. Value of Market Value Added based on research result has a positive MVA value, indicating that the three companies have succeeded in creating substantial wealth for shareholders and companies. The results of data analysis performed statistically shows that there are significant differences in financial performance of three companies by using EVA and MVA Method.*

*Advice for the company that the method of Economic Value Added and Market Value Added can be used to describe the development of the company's financial performance and to decide the business strategy in the coming year.*

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**Key Words:** *Economic Value Added (EVA), Market Value Added (MVA), Economic Performance*

## 1. INTRODUCTION

The performance of the telecommunication companies registered in BEI, seen from their income has significantly increased, except PT. Bakri Telecom which had no profit during 2015 to 2016. Nevertheless,

the increasing net profit of the company does not merely indicate that the company itself has successfully created additional value, as shown in Figure 1.2 that the REO of some companies marks negative value.

To be mentioned in this research, the calculation of the company performance mentioned in the financial report rarely used the calculation of companies' added value. Therefore, it is interesting to investigate and analyze the telecommunication company's financial performance seen from the company's ability to create additional values.

The measurement of the financial performance based on the financial report is usually done by using financial ratio analysis. The accounting using ratio is easy to be done, however there is a limit to the result which may not be inaccurate because it only uses the historical financial data found in the report without considering the market value of the assets. The calculation which only analyze the financial report has a main weakness which is neglecting the cost of capital, thus it is difficult to decide if the company has successfully create the value or not. To overcome the problem, a new performance measure has been developed to add the value, so that the company will not only become the wealth creator, but also the value creator.

The value-based financial measurement which is mentioned in some articles or research is the Economic value Added (EVA). By applying the EVA concept, the additional value derived from the company's operational activity can be calculated. EVA can simply be defined as the reduction of the total cost of capital to Net Operating Profit after Tax or NOPAT). The interesting concept of EVA is that the cost of capital is taken into account. If EVA is positive, it means that the company has created new value and wealth; while if it is negative, then the value is decreasing.

EVA is related to the creation of the stock value in the stock market. EVA is also a measuring tool in deciding whether the company is successful or not in creating additional value to the share holders. EVA is a real economic measuring tool to decide if the company's goals will be achieved. Van Horne (2002: 214) defines Economic Value Added as follows: *"EVA is the residual income a company earns after capital costs are deducted. More specifically, it is operating profit minus the required dollar amount return for the capital employed."*

Fajarwati (2010) in his research on Economic Value Added (EVA), Market Value Added (MVA) and Earning Per Share (EPS) Analysis on Stock Returns at Manufacturing Companies in Indonesia Stock Exchange concludes that Economic Value Added (EVA) has no significant effect on stock return, while Faitullah (2014) in his research on EPS, ROA, ROE, EVA and MVA Influence Analysis on Stock Price at Pharmaceutical Subsector Companies Listed on Indonesia Stock Exchange concludes that EVA and MVA together significantly influence the stock prices.

The second method is the concept of Market Value Added (MVA). MVA can show the performance of a manager in performing its functions, the most important thing is to increase the value of capital that has been entrusted by the investors to the management. MVA is an external indicator that measures how the company has increased or decreased the market value of the cash invested in the company by the shareholders.

MVA is the difference between the value of capital invested in the company over time from capital investments, loans, retained earnings and money that can be taken now or equal to the difference between the book value and the market value of the firm. The MVA is currently considered to be a good guide to assessing the management of public companies whether good or not because MVA answers

the important issues that the investors need or the ability of the management of public companies to increase their wealth. (Young & O 'Byrne, 2001: 47).

## 2. LITERATURE REVIEW

The evaluation on performance is essentials for the company, especially in improvement effort so that the company can compete with other companies. Financial performance is an analysis on the company's performance in implementing the financial rules properly and correctly (Fahmi, 2015: 239).

According tp Helfert in Zahara (2011: 44), the evaluation on the company performance and business unit are devided into three categories, those are:

- a. *Earning Measures, the company performance is calculated based on the profit accounting. The calculation includes Earning Per Share (EPS), Return On Investment (ROI), Return On Net Assets (RONA), Return On Capital Employed (ROCE), and Return On Equity (ROE).*
- b. *Cash Flow Measures, the company performance is calculated base on the operating cash flow. This calculation includes free cash flow, Cash Flow Return On Investment (CFROI), cash flow Return On Gross Investment (ROGI), Total Shareholder Return (TSR), and Total Business Return (TBR).*
- c. *Values Measures, the company performance is calculated based value based management. The calculation include Economic Value Added (EVA), Market Value Added (MVA), Cash Value Added (CVA), and ShareHolder Value (SHV).*

### 2.1 ECONOMIC VALUE ADDED

Kamaludin (2012:60) states that *Economic Value Added (EVA)* is an alternative approach in profitability measurement which can measure the managerial performance in a certain period.

EVA provides benchmarks on how far a company has given the added value to the share holder within a year or certain period. EVA can also be utilized in division level or corporate level, therefore EVA can be the basic for giving compensation or evaluation to the managers in managing the company.

EVA is the difference between net operating profit after tax (NOPAT) and capital expense for the period (i.e. the product of the capital cost of the company and the capital invested at the beginning of the period) (Keown, 2010: 44).

The capital expenditure is the capital invested by the company at the beginning of the period multiplied by the weighted average capital cost of the firm. The value is subtracted from the profit after tax (NOPAT) to estimate EVA.

EVA serves as a "constant reminder" for managers that they have not really done a good job until they generate a return that can cover all their capital costs. EVA also helps managers to understand the concept of capital costs. Positive EVAs generally indicate value creation for shareholders while negative EVA indicates value destruction (Van Horne and Wachowicz, 2007: 142).

To see whether or not the value creation of EVA results in a company, according to Young and O'Byrne (2001: 32), the interpretation of EVA values can be categorized as follows:

- 1)  $EVA > 0$ ; it means that there is an addition to the commpany's value.
- 2)  $EVA < 0$ ; it means that there is no additional value to the company.

- 3)  $EVA = 0$ ; it means that the company is in balance that all the profit has been used to pay the obligation to the creditor and share holders.

If the value of EVA is positive, after-tax operating profit exceeds the cost of capital needed to generate the profit and management actions add value to shareholders (Brigham and Houston, 2010: 112). According to Young and O'Byrne (2001: 32), if the EVA is negative, it indicates that the company's value management goes down and can not meet the demands of investors, but it actually lowers its wealth.

## 2.2 MARKET VALUE ADDED

MVA can be defined as the difference between the market value of a firm's equity and the book value as in the balance sheet, the market value is calculated by multiplying the share price by the number of shares in circulation (Brigham and Houston, 2010: 111).

The main target or goal of any company is to maximize wealth for shareholders. With this MVA approach, the company can perform the level of wealth or profits that will be obtained by the company and will be submitted to the shareholders.

According to Young and O'Byrne (2001: 27), the results of MVA calculations can be interpreted as follows:

- i.  $MVA > 0$ , is positive; the company managed to increase the value of capital invested by the funder.
- ii.  $MVA < 0$ , is negative; the company did not succeed in increasing the capital invested by the funder.

If the market value of the firm is greater than the capital, then the company has a positive MVA, which means that the manager has done the main task of creating value. If the value of MVA is negative, in which the capital is greater than the value of the firm, it means that the manager is not able to perform his/her duties properly.

## 3. HYPOTHESIS

1. There are significant differences of the financial performance among PT. Telkom, PT. Indosat, and PT. XL Axiata using EVA.
2. There are significant differences of the financial performance among PT. Telkom, PT. Indosat, and PT. XL Axiata using MVA.

The analysis applies one-way ANOVA test which is also called as F test in order to test the hypothesis. One way ANOVA is used to find out if the are different average values of the two unrelated samples.

## 4. METHODOLOGY

### Research Population and Sample

This research applies nonprobability design, more specifically the purposive sampling. The characteristics for this sampling technique are:

1. The telecommunication companies that go-public.
2. The telecommunication companies that have the Annual Reports and Financial Reports data for five consecutive years from 2011 – 2016.

3. The telecommunication companies that have positive income during 2011 – 2016.

### **Data Types and Sources**

The data used in this research are secondary data which are used in annual financial reports of three telecommunication companies: PT. Telkom, PT. Indosat, and PT. XL Axiata in the period of 2011 – 2016.

### **Operational Definition and Variable Measurement**

#### **Economic Value Added**

EVA is an estimate of actual economic profit of the firm in the current year. EVA shows residual profit after all capital costs including deductible equity capital (Brigham 2001). EVA calculation consists of several stages which then each component will be described as follows:

#### **Calculating Cost of Capital**

In the calculation of EVA, the component of capital cost used is the cost of debt capital (cost of debt) and the cost of capital of common stock (cost of equity).

#### **Cost of Debt**

In this study, the cost of debt used is the cost of debt after tax, because in calculating WACC it will maximize the value of the company's stock and stock price depends on the cash flow after tax (Brigham and Houston, 2011: 9). The cost is used to calculate the weighted average cost of capital, and is calculated from the interest rate of the debt, less the tax savings resulting from interest that is tax deductible (Brigham and Houston, 2011: 8).

According to Keown et.al (2010: 6), the calculation of after tax expense can be obtained by using the following formula:

$$\text{Cost of Debt after Tax Cost (K}_i\text{)} = K_d (1-T)$$

In which:

K<sub>i</sub>: Cost of debt after tax

K<sub>d</sub>: Cost of debt before tax

Q: Tax rates

#### **Cost of Equity**

There are several methods to calculate the cost of equity. According to Keown et.al (2010: 20,) to perform the calculation of the cost of equity consists of several methods, namely:

#### **Dividend Growth Model**

The cost of equity can be calculated using the following formula:

$$K_{cs} = \frac{D_1}{P_{cs}} + g$$

In which:

D1: Dividends expected for next year

Pcs: Current price of the company's ordinary shares

g: Annual dividend growth rate

### **Capital Asset Pricing Model (CAPM)**

One approach to estimating the usual cost of equity is to use the Capital Assets Pricing Model (CAPM). The CAPM model, according to Keown et al. (2005: 412), can be formulated as follows:

$$K_c = K_{rf} + \beta(K_m - K_{rf})$$

In which:

Kc = Requested refund rate

Krf = Risk-free rate of return

$\beta$  = Stock Beta coefficient

Km = expected rate of return from the market

### **Calculating Net Operating Profit After Tax (NOPAT)**

According to Brigham and Ehrhardt (2010: 60), NOPAT calculations are as follows:

$$\text{NOPAT} = \text{EBIT} (1 - \text{Tax Rate})$$

Earnings Before Interest and Taxes (EBIT) is obtained from cost of goods sold after deducted by operating expenses incurred.

### **Weighted Average Cost of Capital / WACC**

According to Brigham and Houston (2009: 484), WACC is the weighted average of the components of the cost of debt, preferred stock, and ordinary equities. WACC or the weighted average capital cost of the firm is a function of the individual cost of capital and the arrangement of the structure i.e. the percentage of funds in debt and common equity.

The WACC calculation is as follows:

$$\text{WACC} = w_d k_d (1 - T_c) + w_p k_p + w_c k_c$$

In which:

WACC = average capital weighted cost

kd = cost of debt

kp = cost of preferred stock

kc = cost of equity

Tc = corporate tax

wp = preferred stock

wd = weight given to debt

wc = weight assigned to equity

### **Calculating EVA**

According to Keown (2005:445), EVA calculation can be done by using the following formula:

$$EVA = NOPAT - (WACC \times \text{invested capital})$$

The final result if the EVA is to measure the company's operational contribution for the current periode of the company's value.

### **Calculating Market Value Added**

According to Brigham and Houston (2009: 68), the model used to perform MVA calculations is as follows:

$$\begin{aligned} MVA &= \text{Market value of stocks} - \text{Equity capital provided by shareholders} \\ &= (\text{Outstanding shares}) (\text{Stock price}) - \text{Total equity of common stock} \end{aligned}$$

### **Hypothesis**

The criteria used in this F test are as follows:

$H_0$  is accepted if  $F \text{ test} \leq F \text{ table}$

$H_0$  is rejected if  $F \text{ test} > F \text{ table}$

The formulation of the hypothesis to determine the differences in this research are as follows:

- a. Financial Performance based on EVA method

$$H_{0.1}: \mu_1 = \mu_2 = \mu_3$$

There is no significant difference among the financial performances of PT. Telkom, PT. Indosat, and PT. XL Axiata using EVA method.

$H_{1.1}$ : there are at least two unequal mean values ( $\mu$ )

There are differences in financial performance between PT. Telkom, PT. Indosat and PT. XL Axiata by using EVA method.

- b. Financial Performance based on MVA method

H<sub>0.2</sub>:  $\mu_1 = \mu_2 = \mu_3$

There is no difference in financial performance between PT. Telkom, PT. Indosat and PT. XL Axiata by using MVA method.

H<sub>1.2</sub>: there are at least two unequal mean values ( $\mu$ )

There are differences in financial performance between PT. Telkom, PT. Indosat and PT. XL Axiata by using MVA method.

## 5. RESULT AND DISCUSSION

### EVA Calculation

EVA is the difference in net after-tax net income (NOPAT) with the capital cost invested by the company. After knowing the results of the calculation of components that exist in the EVA, then the value of EVA can be calculated.

The results of EVA calculations PT. Telkom, PT. Indosat and PT. XL Axiata from 2011 to 2016 are described in the following table:

**Table 1 EVA Calculation of PT. Telkom (in billion rupiah)**

Tahun	NOPAT	WACC	Invested Capital	EVA
2011	17.076	4,20%	80.865	13.679
2012	18.470	8,72%	87.262	10.860
2013	20.671	12,11%	99.514	8.617
2014	20.990	10,93%	109.109	9.063
2015	24.105	8,00%	130.760	13.645
2016	29.447	8,06%	139.849	18.180

**Table 2 EVA Calculation of PT. Indosat (in billion rupiah)**

Tahun	NOPAT	WACC	Invested Capital	EVA
2011	2.330	5,6%	40.220	83
2012	1.701	8,7%	44.209	(2.130)
2013	1.064	8,2%	41.026	(2.321)
2014	1.355	9,3%	32.107	(1.629)
2015	2.029	6,2%	35.336	(162)
2016	2.920	6,4%	31.752	882

**Table 3 EVA Calculation of PT. XL Axiata (in billion rupiah)**

Tahun	NOPAT	WACC	Invested Capital	EVA
2011	3.284	6,29%	22.443	1.872
2012	3.262	2,80%	26.716	2.513
2013	2.176	5,43%	32.347	420
2014	1.314	6,21%	48.233	(1.683)
2015	944	6,05%	43.096	(1.662)
2016	10	3,93%	40.419	(1.578)

### MVA Calculation

The MVA calculation results of PT. Telkom, PT. Indosat dan PT. XL Axiata from 2011 to 2016 is shown in Table 4:

**Table 4 MVA Calculation (in billion rupiah)**

Company	2011	2012	2013	2014	2015	2016
PT. Telkom	103,336	139,577	167,733	234,453	254,969	335,402
PT. Indosat	24,746	26,670	19,528	28,959	36,675	39,958
PT. XL Axiata	33,582	41,970	37,010	43,033	32,833	17,957

### Hypothesis

The F test results using one-way ANOVA are presented on Table 5 and Table 6 as follows:

**Table 5 One Way ANOVA Test EVA**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	6,74E+08	2	336.916.258,37267200	55,87228135	0,00000011	3,68232034
Within Groups	90451719	15	6.030.114,57975451			
Total	7,64E+08	17				

Based on Table 5, F test is 55.8, while F table is 3.68232. Since the F test is bigger that F table, therefore  $H_0$  is rejected. It means that there are significant differences among the financial performance of PT. Telkom, PT. Indosat, and PT. XL Axiata using EVA.

**Table 6 One Way ANOVA Test MVA**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	121.180.390.531	2	60.590.195.265	24,51592	0,0000187	3,68232
Within Groups	37.071.955.275	15	2.471.463.685			
Total	158.252.345.805	17				

Based on Table 6, F test is 24.515, while F table is 3.68232. Since the F test is bigger than F table, therefore  $H_0$  is rejected. It means that there are significant differences among the financial performance of PT. Telkom, PT. Indosat, and PT. XL Axiata using MVA.

#### **Comparison of Financial Performance by using EVA Method**

Based on Table 1, it is known that over a five year period the value of EVA for PT. Telkom is fluctuating and positive, there is a decrease in the value of EVA in the period of 2012 and 2013, and began to increase again in the period 2014, 2015 and 2016. The decrease in the value of EVA in 2012 is due to several things, among others capital value of weighted average capital (WACC) for the year 2012 and 2013 increased from the previous period, with WACC values of 4.52% and 3.39% respectively and then again declined for the period 2014 and 2015 with the value of decreasing succession of: 1.18%, 2.93% and again rose for the year 2016 by 0.06%. In addition to the above mentioned impairment of EVA in 2013 is likely caused because the company did a stock split in September 2013; it implies that the EVA value has decreased again by 21% from EVA value the previous year. The EVA value starts to increase again in the period 2014 to 2016. In 2014 the company set a new business focus with 3 major programs called as the masterpiece of Telkom 2014 with the program: revenue double digit growth telkomsel, Indonesia digital network and international expansion.

EVA Value of PT. Indosat has a negative value starting in 2012 until 2015, it shows that the period of 2012 to 2015 PT. Indosat was unable to create added value for the company. The cost of capital charged by the company tends to be high while the value of NOPAT produced is low, so it is not able to cover the cost of capital that is charged. In addition, the negative EVA indicates that the company can not meet the demands of investors. Based on the results of operational analysis, that profit PT. Indosat in the end of 2012 recorded a profit that dropped dramatically 54% of the profit in 2011. In 2013, the income of PT. Indosat rose 6% from a year earlier but operating expenses rose 16% from a year earlier. Then respectively in 2013 and 2014 EBITDA decreased 2% and 3% from the previous year, which is Rp. 10,376 billion in 2013 and Rp. 10,033 billion in 2014, this is due to the increase in depreciation and amortization. Throughout 2013 to 2015 PT. Indosat posted a negative profit.

PT. XL Axiata has positive EVA values for three consecutive years which is during the period 2011 to 2013, the value of EVA tend to decrease from 2013 until 2016 and EVA penetrate the negative value from 2014 until 2016. Based on operational analysis that profit / loss PT. XL Axiata tends to decline from 2012 to 2015, and began to increase in the period of 2016. In the period ending 2014 the company recorded revenue that increased by 10% from the previous period but, the increase in operating expenses exceeded the increase in revenue, which rose by 18% from a year earlier, which caused the company to record a loss of Rp. 804 billion in 2014. This indicates that the Company has not succeeded in creating added value. The decrease of NOPAT value and the increase of value of Invested Capital cause the value of EVA tends to decrease.

#### **Comparison of Financial Performance by using MVA Method**

Based on Table 4 that the value of MVA for PT. Telkom has a positive value that tends to increase every year. A positive MVA value means the total value of market value of PT. Telkom is above invested capital and has created value for shareholders. With the greater the value of MVA, it is expected that the market's positive expectation towards PT Telkom will be even greater. MVA is an external measure to see whether the company's performance is able to create shareholder value or not.

MVA data for PT. Indosat shows the fluctuation of MVA value over a period of 6 years with a tendency to rise and decrease in the year 2013. Then the MVA value rose up in the period 2014, 2015 and 2016.

As for PT. XL Axiata throughout 6 years from 2011 to 2016 has a fluctuating MVA value that tends to decline, except in 2012 and 2014 had risen. PT. Indosat and PT. XL Axiata has positive MVA values, meaning that the total value of the company's market value is above the invested capital and has created value for shareholders.

### **Financial Performance Differences Analysis based on measurement result using EVA and MVA method**

Based on the research results obtained EVA value for PT. Telkom is positive during the study period, while EVA calculation results for PT. Indosat and PT. XL Axiata had positive and negative fluctuating values during the study period. The result of EVA value calculation is influenced by parameters: NOPAT, Invested Capital, and WACC. The NOPAT value is influenced by the fluctuation of the EBIT value generated from the company's operating net profit value over a one-year period. The value of invested capital is affected by the amount of the Company's long-term debt and the amount of shareholder equity. While the value of WACC is influenced by the value of cost of debt and cost of equity of the company.

During the period 2011 to 2016, PT. Indosat and PT. XL Axiata still has negative EVA values, it makes consideration for the company to continue to increase its revenue growth, which previously only strengthened in the mobile product stream, to immediately seek new opportunities in non-mobile products—in this case, data and internet or other products that is growing.

## **6. CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 CONCLUSION**

The research finds out that there are significant financial performance differences using EVA and MVA model as shown in the previous analysis. The results of the research on financial performance differences using EVA and MVA methods as resulted in the analysis earlier show that by using the approach of EVA and MVA and also Independent Sample one way anova test obtained different results among the three companies. The results of the study are as follows:

1. The financial performance of PT. Telkom, PT. Indosat and PT. XL Axiata based on EVA in the period 2011 - 2016 shows that the EVA of PT. Telkom has a positive value during the measurement period, while PT. Indosat and PT. XL Axiata has positive and negative fluctuating EVA values during the measurement period. The financial performance based on MVA values during the measurement period indicates that all three companies have positive MVA values.
2. There is differences in performance between PT. Telkom, PT. Indosat and PT. XL Axiata based on the valuation using EVA.

There is differences in performance between PT. Telkom, PT. Indosat and PT. XL Axiata based on assessment using MVA.

### **6.2 RECOMMENDATION**

1. For the recent and future investors:

The positive values of EVA and MVA can be used as a benchmark of investment in a company because it reflects that the company is able to give higher return and to improve the investors' wealthiness which makes it as an insurance that the company will be able to fulfill the obligation in the future.

2. For the company:
  - a. With the positive EVA and MVA that PT. Telkom, Tbk has to maintain its financial performance, so that it can gain higher values in the future, which is done by maintaining the profit level every year through continuous innovations in order to get good responses from the customers.
  - b. For those companies having negative EVA and MVA, they need to improve the financial performance in the next periods. They have to start searching for opportunities that offer innovative products as new revenues, especially in responding to the development of the data which are nearly significant increasing.
3. For other parties and future researchers:
  - a. For other parties who will conduct further research in order to describe the wider condition, it is necessary to analyze the macro economic condition by adding variables affecting the financial performance of a company, among others: inflation, economic growth rate, security, socio-political and others.

For the next researcher, a more complete research such as by adding performance measuring tools and expanding the sample number of companies should be done, so that there will be more samples and more specific conclusions to be drawn which can better illustrate the growth rate of corporate profits.

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# THE EFFECT OF PRICE, PRODUCT QUALITY, PROMOTION, SOCIAL FACTOR, BRAND IMAGE ON PURCHASE DECISION PROCESS OF LOOP PRODUCT ON YOUTH SEGMENT (CASE STUDY OF PT TELEKOMUNIKASI SELULAR)

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## Abstract

*This study aims to determine the influence of price, product quality, promotion, social factor, and brand image on purchase decision of Loop products either partially or simultaneously. This research was conducted with quantitative research using explanative method. Sample method in this research used non-probability sampling with purposive sampling technique. The sample in this research is Telkomsel Loop customer located in Jabodetabek area as many as 400 respondents. The data in this study was obtained from the spread of questionnaires using google docs. From 400 questionnaires distributed 377 questionnaires that can be used to process statistically. Data analysis in this research used multiple linear regression analysis with SPSS program. The results of this study found that price, product quality, promotion, social factor, and brand image have significant effect on purchase decision of Loop product either partially or simultaneously. Then the results of this study also showed that the brand image is the most dominant variable influence on customer purchasing decisions to Loop telkomsel products.*

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**Key Words:** Price, Product Quality, Promotion, Social Factor, Brand Image on Purchase Decision  
**JEL Classification:**

## 1. INTRODUCTION

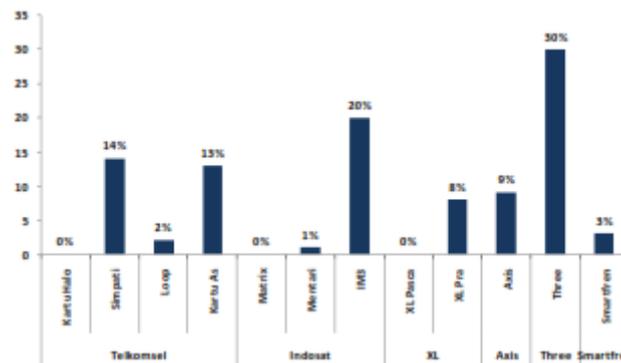
Based on data from the Central Bureau of Statistics (BPS) is known that the number of mobile phone subscribers in 2010 was 211,200,297 users, in 2011 there was 49,805,619 users, in 2012 there was 281,963,665 users, in 2013 there was 313,226,914 users, in 2014 there was 325,582,891 users, and in 2015 there was 338,948,340 users. Thus, the average growth of mobile phone subscribers in Indonesia reaches 9% per year.

Telkomsel as one of the largest cellular operators in Indonesia with 178 million subscribers and more than 146 thousand BTS ([www.telkomsel.com](http://www.telkomsel.com), accessed in December 2017) needs to keep its customers on Telkomsel's service, and also to increase its product sales to acquire new customers. The diversity of customer needs enables industry operators to engage in creative and modern marketing strategies while still oriented to increased sales volume. Therefore, in a competitive market, service providers are expected to compete with the competitive price and excellent service quality.

The number of operators in Indonesia makes the customers do serious consideration in deciding the purchase of the service provider. Thus, service providers must formulate their products with

customer-oriented fulfillment, so that the company can become a leader in the midst of intense market competition. This condition also certainly can provide convenience for customers to decide which service provider they will use. This is also experienced by PT Telkom, with many competitors who continue to develop its products to meet the needs of the community, Telkomsel also launched a new product with the youth market segment, Telkomsel Loop.

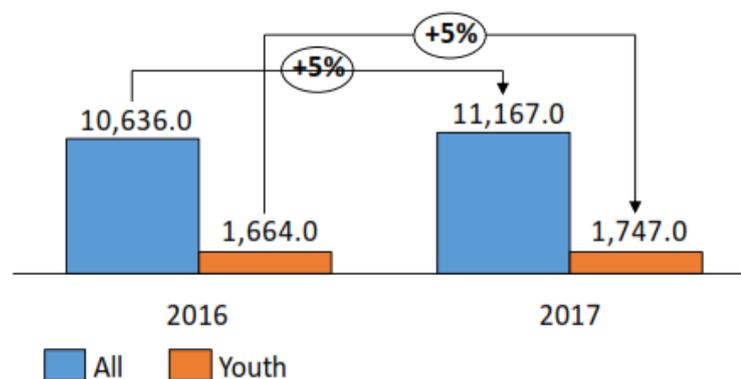
Figure 1  
 Market Share Mobile Operator (National Scope)



Source: Telkomsel Data (2017) ([www.telkomsel.com](http://www.telkomsel.com), accessed in December 2017)

Based on the above data, it can be seen that Telkomsel with Telkomsel Simpati products has a market share of 14%, Telkomsel Loop has a market share of 2%, Telkomsel KartuAs has a market share of 13%, Indosat Mentari has a market share of 1%, Indosat IM3 has market share of 20%, XL Prepaid has a market share of 8%, Axis has a market share of 9%, Three has a market share of 30%, and Smartfren has a market share of 3%. Thus it can be seen that the market share of Three is a service provider with the highest market share nationally. Loop as a new product from Telkomsel only has a market share of 2% nationally. Therefore, it is necessary to analyze the factors that can increase the market share of the product. Market share can be enhanced by an increasing number of customer purchases. The results of study of Ahmad and Ahmad (2014), Ahmed and Khan (2011), Rajpurohit and Vasita (2011) and Rahman et.al. (2010) that in order to improve customer purchasing decision, it is necessary to analyze the price, promotion, product quality, and social factor.

Figure 2  
 Youth Market Overview



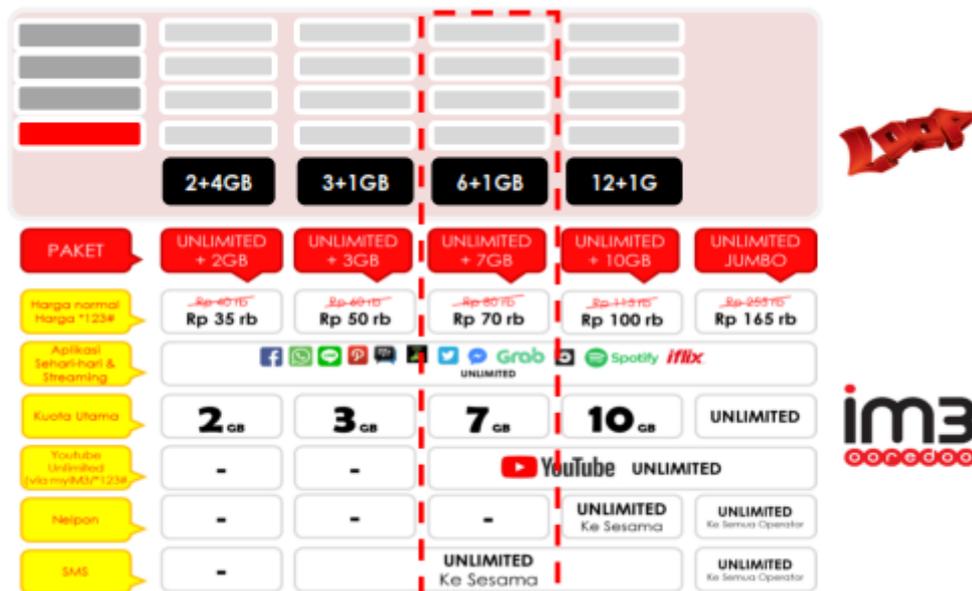
Source: Telkomsel Data (2017) ([www.telkomsel.com](http://www.telkomsel.com), accessed in December 2017)

Based on the above data, it is known that young users experience a significant growth of 5% which the growth is equal to the growth of other age customers. The data became one of the reasons for birth of Telkomsel Loop which is specializing its products for young people. In addition, young people are consumptive and productive actors. The majority of young people are aggressive and crazy in shopping. And in communicating they are quite dominant actors. The potential in this segment is quite large and very profitable, especially for business actors in the field of provider. This condition is supported Indonesia is currently experiencing a decade in which the number of young population reaches the most number. This fact is what cellular provider companies see as a business opportunity that must be taken seriously. Ahmad and Ahmad (2014) found that customer buying behavior is influenced by price, promotion, and social. Ahmed and Khan (2011) point out that price is seen as a decisive factor that motivates or does not motivate customers to buy certain cellular service providers. Rajpurohit and Vasita (2011) mentioned that social factors such as the influence of friends and family give a significant influence on purchasing decision on a product.

Telkomsel's main competitors such as XL also perform the same segmentation strategy, known as XL Jagoan Muda. With XL Jagoan Muda, PT XL Axiata, Tbk is trying to focus on reaching new market segment that is youth community. PT Indosat also consistently strengthen the segmentation of young people, IM3 disarm its latest product that is anti fun product, where this product becomes one of the choice of young people who slang, exciting and cheap. This product also provides value added services VAS, Content, and building HP to complement the needs and activities of young people with a myriad of activities.

The phenomenon of the above segmentation shows quite high competition for cellular services business in the youth segment. This requires telecommunication companies to analyze exactly how the characteristics and buying behavior of youth communities. One factor that young people consider is price.

Figure 3  
 Telkomsel Loop Comparison with Indosat IM3



Source: Telkomsel Data (2017)

Based on above data, showed that the head-to-head telkomsel Loop compete with IM3 indosat at the same price level. However, the benefits offered by Indosat more than Loop Telkomsel. It is understandable that based on comparative price and promotion package data made by Telkomsel Loop is still far below competitors. Rahman et.al. (2010) found that price has a significant influence on consumer perception in choosing telecommunication service provider. Based on the data and the results of the study, it can be concluded that in order to win the competition and increase the number of customers, it is necessary to analyze the price as a factor affecting purchasing decisions.

The price level is very much a reference for young people in making choices of products, this is in line with Kollmann (2000) that prices have an important role in the telecommunications market, especially for telecommunication service providers. The price comparison between Telkomsel Loop and other similar products will certainly provide an evaluation of the customers in determining their choice in purchasing cellular service products. Appropriate pricing is the key to winning price competition in the provision of cellular services.

In addition to pricing, product quality is one of the deciding factors of customer purchasing decisions. Schiffman and Kanuk (2009) stated that product quality is one of the factors influencing consumer behavior. Therefore, quality has been chosen as one of variable in this research to analyze consumer buying behavior utilizing cellular service from Telkomsel Loop product.

The Companies in marketing their products also need to communicate products including Telkomsel Loop. Rahman et.al. (2010) stated promotion as one of the media used by organizations to communicate with consumers in connection with their product offerings. By executing promotions the company can penetrate new markets and create more new customers. In general, promotion is concerned with ensuring that consumers know about the company and the products provided by the organization. Promotional strategies that can be used are personal selling. According to Kotler and Keller (2015: 480) "personal selling is face to face interaction with one or more prospective purchaser for the purpose of making presentations, answering question, and procuring orders."

Social factors are also related to purchasing decisions. Ahmad and Ahmad (2014) explained that reference groups such as friends and family have an impact on the purchasing behavior for a product. Jung and Kau (2004) and Kaapand (2012) in his research found that specifically in choosing cellular operators, consumers made friends and family as references to the selection of cellular operators. Nevertheless, the reference given of course also can not be separated from the branded image factor that is referenced.

In increasingly competitive market conditions, companies need to have a deeper insight into consumer behavior and educate consumers about the brand in order to develop effective marketing strategies. Cannon et al. (2009) explains that brand image is regarded as consumer opinion and trust on product quality produced by organization and organizational honesty in products offered to consumers. Brand image or Brand image is a set of tangible and intangible nature, such as ideas, beliefs, values, interests, and features that make it unique (Hasan, 2013). Visually and collectively, a brand image must represent all internal and external characteristics that can influence how a brand is perceived by a target market or customer (Hasan, 2013). By looking at these statements, it can be stated that if the consumer thinks that the company has a consumer-oriented perspective, then the consumer will have confidence in the brand on the brand image owned by the company. Results of research conducted by Finanto et al. (2014) that brand image has an important role in influencing buying behavior. Then research conducted by Rahman (2012) found that the behavior of young consumers in choosing a product is determined by a good corporate image. Thus, it can be concluded that by forming a positive image of Telkomsel Loop

products, it can lead to purchasing decisions by customers that ultimately this condition can increase market share of Telkomsel Loop products either regionally or nationally.

Many factors can influence purchasing decisions, such as product quality, brand image, price and promotion. Therefore, this study aims to analyze the price, product quality, promotion, social factors, and brand image on the purchasing decision of loop products on the youth segment either partially or simultaneously.

## **2. LITERATURE REVIEW**

Putri et al. (2016) defines marketing as a process of marketing products or services to meet the needs and provide satisfaction to consumers and can generate profits for the company. Furthermore, Karwur (2016) refers to Kotler's theory that marketing management is an art and or science in choosing, obtaining, and maintaining target markets and creating, delivering and communicating superior customer value.

Supranto and Limakrisna (2015:4) state that consumer behavior is an act directly involved in obtaining, using or consuming, and depleting products or services including processes that precede and follow these actions. Thus, it can be understood that consumer behavior is a very complex multidimensional process. This is because the marketing practices are basically designed to influence consumer, company, individual, and community behavior.

Price is a company management system that will determine the right base price for a product or service and must determine strategies related to discounts, freight payments and shared variables (Kotler and Keller, 2015). Price is not just a marketing mix element that generates revenue only, but the price is also a component that describes the cost. Compared to other components of the marketing mix, price is the most flexible component because it can be changed quickly (Kotler and Keller, 2015).

The product is managing the elements of the product including the planning and development of the right product or service to be marketed by changing the existing product or service by adding and taking other actions affecting the various products or services (Kotler and Keller, 2015). Consumers love products that offer the most quality performance, or innovative features. Therefore, managers in the organization focus on product quality and strive to improve the quality of the product over time (Kotler and Keller, 2015).

Promotion is a factor that determines success in marketing a product. The product will be widely marketed if the promotion covers a large area (Santoso, Waluyo and Listyorini, 2013). Ongoh et al. (2015) argues that promotion is a kind of communication that explains and convinces potential customers about goods and services in order to gain attention, educate, remind and convince potential customers.

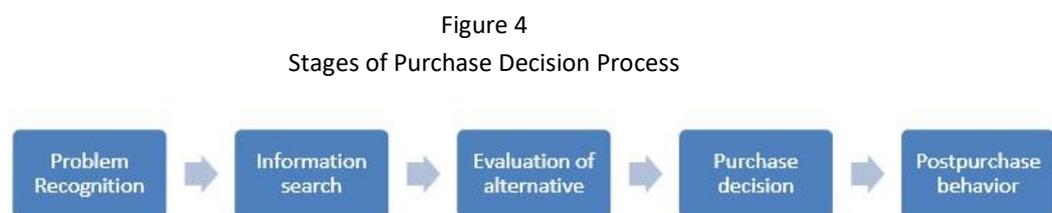
The social factor is a group of people who are equally close considerations of equality in community status or awards that continually socialize among themselves both formally and informally (Lamb, 2001). Kotler and Armstrong (2014) social factors are formal and informal interactions in a relatively permanent society whose members share similar interests and behaviors in an attempt to achieve common goals.

Kotler and Keller (2015) Brand image is the perception and belief that consumers have, as reflected in the associations formed in their memory. The brand image presents the overall perception of the product and is shaped from the past information and experience of the product. Sutisna in Supriyadi

and Marlien (2014) defines the image of the product/service as the sum of the images, impressions and beliefs that a person has of an object. Image to a product / service related to attitude in the form of belief and preference to a brand / service.

According to Kotler and Keller (2015) decision-making is an individual activity that is directly involved in obtaining and using the goods offered. Purchase decision process is a consumer behavior to determine a decision development process in buying a product.

There are 5 stages namely problem recognition, information search, evaluation of alternatives, purchase decision, postpurchase behavior (Figure 4) in consumer purchasing decisions. Each customer goes through these five phases to make a purchase. The five stages of the purchase decision process can be seen in Figure 4 below.



Source: Kotler and Keller (2015)

Based on Figure 4 above, it can be explained that the stage of the purchasing decision process starts from the problem or the needs of consumers, seeking information, assessment of choice, which then decide the purchase and behavior according to purchase. For more details can be explained as follows.

a. Problem Recognition

It is the first stage in the consumer purchase decision process to recognize a problem or need

b. Information Search

At this stage consumers are driven to find more information, consumers can more easily perform active information search. when more information is obtained the consumer's awareness and knowledge of the goods or services will increase.

c. Evaluation of Alternatives

Consumers use information to evaluate alternative brands in the mind set. d. Purchase Decision

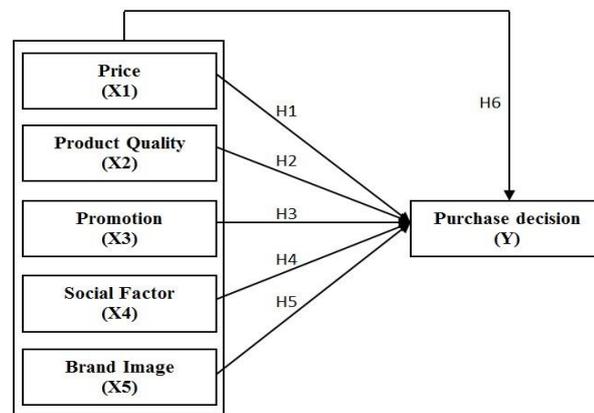
At this stage the consumer actually purchases a product. e. Post-purchase Behavior

After purchasing the product, the consumer will experience a certain degree of satisfaction or dissatisfaction. If the product matches expectations then the consumer is satisfied. If it exceeds expectations then the consumer is very satisfied. If less meet expectations, consumers are not satisfied.

This framework refers to the previous research of Ahmad and Ahmad's (2014). The study establishes the variable price, product quality, promotion, and social factor as independent variable or independent variable and purchase decision as dependent variable or dependent variable. Referring to the previous research, in the framework of thinking researchers add brand image variable as an

independent variable. This is in view of the importance of brand image in shaping consumer perceptions or purchasing behavior toward a product (Idris, 2013 and Zhang, 2015).

Figure 5  
Research Framework



Source: Ahmad and Ahmad (2014) and Zhang (2015)

Based on the theory and previous research, so it can be proposed the following research hypothesis:

H1: Price has a significant effect on purchasing decisions

H2: Product quality has a significant effect on purchasing decisions

H3: Promotion has a significant effect on purchasing decisions H4: Social factor has a significant effect on purchasing decisions H5: Brand image has a significant effect on purchasing decisions

H6: Price, product quality, promotion, social factor, and brand image simultaneously have a significant influence on purchasing decisions.

### 3. METHODOLOGY

This research was conducted with explanative method, which aims to explain the causal relationship between one variable affecting other variables through hypothesis testing (Cooper and Schindler, 2014) with quantitative approach, is to know the influence of variable price, product quality, brand image, social factor to the purchase decision variable of Loop.

#### 3.1 PARTICIPANTS

The sample method used is non-probability sampling because the total of the population of 2.4 million subscribers who are sampled must meet the criteria, the criteria set out in this study are as follows:

1. Minimum age of respondents who can be sampled 17 years. This is because the respondents at the age below 17 years are still considered less objective in answering research questions about the decision to purchase Loop products.

2. The research sample is Telkomsel Loop active customer. Active customers are where no msisdn from these customers can still receive and make calls and access to internet packages.

Meanwhile, to determine the size of the sample that will be examined from all customers Loop position per month November 2017 Jabodetabek region used Slovin formula (Umar, 2013).

$$n = \frac{N}{1 + N(e)^2}$$

Where :

n : Sample

N : Population

e : disired margin of error

In sampling and population here used a failure rate (e) 5% which means 95% confidence level.

Based on the calculation of the number of samples with Slovin formula obtained the number of representative samples in these study as many as 399.93 respondents and rounded up to 400 samples.

The main source of this research data using primary data in the form of questionnaires. The technique of distributing the questionnaire is done by giving a written statement to the respondent. Furthermore the respondent responds to the statement given. In this research with the technique of spreading the questionnaire is used Likert scale measurement technique. The Likert scale is a form of scale that will indicate the answer of the respondents agreeing or disagreeing over a statement about an object. Scale is what gives the number or value of an object, so that the characteristics contained in the object can be measured. The measurement method using the Likert scale consists of five answer ranges: (5) strongly agree, (4) agree, (3) disagree, (2) disagree, and (1) strongly disagree. The advantage of using Likert scale is the ease of making it, and generally respondents are ready and understood to answer the Likert scale (Malhotra, 2014).

### **3.2 MEASUREMENTS**

The variables used in this research are purchasing decision (Y) as dependent variable, and price (X1), product quality (X2), promotion (X3), social factor (X4), and brand image (X5) as independent variable, with the operational definition of each variable is as follows:

#### **1. Purchasing Decision (Y)**

Purchasing decisions are an individual activity directly involved in obtaining and using the goods offered (Kotler and Keller, 2015) .The dimensions of measuring buyer decision variables in this study include the introduction of problems / needs, information retrieval, evaluation of alternatives, purchasing decisions, and post-purchase evaluation.

#### **2. Price (X1)**

The literature attests to the fact that price is an important factor that determines consumer buying behavior. Pakola et al. (2001) in Ahmad and Ahmad (2014) states that prices affect the buying behavior of people who want to buy new services primarily by focusing on the telecommunications sector. The dimensions to measure the price variables in this study include the price expectations offered by different service providers and discounts.

#### **3. Product Quality (X2)**

Product quality is a form of assessment of the product to be purchased, whether it meets what consumers expect (Idris, 2013).

#### 4. Promotion (X3)

The literature attests to the fact that promotion is done as a fundamental factor that has a direct or indirect effect on consumer purchasing behavior (Ahmad and Ahmad, 2014). Dimensions for measuring variables in this study include word of mouth, good ad design, and other advertising.

#### 5. Social Factor (X4)

Kaapand (2012) in Ahmad and Ahmad (2014) social factors is a behavior undertaken by cellular consumers in choosing cellular operators, where consumers take the influence of their friends and family as a reference in taking a buying decision. The dimensions to measure social variables in this study include references such as family and friends.

#### 6. Brand Image (X5)

Brand image is the perception and belief that consumers have, as reflected in the associations formed in their memory (Kotler and Keller, 2015).

### 3.3 DATA ANALYSIS

Data analysis in this research is done by using multiple regression analysis. Multiple regression analysis is performed when the number of independent variables used is more than one that affects one dependent variable. Independent variables used in this study amounted to five variables: price, product quality, promotion, social factor, and brand image. Then the reason for the use of multiple regression analysis method also in this research do simultaneous test or F test from variable price, product quality, promotion, social factor, and brand image to purchasing decision. The multiple regression formula is as follows (Siregar, 2013):

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

Where:

Y = Purchase Decision

$\alpha$  = constants

$\beta$  = coefficients regression

$X_1$  = Price

$X_2$  = Product quality

$X_3$  = Promotion

$X_4$  = Social factor

$X_5$  = Brand image

### 4. RESULTS AND DISCUSSION

Hypothesis testing in this research is done by multiple linear regression tests. Multiple linear test to answer the hypothesis in this study by looking at the value of t test and test value F. The test results terebut can be seen in the following table:

Table 1  
 Multiple Linear Regression Test Result

	$\beta$	t <sub>statistic</sub>	Prob.
Price → Purchase Decision	0,059	3,200	0,001
Product Quality → Purchase Decision	0,107	5,119	0,000
Promotion → Purchase Decision	0,104	3,859	0,000
Social Factor → Purchase Decision	0,041	2,008	0,045
Brand Image → Purchase Decision	0,563	18,622	0,000
		F <sub>statistic</sub>	573,275 (0,000)
		R	0,941
		Adjusted R <sup>2</sup>	0,884

Source: Results of data processing with SPSS

Based on the table of t- test results can be made to answer the research hypothesis as follows:

**Hypothesis 1:**

The first hypothesis in this study examines the effect of price on the purchasing decision of telkomsel loop products.

Ho1 : Price has no significant effect on purchasing decisions Ha1 : Price has a significant influence on purchasing decisions Terms

If sig. > alpha 0.05, then the null hypothesis is accepted If sig. < alpha 0.05, then the null hypothesis is rejected Conclusion

Based on the results of regression testing in Table 1, the price variable obtained significance value of 0.001 < alpha 0.05 and t-statistic of 3.200 > t- table 1.966 (df

= 371, alpha 0.05). This means that Ho1 is rejected and Ha1 is accepted, so it is concluded that price has significant influence on the purchasing decision of telkomsel loop product. The results of this hypothesis support Ahmad and Ahmad's research (2014) that there is a significant influence of price on buying behavior. Similar results were also shown by research conducted by Amrullah and Agustin (2016); Ongoh et.al. (2015); Samosir and Prayoga (2015) and Santoso et.al. (2013) that prices partially have a significant effect on purchasing decisions.

**Hypothesis 2:**

The second hypothesis in this study examines the effect of product quality on the purchasing decision of telkomsel loop product.

Ho2 : Product quality has no significant effect on purchasing decisions

Ha2 : Product quality has a significant influence on purchasing decisions

Based on the results of regression testing in Table 1, the product quality variable obtained a significance value of 0.000 < alpha 0.05 and t-statistic of 5.119 > t table

1.966 (df = 371, alpha 0,05). This means that Ho2 is rejected and Ha2 is accepted, so it is concluded that product quality has significant influence to the purchasing decision of telkomsel loop product. The results of this hypothesis support the research of Amrullah and Agustin (2016) that product quality partially significant effect on purchasing decision. Similar results are also shown by Santoso et.al. (2013) that there is a positive effect of product quality on purchasing decisions.

Idris (2013) also proves that product quality has a positive and significant effect on purchasing decisions.

### **Hypothesis 3:**

The third hypothesis in this study examines the influence of promotion to the purchasing decision of telkomsel loop products.

Ho3 : Promotion has no significant effect on purchasing decisions

Ha3 : Promotion has a significant influence on purchasing decisions

Based on the results of regression testing in table 1, the promotion variable obtained significance value of  $0.000 < \alpha 0,05$  and t-statistic of  $3.859 > t$  table

1.966 (df = 371, alpha 0,05). This means Ho3 rejected and Ha3 accepted, so it is concluded that promotion has a significant influence on purchasing decisions of telkomsel loop products. The results of this hypothesis support Ongoh et.al. (2015) that partially promotional strategy has a significant effect on consumer purchasing decisions. The same results are also shown from the findings of Samosir and Prayoga (2015) research where product promotion has a significant influence on customer behavior in deciding to purchase a product.

### **Hypothesis 4:**

The fourth hypothesis in this study examines the influence of social factors on the decision to purchase telkomsel loop products.

Ho4 : Social factor has no significant effect on purchasing decisions

Ha4 : Social factor has a significant influence on purchasing decisions

Based on the results of regression testing in table 1, the social factor variable obtained a significance value of  $0.045 < \alpha 0.05$  and t-statistic of  $2.008 > t$  table

1.966 (df = 371, alpha 0,05). This means Ho4 rejected and Ha4 accepted, so it is concluded that promotion has a significant influence on purchasing decisions of telkomsel loop products. The results of this hypothesis support Ahmad and Ahmad's research (2014) which states that social factors are the most significant factors that have a positive impact on buying behavior. Urfana and Sembiring (2013) also proved that social factors have a positive and significant impact on purchasing decisions. In line with the results of research Supriyono (2015) that social factors have a positive relationship to purchase decisions but not significant. In addition, research Santoso and Purwanti (2013) also proved that social factors significantly influence consumer purchasing decisions.

#### **Hypothesis 5:**

The fifth hypothesis in this study examines the effect of brand image on the purchasing decision of telkomsel loop product.

Ho5 : Brand image has no significant effect on purchasing decisions

Ha5 : Brand image has a significant influence on purchasing decisions

Based on the results of regression testing in table 1, the brand image variable obtained a significance value of  $0.000 < \alpha 0.05$  and t-statistic of  $18.622 > t$  table

1.966 (df = 371, alpha 0,05). This means that Ho5 is rejected and Ha5 is accepted, so it is concluded that the brand image has a significant influence on the purchase decision of the product telkomsel loop. The results of this study support the study of Amrullah and Agustin (2016) that the brand image partially significant effect on purchasing decisions. Fianto (2014) explains that brand image has an important role in influencing purchasing behavior and brand trust has a mediating role between brand image relationship and buying behavior. Research Idris (2013) also proved that the brand image has a positive and significant impact on purchasing decisions.

#### **Hypothesis 6:**

The sixth hypothesis in this study examined the influence of price, product quality, promotion, social factor, and brand image of the decision to purchase telkomsel loop products.

Ho6 : Price, product quality, promotion, social factor, and brand image simultaneous has no significant effect on purchasing decisions

Ha6 : Price, product quality, promotion, social factor, and brand image simultaneous have a significant influence on purchasing decisions

Based on the results of regression testing in table 1, the variable price, product quality, promotion, social factor, and brand image obtained value significance of

$0.000 < \alpha 0.05$  and F-statistic of  $573.275 > F$  table 2.238 (df1 = 5 df2 = 371 , alpha 0.05). This means that Ho6 is rejected and Ha6 is accepted, so the results obtained that price, product quality, promotion, social factor, and brandimage simultaneously have a significant influence on purchasing decision of loop product.

The results of this study support the results of research conducted by Santish et.al. (2011) that quality is one of the main factors affecting consumer buying behavior. Meanwhile, quoted from Ahmad and Ahmad (2014) research conducted by Ashaduzzaman et.al. (2011) shows that price is seen as a determinant factor and motivation or motivational motivation for people to buy a particular cellular service provider. Meanwhile, regarding social factors Dadzie and Mensah (2011) explained that the influence of friends and family in purchasing decisions is more than just quality services from mobile service providers (Ahmad and Ahmad, 2014).

Based on table 1 obtained R value of 0.941. This explains that the relationship of independent or independent variables in this study are price, product quality, promotion, social factor, and brandimage with dependent or dependent variable ie purchase decision of 0.941. Meanwhile the value of Adjusted R Square is 0.884 or

88.4%. This means that the contribution or influence of variable price, product quality, promotion, social factor, and brand image to the purchasing decision of telkomsel loop product is 88,4%, while the rest equal to 11,6% influenced by other variable outside this research.

## 5. CONCLUSIONS AND RECOMMENDATIONS

This study finds the influence of Price, product quality, promotion, social factor and brand image on purchasing decisions process on Telkomsel Loop products. Brand image or brand image as the most dominant determinant of purchasing behavior in Telkomsel Loop products basically reflects Telkomsel's image in Telkomsel Loop product in the community. Furthermore, this indicates that customers pay more attention to the variety or variance of Telkomsel Loop Internet service products tailored to the tastes of young people. With more detailed conclusions as follows:

1. Price proved to have a significant influence on the purchasing decision process of Telkomsel Loop product on Youth Segment.
2. Product quality proved to have a significant influence on the purchasing decision process of Telkomsel Loop product on Youth Segment.
3. Promotion proved to have a significant influence on the purchasing decision process of Telkomsel Loop product on Youth Segment.
4. Social factor proved to have a significant influence on the purchasing decision process of Telkomsel Loop product on Youth Segment.
5. Brand Image proved to have a significant influence on the purchasing decision process of Telkomsel Loop product on Youth Segment.
6. Price, product quality, promotion, social factor and brand image are proven simultaneously or together have a significant influence on the purchase decision process of Telkomsel Loop product on segment Youth.

Suggested to the marketing management to pay attention to aspect or factor of brand image or brand image, this is because based on research findings of this aspect proved to have the most dominant contribution to customer purchasing behavior to Telkomsel Loop product at Segment Youth. Therefore, managers must remember that in order to attract and retain customers, they must focus on the brand image of Telkomsel Loop products in their marketing campaigns and promotional activities in relation to the mobile service sector. The promotion of mobile services is also one of the shaping aspects of customer purchasing behavior towards Telkomsel Loop products in the Youth segment, so managers must concentrate on forming product strength (in this case product function and product design or packaging), product uniqueness in this case product differentiation with competitors, product variations, design variations or product packaging), and forming product excellence (in this case setting up service products to be easy to remember, easy to say, and easy to get service products). Managers should focus on building the image of Telkomsel Loop products, this is because the competition of cellular service providers in Indonesia at the price level is so competitive that it is difficult to compete on that price aspect. Therefore, the management must look for other alternatives in winning the market where based on the results of this research brand image or a good product image will be able to improve customer purchasing decisions against Telkomsel Loop. It is then suggested to further research to conduct a more in-depth study of this mobile service marketing mix towards purchasing decisions in

the form of in-depth qualitative research in order to be able to understand consumer purchasing decisions, especially in cellular service providers in increasing corporate competition.

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## **EFFECT OF TAX SERVICE QUALITY AND TAX SANCTIONS AGAINST VEHICLE TAXPAYER COMPLIANCE AT THE SAMSAT OFFICE OF GARUT DISTRICT**

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### **Abstract**

*This study aims to determine the effect of Quality Tax Service and Tax Sanctions Against Vehicle Taxpayer Compliance At Garut SAMSAT Office in the year 2013 until 2016. The research method used in this research is descriptive analysis method with quantitative approach. Population in this research is Vehicle Taxpayer registered at SAMSAT Office of Garut Regency and sample used is counted 100 respondents. Quality of Tax Service and Tax Sanction affect to Vehicle Taxpayer Compliance.*

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**Key Words:** *Quality of Tax Service, Tax Sanction and Vehicle Taxpayer Compliance*

### **1. INTRODUCTION**

Continuous national development is needed to improve the welfare of the people (Utama, 2013). One effort that can be done by the government of Indonesia in realizing the national development is by digging the source of funds in the form of taxes (Rusydi, 2009). In the framework of equitable implementation of development and for the efficiency and effectiveness of the implementation of central government affairs, then some of the affairs are submitted to the region (Ilhamsyah et al, 2016). Almost of all regions in Indonesia explore the potential of regional income through local taxes (Barus, 2016).

The type of provincial tax consists of 5 types of taxes: motor vehicle taxes, motor vehicle transfer fees, motor vehicle fuel taxes, surface water taxes, and cigarette taxes (Hermawan and Anton, 2017). From the various types of provincial tax, one of them is the motor vehicle tax as a source of funds that become excellent and potential in collecting tax revenue, so as to meet the financing to be able to carry out the development of provinces and regions (Nugraha, 2015). If the number of motor vehicles has increased but is not matched by taxpayer compliance in paying motor vehicle taxes, then this could cause considerable arrears in the SAMSAT office (Ummah, 2015).

The level of taxpayer compliance in paying motor vehicle taxes in Garut regency is still relatively low. It can be shown by KTMDU report on SAMSAT Office Garut district starting from 2013 until 2016, can be seen in table as follows:

**Table 1: Vehicle Report Which is Not Re-Register (KTMDU) At SAMSAT Office Garut Regency**

Year	Number of vehicles	Vehicle Not Re-Registering (KTMDU)	Percentage
2013	297.808	59.758	20,06%
2014	334.930	70.624	21,09%
2015	363.614	83.857	23,06%
2016	398.584	110.225	27,65%

Source: SAMSAT office of Garut District

Based on the table above, it can be seen clearly in the period of 4 years ie in the year 2013 recorded as many as 59,758 vehicles did not re-register (KTMDU) or about 20.06%, in 2014 increased to 70,624 vehicles did not re-register (KTMDU) or around 21.09%, then in 2015 there was an increase to 83,857 non-re-registering vehicles (KTMDU) or approximately 23.06%, and in 2016 it increased again to 110,225 non-re-listing vehicles (KTMDU) or around 27 , 65%. This shows that KTMDU at SAMSAT Office of Garut Regency from 2013-2016 has increased.

Every year the number of motor vehicles increased but not matched by the increase in the number of vehicles that do re-register on Garut SAMSAT Office. In fact, taxpayer compliance especially for motor vehicle tax has decreased with increasing number of non-re-registration vehicles (KTMDU), indicating that taxpayer compliance is low (Gania, 2017).

One of the factors that causes low compliance of taxpayers is that employees in the Tax Office often do not provide maximum service to taxpayers. (Fuadi and Yenni, 2013). Another factor affecting taxpayer compliance is tax sanction. If tax sanctions have been drafted and made firmly then it is expected to minimize the violation of tax regulations conducted by the Taxpayer (Larasati, 2017). This is in accordance with the results of research Ilhamsyah et al (2016) that the quality of service and tax sanctions have a significant positive effect partially on taxpayer compliance motor vehicles.

## 2. LITERATURE REVIEW

### 2.1 QUALITY OF TAX SERVICES

According to Laksana (2010: 88) that: "Quality of service can be defined as the quality of service received by consumers is stated the difference between the expectations or desires of consumers with their perception level." According Tjiptono and Chandra (2016: 51) that: "Quality is a condition dynamic related to products, services, people, processes, and environments that meet or exceed expectations ". Tjiptono and Chandra (2016: 61) states that: "Quality of Service ie human or people who strive in the fulfillment of consumer needs and desires as well as accuracy of delivery in the balance of consumer expectations.

### 2.2 TAXATION SANCTIONS

According Mardiasmo (2016: 62) that: "Taxation Sanctions is a guarantee that the provisions of tax laws (taxation norms) will be obeyed / obeyed / obeyed. Or in other words, Tax Sanction is a preventive tool for taxpayers not to violate the norms of taxation ". Meanwhile, according to Fatmawati (2016: 29) that:" Tax penalties become a guarantee or prevention efforts (preventif) regulated can be obeyed and not violated by the taxpayer ". Ilhamsyah et al (2016) stated that:" Taxation Sanctions is a guarantee or preventive efforts (preventif) so that regulations that have been regulated taxation can be obeyed and not violated by the Taxpayer, who have been obedient in paying taxes as well as providing a deterrent effect for offenders ". Meanwhile, according to Suandy (2016: 11) that: "Taxation sanctions are guarantees provisions of tax laws and regulations (taxation norms) will be obeyed or obeyed".

### 2.3 MOTOR VEHICLE TAXPAYER COMPLIANCE

According to Gunadi (2016: 94) that: "Taxpayer Compliance in this case means that the Taxpayer has a willingness to fulfill his tax obligations in accordance with the rules applicable without the need for examination, thorough investigation, warning or threats and the application of sanctions both legal and administrative".

Meanwhile, according to Fatmawati (2016: 28) that: "Taxpayer compliance is a tool to measure the contribution of society in regional development".

Rahayu (2016: 139) states that: "Tax compliance is the action of the Taxpayer in fulfilling his tax obligations in accordance with the provisions of the laws and the implementation of taxation applicable within a country".

### 2.4 FRAMEWORK FOR THINKING

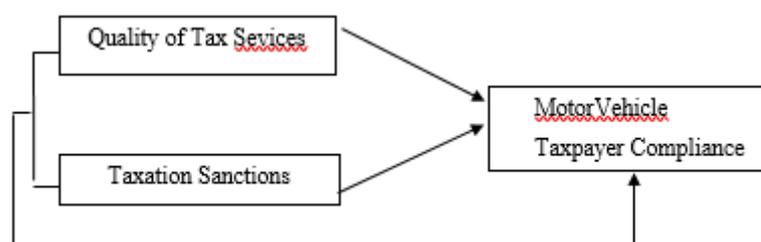


Figure 1: Research Paradigm

## 2.5 HYPOTHESIS

Based on the above framework, and supported by existing theory, the hypothesis is proposed as follow :

H<sub>1</sub> : Quality of Tax Service, Tax Sanction and Compliance of Motor Vehicle Taxpayer at SAMSAT Office of Garut District is good.

H<sub>2</sub> : Quality of Tax Service Affects Motor Vehicle Taxpayer Compliance at SAMSAT Office of Garut District.

H<sub>3</sub> : Tax Sanctions affect the Motor Vehicle Taxpayer Compliance at the Garut SAMSAT Office.

H<sub>4</sub> : Quality of Tax Service and Tax Sanction affect on Motor Vehicle Taxpayer Compliance at SAMSAT Office of Garut Regency.

## 3. METHODOLOGY

The research method used in this research is descriptive method and analysis with quantitative approach. The classification of research variables based on the relationship between variables as follows:

According Sugiyono (2017: 39) that: "Independent Variables (free) is a variable that affects or the cause of change or the emergence of the dependent variable (bound)". In this study, the independent variables are the Quality of Tax Service (X<sub>1</sub>) and Tax Sanctions (X<sub>2</sub>).

And according to Sugiyono (2017: 39) that: "Dependent variable (bound) is a variable that influenced or that resulted, because of the independent variables." In this study the dependent variable is Motor Vehicle Taxpayer Compliance (Y).

According to Sekaran (2011: 64) that: "The population is the whole group of people, events, or things that investigators want to investigate" .Maka who became the population in this study is a registered taxpayer in the Garut SAMSAT Office 398 584. As the method used for determine the sample by the author is to use Slovin approach. So the number of samples taken in this study are as many as 100 taxpayers registered in the Garut SAMSAT Office.

Data type used in this research, that is quantitative data. While the data source used in this study is the primary data. And data collection techniques used in this research are: Field Research, Library Research and Internet Studies.

To test the quality of a data, it is necessary to test the validity and reliability. To test whether or not a measuring instrument is valid, usually the minimum requirement that is considered eligible is if  $r = 0.30$ . The validity test for each variable is assisted by using SPSS software (Statistical Package for Social Sciences) version 20. While the reliability test is said to be reliably if the Cronbach Alpha value is greater than 0.60 (standard value) according to the statement from Ghozali (2016: 47) .

The classical assumption test is used to see if there is an aberration in the regression model, so it needs to be examined by using normality test, autocorrelation test, heteroscedasticity test, and multicollinearity test assisted by SPSS version 20 software.

In general the form of regression equation obtained by using multiple linear regression analysis which refers to Sugiyono (2016: 277) with the following formula:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n$$

The calculation uses statistical methods assisted with SPSS software version 20. Testing this hypothesis consists of:

1. Uji Parsial (t-Test)
2. Uji Simultan (F-test)

Koefisien Determinasi ( $R^2$ )

#### 4. RESULT AND DISCUSSION

##### 4.1 MULTIPLE LINEAR REGRESSION ANALYSIS

##### 4.1.1 PARTIAL EFFECT TEST (T-TEST)

**Table 2: Multiple Linear Regression Test Result (t-Test)**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	7.385	2.849		2.592	.011
	Quality of Tax Service	.143	.040	.344	3.584	.001
	Tax Sanctions	.371	.121	.296	3.077	.003

a. Dependent Variable: Motor Vehicle Taxpayer Compliance

Source: SPSS Version 20.0 Output, Data Processed Year 2018

Based on the table of 2 multiple linear regression equations, read is a value in column B, the first line represents the constant (a) and the next line denotes the coefficient of the independent variable. Based on table 2 regression model used is:

$$Y = 7,385 + 0,143X_1 + 0,371X_2$$

##### 4.1.2 SIMULTANEOUS EFFECT TEST (F-TEST)

**Table 3: Multiple Linear Regression Test Result (F-Test)**

##### ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	226.826	2	113.413	20.918	.001 <sup>b</sup>

Residual	525.924	97	5.422		
Total	752.750	99			
a. Dependent Variable: Motor Vehicle Taxpayer Compliance					
b. Predictors: (Constant), Tax Sanctions, Quality of Tax Service					

Source: SPSS Version 20.0 Output, Data Processed Year 2018

From the F test table, it can be seen that the obtained value of F arithmetic 20,918 with significant 0.001. In this study used 5% significance and degree of freedom (df) of (k-1) = 2 and (n-3) = 97 so obtained F table of 3.09. Thus it can be seen that the value of F arithmetic > F table (20.918 > 3.09) with a significance smaller than Alpha (0.001 < 0.05). This means the hypothesis in this study states that the Quality of Tax Service and Tax Sanctions jointly affect the Motor Vehicle Taxpayer Compliance.

#### 4.2 COEFFICIENT OF DETERMINATION (R<sup>2</sup>)

**Table 4: Coefficient of Determination Results**

##### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549 <sup>a</sup>	.301	.287	2.328
a. Predictors: (Constant), Tax Sanctions, Quality of Tax Service				
b. Dependent Variable: Vehicle Taxpayer Compliance				

Source: SPSS Version 20.0 Output, Data Processed Year 2018

Based on Table 4 above it can be seen that the magnitude of Adjusted R Square is 0.287 or 28.7%. This shows that the percentage of influence of all independent variables (Quality of Tax Service and Tax Sanction) to the dependent variable (Compliance Taxpayer Motor Vehicle) of 28.7%. While the rest of 71.3% influenced or explained by other variables (epsilon).

#### 5. CONCLUSIONS AND SUGGESTIONS

##### CONCLUSIONS

1. Quality of Tax Service Affects Compulsory Compliance Motor Vehicle Tax at SAMSAT Office of Garut District.
2. Taxation Sanctions affect the Motor Vehicle Taxpayer Compliance Officer SAMSAT Garut District.
3. Quality of Tax Service and Tax Sanction affect the Motor Vehicle Taxpayer Compliance at the Garut SAMSAT Office.

##### SUGGESTIONS

1. For the SAMSAT Office of Garut District

- a. SAMSAT Office is expected to continue to improve services to taxpayers who are doing tax obligations, one of them by providing plastic protector SKPD (Regional Tax Assessment Letter) PKB so as to reduce taxpayer expenses.
- b. Then Tax Sanction , is expected to be more clearly and appropriately socialized.
- c. In addition, the SAMSAT Officer is expected to provide the Taxpayer with proper socialization in accordance with applicable tax laws, including payment procedures at SAMSAT Office.

## 2. For Taxpayers

Taxpayers should be able to further improve their compliance in fulfilling the tax obligations of motor vehicles and increase knowledge and understanding of applicable tax laws.

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## I LIKE YOUR COMPANY? DIVIDEN PAYOUT RATIO: EFFECT FROM FREE CASH FLOW AND PROFITABILITY

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### Abstract

*The purpose of this research to analyze the effect of the company financial ratios performance profitability (ROI), free cash flow toward Dividend payout ratio (DPR). we applied causal method for our research and the data obtained from Indonesian Stock Exchange (BEI) website during the period 2005-2014 on PT Astra International, Tbk (ASII). these data were analyzed by using PLS analysis technique (partial least square) through the PLS software.*

*Several interesting findings emerged from this study. It turns out, that eventhough FCF affect profitability (ROI), it has no significant direct effect on DPR. Surprisingly, FCF able to affect DPR through ROI. Another interesting finding is that Astra International Tbk can use DPR as part of its strategy to draw the interest of investors to make investment on the company. The evidence shows that the investors are more likely to invest on the company when the company shows a more stable level of DPR. The implications of these findings for future studies are also discussed.*

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**Key Words:** Dividend Policy, Free Cash Flow (FCF), Return On Investment (ROI), Dividend Payout Ratio (DPR).

## 1. INTRODUCTION

The complexity of life requires people to solve everything quickly, easily and organized. A lot of business people decide to not directly engage to manage a business. For those who experience a surplus of financial resources, they tend to choose investing on the capital market to earn instant return. Capital market is a market for various financial instruments either under the form of equity or obligation that matured in a year (Lisa & Clara, 2009). For companies, the sales of stock in capital market is one feasible way to raise funds. For investors, purchasing stock is a means to obtain profit or return in the form of dividend yield and capital gain. While dividend yield is some portion of company's net profit that are redistributed to shareholders, capital gain is profit earned by shareholders which derived from reselling the stocks owned at a higher price level. In general, for most of investors or shareholders, dividend yield is more desirable than capital gain.

For companies, the decision to redistribute their profit in the form of dividend will reduce their internal source of funds (Lisa & Clara, 2009). On the contrary, if the companies decide to retain their profits in the form of retained earnings, the internal reserve of funds will be higher. This decision will reduce their dependence on external source of funds and thus will reduce risk (e.g. default risk) (Lisa & Clara, 2009). Additionally, investors are willing to purchase stocks at a higher price level if that stocks promise a higher level of dividend (Arilaha, 2009). Hence, the policy to provide higher dividend payout ratio (DPR) by a company will attract investors to invest their money on that company.

Based on those arguments, it can be concluded that dividend policy must be optimized by considering various factors that affect it and affected by it. Optimum dividend policy must be able to strike the right balance between the amount of dividend to be distributed and the amount of fund to be reinvested to maximize company's stock price (Brigham & Houston, 2004). The ability to distribute dividend primarily depends on cash availability as represented by free cash flow (FCF) (Sutrisno, 2011). Besides FCF, profitability also serves as an indicator of company's ability to obtain earnings that affect the level of dividend. One financial ratio that describe the portion of profits that are distributed as dividend is dividend payout ratio (DPR).

The higher the DPR, the smaller the portion of profits that can be invested internally to produce growth. The relationship between dividend and invested earnings as depicted by DPR indicate some sort of dilemma to companies (Sutrisno, 2000). In this situation, it is obvious that there are two parties with conflicting interest. Those parties are the shareholders and the company itself. Therefore, management must be able to put various factors that affect dividend policy into consideration.

**Table 1 Dividen Payout Ratio (DPR) PT. Astra International Tbk. during the period 2005-2014 .**

Tahun	DPR (%)
2005	32,59
2006	47,82
2007	<b>40,00</b>
2008	38,33
2009	<b>45,16</b>
2010	45,07
2011	45,10
2012	45,00
2013	45,00
2014	45,57

Source: Indonesian Stock Exchange (2017)

Table 1 shows the dividend payout ratio of PT. Asrta International Tbk. experienced fluctuations in the first of 4 (four) years, but from every increase and decrease it was recorded that occurred significantly. In 2005 to 2006 recorded an increase of 15.23%, then decrease in 2007 by 7.82%, and recorded a decline back in 2008 of 1.67%, and increased in 2009 by 6.83 %, and the resst in 2010 until 2014 is relatively stable.

Due to dividend policy, there are several different parties of interest, namely between the interests of shareholders and the company. And the size of it must be really considered. For that management needs to consider various factors that will affect the policy to be determined company.

### **1.1 Research question**

Based on research background, the question that emerge and about to be discussed in this paper is whether the DPR of PT. Astra International Tbk is directly affected by FCF or affected by FCF through profitability (i.e. ROI). The findings of this research are expected to provide insights about how PT. Astra International Tbk makes decision regarding the distribution or retention of it's profits. To be more specific, the findings are expected to explain whether cash position (FCF) and profitability (ROI) have some contribution to decision regarding dividend.

## **2. LITERATURE REVIEW**

### **2.1 FREE CASH FLOW (FCF)**

FCF is some amount of cash that can be distributed by company to creditor or shareholders without sacrificing it's working capital or it's investment on fixed assets. FCF also provide evidence for investors that dividend distributed is not just a strategy to increase the price of company stocks (i.e. signalling) (Ross et al, 2000). Companies with higher FCF are expected to have better performance than those with lower FCF because companies with higher FCF will be able to capitalize on more opportunities. Moreover, companies with higher level of FCF also possess higher chance to survive in adverse situation than those who have lower FCF. Furthermore, negative FCF indicate that the internal source of funds is not sufficient to cover the investment needs of the company. In this situation, the company is required to obtain additional funds that can be provided by the issuance of new stocks or obligations.

### **2.2 RETURN ON INVESMENT (ROI)**

Profitability ratio describes company ability to produce profit through any means and through any sources of income including sales (Hararap, 2008). In the effort to improve profitability, ROI is widely known as a useful financial ratio to measure and analyze profitability (Rudianto, 2006). ROI is the comparison between the amount of net profit with the amount of funds invested on assets. In it's calculation, ROI is produced from earning after tax (EAT) divided by the amount of total assets. Hence, ROI shows the ability of a company to utilize the assets in order to produce net profit. Company with high profitability will be more attractive to investors due to higher expected earnings. Higher ROI indicate higher rate of return and hence indicate better company performance.

### **2.3 DIVIDEND PAYOUT RATIO (DPR)**

DPR is the proportion of net profit paid to shareholders in the form of cash dividend (Riyanto, 2008). The level of dividen distributed is depend on the dividend policy. Dividend policy is a set of rules that govern whether the profit earned by the company will be distributed to shareholders as dividend or

will be retained to finance future investment (Martono & Harjito, 2010). Factors that might affect dividend level including investment opportunities, profitability, liquidity, access to capital market, income stability, and other limitations (Mamduh, 2010). DPR can be derived from cash dividend per share divided by earning per share (EPS).

### 3. OBJECT AND METHODOLOGY

#### 3.1 RESEARCH OBJECT

Throughout its long history, Astra has successfully built a positive reputation and become one of the nation's household names. Astra offers a wide range of excellent products and services as well as providing extensive non-business contributions through its corporate social responsibility programs in education, environment, small and medium enterprises (SME) development and health. Such contribution is an integral part of Astra's journey to become the pride of the nation, a company that plays a role in ongoing efforts to improve welfare for the benefit of the Indonesian people at large.

This research to analyze the effect of the company financial ratios performance profitability (ROI), free cash flow toward Dividend payout ratio (DPR) on PT Astra International Tbk.

#### 3.2 RESEARCH METHOD

The method used in this research is quantitative method with associative problem formulation.. Therefore, a model that explain the relationship between independent, dependent, and intervening variable is tested. As the tool of analysis, Partial Least Square (PLS) is used with the help of SmartPLS software., then the results are further interpreted and discussed. The data gathered in this research are secondary data that are taken from the financial statement of PT. Astra International Tbk between the period of 2005 to 2014.

**Table 2. Free Cash Flow, Return on Investment, and Dividend Payout Ratio of PT. Astra International Tbk for 2005 to 2014**

No	Year	Free cash flow (billion of rupiah)	Return on Investment (%)	Deviden Payout Ratio (%)
1	2005	-6,280.25	8.92	32.59
2	2006	87,045.45	6.41	47.82
3	2007	7,984.61	10.26	40.00
4	2008	4,214	11.38	38.33
5	2009	7,019	11.29	45.16
6	2010	-2,323	12.73	45.07
7	2011	632	11.58	45.10
8	2012	-611	10.65	45.00
9	2013	12,958	9.07	45.00
10	2014	13,370	8.13	45.57

Source: Indonesian Stock Exchange (2017)

### 3.3 MODEL AND HYPOTHESIS

The model that is tested and analysed in this research can be described on Figure 1. Based on that model there are three hypotheses that can be formulated as follows:

- H1 : free cash flow (FCF) has significant effect on return on investment (ROI).
- H2 : free cash flow (FCF) has significant effect on dividend payout ratio (DPR).
- H3 : Return on investment (ROI) has significant effect on dividend payout ratio (DPR).

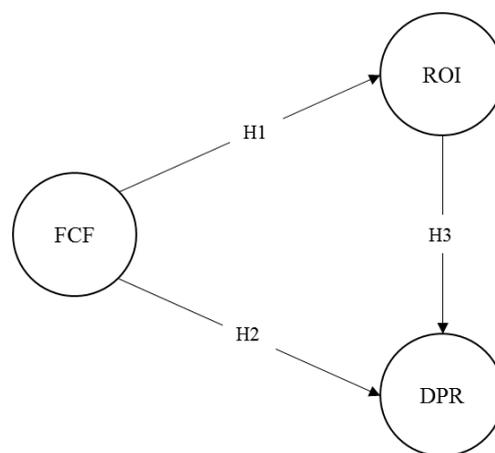


Figure 1. Research Model

## 4. RESULTS AND DISCUSSION

### 4.1 CALCULATION RESULTS

#### 4.1.1 OUTER MODEL MEASUREMENT

An indicator can be considered as valid if it has a loading factor above 0.700 toward the intended construct (Ghozali & Latan, 2015). The output of analysis by using SmartPLS for loading factors produce the results as displayed on Table 2.

**Table 3. Loading Factor of Free Cash Flow, Return On Investment, and Devidend Payout Ratio**

	<i>DPR</i>	<i>ROI</i>	<i>FCF</i>
<b>Y21</b>	0.999		
<b>Y22</b>	0.999		
<b>Y11</b>		0.986	
<b>Y12</b>		0.983	
<b>X11</b>			0.760
<b>X12</b>			0.759

Based on the result, all of the indicators that are used to measure all of the variables have good validity. In other words, those indicators have fulfilled the criteria of convergent validity. Furthermore, to assure discriminant validity of this model, square root of average variance extracted (AVE) and composite reliability (CR) are used. The values of AVE and CR are displayed on Table 3.

**Table 4. Average Variance Extracted and Composite Reliability**

	Average Variance Extracted	Composite Reliability
Dividend Payout Ratio	0.998	0.999
Return on Investment	0.969	0.984
Free Cash Flow	0.577	0.732

The values of AVE of DPR has higher correlation (0.998) compared to ROI (0.969) and FCF (0.577). Table 3 also shows that the value of AVE for all constructs are higher than 0.500. In respect to composite reliability (CR), all of the constructs have CR value above 0.700. Therefore, all of the constructs described on the model can meet the criteria of discriminant validity (Ghazali, 2015).

#### 4.1.2 STRUCTURAL MODEL (INNER MODEL)

The magnitude of direct effect can be seen from the value of R Square. The findings reveal that the value of R Square for DPR and ROI is 0.974 and 0.447 respectively. Meanwhile the indirect effect of FCF on DPR through ROI is 0.637.

**Table 5. Direct Effect, Indirect Effect, and Total Effect of Each Construct.**

	Direct Effect	Indirect Effect	Total Effect	
	R Square	DPR	DPR	ROI
Dividend Payout Ratio	0.974	-	-	-
Return on Investment	0.447	-	0.952	-
Free Cash Flow	-	0.637	0.688	0.669

Sumber: Analyzed Data (2017)

Table 4 shows that the magnitude of total effect of FCF on DPR is 0.688 and the magnitude of total effect of ROI on DPR is 0.952. Moreover, the magnitude of total effect of FCF on DPR through ROI is 0.669. The results of analysis are showed by Figure 2.

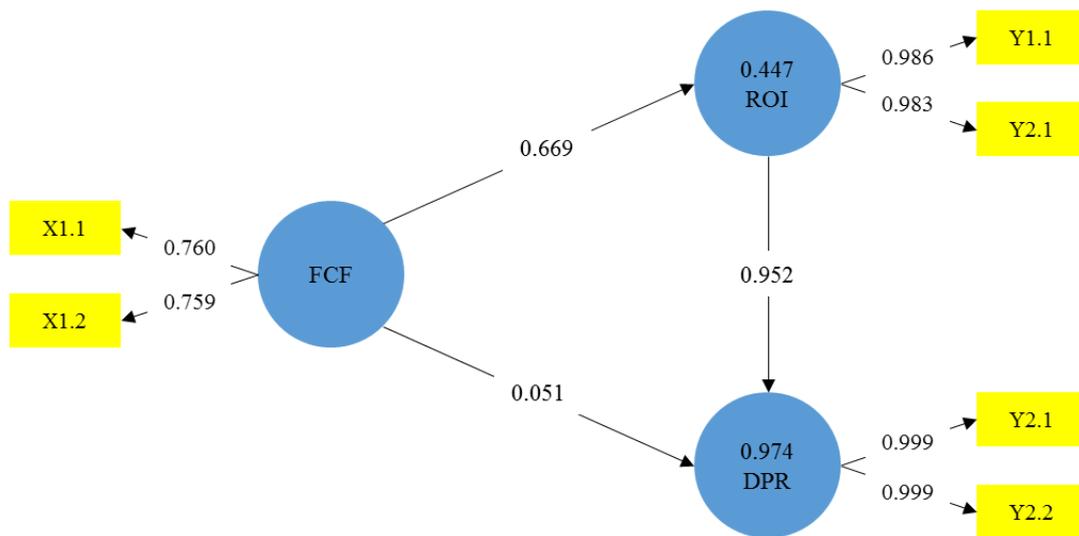


Figure 2. The Relationship Between Variables and The Loading Factor

**4.1.3 HYPOTHESIS TESTING**

Path coefficient between the construct of latent variables in structural model (inner model) can be used as a means to test hypothesis. Path coefficients that are produced by bootstrapping process also shows the level of significance of each hypothesis that is proposed in this research. The result of bootstrapping process is showed by Figure 3.

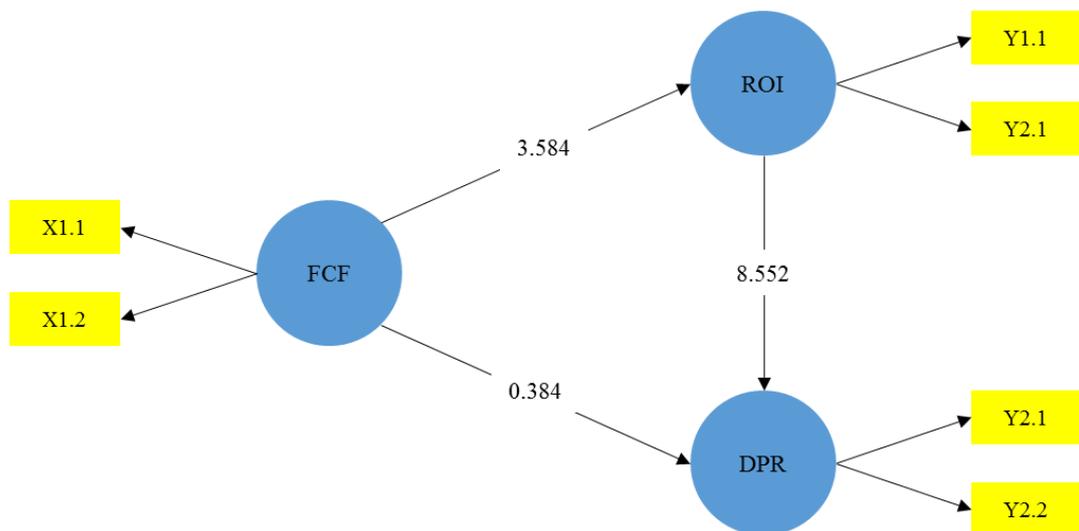


Figure 3. Bootstrapping

Based on Figure 3, the values of t-statistics of each indicator of each construct in the structural model is higher than the  $t_{table}$  (2.306). These results can be interpreted that each indicator can be serve as a good predictor of latent variable that it intends to represent. For more details, each path coefficient is explained as follows:

**Table 6 Path Coefficient**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STERR )	P Values
FCF -> DPR	0.051	-0.014	0.143	0.355	0.723
FCF -> ROI	0.669	0.741	0.176	3.810	0.000
ROI-> DPR	0.952	1.004	0.123	7.757	0.000

**Table 7 Indirect Effect Bootstrapping**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STERR )	P Values
FCF-> DPR	0.637	0.750	0.229	2.784	0.006
FCF-> ROI		-0.000	0.000		
ROI -> DPR					

## 4.2 DISCUSSION OF RESEARCH RESULTS

### 1. The effect of free cash flow (FCF) on return on investment (ROI).

Based on path coefficients table, the result of t-statistics test reveals that FCF bears positive and significant effect on ROI of PT. Astra International. This is showed by the value of  $t_{calculated}$  (3.810) is higher than 2.306 with the level of significance of 0.000. Moreover, the value of original sample, that is 0.669, shows positive relationship between FCF and ROI.

This result accordance with Muthusi (2014) that free cash flow has a positive and significant impact on profitability. Hubbard (1998) shows that there is a positive and significant relationship between free cash flow and profitability, an increase in cash flow from a company causes an increase in corporate profits, this increase comes from investment revenue. Griffin & Carroll (2001) stated that the Company can holdin free cash flow for the purpose of investments return in the future that provide high returns with high risk or otherwise.

According to the theory, as well as in PT Astra International Tbk that free cash flow effect on profitability, seen from fixed assets that continue to grow. As in 2007, free cash flow increased due to all aspects of business and expansion in automotive and heavy equipment financing experienced have a very significant increase, as well as an increase in net income and total assets, due to the increase in profit of automotive, agribusiness and heavy equipment units the automotive unit contributed 54.3% to the biggest profit, this was achieved caused Indonesia's conducive economic conditions, among others, supported by lower interest rates, controlled inflation rate, increased purchasing power and stability exchange rate of rupiah.

From the data of free cash flow which tendency to increase for 10 years, give influence to PT Astra International Tbk, seen from the increase of free cash flow give positive influence to profitability, from investment on fixed asset, with return rate from result of investment.

Based on the calculation, it is known that R square obtained is 0.447 or 44.7%, that score gives meaning that the change in profitability influenced by free cash flow of 44.7% while the remaining 55.3% influenced by other factors outside this discussion that also affect profitability .

## **2. The effect of free cash flow (FCF) on dividend payout ratio (DPR).**

Based on path coefficients table , the FCF does not bear any effect on DPR of PT. Astra International Tbk. This is indicated by the value of  $t_{\text{calculated}}$  (0.355) that is lower than the  $t_{\text{table}}$  (2.306) with the level of significance greater than 0.05 (0.723).

Base on insignificant results and from the observation data, most of FCF have the minus, but the company's assets grew annually due to the tendency of companies to holdin free cash flow in order to keep under control of those used as a source of internal funds (retained earnings) to invest by adding assets companies that will certainly encourage the growth of the company than to distribute it to shareholders in the form of dividends. This result accordance with brigham (2012) that the FCF is a cash flow that is really available to be paid to investors after the company invested in fixed assets, new products, and working capital needed to maintain ongoing operations.

According to the theory, as well as in PT Astra International Tbk that the decline in the value of free cash flow even up to minus value, because the company expands through its internal funds. As the data in 2005, free cash flow is negative, but on the other side when free cash flow decreases, it does not cause a decrease or dividend is not distributed, it is mean, although the free cash flow is negative, the company still distributes dividends, seen from the dividend payout ratio in 2005 of 32.59%. And seen from free cash flow data tendency up, inversely with DPR for 10 years is likely to decline, so free cash flow directly does not affect the dividend payout ratio at PT Astra International Tbk.

The variable of free cash flow in this research has no effect on dividend payout ratio in accordance with the result of research of lias dwi haryadi (2014), salvatore and i putu (2014) stated that there is no influence of free cash flow variable to dividend payout ratio and support tarjo statement (2005 ) in lopolusi (2013) that free cash flow has not received attention in Indonesia because the existing companies do not report their existence explicitly. This condition is different from the conditions in the United States, where free cash flow has received attention. This can be evidenced by the free periodical release of free cash flow by the institution or independent, and also contrary to the results of research conducted by Rosdini (2009) states that free cash flow has a positive effect on dividend payout ratio.

## **3. The effect of return on investment (ROI) on dividend payout ratio (DPR).**

Based on the result of t-statistics test on Path Coefficient table, it is found that profitability (ROI) bears positive and significant effect on DPR. This is indicated by the value of  $t_{\text{calculated}}$  (7.757) which is greater than  $t_{\text{table}}$  (2.306) with the level of significance of 0.000. Furthermore, the value of original sample (0.952) shows that the relationship between ROI and DPR has positive direction.

Parthington (1989) states that profitability is the most important factor considered by management in predicting DPR. Companies that are able to manage their assets effectively and efficiently tend to produce good financial performance. This is realized with high profits (referring to high ROI) resulting in greater returns. Thus, the company is considered capable of paying a portion of its profits in the form

of cash dividends. The higher the profit that can be generated, the greater the probability of the company to distribute dividends that indicate that the company is able to provide a better level of welfare to shareholders.

According to the theory, as well as in PT Astra International Tbk that an increase in profitability will increase the percentage of dividends are distributed. such as in the 2010 earnings of 14.366 billion with 355 billion earning per share, an increase in 2011 from the previous year due to an increase in sales volume of a profit increase of 17.785 billion with 439 billion earning per share from the previous year. This decline in profitability over the past 10 years also contributes to the downward trend in the dividend payout ratio, thus increasing or decreasing profitability will increase or decrease the profit to be distributed as dividends.

Based on calculations, known R square obtained is equal to 0.9063 or 90.63%. the score means that the change of dividend payout ratio influenced by profitability of 90.63% while more 9.37% influenced by other factors outside this discussion which also influence dividend payout ratio.

This result accordance with elyzabet (2009), and Fira (2009) show that profitability has a positive and significant influence on dividend payout ratio. And in the opinion of Mahmud (2010: 375) companies that have good profitability can pay dividends or increase dividends..

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 CONCLUSIONS**

Based on the analysis and discussion in the previous section, there are several conclusions that can be derived from the findings. The conclusions are as follows:

1. FCF significantly affect ROI as the measure of profitability. It can be seen from growing fixed assets of PT. Astra International Tbk as the result of making internal investment. With the value of R square of 0.447, it can be interpreted that as much as 44.7% of the profitability of PT Astra International Tbk can be explained by the variability of FCF.
2. FCF does not bear any effect on DPR. One possible explanation that can be made about this is that PT. Astra International Tbk has some tendency to retain control over FCF rather than to distribute it as dividend. The FCF is used as the source of internal funds to make new investment on assets that are expected to drive company growth in the long run.
3. Profitability (ROI) significantly affect DPR with the value of R square of 0.9063. It can be interpreted that profitability is able to explain DPR by 90.63%. It is not surprising that decreasing profitability of PT Astra International for 10 years is followed by decreasing value of DPR. On the contrary, the rise and fall of profitability (ROI) will increase or decrease the proportion profits that are distributed as dividend.

### **5.2 RECOMMENDATION**

Based on the findings, there are several recommendations that might be of value for future research dedicated to investigate dividend policy. Some of the findings can also be used to improve the decision quality of PT. Astra International Tbk in respect to dividend. For more details, the recommendations are as follows:

1. The DPR of PT. Astra International Tbk is improving after the 2008 crises. It is indicated by relatively stable values of DPR from 2009 to 2014 with 45.15% on average. On the contrary, during the previous years, the DPR of PT. Astra International Tbk is substantially fluctuated. It can be presumed that the stability of DPR attracts investors to make investments on the company. Therefore, the value of DPR should really be considered by the management of PT. Astra International Tbk. Thus, using DPR as performance evaluation tool for internal and external parties can be part of the strategy by PT. Astra International Tbk. It is better for the company to not only rely on internal funds to support assets growth. The company should also consider to distribute the available funds to investors in the form of dividend based on the number of stock owned or as agreed upon.
2. Prior to making investment decision, it is better for investors to review factors that might influence the level of DPR. One of those factors is the level of company profitability. The rationale behind this is that the level of profitability affects company ability to distribute dividend or even increase the dividend that eventually improve shareholders wealth.
3. For future studies, it is suggested to also add other financial ratios that possibly affect the level of DPR. The addition of other financial ratios as variables is expected to improve the accuracy and completeness of the model. The extension of research period will also produce more useful information for investors since they are likely to prefer long run prediction rather than the shorter one. In that way, the investors are able to discern company's growth rate in longer time horizon.

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# THE IMPACT OF LOCAL GOVERNMENT CHARACTERISTICS AND AUDIT FINDINGS OF BPK TO LOCAL GOVERNMENT PERFORMANCE (STUDY ON DISTRICTS AND CITIES IN SOUTH SULAWESI PROVINCE DURING 2012-2015)

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## Abstract

*The purpose of this research is to investigate the influence of Local Government Characteristics and Audit Findings of BPK that will impact on Local Government Performance in 2012 until 2015. By using the application Eviews 10, this study uses panel data regression where data are cross sectional and time series are combined. In the previous study, the results of hypothesis testing simultaneously the same with the final test results are the characteristics of local government in which there are three variables namely the level of regional wealth, the level of dependence on the central government, the size of local government and one variable outside the characteristics of local government is Audit Finding BPK has influence on Local Government Performance. By using the calculation of contribution of Original Revenue, contribution of General Allocation Fund, Natural logarithm of Total Asset of Local Government, and Audit Finding of BPK (in rupiah) divided by Total Budget of Local Government in each Regency and City. The result shows the difference with the previous hypothesis that is partially the variable of the Regional Wealth Level, the size of Local Government and Audit Findings of BPK has no effect on Local Government Performance, while the variable Level of Dependency on the Central Government has a negative effect on the Performance of South Sulawesi Provincial Government in 2012-2015.*

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**Key Words:** characteristics of local government, regional wealth level, level of dependency on the central government, the size of local government, audit findings BPK

**JEL Classification:**

## 1. INTRODUCTION

South Sulawesi Province is a province established in 1960 with the name of the first level region of South-Southeast Sulawesi Province where the capital center was originally located in the city of Makassar. Currently, South Sulawesi Province has 3 Cities and 21 Districts covering: Makassar City, Pare-Pare City, Palopo City, Bantaeng District, Barru District, Bone District, Bulukumba District, Enrekang

District, Gowa District, Jeneponto District, Selayar Islands District, Luwu Utara District, Luwu Utara District, Luwu Utara District, Maros District, Pangkajene and Islands District, Pinrang District, Sidenreng Rappang District, Sinjai District, Soppeng District, Takalar District, Tana Toraja District, North Toraja District and Wajo District UU no. 47 of 1960 on the Formation of the First Level Region of South-East Sulawesi and North-Central Sulawesi. And currently has a population of 8,432,200 from the latest statistical data obtained from the Central Bureau of Statistics of South Sulawesi Province in 2014, which, when measured by the total population in Indonesia, the total population living in South Sulawesi Province is approximately 3.34% of the total population of Indonesia.

South Sulawesi province also in 2014 became the center of economy and trade in Eastern Indonesia, where it can be seen that the province also has a strategic location that connects the Asian and Australian continents as the entrance gateway to Eastern Indonesia, as well as adequate infrastructure such as ports and airport that will help the distribution of goods to the eastern region of Indonesia. Judging from the ranking and performance status performed by the Ministry of Home Affairs of the Republic of Indonesia in 2015, the highest ranking is still owned by the Province domiciled in Java, but South Sulawesi Province is still ranked and the highest performance of each Province in Sulawesi Island ranked seventh for the whole of Indonesia.

**Table 1.1**

**Establishment of Ranking and Performance Status of Local Government Implementation on National by 2015**

No.	Province	Rank		Status
		Number	Skor	
1	East Java	1	3,1802	Highest
2	West Java	2	3,1760	Highest
3	East Kalimantan	3	3,1469	Highest
4	DKI Jakarta	4	3,0560	Highest
5	Central Java	5	3,0539	Highest
6	West Nusa Tenggara	6	2,9079	High
<b>7</b>	<b>South Sulawesi</b>	<b>7</b>	<b>2,8971</b>	<b>High</b>
8	DI Yogyakarta	8	2,8707	High
9	Gorontalo	9	2,8438	High
10	Riau Island	10	2,8263	High

Source: <http://www.otda.kemendagri.go.id/> (2017)

Based on the data obtained, it can be seen, in 2012 South Sulawesi Province has a higher performance score of 2.7260 compared to the year 2013 of 2.6905 where there is a difference of 0.0355, but the audit findings are more high compared to the value of findings in 2012 amounting to Rp310,148,500,000,000,- compared to the year 2013 amounting to Rp229,632,020,000,000, - of which there is a difference of Rp80,516,480,000,000, which is a sign that the value of the findings is higher, but the performance for the Local Government is also higher. This is different from that described by Utomo (2015) which states that the higher BPK audit findings the lower the Performance of Regional Government due to the higher level of loss that must be accepted by a local agency and follow the previous research conducted by Mustikarini (2012).

**Table 1.2**

**Value of Audit Findings and Performance Scores of Regency and City Government of South Sulawesi Province in 2012 and 2013**

Fiscal Year	Information	Status
2012	Value of Findings	Rp310.148.500.000.000,-
	Performance/Score	High (2,7260)
2013	Value of Findings	Rp229.632.020.000.000,-
	Performance/Score	High (2,6905)

Source: <http://bpk.go.id> and <http://otda.kemendagri.go.id> (Data processed 2017)

## 2. LITERATURE REVIEW

### Regional Autonomy

According to Law no. 23 of 2014 reveals that regional autonomy is the right, authority and obligation of autonomous regions to regulate and manage their own Government Affairs and the interests of local communities in the system of the Unitary State of the Republic of Indonesia. In a book made by Sujarweni (2015: 230) reveals that regional autonomy is a freedom possessed by the Regional Government allowing it to make its own initiatives, manage and optimize local resources. With the freedom to take initiative is a basis for the provision of regional autonomy is able to do according to local needs.

### Public sector accounting

According to Abdul Halim, et al (2014: 3) states that public sector accounting is a process of identifying, measuring, recording and reporting economic transactions (financial) of an organization or public entity such as government, Non-Governmental Organization and others that serve as information in order to take economic decisions by the parties in need. Another opinion according to Sujarweni (2015: 1) reveals that public sector accounting is a service activity consisting of recording, classifying and reporting events or economic transactions that will ultimately produce a financial information that will be needed by certain parties for decision making, which applied to the management of public funds in the state high institutions and departments under it.

### Local Government Performance

Performance is a description of the level of achievement of the implementation of an activity, program, or policy in realizing the goals, objectives, mission and vision of the organization contained in strategic planning of an organization (Mahsun et al, 2011: 141).

The performance of Regional Government can be interpreted as a description of the level of achievement of the results of the implementation of an activity or program of the Regional Government in realizing the objectives, objectives, mission and vision of the Region as contained in the Regional Planning Document used as accountability to the public and should be informed to the community and stakeholders the level of achievement of results, which is associated with the mission and vision of the organization and the positive and negative impacts of operational policies that have been taken (Suripto, 2011: 1).

### **Performance Evaluation of Local Government Implementation**

Minister of Home Affairs Regulation no. 73 of 2009 states that one of the performance evaluations undertaken by the government against Local Government is done by using the Evaluation of Local Government Implementation Performance (ELGIP) using Local Government Implementation Report (LGIR) as the main source of information. ELGIP is a systematic process of data collection and analysis systematically and continuously on the performance of local government by using performance measurement system (Utomo, 2015). The purpose of the evaluation of governance by Gamawan Fauzi quoted by Sedyaningsih (2014) is to know the success of local government in managing the region and the results achieved. Implementation of ELGIP includes measuring the performance of provincial governance, ranking, and determining the performance status of existing governance in provinces, districts and cities nationally. Then the results of these assessments are used for performance improvement capacity building programs and fostering the implementation of local government (Sedyaningsih, 2014).

### **Characteristics of Regional Government**

According to the Great Indonesian Dictionary (KBBI) reveals that the notion of characteristic is something that has a characteristic in accordance with certain *perwatakan*. According to research made by Utomo (2015) revealed that the characteristics of Regional Government is a special feature inherent in the Regional Government that marks and distinguishes it from other regions. According to some previous studies, it was revealed that the characteristics of the Regional Government consisted of the level of local government wealth measured by the ratio of the Local Revenue and divided by total regional revenues, capital expenditure using the ratio of capital expenditure divided by total spending, the level of dependence on the Central Government measured using the General Allocation Fund divided by total revenue, the size of Local Government by calculating the natural logarithm of the total assets of Local Government, then the findings of BPK audit with audit findings ratio (rupiah unit) divided by total performance budget (Utomo, 2015).

### **Regional Wealth Level**

The level of regional wealth represents income derived from the region itself proxied based on the acquired PAD (Sedyaningsih, 2014). In other journals it also mentions the same thing as in the journal according to (Sudarsana and Rahardjo, 2013) which reveals that the Original Income is compared to the total income as a measurement proxy and to find the amount of the contribution of the Original Regional Revenue to the level of regional wealth, this is also in line with research made by (Mustikarini and Fitriasari, 2012) and also in the opinion of Retnowati (2016) which reveals that the level of regional wealth is a representation of the level of prosperity of a region. Accordingly (Sedyaningsih, 2014) the formula used to calculate the level of regional wealth is as follows:

$$\text{Regional Wealth Level} = \frac{\text{Local Original Revenue}}{\text{Total Revenue Area}}$$

### **Level of Dependency on Central Government**

The level of dependence on the Central Government is proxied by using the General Allocation Fund which is a transfer fund from the Central Government to assist the Local Government in managing its financing and expenditures (Sedyaningsih, 2014). According to Law no. 33/2004 cited from Raviyanti's (2016) study on Financial Balance states that the General Allocation Fund, is a fund derived from the

revenues of the State Budget allocated to the Province and Regency/City for the purpose of even distribution inter-regional financial capability to fund regional needs for decentralization. According to the formula used by (Utomo, 2015) to measure the degree of dependence on the Central Government are:

$$\text{Level of Dependency on Central Government} = \frac{\text{General Allocation Fund}}{\text{Total Revenue Area}}$$

#### **Size of Local Government**

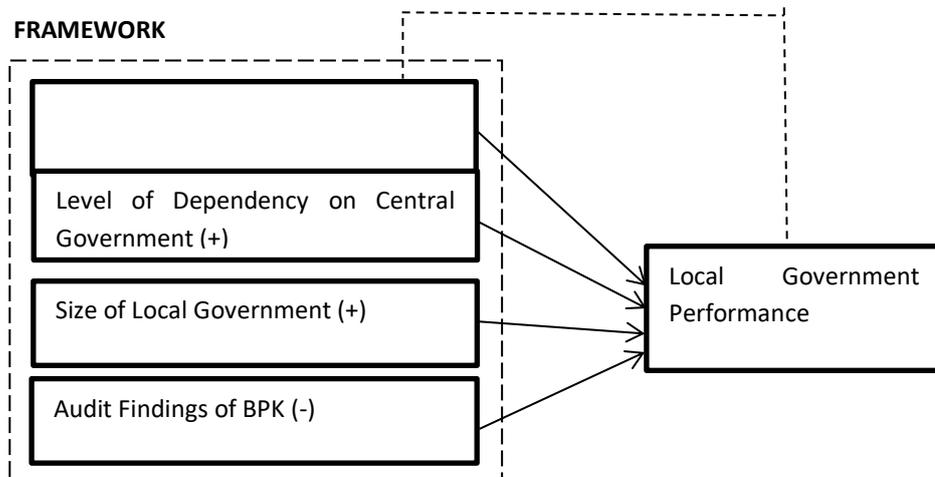
The size of the Local Government or known as the size of the Regional Government describes how large the area is by looking at the total economic resources owned by the region or through its total assets (Sedyaningsih, 2014). According to Home Regulation no. 17 of 2007 revealed that the assets of the region is one element in the framework of government administration and service to the community. Therefore, it must be managed properly and properly so that it will manifest the management of local goods that are transparent, efficient, accountable, and the certainty of value that can function in accordance with the main tasks and functions of local government. The formula according to (Harumiati and Payamta, 2014) to calculate the size of Local Government is:

$$\text{Size of Local Government} = \text{Natural Logarithm (Total Assets)}$$

#### **Audit Findings of BPK**

According to SPKN (2017) cited from a study by Husna (2017) states that examination findings containing initial indications of fraud are presented in the LHP without explaining in detail the alleged fraud. However, the examiner focuses more on the explanation of the impact of the findings on the subject matter / information subject to the purpose of the examination. The examiner discloses his findings with elements that can be adapted to the purpose of the examination. For example PDDT (inspection with a specific purpose) in the form of compliance checks then the elements of the findings that must exist are conditions, criteria and consequences. The element of the cause is optional depending on the depth of the examiner's test to determine the underlying cause of non-compliance. In this case, the audit findings variables are measured using the percentage of the division between Audit Findings (in Rupiah) divided by the total local budget (Sudarsana and Rahardjo, 2013). Thus, the formula for BPK audit findings is:

$$\text{Audit Findings of BPK} = \frac{\text{Audit Findings (in Rupiah)}}{\text{Total Shopping Budget}}$$



### 3. METHODOLOGY

#### 3.1 PARTICIPANTS

This type of research uses descriptive verification research with a causal nature. Causal in this study aims to obtain information about the current state and provide an overview of the influence of local government characteristics and BPK audit findings analyzed objectively against the performance of local government, both simultaneously and partially. This research uses quantitative data type with scale ratio. Quantitative data is data that is numerical or numerical or can be measured with certainty.

Population in this research is Regency/City that exist in South Sulawesi Province year 2012-2015. Sampling technique in this research is done by taking non-probability sampling with purposive sampling method. According Sugiyono (2014: 120) non-probability sampling is a sampling technique that does not provide equal opportunities / opportunity for each element or member of the population to be selected into a sample and purposive sampling is a sampling technique based on the characteristics or characteristics (goals) set by previous researchers (Dantes, 2012: 46).

**Table 3.1 List of Sample Research**

No	District Name	No	District Name	No	Cities Name
1.	Bantaeng	11.	Maros	20.	Makassar
2.	Bone	12.	Pangakajene dan Kepulauan	21.	Palopo
3.	Bulukumba	13.	Pinrang	22.	Pare-Pare
4.	Enrekang	14.	Sidenreng Rappang		
5.	Gowa	15.	Sinjai		
6.	Jeneponto	16.	Soppeng		
7.	Kepulauan Selayar	17.	Takalar		
8.	Luwu	18.	Tana Toraja		
9.	Luwu Timur	19.	Wajo		
10.	Luwu Utara				

Source: <https://sulselprov.go.id> (2018)

### 3.2 MEASUREMENTS

#### Descriptive Statistics Analysis

According to Rasyad (2014: 7) descriptive statistics is a science that is a collection of rules about the collection, processing, assessment, and the conclusion of statistical data to describe a problem. Descriptive statistics according to Sugiyono (2012: 148) have the presentation of data such as graphs, tables, diagrams, pictograms, median calculations, modes, mean, decile calculations, presentations, data deployment calculations using average calculations and standard deviations and percentage calculations. This research uses descriptive analysis in the form of graph, calculation mode, median, mean, and calculation of data dissemination by using standard deviation.

#### Panel Data Regression Analysis

In regression analysis, there are three forms of time series, cross section, and panel data. According to Ansofino (2016: 141) panel data regression is a combination of time series and cross section with the aim to avoid or overcome the problem of omission of variables. If each cross section unit has the same time series data, then the model is called a balanced panel panel regression model (balance panel), if the number of time series observations and cross section units is not the same, it is called an unbalanced data panel regression. To model the data panel regression using software eviews version 10. The regression model for panel data is as follows:

$$Y_{it} = \alpha + X_{1it}\beta_1 + X_{2it}\beta_2 + u_{it}$$

Where:

$Y_{it}$  = Local Government Performance

$\alpha$  = Interception coefficient (serves as a scale)

$\beta_1$ -  $\beta_2$  = Slope coefficient

$X_{1it}$  = Characteristics of Local Government

$X_{2it}$  = Audit Findings CPC

$u_{it}$  = Another disturbance factor

For panel data regression, there are three methods generally applied in this method:

#### Pooling Method or Fixed Coefficient Between Time and Individual (Common Effect)

This technique is not the same as making regression with cross section data or time series. However, for panel data, before creating a regression we must combine cross-section data with data. This combined data is then treated as an observational entity to estimate the model by the OLS method. This method is known as the Common Effect estimation. However, by combining data, we can not see the difference between individuals and between time. Or in other words, in this approach does not pay attention to the dimensions of individuals and time. It is assumed that the behavior of data between firms is the same in various periods.

### Fixed Effect Model

In the previous discussion we assume that intercepts and slopes are the same between time and between firms. However, this assumption is clearly very far from reality. The existence of variables that are not

all entering in the model equation allows for the existence of an intercept that is not constant. Or in other words, this intercept may change for each individual and time. Thought is the basis for the idea of forming the model.

### Random Effects Model

If in the Fixed Effect Model, the differences between individuals and or time are reflected by interception, then in the Random Effects Model, the difference is accommodated by error. This technique also takes into account that errors may be correlated along time series and cross section.

## 3.3 DATA ANALYSIS

Table 3.2

### Descriptive Testing Results

	Local Government Performance	Wealth Level	Level of Dependency	Local Government Size	Audit Findings of BPK
Mean	2,75	8,50%	61,03%	24,75	1.11%
Maximum	3,46	28,07%	72,36%	29,95	10.12%
Minimum	0,67	0,57%	40,60%	14,05	0.00%
Std. Dev.	0,58	5,14%	7,60%	5,97	1.98%
Observation	88	88	88	88	88

Source: Processed Data (2018)

From these data it can be seen that there are data that have deviation standard which is bigger than the mean value that is Local Government Performance, Local Government Property Level, Dependency Level to Central Government, and Audit Finding of CPC so that operational variable contained in the above table is included in group or not varied and vice versa.

In all samples produced by Regency and City in South Sulawesi Province 2012-2015 have mean value of Regional Wealth Level of 8.50%, maximum value of Regional Wealth Level of 28.07% achieved by Makassar City in 2015, value minimum of 0.57% recorded is Jeneponto District in 2014, the standard deviation value recorded at 5.14% which is smaller than the mean or average of 8.50%, therefore it can be concluded that the data Wealth Level The regions in the data group do not vary.

In all samples produced by regencies and municipalities in South Sulawesi Province from 2012 to 2015 has an average of the dependency variable on central government is 61.03%. Data from the sample has a maximum value of 72.36% and recorded in Sinjai District in 2013. Then the minimum value of Dependency on the Central Government of Makassar City in 2015 is 40.60%. Standard deviation for Dependency on Central Government is 7.60% smaller than the average value of 61.03% so it can be

concluded that the dependent variable data rate on the Central Government in the data group does not vary.

In all samples produced by regencies and municipalities in South Sulawesi Province from 2012 to 2015 has an average of the variable size of Local Government is 24.75. From this sample that has a maximum value of 29.95 obtained by the city of Makassar in 2014 and the minimum value of 14.05 obtained by Wajo Regency in 2013. Then the standard deviation of variables of local government size of 5.97 which is smaller from the average that is in the data that is equal to 24.75. So it can be concluded that the data variable size of the Regional Government data are grouped and the data does not vary.

In all samples produced by regencies and cities in South Sulawesi Province from 2012 to 2015 has an average of BPK Audit Finding variable is 1.11%. From the data that has been presented the maximum value for this variable is 10.12% and the minimum value is 0.00%. Standard deviation of which is greater than the average of 1.98% and it can be concluded that the data of the Audit Findings BPK data is not clustered and varied.

In all samples produced by regencies and municipalities in South Sulawesi Province from 2012 to 2015 has averages from Local Government Performance 2.75. From this sample has a maximum value of 3.46 recorded in Pinrang District in 2015 and a minimum value of 0.67 recorded recorded in Soppeng District in 2012. Standard deviation of 0.58 which is smaller than the average recorded average of 2.75, so the sample data is clustered and the data does not vary.

### Selection of Panel Data Regression

#### A. Chow Test

Chow test is a test used to choose between common-constant model and fixed effect model. Decision making uses the following criteria:

H0: Common Constant Model (PLS)

H1: Fixed Effect Model (FEM)

With a significance level of 5%, if the probability value for cross-section chi square  $< 0.05$ , then H0 is received or panel data regression using the common-constant model. The following is Table 4.9 which is testing chow test.

**Table 3.3**

#### Chow Test Result

Redundant Fixed Effects Tests  
 Equation: Untitled  
 Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.772972	(21,61)	0.0010
Cross-section Chi-square	58.307467	21	0.0000

Source: EViews 10 (2018)

Based on chow test result proved that p-value cross-section of chi square is 0,0000 <0,05 and p-value F test 0,0010 <0,05 so this research model use Fixed Effect Model (FEM). The Fixed Effect Model (FEM) was chosen because the value of p-value cross-section chi square and p-value F test has a value smaller than the significance level of 5%.

### B. Hausman test

Hausman test is a statistical test used to be the basis of consideration in choosing whether to use the fixed effect model or random effect model. This test is performed using the following hypothesis:

H0: Random Effect Model (REM)

H1: Fixed Effect Model (FEM)

To find out if fixed effect model is better than random effect model then use hausman test. This hausman test statistic follows the statistical distribution of chi square with degrees of freedom by the number of independent variables. The null hypothesis is rejected if the statistical value of the hausman test is greater than the critical value for the chi-square statistic. This means that the proper model for panel data regression is the Fixed Effect Model (FEM). Here is a table 3.4 testing of the test hausman.

**Table 3.4 Hausman Test Result**

Correlated Random Effects - Hausman Test  
 Equation: Untitled  
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.444234	4	0.3492

Source: EViews 10 (2018)

Based on the above table, hausman test results can be seen from the existing criteria, can be determined Random Effect Model (REM) is the best model in this test with a hausman statistic value of 0.3492 greater than the significance value of 0.05 or 5%.

### Regression Equation of Panel Data

Based on the test that has been done, in this research using Random Effect Model (FEM) for panel data regression. The following test results were tested using the Random Effect Model (REM) in Table 3.5.

**Table 3.5 Random Effect Model Test Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.305549	0.872667	6.079698	0.0000
TKD	3.776117	2.710647	1.393069	0.1687
TKT	-4.181947	1.147789	-3.643480	0.0006
UP	-0.010081	0.008462	-1.191253	0.2382
TA	-6.393283	3.285400	-1.945968	0.0563

Source: EViews 10 (2018)

Based on the test data listed above can be seen that the panel data regression equation is as follows:

1. Interception coefficient of 5.305549 which means if the variable of Regional Wealth Level, Level of Dependency on Central Government, Local Government Size, and Constant Audit Findings of BPK is the level of Performance of Local Government owned by District/City in South Sulawesi Province and its component has increased at 5.305549.

2. The Coefficient of Regional Wealth Level (X1) is 3,776,117 which means also that if there is a change in the increase of Regional Wealth Level of 1 (assuming other variable is constant) then the performance level of Local Government owned by District/City in South Sulawesi Province has increased amounted to 3.776117.

3. Coefficient of Dependency on Central Government (X2) equal to - 4,181947 which also means that if there is a change of increase of Dependency Level on Central Government equal to 1 (assuming other variable constant) hence level of Local Government Performance equal to 1 (assuming other variable constant), the level of Performance of Regional Government owned by District/City in South Sulawesi Province decreased by 4.181947.

4. Coefficient of Local Government size (X3) is -0,010081 which means also that if there is a change of Local Government size increase of 1 (assuming another variable is constant) then the level of Local Government Performance is 1 (assuming other variable is constant) Local Government owned by District/City in South Sulawesi Province decreased by 0,010081.

5. The Coefficient of Audit Findings of BPK (X4) is -6.393282 which means also that if there is a change in the increase of Audit Findings of CPC of 1 (assuming other variables are constant) then the level of Local Government Performance is 1 (assuming other variables are constant) The performance of Local Government owned by Regency / City in South Sulawesi Province decreased by -6.393282.

### **Regression Coefficient Testing**

#### **F Test (Simultaneous)**

Test F or often referred to as a simultaneous test is a test conducted to test whether the independent variables simultaneously or together have a significance influence on the dependent variable. With the provision of decision if the probability value (F statistic)  $< 0.05$  (5% significance level) then  $H_0$  rejected which means independent variables have a significant influence on the dependent variable together. However, if the probability (F statistic)  $> 0.05$  (5% significance level) then  $H_0$  is accepted which means the independent variables simultaneously or together have no significant effect on the dependent variable.

**Table 3.6 Simultaneous Effects Specification Test Results**

Cross-section fixed (dummy variables)			
R-squared	0.608808	Mean dependent var	2.746495
Adjusted R-squared	0.448484	S.D. dependent var	0.578076
S.E. of regression	0.429303	Akaike info criterion	1.389361
Sum squared resid	11.24238	Schwarz criterion	2.126299
Log likelihood	-34.43718	Hannan-Quinn criter.	1.686103
F-statistic	3.797351	Durbin-Watson stat	1.867848
Prob(F-statistic)	0.000011		

**Source: EViews 10 (2018)**

Based on Table 3.6, it can be found that the probability value (F statistic) is 0.000011 < 0.05 so that H<sub>0</sub> is rejected which means that the Regional Wealth Level, the Dependence on the Central Government, the Local Government Measures and the BPK Audit Findings simultaneously or jointly, have a significant influence on Local Government Performance in Regency / City in South Sulawesi Province in 2012-2015.

**Test t (Partial)**

Test t is a test conducted to determine the value of regression coefficient on each variable individually to variable (Y) whether significant or not. If the probability (t statistic) > 0.05 (5% significance level) then H<sub>0</sub> is rejected which means that the independent variable has a significant influence on the dependent variable partially. The following Table 3.7 describes the partial test results.

**Table 3.7 Test Result t (Partial)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.305549	0.872667	6.079698	0.0000
TKD	3.776117	2.710647	1.393069	0.1687
TKT	-4.181947	1.147789	-3.643480	0.0006
UP	-0.010081	0.008462	-1.191253	0.2382
TA	-6.393283	3.285400	-1.945968	0.0563

**Source: Output Eviews 10 (2018)**

Based on table 3.7 it can be concluded that:

1. Variable Level of Regional Wealth has a probability value of 0.1687 > 0.05, in accordance with the provision that H<sub>0</sub> is accepted means the level of Regional Wealth partially has no significant effect on the performance of Local Government at the Regency / City in South Sulawesi Province and its components on year 2012-2015.
2. Dependency Variables on the Central Government has a probability value 0.0006 < 0.05, in accordance with the provisions of the decision that H<sub>0</sub> rejected, which means Dependency on the Central Government partially have a significant influence on the performance of local governments in districts / cities in the Province South Sulawesi and its components in 2012-2015. On the result of t test coefficient, it can be seen that the direction of this variable is negative ie -4.181947.

3. Size Variables Local Government has a probability value of  $0.2382 > 0.05$ , in accordance with the provision of decision that  $H_0$

is accepted which means that the size of Local Government partially has no significant influence on the performance of Local Government at Regency / City in South Sulawesi Province and its components in 2012-2015.

4. Variable Audit Findings The CPC has a probability value of  $0.0563 > 0.05$ , in accordance with the decision provision that  $H_0$  is accepted which means BPK Audit Findings partially has no significant effect on the performance of Local Government at the Regency / City in South Sulawesi Province and its components in 2012-2015.

#### Determination Coefficient Test

Test coefficient of determination is a test conducted to measure how far the ability of the test model in explaining the dependent variable. The value of the coefficient of determination close to one means that the independent variables almost provide all the information needed to predict the dependent variable.

**Table 3.8 Coefficient of Determination Results**

Cross-section fixed (dummy variables)			
R-squared	0.608808	Mean dependent var	2.746495
Adjusted R-squared	0.448484	S.D. dependent var	0.578076
S.E. of regression	0.429303	Akaike info criterion	1.389361
Sum squared resid	11.24238	Schwarz criterion	2.126299
Log likelihood	-34.43718	Hannan-Quinn criter.	1.686103
F-statistic	3.797351	Durbin-Watson stat	1.867848
Prob(F-statistic)	0.000011		

**Source: Eviews 10 (2018)**

Based on table 3.8 can be seen that the value of  $R^2$  (R square) of 0.448484 or for Adjusted R-squared of 44.84%. This indicates that the independent variables consisting of the Regional Wealth Level, the Dependence on Central Government, the size of Local Government, and BPK Audit Findings are able to explain the dependent variable that is the Performance of Regional Government in the Regency / City in South Sulawesi Province and its components in 2012-2015 amounted to 44.84% while the rest of 55.16% is explained by other variables outside of the study.

#### 4. RESULTS AND DISCUSSION

##### Effect of Regional Wealth Level, Level of Dependency on Central Government, Local Government Size, and Audit Findings of BPK on Local Government Performance

Based on simultaneous testing, Regional Wealth Level, Dependency on Central Government, Local Government Measures and BPK Audit Findings on Local Government Performance has a probability value of  $0,000011 < 0.05$  so that  $H_0$  is rejected which means that the Regional Wealth Level, Dependence on Central Government, Local Government Measures, and BPK Audit Findings simultaneously or together have a significant influence on Local Government Performance in Regency/City in South Sulawesi Province in 2012-2015.

This is in line with the research made by Susilowati (2016) and Mustikarini (2012) which revealed that the variables of Regional Wealth Level, Level of Dependency on Central Government, Local Government Measures and BPK Audit Findings simultaneously have a significant influence with Local Government Performance.

#### **Effect of Regional Wealth Level on Local Government Performance**

Based on the partial test that has been done, the Regional Wealth Level has a probability value of  $0.1687 > 0.05$ , then in accordance with the provision then  $H_0$  accepted which can be interpreted that the Regional Wealth Level has no significant effect on the Performance of Local Government. The level of Regional Wealth does not affect the performance of local government, so even though the value of the level of local wealth is higher does not have any effect to the performance of local government.

This is in line with the research made by Maiyora (2015) and the research made by Khasanah (2014), each of which revealed that in the study made no significant influence between the Level of Regional Wealth on Local Government Performance for the District and the City that exist in the Province of North Sumatra and the Level of Regional Wealth does not affect the performance of local governments in the regencies and cities in Central Java province, this happens because the low level of public awareness in terms of payment of taxes and levies paid and tend to only carry out its obligations in paying taxes and levies without claiming further rights to the relevant Regional Government.

#### **Effect of Dependency on Central Government on Local Government Performance**

Based on the partial test, the level of dependency on the central government has a probability value of  $0.0006 < 0.05$ , then in accordance with the provision then  $H_0$  rejected which can be interpreted that the Dependency on Central Government has an influence on Local Government Performance, with a negative direction  $-4,181947$ . Which is contrary to the results of the researcher's hypothesis is a positive effect. This is caused by the high level of dependence on the Central Government is a form of waste on General Allocation Funds that are not followed by the realization of Local Revenue. A good performance of the Local Government is how to use the General Allocation Fund efficiently in order to generate greater Original Regional Revenue (Susilowati, 2016).

This is in line with the research made by Adinafa (2015) which reveals that no effect on the level of dependence on the center of performance scores, possibly because in the evaluation of Performance Evaluation of Local Government Government of the Ministry of Home Affairs Republic of Indonesia not only consider the financial performance side, the relationship between the size of the DAU to the performance scores of the district / municipal governments and obtaining insignificant results. In determining the performance score, which is the result of the Evaluation of Performance of Local Government Implementation, not only the financial performance aspect but also the nonfinancial performance of local government so that the assumption is not significant. This can be seen from the descriptive statistics, the level of dependency with the government as measured by the amount of General Allocation Funds, has almost the same average value in each category.

#### **Effect of Size of Local Government on Local Government Performance**

Based on the partial test that has been done, the size of Local Government has a probability value of  $0.2382 > 0.05$ , then in accordance with the provision then  $H_0$  accepted which can be interpreted that the size of Local Government has no significant effect on the Performance of Local Government. The size of Local Government has no effect on Local Government Performance.

This is in line with research made by Artha (2015) and Marfiana (2013) which reveals that the size of Local Government has no significant effect on Local Government Performance. This happens because the role of Total Assets that serves to improve the performance of local government has not been able to function properly (Kurniasih, 2013).

#### **The Effect of BPK Audit Findings on Local Government Performance**

Based on partial test that has been done, BPK Audit Findings have probability value  $0.0563 > 0.05$ , then in accordance with the provision then  $H_0$  accepted which can be interpreted that BPK Audit Finding does not have significant influence to Local Government Performance. BPK Audit findings have no effect on Local Government Performance, so even though BPK Audit Finding value does not have an effect on Local Government Performance.

This is in line with a study by Nurdin (2014) and Artha (2015) which revealed that BPK Audit Findings do not have a significant effect on Local Government Performance. This occurs because of the justification that can be given is the Audit Findings BPK is a finding obtained at the time of LKPD audit and does not pay attention to whether the activities reported in LKPD have been in accordance with the expectations to be achieved or not and only pay attention to non-conformity with these activities with legislation legislation including disclosure of administrative irregularities, violations of civil engagement or irregularities containing criminal elements (Nurdin, 2014).

#### **5. CONCLUSIONS AND RECOMMENDATIONS**

The results simultaneously show that the Level of Regional Wealth, Level of Dependency on Central Government, Local Government Size, and Audit Findings of BPK have significant effect on Local Government Performance in 2012-2015 in Regency / City in 2012-2015, with coefficient of determination or Adjusted R -quared by 0.448484. This indicates that the independent variables consisting of the Regional Wealth Level, the Dependency on the Central Government, the Local Government Measures, and BPK Audit Findings are able to explain the dependent variable: Local Government Performance in Regency / City in South Sulawesi Province is 44.84% while the rest of 55.16% is explained by other variables outside this study.

Partial test results on each variable on Local Government Performance can be described as follows:

- a. The level of local wealth partially does not affect the performance of local governments in each regency and city in the province of South Sulawesi in 2012-2015.
- b. Dependence on Central Government has a negative effect on Local Government Performance in every Regency and City in South Sulawesi Province in 2012-2015.
- c. The size of Local Government partially does not affect the performance of local governments in each regency and city in the province of South Sulawesi in 2012-2015.
- d. BPK Audit Findings partially have no effect on Local Government Performance in every Regency or City in South Sulawesi Province in 2012-2015.

#### **Suggestion**

#### **Theoretical Aspects**

Based on the result of the research, the writer tries to give input of further research development by adding other variables such as Regional Expenditure, Legislative Size, and Leverage, and other related variables so that it can get much better research result, and can add years of research.

### **Practical Aspects**

For the District and City Government in South Sulawesi Province, the results of the research that the authors do can help the District and City Government in South Sulawesi Province in terms of knowing the variables that affect the improvement of Local Government Performance, so that the variables that exist in this study can be maximized as well as possible.

Then the suggestion for Provincial Government and Central Government to improve Local Government Performance, must be supported by the increase of Original Regional Revenue is by finding source of finance what can be produced by Regency and City in South Sulawesi Province, as in the case of tourism if there is new area which is likely it can be disseminated as well as other sources such as agriculture and industries to increase revenue for the Original Revenue which ultimately aims to increase the Regional Wealth Level.

Equally important, the Government can also conduct better supervision on Local Government Financial Reports so that audit findings that will trigger losses for the Central Government can be minimized.

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## ANALYSIS OF WEATHER ON STOCK RETURN

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### 1. INTRODUCTION

Investment decision is an important factor in the finance function, because to achieve company goals by maximizing shareholder wealth that will be generated through investment activities in the company (Hidayat, 2010). In this case, people have an important role in making the investment decision process, because they always think rationally in every action, so that each decision is a rational choice. To get a rational decision, someone cannot make a decision directly, so one of the main factors that affect the mood and financial decisions of investors is the socio-psychological environment. According to the financial approach, a person's psychological influence has an important effect on investment decisions. Thus, investors' moods influence risk assumptions and provide a safe strategy for the investors themselves (Tuna, 2014).

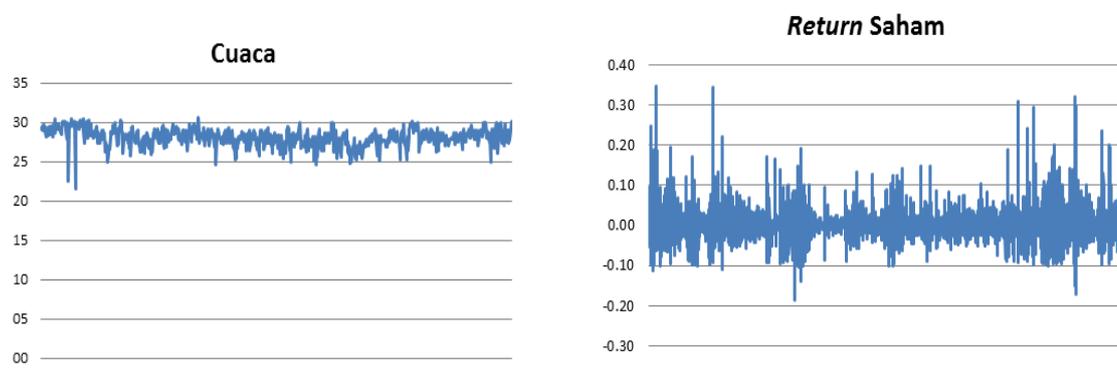
Weather is said to be one of the factors that can affect someone's mood. Howarth & Hoffman (1984) described how weather can have an effect on concentration levels and can predict an optimistic feeling in a person. The mood has an influence on the behavior or how someone makes economic decisions. In his study, Kourtidis et al. (2006) explained that with a positive mood (described through more energetic attitudes and more pleasant voice intonation), an investor is able to achieve higher stock returns. The optimistic attitude is also said to have an effect on the attainment of an investor's stock return (Goetzmann, et al., 2015).

From the study above, can be drawn an assumption that there is a relation between weather and the stock condition. Several previous studies have tested this theory with many results. There have been several studies to prove the relationship between the weather and stock conditions, including Saunders (1993) on the effects of weather on NYSE / AMEX stock indexes in New York, Keef & Roush (2002) regarding the effect of weather on stock retakes in New Zealand and Wang et al. (2012) on the effect of weather on stock risk in Taiwan. However, there are studies that do not find any influence between weather and stock conditions, including Pardo and Valor (2003) related to the stock price at the Madrid Stock Exchange (MSE) in Spain, Tufan & Humarat (2004) Stock Exchange 100 in Turkey, as well as Floros (2011) which found no direct link between weather and stock returns on the PSI20 stock index in Portugal.

In Indonesia itself, has been conducted study by Brahmana et al., (2012) to prove the effect of weather on stock return. The results show that temperature and weather can affect a certain day (called day-of-week anomaly or DOWA), which is on Monday that tends to cause fluctuation of investor's mood, thus impacting on higher stock return rate. Based on Capital Market Statistics data, it was found that the Composite Stock Price Index (IHSG) at the closing of December 29, 2017 increased to 19.99% compared to 2016. Although, IHSG experienced an increase in one of the indexes that experienced a decline, the index of agricultural sector with a decrease to -13.30% compared to 2016.

The decrease in stock indices in the agricultural sector was caused by a single sub-sector, a plantation sub-sector that is affected by weather factors in the city of Jakarta ([www.investasi.kontan.co.id](http://www.investasi.kontan.co.id), accessed on 27 January 2018). Weather fluctuations that occur in the city of Jakarta affect the mood of investors in making share transaction decisions. Based on the data from BMKG Indonesia and BEI that weather data and stock returns of plantation sub-sector was fluctuated as shown by the following graph.

**Graph 1.**  
**Weather Fluctuation and Stock Return of Plantation Sub-Sector 2015-2017**



It is known that the average maximum temperature of Jakarta is 30.60 ° C and the minimum temperature is 21.50 ° C. This indicates that Jakarta more often have high or hot temperature. While the highest stock returns owned by the estate sub-sector of 0.35 and the lowest stock return is -0.19. From the data of weather fluctuation and stock return above can be said that the weather and stock return have a relationship. Based on the graph above, when the temperature of Jakarta is at a high point (hot), stock return tends to increase from the number of stock demand. Conversely, when the temperature is at a low point (rain / cold), the stock return declines due to stock sales. Based on these data, it is necessary to do further study to determine the effect of weather on stock returns.

Weather changes that occur also affect the business in the plantation industry. The reason, the plantation industry is the strength and support of the national economy. In 2016, the plantation sector contributed significantly to the national Gross Domestic Product (GDP) of IDR 429 trillion. The income of the plantation sector has been able to exceed the oil and gas sectors, which amounted to only IDR 365 trillion. However, the results are still said to be a result from poor conditions due to several factors ([www.mediaindonesia.com](http://www.mediaindonesia.com), accessed on 14 February 2018). Weather conditions have a very close relationship with the results obtained in the plantation sector. Some plantation commodities depend on the amount of rainfall and soil absorption, but it will not be good if the weather is prolonged.

Not only has an influence on the plantation industry, the effects of weather can also be felt by an investor who wants to invest. Someone will have different behavior when there is a difference of hot weather and cold weather. When bright sunlight will form a good mood for investors, investors will be optimistic and more eager to analyze stock movements that will eventually raise stock prices in the capital market (Yang, 2004).

In the explanation above can be concluded that the study related to the effect of weather on stock still shows varying results. So in this study will have a study of the weather effects in Indonesia, especially air temperature, on stock returns in Indonesia Stock Exchange. The duration of this study is based on the average daily air temperature taken from the Meteorology Climatology and Geophysics Agency (BMKG).

## **2. LITERATURE REVIEW**

### **a. The effect of weather on stocks**

There are various weather elements used in the previous study, which generally use elements of the cloud state (Saunders, 1993, Keef & Roush, 2002; Hirshleifer & Shumway, 2003; Pardo & Valor, 2003; Tufan & Humarat, 2004; Tuna, 2004; Goetzmann et al., 2015; Keef & Roush, 2007), wind speed (Keef & Roush, 2002; Sariannidis et al., 2016), humidity levels (Pardo & Valor, 2003; Tuna, 2004; Sariannidis et al., 2016), as well as air temperature.

The study using clouds as an element of weather has generally been conducted in various countries, including Hirshleifer & Shumway (2003) in 26 major cities in the world, including New York, Paris, Melbourne, and Kuala Lumpur. The results generally show that the cloud conditions have a positive effect on stock conditions. This can be explained because the psychological state can affect investor behavior, a bright day can provide a good mood for someone, and a good mood will cause a positive reaction to the news in circulation (Saunders, 1993; Hirshleifer & Shumway, 2003; Goetzmann et al., 2015).

Meanwhile, the result of Tuna (2004) explained that the mood of investors affects the perception of risk and gives instinct to create a safe strategy for investors. The financial behavior approach explains that there is a relationship between weather and returns. Environmental factors such as rain, snow, humidity, sunny or cloudy days are thought to affect investors' moods. However, there are studies that explain that there is no relationship between the state of clouds to stock prices (Tufan and Humarat, 2004; Pardo & Valor, 2003; Keef & Roush, 2002; Kourtodis, Sevic & Partalidou, 2016), which indicate the rational behavior of investors in the stock market.

Results of study using wind speed indicators have been conducted in New Zealand (Keef & Roush, 2002). The results showed that wind speed has a significant effect on stock return, that the higher the wind speed the lower the rate of stock return. However, Keef & Roush (2002) explained that wind velocity cannot be directly linked to stock returns, but may have an effect on investor pessimism or optimism, which has an impact on the company's future cash flow and discount rate. The results of this study are also reinforced by Sariannidis et al. (2016) conducted on stock exchanges in Europe. However, Sariannidis et al., (2016) explained that the psychological aspects of an investor can influence in making investment decisions.

Sariannidis et al., (2016) explained that the impact of weather conducted in New Zealand using the air humidity shows a positive relationship between air humidity and the rate of returns. The level of humidity described can encourage investors to become more aggressive, resulting in an increase in stock returns. But in contrast to the results of Pardo & Valor's (2003) study, the humidity level has no effect on stock trading that indicates investors' rational behavior.

### **b. The effect of temperature on stock return**

There are some different results related to the influence of air temperature on stock return. Keef & Roush (2002) study showed that there is a correlation between air temperature and stock returns in New Zealand. It is said that the higher the air temperature the lower the value of stock index. This can happen especially in countries with hotter temperatures, such as Singapore or Kuala Lumpur. Kang et al. (2009) also found a correlation between weather (including temperature, humidity level, cloud state and radiation time or sunshine) to the trade return rate in Shenzhen, which is described as a weather impact on investors' emotional condition.

However, there are also study results explained that air temperature has no effect on stock returns. Cao & Wei (2005) tested the theory that low temperatures can be associated with high returns, and higher temperatures can be attributed to low returns, but this study found no correlation between air temperature and returns. It is explained that the temperature has no effect on the investors, because generally the office workers have been equipped with a room that has a cooling or heating system to adjust the comfort to air temperature. Floros (2011) also noted that there is no direct relationship between air temperature and returns in Portugal, but it was found that the effect of temperature in January had an impact on higher returns. Investors are described as being more aggressive in January, impacting on the high rate of returns to the month.

The study in Indonesia has also found that there is no positive correlation between weather and returns, which means that stock market trading does not depend on weather conditions (Brahmana et al., 2012). But the study also found that weather can affect investors' moods on certain days such as Monday when higher temperatures (referred to as day-of-the-week anomaly or DOWA), have an impact on market returns that are higher than other days. The previous study findings on the effect of air temperature on stock returns are shown in Table 1. below.

**Table 1. Summary of Past Research Results**

No	Researcher	Weather Dimension	Duration of study	Stock Index	Study Results
1	Keef & Roush, 2002	Cloudy weather, air temperatures, and wind conditions	June 1968 – October 2002	New Zealand <i>Stock Exchange</i>	Wind and air temperature conditions have a relationship with the stock index on the New Zealand Stock Exchange.
2.	Cao & Wei, 2005	Air temperature	July 3, 1962 – July 9. 2001	8 international stock markets, including America, Canada, UK, Germany, Sweden, Australia, Japan and Taiwan	The air temperature is not affected to stock return level in 8 international stock market.

No	Researcher	Weather Dimension	Duration of study	Stock Index	Study Results
3.	Apergis & Gupta, 2007	Combination of daily temperature data, wind speed, rainfall, humidity, and cloud conditions	January 2, 1973 - December 31, 2015	South Africa stock in New York Stock Exchange	Weather (including daily temperature, wind speed, rainfall, humidity levels, and cloud conditions) were found to have an effect on South African stock returns in New York.
4.	Kang <i>et al.</i> , 2009	Temperature, humidity level, cloud state and duration of irradiation	January 1999 - December 2008	Hong Kong and Shenzhen stock market	The weather (including temperature, humidity, cloudiness and sunshine) influences the Shenzhen market.
5.	Floros, 2011	Air temperature	January 1, 1995 – July 31, 2007	The PSI20 stock index on Lisbon Stock Exchange	Air temperature has no direct effect on the rate of return of stock PSI20, but the air temperature in January have an influence on the mood of investors, which is shown through a higher return value at month.
6.	Brahmana <i>et al.</i> , 2012	Air temperature	January 1999 - December 2015	Indonesia Stock Exchange	Temperature has no direct effect on market return rate in Indonesia
7.	Wang <i>et al.</i> , 2012	Rainfall, duration of irradiation and air temperature	2001-2007	TAIEX (Taiwan) stock index	Air temperature has no effect on stocksets, but has an effect on stock volatility.

No	Researcher	Weather Dimension	Duration of study	Stock Index	Study Results
8.	Apergis <i>et al.</i> , 2016	Combination of daily temperature data, wind speed, rainfall, humidity, and duration of exposure	September 2000 - December 2013	58 stock indexes on the markets of New York and London	Weather (including daily temperature, wind speed, rainfall, humidity level, and duration of irradiation) were found to have an influence on international stock exchange returns.

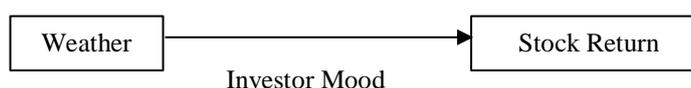
### 3. RESEARCH FRAMEWORK

This study uses daily weather data in the city of Jakarta and returns of plantation sub-sector shares in the period from 29 August 2015 to 1 November 2017. Previous study (Keef *et al.*, 2002; Apergis & Gupta, 2007; Kang *et al.*, 2009; Apergis *et al.*, 2016) stated that the weather effect on stock returns. While study (Cao & Wei, 2005; Floros, 2011; Brahmana *et al.*, 2012; Wang *et al.*, 2012) stated that the weather has no effect on stock returns. Thus, this study needs to be retested in the context of plantation sub-sector. Hence the hypothesis of this study as follows.

H<sub>0</sub>: Weather has an influence on stock returns in the plantation sub-sector.

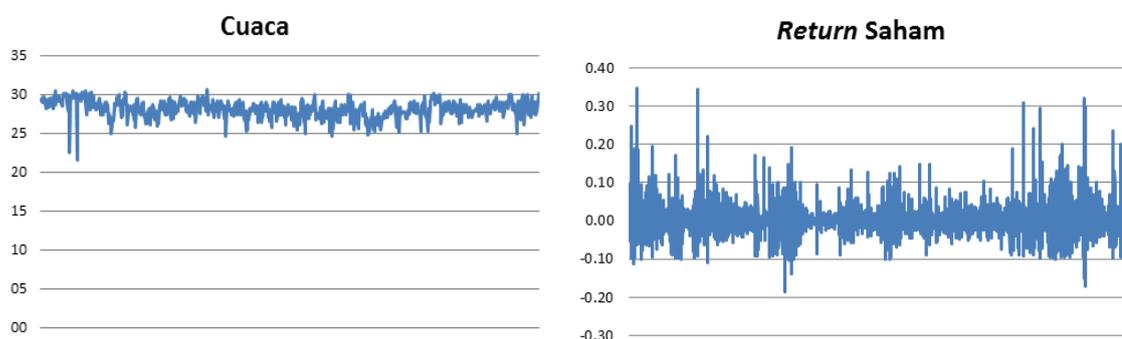
H<sub>1</sub>: Weather has no effect on stock returns on plantation sub-sector.

From the 8 studies support the hypothesis in this study that the weather effect on stock returns. Changing weather conditions can affect a person's mood (mood). When a person has a positive mood, it makes someone think positive and more passionate about their activities, while negative mood tends to make people feel pessimistic and uninspired. This can be felt by an investor who wants to invest in a business. Good and bad mood of an investor who is affected by weather conditions can affect stock returns. Mood can be said to be one factor for investors in determining decision-making that will affect the rise and fall of a company's stock demand. A rising stock demand will lead to a rise in stock prices and an impact on rising stock returns.



### 4. FINDINGS AND DISCUSSION

In this study obtained the results of descriptive statistical analysis based on Jakarta weather fluctuations and fluctuations of stock returns in the period August 29, 2015 - November 1, 2017 as follows.



**Graph 2.**

**Weather Fluctuation and Stock Return of Plantation Sub-Sector**

Based on the weather fluctuation chart from BMKG Indonesia data, Jakarta in the period of August 2015 to October 31, 2017 has an average temperature of 28.08 ° C, with the maximum temperature conditions occurring on May 19, 2016 and the minimum temperature conditions occurring on October 23, 2015 amounting to 21.5° C. Seen from the graph of weather fluctuation shows the weather trend in that period tends to decrease at the end of 2016 until early 2017 which then rise again in the middle of 2017. As for the return data of shares of plantation sub-sector has average value of 0.00. Meanwhile, the minimum return value of shares of plantation sub-sector of -0.19 or -19% obtained by PT. Provident Agro, Tbk on March 27, 2017. The maximum return value of shares of plantation sub-sector of 0.35 or 35% obtained by PT. BW Plantation, Tbk on January 26, 2016.

To prove the result of study need to be tested hypothesis influence of weather to stock return. But before doing hypothesis testing, it is necessary to test chow using Eviews 8.0 application to determine using common effect or fixed effect. The chow test shows the probability of 0.4370 which is where Prob. > 0.05, then chow test does not suggest using fixed effect and better use common effect. Because the chow test suggests to use a common effect, it is necessary to test Lagrange multiple to determine the use of common effects and random effects. The result of Lagrange multiple test obtained result at Breusch-Pagan both equal to 0.0000, so Breusch-Pagan <0.05 (5% significant level) hence concluded that Lagrange multiple test suggested to use random effect.

From the results using random effect model obtained results that show the panel data regression and the coefficient of determination as follows.

**Table 2. Random Effect Test Results**

Dependent Variable: Y  
 Method: Panel Least Squares  
 Date: 02/07/18 Time: 21:14  
 Sample: 2015 2016  
 Periods included: 2  
 Cross-sections included: 4794  
 Total panel (balanced) observations: 9588

---

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.016272	0.014131	-1.151473	0.2496
X	0.000598	0.000503	1.188119	0.2348

---

Effects Specification

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Cross-section fixed (dummy variables)

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R-squared	0.394357	Mean dependent var	0.000514
Adjusted R-squared	-0.211413	S.D. dependent var	0.026316
S.E. of regression	0.028964	Akaike info criterion	-3.938660
Sum squared resid	4.020966	Schwarz criterion	-0.353778
Log likelihood	23676.94	Hannan-Quinn criter.	-2.722658
F-statistic	0.651001	Durbin-Watson stat	3.072234
Prob(F-statistic)	1.000000		

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*Source : Data by writer, 2018*

Based on the test data in Table 2, we can see the regression equation of panel data as follows.

$$Y = - 0,016272 + 0,000598X + e$$

The value of weather regression coefficient (X1) expressed positive effect on stock return of company sub-sector of plantation. This indicates if the weather variables rose by 1 unit then the return of shares of plantation sub-sector companies increased by 0.000598 times. This shows when the weather is hot then the stock returns up, because the investors' mood is well and eager so that it affects decision making in taking investment risk. Meanwhile, when the weather is cold or rain, stock returns fall, because the mood of investors is bad so that it affects decision making and more likely to sell its shares that cause the decline in stock returns. The result of using random effect model also shows the result of coefficient of determination R-square (R2) equal to 0,3943, so it can be concluded that the weather explain the rise and fall of stock return equal to 39,43%, while the rest equal to 60,57% explained outside of this study.

After knowing the weather has a positive effect on stock return of estate sub-sector, then tested hypothesis by using partial test (t test). The results of partial test of one-sample test can be seen in Table 3. as follows.

**Table 3. Partial Test  
 One-Sample Test**

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Cuaca	2458,080	9587	,000	28,08343	28,0610	28,1058

The weather variable has a significance value of 0.000. This indicates that H<sub>1</sub> is rejected because of Sig < 0.05. So it can be stated that weather variables have a significant influence on stock returns. The results of this study indicate that the weather in the city of Jakarta has a significant positive effect on stock returns in sub-plantation companies. This is in line with study conducted by Keef & Roush (2002) that the climate in Wellington, New Zealand has a relationship with the return on the stock index. The study divides the weather into three factors: clouds, temperatures, and winds where two factors are related to stock indices. Besides weather is said as one of the factors that can affect one's mood (mood). Brahmana et al. (2012) indicated that temperature and weather can affect a particular day (called day-of-week anomaly or DOWA), which is on Monday that tends to cause fluctuations in the mood of investors, resulting in higher stock returns.

Someone's psychology has an important effect on investment decisions, as in the study conducted by Tuna (2004) explained that investors' moods influence perceptions of risk and give instinct to create a safe strategy for investors. The financial behavior approach explained that there is a relationship between weather and stock returns. Environmental factors such as rain, snow, humidity, sunny or cloudy days are thought to affect investors' moods. Thus, it can be concluded that the weather affects the mood of investors in making investment decisions. The mood affects investors in buying and selling shares of the company. When the weather of Jakarta is at its maximum temperature (hot) it affects the mood of investors, as investors become more eager in making investments.

Thus, affecting the interest of investors to buy the company's shares and increasing demand for shares of the company. When the demand for stocks increases then the stock price of the company increases, this causes the stock returns obtained by investors also increased. Meanwhile, when the weather in the city of Jakarta is at a minimum (rain) affects the mood of investors to be less excited that makes the lack of interest in investing so that it sells shares owned. The sale of these shares led to falling demand for stocks followed by falling stock prices and stock returns obtained by investors. Based on the results of this study can be stated that the weather is a variable that can affect the stock return.

## 5. CONCLUSION

This study resulted in the finding that the weather had a significant effect on stock returns. An investor is influenced by his own mood in making a decision to invest, when the hot weather, an investor has a positive mood and eager to make an investment. Positive mood is able to increase the desire of investors to make investments that increase the demand for stocks and stock prices, then the stock return also increased significantly. Conversely, when the rainy or cold weather, an investor has a more negative mood and is not eager to make an investment that is even more likely to sell its shares, so the stock price falls and then the stock return also decreases.

This study can give implication for investor who want to do investment so that investor can take into account the weather factor in decision of buying and selling stock, because weather influence to fluctuation of stock return. When the weather is hot there is an indication of the number of investors who buy shares, it can be used by selling stocks with higher stock prices. Conversely when the weather is cold or rain investors are more likely to make a sale, it can also be exploited by buying stocks at a cheaper price because the number of stock sales will result in falling stock prices. These results may be different for other sectors, so further study is needed in other sectors. As for companies in the plantation sector should be able to maintain the company's performance when the weather is bad. Companies can increase sales volume when the weather is cold or rainy.

For further study can group climate-based climates that occur in their respective areas such as dry season and rainy season, or spring and others based on the weather situation in the region. The results of this study may not be the same with the results of study on other sectors, therefore can be further study to determine the effect of weather on stock returns in other sectors. As for adding other variables such as demographics and behavioral can expand the results obtained in the study.

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# **ANALYSIS OF MOBILE ADVERTISING EFFECT ON PURCHASE INTENTION WITH BRAND IMAGE AS THE INTERVENING VARIABLES (CASE STUDY: TELKOMSEL MOBILE COUPON)**

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## **Abstract**

*This research was conducted with the aim to know and analyze the effect of mobile advertising to purchase intention with brand image as the intervening variable (Case Study: Telkomsel Mobile Coupon).*

*The type of research used in this research is descriptive quantitative research method with causality research approach. This study is intended to build a real depiction of a phenomenon that is in the research context. The population in this study is all Starbucks consumers in DKI Jakarta area. The sample used is Jakarta Starbucks customer of 180 people.*

*The results showed that Mobile Advertising (M-Coupon) directly has positive affect on the Brand Image. Mobile Advertising (M-Coupon) directly affects positively on Purchase Intention. Brand Image directly positively affects Purchase Intention. Brand Image can mediate the influence between Mobile Advertising (M-Coupon) and Purchase Intention. Mobile Advertising (M-Coupon) and Brand Image mutually influence positively on Purchase Intention.*

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**Key Words:** *Mobile Advertising, Brand Image, and Purchase Intention*

## **1. INTRODUCTION**

One of today's growing marketing strategies is Mobile Marketing. According to Ene and Ozkaya (2015), along with technological developments, mobile devices have an effect on the company's commercial activities and add new dimensions that affect consumer-buying behavior. Communication technology using mobile devices is a highly innovative strategy in a competitive environment by generating larger scale but efficient in operational costs and not limited to place and time (Kocabas 2005)

Telkomsel as the largest mobile operator company in Indonesia is currently implementing customer-oriented strategy to influence the customer purchase intention. Buying interest or customer purchase intentions are important for the company to increase sales.

Consumers generally experience five stages in the buying process: recognition, information search problems, alternatives evaluation, purchase decisions, and post-purchase behavior.

The purchasing intention is at the stage before the formation of the purchase decision, where the consumer has conducted an alternative evaluation and has not decided to make a purchase. A strong purchase intention will lead to a purchase decision.

The solution presented by Telkomsel in influencing the buying interest (purchase intention) customers to the brand is through the mobile advertising implementation. This solution is expected to affect customers' interest in purchasing products from Starbucks that use the product services of Telkomsel Mobile Coupon.

Brand image presents associations that are activated in memory when thinking about a particular brand. This association can be conceptualized in terms of type, favorable, strength (strength), and uniqueness. Consumers develop these associations over time. Brand associations may be attributes (brand attributes) or brand benefits. Brand attributes are anything related to descriptive features that characterize a product or service.

For future business interests, Telkomsel must be able to convince the merchant that the services provided in the form of Mobile Coupon may affect the interest of the subscriber's purchase who get the Mobile Coupon. As for merchants, it takes an appropriate promotion form that can increase the number of customers so that increase sales. For this case, we need a further study that can answer it, so Telkomsel can improve Mobile Coupon service in the future and merchant can allocate their marketing budget and promotion appropriately.

## **2. LITERATURE REVIEW**

### **2.1 MOBILE ADVERTISING**

One of today's growing marketing strategies is Mobile Marketing. According to Ene and Ozkaya (2015), along with technological developments, mobile devices have an effect on the company's commercial activities and enlarge new dimensions that affect consumer-buying behavior. Communications technology using mobile devices is a highly innovative strategy in a competitive environment by generating larger scale, but efficient in operational costs and not limited to place and time (Kocabas, 2005)

Mobile communication technology becomes an indispensable factor in the lives of individuals, both individuals and companies performing individual transactions and other activities through mobile devices. As time matters nowadays, the functionality of mobile devices helps dramatically in the formation of active communication, enabling information flow and making good use of time (Barutçu, 2008).

Mobile advertising is the transmission of advertising messages through mobile devices such as mobile phones (Haghirian, 2005). According to Scharl et.al. (2005) defined that mobile marketing as an area where wireless consumers are driven against products, used freely from time and place. Mobile advertisement is an advertisement that is displayed in various forms, such as music, graphics, sound, or writing, via mobile telecommunication terminal (Frisca, 2011).

This mobile device will be used to collect personal information and all stakeholders will benefit from this type of communication, achieved through mobile devices. Another definition describes mobile

marketing as delivering various marketing activities, advertising-specific messages, sales offerings, special offers, sales, sweepstakes, contests, and more to consumers via mobile devices. The most important feature of mobile marketing activities conducted through mobile devices is the ability to assign voice, text and visual communication with consumers anywhere, anytime and the ability to store messages. In order for company to be successful in mobile marketing activities, they need to build active communication with consumers.

At this time many companies already using mobile advertising technology, so consumers who are accustomed to using mobile devices will soon know that the merchant brand product offerings are true. Consumers do not hesitate to take advantage of the offer even though previously there is no desire to make purchases of merchant brand products.

## **2.2 BRAND IMAGE**

Brand gives added "value" so that the total value of "branded" good products becomes higher than the products that are considered purely objectively (non-"branded" products). Consumers are also known to have high awareness, acceptance, and preference for brands with a good reputation, so that reputable brands have become assets that can also be traded as well as other company assets (Aaker, 2010).

According to Kotler (2012), the brand image as a set of beliefs, ideas, and impressions that are owned by someone against a brand. Therefore, the attitude and actions of consumers towards a brand is determined by the brand image. Keller (2013) defines brand image as the perception and belief that is in the minds of consumers reflected on the association embedded in consumer memory.

Brand image presents the overall perception of the brand and is shaped from past experience information about the brand related to the attitude of belief and preference for a brand. Consumers with a positive image of the brand will be more likely to make a purchase. A positive image of a brand can be affected by a marketing program. Creating a positive brand image requires a marketing program that can connect a strong, profitable and unique brand association in the mind

According to Hasan (2013: 210), brand image is a set of tangible and intangible properties in nature, such as ideas, beliefs, values, interests, and features that make it unique. Brand is defined as a combination of a name, sign, symbol or design to identify goods and services of a business or business group developed into a trademark and differentiates itself from competitors, creates influence and generates value for the company.

Brand image is one of the two parts of brand knowledge in addition to brand awareness. Brand awareness is linked to the strength of a brand's node or brand memory that can be used to measure a consumer's ability to identify brands under different conditions. Brand image is an important concept in marketing that is defined as "consumer perception of a brand that is reflected by the brand linkage in the consumer's memory. This association has various forms and reflects the product characteristics or other aspects of the product. These associations form a brand image in the consumers' minds (Keller, 2013).

Keller (2013) brand image is formed after brand awareness is established by increasing familiarity with the brand through repeatedly exposure and forming strong associations with appropriate product categories or other instructions consumers use to perform purchase or consumption. Once brand awareness is built, brand image can be established.

Establishing a positive brand image requires a marketing program that links strong, positive and unique association to the brand in the consumers' minds. This brand association can be on the characteristics or advantages that brands offer. Brand attributes (brand character) are descriptive features that are a product or service characteristics, while brand benefits are personal values and meanings attached by consumers to product or service characteristics (Keller, 2013: 77).

### **2.3 PURCHASE INTENTION**

Consumer-purchasing behavior is often initiated and influenced by the number of stimuli from outside, both in the form of stimulus and the stimulus of the environment. The stimuli are then processed within themselves according to their personal characteristics, before a purchase decision is finally made. The personal characteristics of consumers used to process the stimuli are very complex, and one of them is the consumer's motivation to buy.

Understanding of consumer behavior will significantly influence the marketing process undertaken by a company, both for the development and implication of marketing strategies. Knowing the purchases motive made by consumers will help simplify a company in meeting the needs and desires of consumers.

Durianto (2013), states that buying interest is the desire to have a product, buying interest will arise if a consumer has been affected to the quality and quality of a product, information about the product, ex: price, how to buy and weaknesses and product advantages over other brands.

Schiffman and Kanuk (2010) say that interest is one of the psychological aspects that have a considerable influence on attitudes of behavior. Buying interest can be interpreted as a happy attitude towards an object that makes the individual trying to get the object by paying it with money or sacrifice. In addition, buying interest can also be interpreted as a form of real thought from the reflection of the buyer's plan to buy several units in a certain quantity of several brands available within a certain period of time (Schiffman and Kanuk, 2010). In the buying process, consumer-buying interest is closely related to the motive it has to use or buy certain products.

Consumer buying interest is a consumer behavior in which the consumer has a desire in buying or choosing a product, based on experience in choosing, using and consuming or even wanting a product (Kotler and Keller, 2012). Buying interest is basically customer behavior in which the customer responds positively to the quality and satisfaction in getting the consumer from the company where it will make the consumer to conduct activities visit or consume the company's products. The creation of consumer satisfaction can provide several benefits, such as the relationship of the company and its customers become harmonious and will form a recommendation for consumers who can benefit the company.

Simamora (2011), states that buying interest (purchase intentions) of a product arise because of the basis of confidence in the product that is accompanied by the ability to buy the product. In addition, the purchase intentions of a product can also occur with the influence of others who are trusted by prospective customers. Buying intentions can also arise if a consumer is very interested in the various information about the product obtained through advertising, experience of a person who has used it, and the urgent need for a product.

Buying interest is derived from a learning process and thought processes that form a perception (Mowen, 2010). This consumer-buying interest creates a motivation that is constantly recorded in her- his mind and becomes a very strong desire that in the end when a consumer has to fulfill his need to actualize what is in his mind.

## 2.4 FRAMEWORK

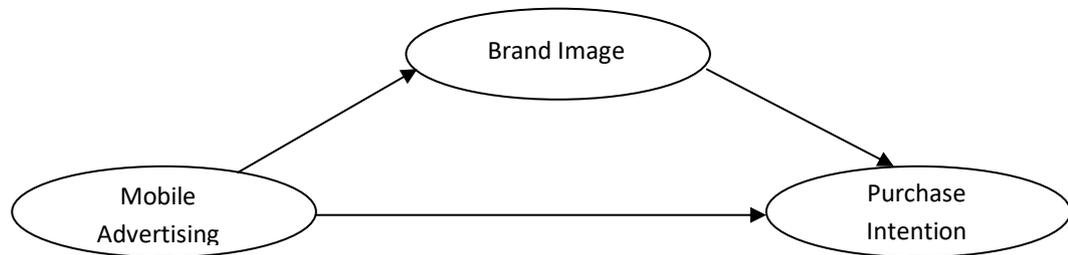


Figure 1. Framework

## 2.5 RESEARCH HYPOTHESIS

Based on the previous framework, research and discussion in the previous chapters can be put forward the following research hypothesis:

- H<sub>1</sub> There is a positive influence of Mobile Advertising (M-Coupon) directly to Brand Image.
- H<sub>2</sub> There is a positive effect of Mobile Advertising (M-Coupon) directly to Purchase Intention.
- H<sub>3</sub> There is a positive influence of Brand Image directly on Purchase Intention.
- H<sub>4</sub> There is a positive effect of Mobile Advertising (M-Coupon) on Purchase Intention mediated by Brand Image.
- H<sub>5</sub> There is a positive effect of Mobile Advertising (M-Coupon) and Brand Image together against Purchase Intention.

## 3. METHODOLOGY

### 3.1 PARTICIPANTS

The Variables used in this study consisted of independent variable, mediation variable, and dependent variable described as follows:

1. Mobile Advertising Variables (M-Coupon) (X) is the transmission of advertising messages through mobile devices such as mobile phones. Indicators used are: information, entertainment, interactivity and personalization.
2. Variable Brand Image (M) is a perception and trust is in the mind of consumers reflected on the association embedded in the consumer memory. The indicators used are: Strength of Brand Association, Favorability of Brand Association and Uniqueness of Brand Association.

3. The Purchase Intention (Y) variable is a concrete thought form of reflection of the buyer's plan to purchase several units in a certain quantity from several brands available within a certain period of time. The indicators used are: interest, desire and conviction.

The populations of this study are all Starbucks consumers in Jakarta area who use and utilize mobile coupon of Telkomsel. Sampling technique using purposive sampling method is a sampling method based on certain criteria or considerations. In this case the sample is selected based on Starbucks customers using mobile coupon service from Telkomsel.

Referring to Hair et al (2010) found that the appropriate sample size is 100 to 200. It is also explained that the minimum sample size is 5 observations for each estimated parameter and a maximum of 10 observations of each estimated parameter. In this study, the number of research indicators as much as 18 so that the minimum sample size is 10 times the estimated number of indicators or as much as  $10 \times 18 = 180$ . The number of samples used more that is 190, so that if there is a biased data or invalid then it does not reduce the number of respondents below the minimum sample recommended by Hair et al, (2010).

### 3.2 MEASUREMENTS

The type of research used in this research is descriptive quantitative research method with causality research approach. The data used in this study is primary data is data obtained directly through the survey by distributing questionnaires to respondents and collecting the results of questionnaires that have been obtained. In the measurement used Likert scale, which is a format that can be used to know or determine the value of the three variables. Applications used of the instrument are: 1) Strongly Agree, 2) Agree, 3) Less Agree, 4) Disagree and 5) Strongly Disagree. Then determine the relative importance values of the five answers that can affect the perception of respondents are: Strongly Agree (5), Agree (4), Less Agree (3), Disagree (2), Strongly Disagree (1).

For more details can be presented operational variables and measurement scale in the following table.

**Table 1. Operational Variabel and Measurement Scale**

Variable	Indicator	Item	Measurement
<i>Mobile Advertising (M-Coupon)</i> (X)	<i>Information</i>	1	Likert Scale
		2	
	<i>Entertainment</i>	3	
		4	
	<i>Interactivity</i>	5	
		6	
	<i>Personalization</i> (Chang, 2016)	7	
		8	
<i>Brand Image</i> (M)	<i>Strength of Brand Association</i>	1	Likert Scale
		2	
	<i>Favorability of Brand Associaion</i>	3	
		4	
	<i>Uniqueness of Brand Association</i> (Keller, 2013)	5	
		6	

Purchase Intention (Y)	Interest	1	Likert Scale
		2	
	Desire	3	
		4	
	Conviction (Schiffman & Kanuk, 2010)	5	
		6	

### 3.3 DATA ANALYSIS

This study is intended to build a real picture of a phenomenon that is in the context of his research. With this descriptive research will be collected various information in order to answer questions about mobile advertising (m-coupon), brand image and purchase intention.

Validity test is a measure to assess whether the measuring instrument used is really capable of providing the variable value to be measured. Testing the validity of each item is used item analysis to correlate the score of each item with a total score, which is the number of scores per item. When the value obtained  $r\text{-count} > r_{\text{table}}$  then the statement item is declared as valid. The data validity test was performed using SPSS program Version 21.

Reliability test is a measure to assess whether the measuring instrument used is able to provide consistent measurement values. Inconsistent measuring tools will yield dubious data. The way used to measure reliability is to use the Alpha coefficient (Cronbach Alpha) which is the average of all the coefficients obtained from the division of many items into different groups.

#### Stages of Path Analysis

According to Widardjono (2010) the first step in path analysis is to make the specification of path analysis model based on existing concepts and theories. The model can also be expressed in terms of equations so as to form a system of equations. This system of equations is called the system of simultaneous equations or there is also a mention of structural models. The model was developed to answer the research problems of research and based on theory and concept, hence called hypothetical model, can be presented in the following picture.

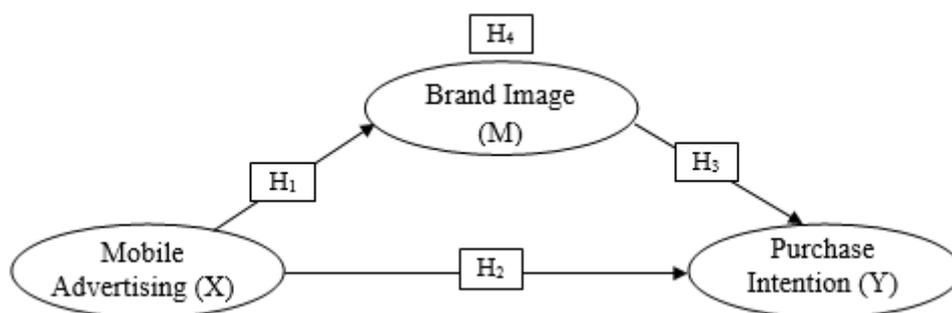


Figure 2. Path Analysis

Based on Figure 2 can be made the structural equation, where X, is exogent variable and M as well as Y is Endogen variable. The structural equation can be seen as follow: (Sarwono, 2007)

1.  $M = \alpha + \beta X + \varepsilon_1$  .....(Substructural 1)

$$2. Y = \alpha + \beta X + \beta M + \varepsilon_2 \dots\dots\dots(\text{Substructural 2})$$

Remarks:

X = *Mobile Advertising (M-Coupon)*

M = *Brand Image*

Y = *Purchase Intention*

$\varepsilon_{12}$  = *Error*

#### 4. RESULT AND DISCUSSION

##### 4.1 CHARACTERISTIC OF RESPONDENTS

In this study, respondents used as samples are Starbucks customers using mobile coupon services from Telkomsel. Methods of data collection using questionnaires to obtain mobile advertising data, brand image and purchase intention. Questionnaires distributed to the respondents and obtained as many as 180 people with the characteristics presented in the following table:

**Table 2. Respondents Characteristics**

Characteristics	Categories	Freq.	Percentage
Sex	Male	97	54%
	Female	83	46%
	Amount	180	100%
Age	20 – 30 years	37	21%
	31 – 40 years	43	24%
	41 – 50 years	65	36%
	More than 50 years	35	19%
	Amount	180	
Occupation	Employee	46	26%
	State Employee	42	24%
	Entrepreneur	59	33%
	Student	33	17%
	Amount	180	100%
Education	High School/Equalized	17	9%
	Diploma III	34	19%
	Scholar S1	63	35%
	Scholar S2	45	25%
	Scholar S3	21	12%
	Amount	180	100%

##### 4.2 REGRESSION ANALYSIS SUBSTRUCTURE 1

**Table 3. Output Resultf of SPSS "Ttes" Substructure 1**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.420	1.201		3.680	.000
	Mobile Advertising	.610	.041	.747	14.991	.000

a. Dependent Variable: Brand Image

#### 4.3 REGRESSION ANALYSIS SUBSTRUCTURE 2

Table 4. Output Result of SPSS "T<sub>Test</sub>" Substructure 2

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.500	1.201		1.249	.213
	Mobile Advertising	.443	.059	.507	7.513	.000
	Brand Image	.374	.072	.349	5.170	.000

a. Dependent Variable: Purchase Intention

Tabel 5. F Test Result

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1848.202	2	924.101	159.747	.000 <sup>a</sup>
	Residual	1023.909	177	5.785		
	Total	2872.111	179			

a. Predictors: (Constant), Brand Image, Mobile Advertising

b. Dependent Variable: Purchase Intention

#### 4.4 DIRECT EFFECT, INDIRECT AND TOTAL EFFECT CALCULATIONS

##### 1. Direct Effect

Effect of *Mobile advertising* variable on *purchase intention*

$$X \rightarrow M = 0,747$$

Effect of *Mobile advertising* variable on *purchase intention*

$$X \rightarrow Y = 0,507$$

Effect of *purchase intention* variable on *purchase intention*

$$M \rightarrow Y = 0,349$$

##### 2. Indirect Effect

Effect of mobile advertising effect on purchase intention through purchase intention.

$$X \rightarrow M \rightarrow Y = (0,747 \times 0,349) = 0,261$$

### 3. Total Effect

Effect of mobile advertising variabel on purchase intention through brand image.

$$X \rightarrow M \rightarrow Y = (0,747 + 0,349) = 1,095$$

From the calculation, all coefficients inter variable can be depicted in path diagram as follows:



Figure 2. Result of Path Analysis Calculation

Structural Equation

Substructure 1 :  $M = 0,747X + e$

Substructure 2 :  $Y = 0,507X + 0,349M + e$

## 4.5 DISCUSSION OF RESEARCH RESULTS

### The effect of mobile advertising on brand image

Based on the test results obtained mobile advertising of 0.747 with a significant value of  $0.000 < 0.05$  which indicates that mobile advertising has a significant positive effect on brand image.

Mobile advertising (m-coupon) is transmission of advertising messages through mobile devices such as mobile phones. Brand Image is a perception and trust that is in the minds of consumers reflected on the association embedded in the consumer memory.

Starbucks using mobile advertising services with M-Coupon through Telkomsel services can send messages to potential customers. Telkomsel Mobile Coupon is a service of Telkomsel Digital Advertising that allows customers to get free discount coupon SMS from merchants located in the vicinity. The customer can redeem this discount coupon at the intended merchant in this case is Starbucks.

With SMS messages that customers receive from Starbucks via M-Coupon, then customers are reminded of the Starbucks brand and will respond well to anything related to Starbucks brand image. It can be said that mobile advertising has an effect on brand image.

The results of this study support research conducted by Sallam and Algamash (2016), which shows that mobile advertising has an effect on brand image.

### The effect of mobile advertising on purchase intention

Based on the test results obtained mobile advertising of 0,507 with a significant value of 0,000 <0.05 which indicates that mobile advertising has a significant effect on purchase intention.

Purchase intention is a real form of thought of reflection of the buyer's plan to buy several units in a certain quantity of several brands available within a certain period of time.

As previously mentioned that with SMS messages obtained from Starbucks customers via M-Coupon, customers will respond and make a decision whether to make a purchase or not with the SMS messages obtained. It can be said that advertising cars have an effect on purchase intention.

The results of this study support research conducted by Chang (2016), Hashim and Zolkepli (2014), Wang and Tsai (2014), which show that mobile advertising has an effect on purchase intention.

#### **The effect of brand image on purchase intention**

Based on the test results obtained purchase intention of 0.349 with a significant value of 0.000 <0.05 indicating that the brand image of customers have a significant effect on purchase intention.

Consumer confidence on the Starbucks brand embedded in its memory will make it easier for consumers to make decisions on Starbucks brand purchases. A well-formed brand image or brand image of Starbucks will be easy to remember what the advantages and benefits of the products it derives from Starbucks, whether it's product quality, product benefits, product pricing, service quality and so on. It can be said that brand image has an effect on purchase intention.

The results of this study support the research conducted by Shah et al, (2012), Wang and Tsai (2014), which show that brand image has an effect on purchase intention.

#### **The effect of mobile advertising on purchase intention is mediated by brand image**

Based on the test results obtained by mobile advertising directly to the brand image of 0.747 and brand image to purchase intention of 0.349, so obtained value of  $0.747 \times 0.349 = 0.261$  this means that brand image can mediate the influence between mobile advertising with purchase intention.

SMS messages obtained by customers from the Starbucks brand through Mobile Coupon indirectly can remind consumers' memory about Starbucks and its various attributes. This can indirectly affect consumer decisions in purchasing Starbucks products. Can be said that brand image can mediate influence between mobile advertising with purchase intention.

The results of this study support the research conducted by Huda (2013) and Salam & Fahad (2016), which states that mobile advertising indirectly mediated by this brand to purchase intention.

#### **The effect of mobile advertising and brand image jointly on purchase intention**

Based on the results of F test calculation obtained value of 159.747 with sig 0,000 <0.05, this means mobile advertising and brand image mutually affect the purchase intention.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 CONCLUSIONS**

Based on the results obtained research it can be put forward some conclusions as follows:

1. There is a positive effect of Mobile Advertising (M-Coupon) directly on Brand Image.
2. There is a positive effect of Mobile Advertising (M-Coupon) directly to Purchase Intention.
3. There is a positive effect of Brand Image directly to Purchase Intention.
4. There is a positive effect of Mobile Advertising (M-Coupon) on Purchase Intention mediated by Brand Image.
5. There is a positive effect of Mobile Advertising (M-Coupon) and Brand Image mutually towards Purchase Intention.

## 5.2 RECOMMENDATIONS

Based on the results of research and discussion in the previous chapters can be put forward some recommendations that are expected to be useful for various parties who need the following:

6. Mobile Advertising (M-Coupon) directly affect the Brand Image. It is therefore advisable for Starbucks merchants of keeping to maintain and further enhance the use of mobile advertising to its customers by further increasing the number of SMS messages to potential customers so that customers can still remember well the Starbucks brand.
7. Mobile Advertising (M-Coupon) directly affects Purchase Intention. For this reason, Starbucks merchants are recommended to increase the use of mobile advertising so that more customers make purchases of Starbucks products.
8. Brand Image directly affects the Purchase Intention. For the reason, it is suggested to the Starbucks merchant to better maintain product quality, service quality, product prices and so forth so that brand image Starbucks remain firmly embedded in the minds of consumers.

For other researchers are expected to expand the research object and add other variables that can affect brand image and purchase intention.

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## ENGLISH TEACHING METHOD IN COURSE INSTITUTION

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### Abstract

*Teaching is interactive process, in which the teacher's method is the result from interaction process between the teacher, the learners, the instructional task, and activities overtime. Course is one of alternative for students who wants to study English deeply, more detail, specifically to improve English skills as addition English lesson at the school.*

*This research aims to describe the process of English teaching and learning at one of course institution as non-formal education, a descriptive study at Beginner level of POLITEK IBC Indramayu. Beside that, it is done to identify students' supporting factor to study English at course institution. The descriptive method is used in the study by applying the qualitative analysis with the specification on the description. This paper uses some techniques for getting information or facts by observation and interviewing. Some questionnaires for teachers, learners, officers and directors are given as well.*

*The finding shows that there are three methods which are applied by course institution, namely: Grammar translation method, direct method, and audio-lingual method. Those methods are not used in one activity but every activity used different method.*

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**Key Words:** *English teaching learning, Course Institution*

### 1. INTRODUCTION

As an international language, English is necessary for all people in the world from children until adult. Although English lesson has applied from the elementary school up to university as formal education but students do not feel enough to get English lesson yet. That is why many students want to learn English course in non-formal education. Non-formal education includes course institution, training institution, play group, and so on. Non formal education is organized for society who needs education's service the function as substitute, addition, and or complement of formal education in the framework of education support along live.

POLITEK IBC is non-formal education and one of English courses in Indramayu regency. Beside English course, POLITEK IBC also opens computer class, Mobile Phone Technician, and Japanese Course. The institution has been existed since 1984 until now, although the existence of POLITEK IBC in the small town in Indramayu regency but in 2006 POLITEK IBC followed English competition of a model skill and education institution in West Java level and becomes the runner up. Besides that, it has ever been a

winner in competition of institution's management. It is interesting to investigate and to analyze the process of English teaching learning at POLITEK IBC.

Based on the background above, this investigation can be formulated by the questions as follows:

1. How does the process of English teaching and learning in beginner level in POLITEK IBC?
2. What are the students' supporting factors to study English at POLITEK IBC?

One of components that support English teaching and learning process is the method. As stated previously, this component has a very important role and meaning in English teaching learning process. The success of learning teaching cannot be reached without involving it. In term, the output will be qualified if the whole components are integrated, on the contrary, the education system will result in failure when the whole components are not accordance.

The goal of many language teachers is caused by the right methodology. As we know that is very significant component of language teaching. It is supporting the successful of language teaching. Approach, method, and technique are the other components that support English teaching learning process. Learning English at POLITEK IBC is different from learning English at school.

It will be different the methods of English teaching learning as formal education and non-formal education. The characteristic of formal education is obligatory for Indonesia society and nowadays the compulsory education for Indonesian society to study (formal education) is nine years education. Whereas, the characteristics of non-formal education as addition and complement of non-formal education, also the characteristic of non-formal education as substitution of formal education.

English course at POLITEK IBC is as complement and addition for students who study at Elementary School (SD), Junior High School (SMP), and Senior High School (SMA), whereas English course for graduated students is as education substitution of College and the learning level at course will be different depending on skill of students themselves.

## **2. LITERATURE REVIEW**

TEFL or Teaching English as a Foreign Language refers to teaching English to students whose first language is not English and is taught in a region where English is not the dominant language and natural English language immersion situations are apt to be few. TEFL usually occurs in the student's own country either within the state school system, or private, either in an after-hours language school or with a one-on-one tutor. The teachers may be native or non-native speakers of English.

Language is part of education. Since English becomes a major international language, the demand for mastering English has increased. This put a considerable force to educational resources of many countries, including Indonesia. Problem relating to the teaching of English are discussed, identified, and formulated. These cover curriculum, methodology, and the role of cognitive and affective factor in the acquisition process. Language teaching also involves a number of components, such as policy, approach, syllabus, material, classroom, teacher and learners. These components connect to each other to form a good language teaching.

Based on ELT English become the language that is used in teaching and learning process. H.H Stern (1983) (cited from the thesis of Weni wahyuningsih 2005) defines language teaching as the activity, which is intended to bring about learning. It at least involves three disciplines: linguistics, psychology, and pedagogy. Linguistics provides information about language in general and the specific language

being taught; psychology describes how learning takes place; pedagogy blends the information from linguistics and psychology into a compatible method of presentation in the classroom in order to easy learn for students. Based on this, teaching method is regarded as the important aspect of pedagogy.

In the education area, teaching, learning, instruction, and curriculum are connected each other. Teaching is reflection of teacher identity system measure as professional; learning is reflections of students' identity system are showed by action which is connected with assignment which is given; instruction is social system the place for teaching and learning activities; whereas curriculum is social system pointed to lesson plan.

Effective teachers have clear and consistent communication and management skills. They use classroom time effectively and efficiently either on instruction or on student task development. As a definition of teacher, teacher is called on to be a guide or facilitator. Based on Myra Pollack Sadker and David Miller Sadker (2005) there are six principles which is used by effective teacher because the principles are consistently and systematically. They are: (1) daily review (2) new material (3) guided practice (4) specific feedback (5) independent practice (6) weekly and monthly review

#### 1. Daily Review.

At the beginning of the lesson, teachers review prior learning. Frequently, teachers focus on assigned homework, clarify points of confusion, and provide extra practice for facts and skills that need more attention.

#### 2. New Material.

Teacher begins by letting students know the objective to be attained; new information is broken down into smaller bits and covered at a brisk pace. Teacher illustrates main points with concrete examples. Teachers ask questions frequently to check for student understanding and to make sure that students are ready for independent work using new skills and knowledge.

#### 3. Guided Practice.

Students use new skills and knowledge under direct teacher supervision. During guided practice, teachers ask many content questions and many process questions. Teachers check students' responses for understanding, offering prompts and providing corrective feedback. Guided practice continues until students answer with approximately 70 to 80 percent accuracy.

#### 4. Specific feedback.

Correct answers to questions are acknowledged clearly, so that students will understand when their work is accurate. When student answers are hesitant, the teacher provides process feedback ("Yes, Juanita, that's correct because...."). Teacher correct inaccurate responses immediately, before errors become habitual. Frequent errors are a sign that students are not ready for independent work, and guided practice should continue.

#### 5. Independent Practice.

Independent practice similar to guided practice, except that students work by themselves at their seats or at home. Independent practice continues until responses are assured, quick, and at a level of approximately 95 percent accuracy.

## 6. Weekly and monthly reviews.

Regular reviews offer students the opportunity for more practice, a strategy related to high achievement.

Based on Robert O'Neill circa 1980 goals can be classified by type and status. Type involve: cognitive, affective and psycho motor. Status involves:

- short term

Teach a few examples of the most frequent questions we use to get information from and about other people's job, nationality, where/live

- mid term

Extend outwards to other functions such as inquiring into cause, asking about like/dislike. At the same time begin to contrast systematically the difference in construction between simple and progressive Qs

- Long term

Help the learner towards generative competence in giving and getting information about oneself and other people, asking for things, suggestion things, offering and refusing things. Relate these utterances to the structural principles underlying them:

- Tense
- Word order
- Modality

Many basic mistakes are made by teachers because they do not pay enough attention to affective goals and they fail to distinguish sufficiently in their own teaching and analysis of other people's teaching and materials between long/mid/short term goals.

Strategies in teaching beginner are divided as three strategies. They are: Expository, Eliciting, and Integrative.

- Expository strategy involves:
  1. explaining
  2. focusing
  3. Problem-setting
  4. exemplification
  5. correcting and
  6. Model-Giving
  7. summarizing

- Eliciting strategy involves :
  1. questions
  2. Drilling
  3. Role-Simulation
  4. Repetition
  5. Recall
  6. Modeling
  7. Silence
- Integrative strategy involves:
  1. Linking lesson-segments to lessons
  2. linking lesson-segments to block of lessons
  3. linking blocks of lesson to overall goals
  4. establishing rapport with the class
  5. establishing rapport and interaction between members of the class

The scope of English subject involves reading, listening, writing, speaking, pronunciation, grammar, vocabulary, and spelling. Those materials have been lined in the curriculum of POLITEK IBC as non-formal education. A bit detail of them as follows:

- Reading

Reading methods are most effective when reading materials are based on real-life, natural setting. Reading should be approached first of all as a process for deriving meaning from the printed word and not for using the printed word as a stimulus for speaking. Reading aloud tends to encourage students to respond to the surface futures of the language and not to the massage.

- Writing

Writing language has become one more tool of communication. Practically, writing activities involves copying sentences have mastered, arranging words to be sentences, writing sentences by changing a certain element of it. Arranging the words to be correct sentences, concluding: a history, private experiences, and writing a simple composition

- Listening

Listening comprehension is one of hardest skills to learn in a foreign language. Within the framework of communication, listening skills take on a very important role. They are both of basis for the development of all other skills and the main channel through which the student makes initial contact with the target language and its culture.

- Speaking

Beauchamp (1968: 322) (cited from Anugrah imani thesis) said that “speaking is the second communication skill that the children learn”.

- Grammar

In this part of teaching English, teacher teaches the students to understand grammatically rules, in other that the students can use English from communication correctly in spoken language or in written.

- Vocabulary

Vocabulary is the one of important materials hat should be learned, because it is the basic aspect in language. And their ability in English is determined little or much vocabulary.

- Pronunciation

Pronunciation is part of speaking. There are many students find a lot of difficulties in conversation because they don't know how to pronounce English fluently.

- Spelling

Spelling is one of important factor in learning English, especially for the new students. Spelling is part of speaking.

### **3. METHODOLOGY**

The descriptive method used in the study is by applying the qualitative analysis with the specification on the description. Guba and Lincoln quoted by Moleong (2000:15) state that “qualitative research called with the naturalistic inquiry”. In qualitative research, the study uses descriptive qualitative method. According to Milan (1998:395) “qualitative method is inquiry which the researcher collects the data in face to face situation, by interacting with selected person in their setting (field research)”.

Descriptive method according to Ahmad Supardi (1948:28) is similar to the structural method; its research method is used for solving the currently problem and it involves investigating, classifying, analyzing, and deciding the problem.

This paper uses some techniques for getting information or facts by observation and interviewing some students who study at beginner level of POLITEK IBC, teachers and director of POLITEK IBC. Some questionnaires are given for some learners to know their escalation in English lesson as long as study at POLITEK IBC, and deciding location or sample.

- a. Observation

Observation is a systematic and accurate research and it describes the objective data that has been and got research in location directly. This technique is used for getting information concerning to the objective condition of POLITEK IBC. The investigation will seek the empirical data that will be observed in order to find out the general situation and condition at POLITEK IBC.

- b. Interview

Interview technique is an oral communication technique; it is used for collecting the data through the way to do the communication directly. "The interview is an alternative method of collecting survey data. Interview is typically done in face- to-face encounter" (Babbie, 1986:225). Interview is to display the language proficiency of one participant, and interview is a technique of verbal communication for getting information. The technique that is used for collecting data is through the way to do communication directly. Perret in Cohen (1994:262) argues that, "despite the oral interview's high face validity as an elicitation device for communicative language assessment". This interview is dedicated to:

1. Director or owner, to know the history of POLITEK IBC, method which is used, and general description concerning the general process of teaching and learning English course for beginner level at POLITEK IBC
2. Instructors, to know all the activities of English teaching and learning process, method which is used in teaching and learning process.
3. Students, to know the interest, difficulties and the outcome of teaching English.

c. Research Site

The research takes place at POLITEK IBC Jl. Tentara Pelajar no 3 Jatibarang Kab. Indramayu. The choice to select this place because to know the methods which is used in teaching learning of English course, wants to know why this Institution has been existing since 1984 until now although the existence in the small town in Indramayu regency and why this institution have some achievements. May be from this research being able to learn in the future how to implement the good methods for course, and also can learn how the ways to exist of institution for a long time.

#### 4. RESULT AND DISCUSSION

The general descriptions of this course are below:

- Name : POLITEK IBC
- Address : Jl. Tentara Pelajar No. 3 Jatibarang-Indramayu  
West Java Indonesia
- English Classroom : 3 classroom
- Learning Time : Monday – Saturday
  - 1. 8 a.m – 10 a.m
  - 2. 10 a.m - 12 p.m
  - 3. 1 p.m - 3 p.m
  - 4. 3 p.m - 5 p.m

Students who study English at POLITEK IBC are expected to practice their English ability, from beginner level until Elementary Two.

Almost students consider that classroom of POLITEK IBC is suitable place to practice English than in the house or school.

Almost every week there are new students at POLITEK IBC especially on July-December, together with new school year. Every student who has registered will be collected first up to 10-15 students, and then they can to begin study English. Usually, to collect students up to 10-15 needs a week along. Before studying English they must follow placement test first to know their ability.

Based on students of beginner's opinion (it is gotten from questioners paper), Almost students said that the teacher of POLITEK IBC especially Beginner's teacher is the good teacher. The quality of teacher is very good; the way to transfer material is easy to be understood. The teacher is familiar as well. There are many increasing that is gotten by students about English lesson in school during they have been studying English at POLITEK IBC. It resembles with Myra Pollack Sadker and David Miller Sadker's opinion (2005); there are six principles which are used by effective teacher because the principles are consistently and systematically. They are:

- (1) Daily review
- (2) New material
- (3) Guided practice
- (4) Specific feedback
- (5) Independent practice
- (6) Weekly and monthly review.

Based on observation that is done, researcher found :

1. Teacher does daily review every day, before finishing English learning such as give some question for students, about material which is given just now. It similar with *daily review*
2. Each meeting teacher always gives new material (it is found by researcher for three meeting) it similar with *new material*
3. Teacher guides students well every meeting. More over for silent student, teacher tries to make he or she be confident person. It similar with *guide practice*
4. Before beginning study, usually teacher gives question for students about last meeting material. It similar with *specific feedback*
5. Teacher gives 30 minutes every practice class to conversation with friend and sometimes gives assignment to practice English with other person at home. It similar with *independent practice*
6. Every month teacher gives monthly test, it similar to *weekly and monthly review*

From this observation, the study concludes that beginner level teacher of POLITEK IBC is effective teacher because the six principles above has been doing, especially during the observation is done.

In teaching learning English process, teacher is using media such as books, texts, cassettes, videos, games, pictures, and school environment. The most prestigious media that used at POLITEK IBC is

language-based environment. It is referred to Gerland and Ely's opinion (in Arsyad, 1997:3) they say, "The teachers, textbooks, and school environment are including media in teaching and learning process".

Media for language environment is also called as natural language laboratory. The students will heard and speak the language patterns in the conversation directly and effectively. They will put some English words or English sentences in daily language.

As non-formal education, POLITEK IBC is the place for people who want to increase their skill especially in English skill. It seen from the number of students in the class, usually in the formal education there are more than 30 students, but in course such as POLITEK IBC as non-formal education there are 15 (maximum) And the minimum students, about 5 students. It does in other to teaching and learning process more intensive. Also the process of teaching and learning is different. It seen from; usually in the school as formal education, the most activities of students when study English are answer the work book. Teacher, just about 15 minutes explains the lesson after that students answer the workbook (LKS) or answer question from teacher. (Observation at SDN Palalangon-Bandung, SMPN 1 Cilengkrang, and researcher's experience when Elementary school, Junior High School, and Senior High School). Whereas, the process of teaching and learning English in the course, such as POLITEK IBC as non-formal education is direct method.

The relationship among the teacher and students is like friend; it is not like among teacher and students. Also among students and students, whereas every students are different age (usually beginner are elementary students and Junior High School students, but sometimes there are from Senior High School, depends on their ability) is like friend that is same age.

#### Students activities

Students learn English at POLITEK IBC twice in a week. They study in the class. Beside that there are three activities which are done once a month. They are Sunday meeting, general meeting and grand meeting. Students of POLITEK IBC study about English basic, they are speaking, listening, reading, and writing. The name of subject are speaking class, writing class, reading class and listening class.

##### a. speaking class

Practice is the key to improve speaking skill. Daily conversation practice plays a vital role in speaking; practice is the main way to acquire English. This activity is giving the opportunity for the students to practice English; because language is habitual process, so, without practice it is impossible to learn speaking or to learn language. Every meeting conversation helps students in pronunciation. Practice also makes students confident and fluent in speaking.

At POLITEK IBC the teacher uses English as guide language, teaches is as guide. Teacher use body language to make student more understand what he or she says or use mix language, between English and mother tongue. In this subject the most available technique of teaching English is focused on conversation, practice technique. In this activity, Teacher give dialog after that translate together with students and then students practice that dialog with their friends and also their teacher (usually the dialog about daily activities, using the name of something in the class in other to students can practice it). All students must speak up. First session, students read their book about the dialog then in second session student do not read that dialog, teacher guide them, especially for students who do not remember yet. In dialog class, students learn speaking, listening, spelling, and pronunciation in one meeting.

b. writing class

The second activity is writing class. Writing relate with grammar. Students learn grammar in other to when they write sentence or essay English, they know how to write well. In beginner level, the grammar is not complex yet. Just as introduction. Students are though how to make simple sentence. Such as make sentence use simple present tense, continuous tense, how to use demonstrative pronoun. And so on.

Beside learn grammar, in writing class, students learn how to write vocabularies. Teacher says a word, then student write down. After that, they make sentence use that word. Example: "apple", students write this is apple, I eat apple, apple is red, and so on.

c. Reading class

In the reading class, teacher gives text paper. Students read loud one by one. After that teacher ask do students understand about the meaning of the text or not, then translate together, to know what the text means. There are some question about the text which must be answered by students.

When students answer the questions, teacher takes a walk to students' chair, to guide them.

d. Listening class

In the Listening class, there are two kinds of learn listening. The first is traditional way, and the audio visual way. In the traditional way, students listen the teacher's say. In the audio visual way,

Students listen and watch VCD or DVD about English conversation. But for beginner level, students listen and watch conversation on VCD, the speaker is Indonesian people. Because students' ability still low, so if they listen native speaker, they will difficult to understand it.

e. Sunday meeting

As its name, Sunday meeting does at Sunday in every two weeks. Usually, it is conducted at 9 a.m. this activity is conducted for three times. Who follows this activity are members of POLITEK IBC. Example, for first week is all students of beginner level from all sorts of class, and then next meeting is Elementary One level, then `next meeting Elementary Two level.

The material of Sunday meeting are introduction, speech, puzzle game. All activities are full English, and beginner level try to practice speak English.

f. General meeting

General meeting is an activity that is followed by all of level from Beginner until Elementary Two. It is done every two month. The activities similar with Sunday meeting

g. Grand meeting

Grand meeting is an activity that is followed by all of level from beginner, Elementary One until Elementary Two. It is similar with general meeting. It is done every six month.

All of activities are the out class activities such as Sunday meeting, general meeting and grand meeting is done in other to between students of POLITEK IBC to know each other.

## 5. CONCLUSION AND RECOMMENDATION

After analyzing and observing the process of learning and teaching at POLITEK IBC. The investigate Researcher can conclude that:

English teaching and learning at POLITEK IBC especially in beginner level uses Grammar Translation Method and Direct Method. Although Grammar Translation Method is the old method (because it begun to be taught in educational institutions in the eighteenth and nineteenth centuries) but at POLITEK IBC, it is still as a good method. Because the suitable method is depends on learners' capability. Whatever method which is used must be adapted with capability and environment of learners. When teacher teach beginner, should use mix language between mother tongue and English in order to learners understands what teacher said, or use body language as substitute mother tongue to more learners accustomed. Direct method is used when students learn speaking class, this method helps students easy to absorb speaking subject. The methods which are used depends on material will be transferred by teacher.

The students support factors to study English at POLITEK IBC are because the methods which are used by POLITEK IBC are suitable with capabilities people of Indramayu. Beside The teacher of beginner level can be called as effective teacher, they use six principles which is used by the effective teacher, namely: (1) daily review (2) new material (3) guided practice (4) specific feedback (5) independent practice (6) weekly and monthly review. And also students motivate to study English at POLITEK IBC because they consider that POLITEK IBC has good quality. It shows from achievement of POLITEK IBC, for several times it has won institution competition.

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## THE ROLE OF THE HIJABERS COMMUNITY IN BUILDING THE BRAND EQUITY OF MUSLIM FASHION

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### Abstract

*The community is essentially a place to combine common interests and thoughts that can benefit both community members as internal parties as well as external parties that working with the community itself to create a strong attachment. During interactions, the member of community allow to transfer and exchange of knowledge and experience that give positively values the members of the community itself. On the other side, existence within the community will help its members become more easily seen by outsiders as well generate trust and recognition from outsiders so as to provide confidence for their members. Regarding to the tight competition in the business world, business people look for marketing communication strategies that involve the community as a force that has the advantages of member loyalty, product knowledge and the closer relationship quality among members make the community as a party in determining image enhancement and strength a product or service brand. Hijab is one of the clothing sought by Muslim women. This is the reason for the emergence of a community or a group of Muslim women with hijab, as well as the hijab fashion trend itself which provides a significant increase in marketing and business activities. The purpose of this study is to find out and explore more deeply the role of the community in building the strength of brand Muslim fashion in the city of Bandung. This research uses descriptive qualitative method by taking data through interviews and observation to the board and members of Hijabers Bandung community. Based on the result of research, the role of Hijabers community in building the strength of fashion brand in Bandung City is as developer of involvement in social interaction, social adhesive and the essence of the brand itself.*

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**Key Words:** community, marketing communication, hijab, dress, muslim, brand

### 1. INTRODUCTION

The community is basically a medium to combine the common interests and thoughts that can benefit both community members as internal parties as well as for external parties working with the community itself. The community is formed from the human need to interact with others who have the same hobbies in everyday life so as to bring out a strong and deep attachment. In interaction allows the transfer and exchange of knowledge and experience that increasingly give positive value for

community members themselves. On the other side, existence within the community will help its members become more easily seen by outsiders who generate trust and acknowledgment from outsiders so as to give confidence to their members.

Nowadays, lot of the emergence of the community or collections of Muslim women hijab become trend especially among women in line with the development, fashion trend hijab itself. This provides a significant increase in various aspects of life, including in the world of marketing communications. Hijab that had been negatively impressed slowly began to widely accepted by the wider community. Thus, finally women who wear the hijab started well received in the community. Entering the millennium year, history and development of hijab in Indonesia increasing rapidly. The hijab trends begin to be known so that the hijab begins to enter into the count of fashion. Indonesia is one of the pioneers of the hijab trend in the 2000s. Until now one by one began to emerge the young designers who make hijab become popular among women and even started emerging hijabers community is a community of women who use hijab that is fashionable and in accordance with Islamic Shari'a which in today is a community that is classy and always updated in every way. (Source: <http://lifestyle.okezone.com/read/2014/11/18/194/1067409/mau-join-with-hijabers-community> accessed on September 8, 2017 at 13:23)

Starting from the observation of Fenny Mustafa, the founder of Zoya who discovered that the huge Muslim fashion market in Indonesia and the business opportunities for the middle class muslim, Fenny has successfully built Shafira as an upscale Muslim fashion market, building Zoya. Zoya was made to give a choice in the hijab and Muslim dress that is simple but fashionable for the middle class in 2006.

Indonesia Best Brand Award (IBBA) 2016 "held by Mars research institute and SWA magazine chose Zoya to be the best brand alias number one compared to other hijab brands such as Rabbani (second winner), Elzata (third winner), and Zahra (fourth winner). (Source: <https://swa.co.id/business-champions/brands/ibba/geliat-zoya-mengevelop-market> was accessed on September 8, 2017 at 12:05)

## **2. LITERATURE REVIEW**

### **2.1 GROUP COMMUNICATIONS**

Group Communications is "communication that takes place between a communicator with a communicant with a group of people who number more than two people" (Effendy, 2002: 75). Groups have self-made goals and rules and are contributing to the flow of information between them so as to create group attributes as a characteristic that is distinctive and attached to the group (Bungin, 2008: 266).

The group also has shared goals, so that the presence of each person in the group is followed by his or her personal goals. Thus, the group has two main goals, namely the goals of each person in the group and the group's own goals. Each individual goal must be aligned with the group's goals, whereas group goals must provide certainty to the achievement of individual goals. Groups also give identity to individuals, through this identity each member of the group is indirectly related to each other. Through this identity the individual exchanges functions with other individuals in the group (Bungin, 2008: 267-268).

There are four elements of the group proposed by Adler and Rodman (Sendjaja, 2002: 3-5), ie interaction, time, size, and purpose.

Interaction in group communication is an important factor, because through this interaction we can see the difference between groups with terms called coacts. Coact is a group of people who are simultaneously bound in the same activity but without communication with each other. For example, students who only passively listen to a lecture can not technically be called a group. They can be said as a group when it has started to exchange messages with lecturers or colleagues of other students.

A group of people interacting for a short period of time, can not be classified as a group. Groups require long-term interaction, because with this interaction will have characteristics or characteristics that are not possessed by a temporary set

The size or number of participants in group communication. There is no definite measure of the number of members in a group.

Objectives that imply that membership in a group will help individuals who are members of the group can realize one or more goals (Bungin, 2008: 268-269).

Role is the dynamic aspect of position (status). When a person exercises his rights and obligations in accordance with his position, he executes a role (Soekanto, 2002: 242). Roles are divided into three, namely active role, participative role, and passive role. Active role is the role given by the group members because of its position in the group as a group activist, such as administrators, officials, and so forth. Participatory roles are the roles given by group members in general to their group, the participation of such members will make a very useful contribution to the group itself. While the passive role is the passive contribution of group members, in which members of the group refrain from allowing other functions in the group to work well. (Bungin, 2008: 269-270).

## **2.2 ROLE OF COMMUNITY**

Characteristics of communication in groups is determined through two things, namely norms and roles. Norms are agreements and agreements about how people in a group relate and behave to each other. Severin and Tankard (2005: 220, Reno, Cialdini and Kallgren, 1993) say, social norms are of two types; descriptive and command. Descriptive norms define what is generally done in a context, whereas the command norms define what is generally agreed upon by society. Both have an impact on human behavior, but command norms seem to have a greater impact. Roles include three things:

Roles include norms associated with a person's position or place in society, thereby functioning to guide one's role in community life; Role is a concept of what an individual can do in society as an organization;

Roles also concern individual behavior that is important for the social structure of society (Soekanto, 2002: 244)

Social interaction is a relationship between individual one with another individual in which individual one can influence other individual so there is mutual relationship (Bimo Walgito, 1990). While Soekanto (1997) defines social interaction as a relationship between people per person or with human groups (Dayakisni, 2009: 105).

According to S. Sargent, social interaction essentially views social behavior always within the framework of groups such as structure and function in groups. Thus, the individual's social behavior is seen as a result of group structure, such as the behavior of the leader or the behavior of the individual who functions as a member of the group. Meanwhile, H. Bonner gives the formulation of social interaction

is a relationship between two or more human individuals when the behavior of one individual affects, changes, or improves the behavior of another individual, or vice versa (Santosa, 2009: 11).

### **2.3 SOCIAL INTERACTION**

Social interaction will not be possible if it does not meet two conditions, namely the existence of social contact, and the existence of communication. According to Soekanto (1997) there are four patterns of social interaction, namely cooperation, competition, conflict, and accommodation. According to Gillin & Gillin (in Soekanto 1997) there are two kinds of social processes that arise as impact of social interaction, namely the associative process and dissociative process. The associative process consists of accommodation, assimilation and acculturation, while the dissociative process involved with the recognition of the above definition of social interaction, the aspects of social interaction are as follows:

The existence of relationships, each interaction certainly occurs because of the relationship between individuals and individuals as well as between individuals and groups.

The existence of individuals, every social interaction requires the appearance of individuals who carry out the relationship.

The existence of a goal, every social interaction has a specific purpose such as affecting other individuals.

The existence of relationships with the structure and function of groups, social interactions that exist relation to the structure and function of this group occurs because the individuals in his life are not separated from the group. In addition, each individual has a function within his group (Santosa, 2009: 11).lves competition and controversy or conflict which includes controversy and conflict (Dayakisni, 2009: 105).

#### **2.3.1 ASPECT OF SOCIAL INTERACTION**

With the recognition of the above definition of social interaction, the aspects of social interaction are as follows:

The existence of relationships, each interaction certainly occurs because of the relationship between individuals and individuals as well as between individuals and groups.

The existence of individuals, every social interaction requires the appearance of individuals who carry out the relationship.

The existence of a purpose, social interaction has a specific purpose such as affecting other individuals.

The existence of relationships with the structure and function of groups, social interactions that exist relate to the structure and function of this group occurs because the people in their life are not separated from the group. In addition, each individual has a function within his group (Santosa, 2009: 11).

#### **2.3.2 INFLUENTIAL FACTORS IN SOCIAL INTERACTION**

In addition to the aspects, in social interactions there are factors that influence the social interaction, which determines the success / absence of social interaction. Factors in the intention are:

The nature of the social situation, however, gives the form of behavior towards the individual in the situation.

The norms prevailing in any given social group, the power of group norms is very influential on the occurrence of social interaction between individuals.

Their own personality trends, each individual has a personality purpose so as to affect his behavior.

A person's transitory tendencies, each individual interacting in accordance with their temporary position and condition.

The process of perceiving and interpreting a situation, every situation has meaning for every individual so that it affects the individual to see and interpret the situation (Santosa, 2009: 12).

## **2.4 COMMUNITY**

A community is a group of people who come together or live together to achieve certain purpose, and they share meaning and attitude. Without communication there will be no community. Communities depend on shared experiences and emotions, and communication plays and explains togetherness. Therefore, the community also shares forms of communication related to art, religion, and language, and each of these forms conveys and conveys ideas, attitudes, perspectives, views deeply rooted in the community's history (Mulyana, 2007: 46 ). According to McMillian and Chavis (in Rafiqi, 2014: 30) also explains the benefits of joining certain groups, including:

Membership, by being part of a particular group, can build the pride of group.

Influence, as example someone who has joined a particular community will be able to influence other community members.

Integration and fulfillment of need, for example a community member feels appreciated by other members if they can participate in the community.

Shared emotional connections, the mutual trust between community members to share stories, experiences.

So it can be understood that the community is a group of people who gathered together with the same interests and interests, such as the community Hijabers Bandung, they gathered because it has the same interests and interests of the desire to socialize hijab and style of Islamic dress is fashionable but still syar'i in Bandung.

## **2.5 BRAND EQUITY**

According to David Aaker in Tjiptono (2011: 96) states that Brand equity is a series of brand assets and liabilities associated with a brand, its name and symbol, which add or subtract the value of a product or service to the company.

In addition, according to Kotler & Keller in his 14th edition Marketing Management (2012: 243) defines brand equity as an added value given to a product or service and can affect consumers' thoughts, feelings and actions towards a brand.

A brand has a positive brand equity in the eyes of its customers when they respond favorably to a product or service marketed by identifying the brand and vice versa, a brand has a negative brand equity if customers respond poorly to marketing activities for a brand (Kotler & Keller, 2012: 244).

According to Aaker in Tjiptono (2011: 97) there are four dimensions in brand equity, namely:

1. Brand Awareness, namely the ability of consumers to recognize or remember that a brand is a member of a particular product category.
2. Brand association is everything that is related to the memory of a brand. As a series of brand associations that have a certain level of strength and will be stronger along with the increase of specific brands.
3. Perceived quality is the consumer's assessment of the superiority or superiority of the product as a whole. Therefore, perceived quality is based on a subjective evaluation of the consumer on product quality.
4. Brand loyalty is the level of how loyal consumers to a brand. Reflects the level of consumer loyalty to a product. Consumers will be loyal to a brand if the product can provide satisfaction.

#### **2.5.1 BRAND AWARENESS**

Brand awareness is the ability of a potential buyer to recognize, recall a brand as part of a particular product category (Durianto, 2004: 55). Brand awareness is one of the key roles in brand equity. If consumer awareness of a brand is high it will affect their perceptions and behavior towards the brand and it will affect the high brand equity or brand equity (Durianto, 2004: 6).

In addition, according to David A. Aaker in Durianto (2004: 55), he divided brand awareness into four levels, namely:

1. Unaware of Brand (brand awareness) is the lowest level of brand awareness in the pyramid. At this level consumers are not aware at all about a brand.
2. Brand Recognition (brand recognition) is the second level from below in the pyramid of brand awareness. At this level consumers can be aware of a brand using aid or stimulus (aided recall).
3. Brand Recall is a level of brand awareness in which consumers can recognize a brand after an unaided recall.
4. Top of Mind (peak thought) is the highest level of brand awareness in the pyramid where the consumer first mentions a brand that appears in their minds.

#### **2.5.2 BRAND ASSOCIATION**

David A. Aker in Tjiptono (2011: 98) brand associations' are all things that are related to the memory of a particular brand both rationally and emotionally. The more experience or exposure a brand receives by the consumer will be directly proportional to the strength of the brand association.

According Durianto (2004: 70-71), brand can be associated with the following things:

1. Product / service attributes: Associated with the attributes or characteristics of a product or service.

2. Intangible attributes: Consists of an intangible factor that exhibits a series of objective attributes such as technological advances or value impression.
3. Benefits for customers: Consists of the rational and psychological benefits of a brand both products and services.
4. Relative price: The association of the price level of a product or service.
5. Usage: Association associated with a particular use or application on a brand.
6. Customer: Associations are related to users of a brand.
7. Artist: Association associated with artist who has close relationship with the brand.
8. Lifestyle: Association based on lifestyle of majority of its customers.
9. Class of products / services: Associations by class of products or services.
10. Competitors: Associate brands by knowing the differentiation of products / services.
11. Geographical region: Associations by country that have close relationships with products, materials and abilities.

### **2.5.3 PERCEIVED QUALITY**

Perceived Quality is a subjective assessment and evaluation of the customer regarding the quality and superiority of a product or service as a whole (Tjiptono, 2011: 97).

In Durianto (2004: 100), there are five perceived quality dimensions in the service context according to Garvin:

1. Physical Form: Consumer perceptions related to facilities, equipment, and employee appearance that reflect the quality of a service provider's brand.
2. Competence: Consumer perceptions related to the knowledge, skills, beliefs and confidence that employees of a service provider's brand have.
3. Reliability: Consumer perceptions related to accurate and convincing service from employees of a service provider's brand.
4. Responsibility: Consumer perceptions related to good service of employees of a service provider's brand.
5. Empathy: Consumer perceptions related to the concern and attention of employees on each customer

### **2.5.4 BRAND LOYALTY**

Durianto (2004: 126) reveals brand loyalty is a measure that shows the extent to which the relationship between consumers with a particular brand that affects the possibility of consumers will switch or not to brand other products or services. If a brand has a high brand loyalty in its customers it will minimize the possibility for them to switch to other brand products or services and will usually also result in sustainable purchases.

Durianto (2004: 128) revealed that there are five levels in brand loyalty are:

1. Switcher: At the most basic level of brand loyalty customers easily move from one brand to another, in other words they are not loyal to the brand and do not affect the purchase decision.
2. Habitual Buyer: At this level the customer does not feel discontent but they decide to use a product or service for the reason of their habits so far. So the possibility to switch to other brands is still very possible.
3. Satisfied Buyer: At this level the customer is satisfied if they use a brand but the possibility to switch to another brand still exists.
4. Likes The Brand: At this level the customer is very fond of a brand and the possibility to switch to another small brand.
5. Committed Buyer: At this level, customers have a high degree of loyalty or loyalty to a brand so they voluntarily recommend and promote the brand to others. This is very profitable for the brand company because it will reduce marketing costs and generate new customers.

### **3. METHODOLOGY**

In this research paradigm used by researcher is constructivist paradigm. In constructivism individuals try to understand the world in which they live and work. They develop subjective meanings of their experiences, meanings directed to certain objects or objects (Creswell, 2014: 32). The theory of constructivism states that the individual engages in interpretation and acts according to the various concepts in mind. According to this theory, reality does not show itself in a rough form, but must be filtered first through how people see things. Constructivism theory prefers its observations on individual differences through the complexity of its personal construction as well as the strategies used in communicating (Morisan, 2013: 107-108).

Constructivist researchers study the diverse realities constructed by individuals and the implications of such constructs for their lives with others. In constructivist, each individual has a unique experience. Thus, research with such a strategy suggests that every individual's way of looking at the world is valid, and there needs to be a sense of appreciation for that view.

In this study the authors use constructivist paradigm, because the writer wanted to know the role of Bandung hijabers community in building the strength of Muslim fashion brand Zoya.

### **4. RESULTS AND DISCUSSION**

Based on the data obtained from interviews with the head and public relations division of Hijabers Community as informants and observations through activities conducted Hijabers Community Bandung, the author will describe the results of research on the role of Bandung hijabers community in building the strength of Zoya Muslim fashion brand in Bandung.

In the event held by Hijabers Community, every member of the community has a stylish dress style that is diverse, stylish but still syar'i without forgetting also the comfort factor and personality of each diverse individual. Regardless of the diversity, Zoya includes a Muslim clothing brand that is often used and emerged as a sponsor in the activities of Hijabers Community. In line with the aim to increase brand awareness that is presented through the brand element that represents the name, logo that attaches to clothing products and hijab used, and brand character. Brand characters that appear in the minds of

the informants are stylish, youthful, comfortable to use and keep the Islamic precedence in every model with an affordable price. Along with that directly or indirectly, whether consciously or unconsciously, the presence of Zoya's brand in the Hijabers community builds a positive image and involves many people who have a similar impression and feel a sense of comfort when using the clothing brand. This process helps to develop engagement in the social interactions between members, as well as the social interaction between the customer and the brand itself.

At the brand association level, most members of the community associate the Zoya brand with the middle class, judging from the fairly affordable price and the much-awaited model for the younger segment who also prioritizes attractive models and vibrant colors. They also often associate through public figures they know using a shirt or hijab that can be found on the counter Zoya. This further reinforces the role of the community as a developer of involvement in social interaction both conventionally and through social media.

The well-established brand association, leads the formation of a brand image that is maintained positively in the eyes of customers through the impression and experience they feel when visiting Zoya's outlet to either buy or just look at the current trend model. The friendliness of the outlet officers, the willingness to provide information, giving free hijab tutorials and the ease of transactions into values in perceived quality. This highly subjective assessment of Perceived Quality shows, although not all informants give the same opinion, but generally show a positive image in the consumer perception with additional info of certain Zoya outlets favored by an accessible and wider location and willingness products that are more updated and diverse. A similar experience when dealing with brands brings more social relationships between members and fosters equality and similar image. This shows the role of the community has a great influence in building brand strength, especially at the subjective rating level of each member.

On the other side, the experience associated with the Zoya brand that is generally excavated from members of the Hijabers community still requires time to become a strong brand loyalty. Based on the results of interviews and observations, community members still provide great opportunities for other Muslim brands because so many brands that enter in the same market segmentation with Zoya. In general, community members mention some other brands that they consider attractive and have similar brand characteristics. So that in this stage still allows members of the community to move on other brands as long as they feel the same experience with the brand Zoya. Some members of the community see that the use of Zoya products is more due to buying habits in an easily accessible place, one stop shopping, a shopping mall that can be a place to hang out with friends, meeting and lunch or dine together, so it feels more comfortable. When the same experience can also be found in other brands, they are likely to easily switch to other brands. Customer satisfaction in this case is the community members of the brand Zoya does not mean the level of loyalty to the brand is very strong because there are other factors that make customers use other brands, such as variations of existing models, competitors who also offer various models and colors and friendly service as well as the competence of employees of higher outlets. Based on this information, the role of community members as a confirmation of the essence of the brand itself needs to be built so that they have a very significant reason continuing to increase the power of Zoya's own brand. Brand Zoya needs to make sure that the Brand messages they communicate through the community remain relevant to be strong and well received by members.

Based on the analysis obtained, it can be understood that the role of community in building brand equity is formed as follows:

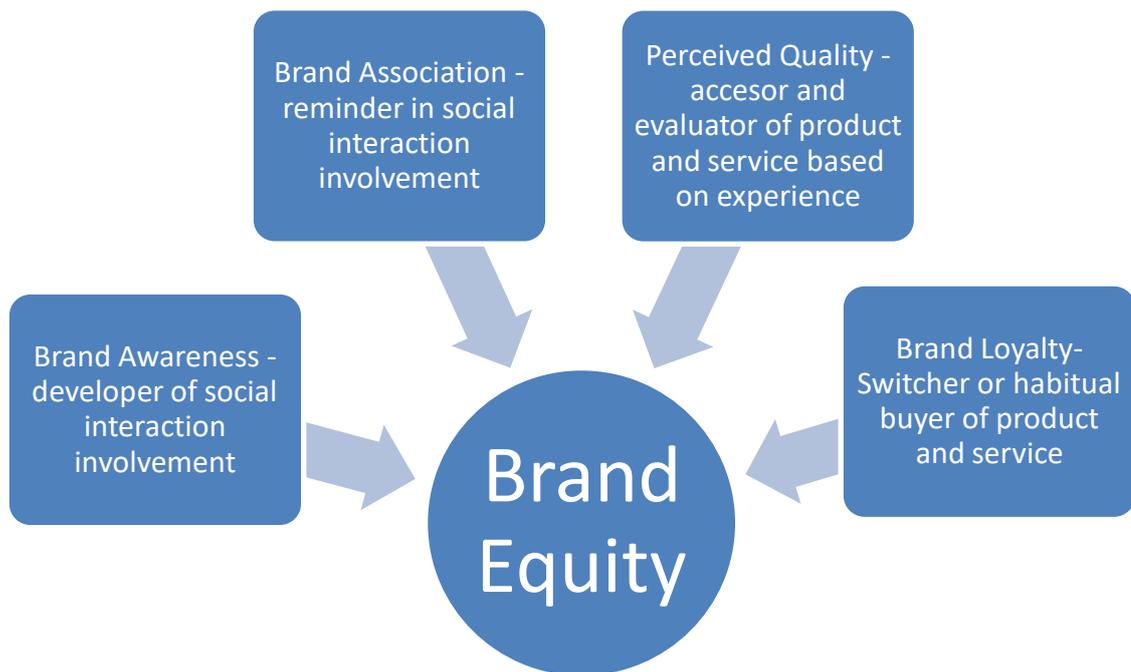


Figure 1: The Role of Community in building brand equity

## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 CONCLUSIONS

The conclusions that can be drawn from the research about the role of Hijabers Community in building the strength of brand muslim Zoya as follows:

At the brand awareness stage the role of community members is as a participant of the process of developing engagement in social interaction. While at the level of brand association the community play the role as a reminder in social interaction involvement among the members. At perceived quality stage, the role is increasingly becoming an accesor or evaluator of product and service based on their experience whereas if they have good assessment about the product so that the role become adhesive between members and with Brand Zoya itself. At the level of brand loyalty that has just reached the level of Satisfied Buyer, the role of the community is increasingly influential because the community can be switcher or habitual buyer which is the essence of the brand Zoya itself.

### 5.2 RECOMMENDATIONS

Based on the research and observation, Management needs to give the community part not only as a medium to build the brand but also continue the research by making community as a part of marketing communication itself. The community should have play deeper into the involvement of Zoya's brand management in building brand strength to move in the right direction, still innovating and relevant to the brand's own character through the value, brand essence and brand equity of Zoya.

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[http://www.kompasiana.com/rizkinurismarinihadi/hijab-trend-dan-aturan\\_555476657397733a14905529](http://www.kompasiana.com/rizkinurismarinihadi/hijab-trend-dan-aturan_555476657397733a14905529) was accessed on 31 Jan 2018 at 1:50pm

<http://mix.co.id/brand-communication/community/the-power-and-value-of-community> was accessed on 05 Juli 2017 pukul 2:10

[http://www.academia.edu/3134645/antara\\_Hijab\\_Jilbab\\_dan\\_Hijabers](http://www.academia.edu/3134645/antara_Hijab_Jilbab_dan_Hijabers) was accessed on 12 Juli 2017 at 2:00pm



## INTEGRATED MARKETING COMMUNICATION POCARI SWEAT TO BE THE BEST BRAND ON ION SOFTDRINK CATEGORY

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### Abstract

*The Pocari Sweat's goal is become the top brand on Ion Soft drink Category. To achieve that goal, Pocari Sweat create the Integrated Marketing Communication strategy that combine any tools, such as advertising, Public Relations, Direct Marketing, Sales Promotion, Personal Selling, Event and Sponsorship. In one year period of media buying, one of the integrated marketing communication tools chooses to the main strategy. It related to what the purpose and goal that to be achieved.*

*Pocari sweat in "Pocari Sweat Bandung Java Marathon" choose event as the main tools in Integrated Marketing Communication Strategy. One of the unique points of the event is the collaboration of the running community that represented the "born to sweat" generation. Pocari Sweat Positioning is soft drinking that regenerating ion.*

*It is not easy to Pocari Sweat become a top of brand. In the beginning, Pocari Sweat's brand Awareness began to appear during a dengue outbreak in Indonesia. That time many doctors recommend patients to drink Pocari Sweat to quickly restore the condition of the body. Since then, that brand became known as soft drink that regenerating ion. Pocari Sweat takes advantage of the moment by strengthening its positioning.*

*Running Community that participated in Pocari Sweat Java Marathon represented the Pocari Sweat's target market. Running is kind of exercising that need replacement ion body. That's why Pocari Sweat chooses the event as the main tools for the Integrated Marketing Strategy for several years.*

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**Key Words:** Community Branding, Unique Selling Point, Positioning

### 1. INTRODUCTION

The Pocari Sweat's goal is become the top brand on Ion soft drink Category. To achieve that goal, Pocari Sweat create the Integrated Marketing Communication strategy that combine any tools, such as advertising, Public Relations, Direct Marketing, Sales Promotion, Personal Selling, Event and Sponsorship. One of the Integrated Marketing Communication tools chooses to the main strategy. It related to what the purpose and goal that to be achieved.

Pocari sweat in “Pocari Sweat Bandung Java Marathon” choose event as the main tools in Integrated Marketing Communication Strategy. One of the unique points of the event is the collaboration of the running community that represented the “born to sweat” generation. Pocari Sweat Positioning is soft drink that regenerating ion.

It is not easy to Pocari Sweat become a top of brand. In the beginning, Pocari Sweat's brand Awareness began to appear during a dengue outbreak in Indonesia. That time many doctors recommend patients to drink Pocari Sweat to quickly restore the condition of the body. Since then Pocari Sweat became known as soft drink that regenerating ion. Pocari Sweat takes advantage of the moment by strengthening its positioning.

Running Community that participated in Pocari Sweat Java Marathon represented the Pocari Sweat's target market. Running is kind of exercise that need replacement ion body. That's why Pocari Sweat chooses the event as the main tools for the Integrated Marketing strategy for several years.

Moreover, all participants agreed that integrated messages are an important way of achieving outcomes, both in terms of brand benefits to the individual charity or in terms of behaviour change objectives.

## **2. MATERIALS AND METHOD**

### **2.1 INTEGRATED MARKETING COMMUNICATION**

Smith, 1996; Balmer, 1995; Ind, 1997; Knox and Bickerton, 2003; Mitchell, 1997; Harris and Chernatony, 2001 in Christensen and Firat, Integrated communications proceeds from the imperative “Know thy organization and produce a general overview of all its communications!”. It helps organizations break the clutter in a world saturated with commercial symbols and messages. The consistency of integration marketing communication message makes brief the communication agency more easier. It purpose to spent media budgets more efficiently. Conversely, it is argued, non-integrated or disintegrated communications send disjointed messages that weaken impact and confuse, frustrate or irritate the organization's audiences.

Integrated Marketing Communication (IMC) is one of the most important communications concept has influenced thinking and acting among companies but also authorities, state owned companies and political parties. Few years back, major portion of marketing budgets went to advertising. Nowadays, the integrated marketing communication activities such as trade promotions, consumer promotions, branding, PR and advertising allocated the budgets from mass media and traditional advertising has obviously promoted IMC in recognition and importance for effective marketing.

The American Association of Advertising Agencies defines IMC as “a concept that recognizes the added value of a comprehensive plan that evaluates the strategic roles of a variety of communication disciplines, and combines these disciplines to provide clarity, consistency and maximum communication impact”. Jones & Schee in Brunello 2013 consider that integrated marketing communication represents a combination of direct marketing, general advertising, sales promotion and public relations. The eventual role of the IMC is to convey a consistent message to customers. Effective IMC approaches foster companies to effective usage of promotional resource and to build longer term sustainable consumer relationships.

The concept of IMC is increasingly accepted by many firms due to a number of advantages. The mass media advertising was initially thought of as viable and useful. However, nowadays specialists consider

it ineffective because of high cost involved and the unpredictable target audience. Today, firms use precisely targeted promotional techniques such as direct mail, cable TV, the Internet, etc. Today almost all companies seek for effective implementation of information technology in promotional aspects. These new initiatives of information technology have foster buyers and sellers to share and to promote an effective customer relationship management.

Integrated marketing communication represents to leads maximum profit and minimum cost. Marketing Mix includes internet marketing, sponsorship, direct marketing, database marketing and public relations. The integration of all these promotional tools along with other components of the marketing mix to gain edge over competitors is referred to as Integrated Marketing Communication. Using outside-in thinking, it is a data-driven approach that focuses on identifying consumer insights and developing a strategy with the right (online and offline combination) channels to forge a stronger brand-customer relationship. The integrated marketing communication goal process are to create brand awareness, deliver information, educate the market, and advance a positive image of the brand. IMC refers to speaking with one voice, eliciting a response" (Brunello, 2013).

## **2.2 THE KEYS TO INTEGRATED MARKETING COMMUNICATION SUCCESS**

Integration requires a zero based communications planning. It means starting from scratch without preconceived notions of what was done in the past. That frees marketers to choose the disciplines are that will best fit the strategy. From the outset, all marketing disciplines are created equal. Public Relations has the opportunity to be heard. IMC success demand that all the key players (advertising, public relations, direct marketing, event marketing, etc. Collaborate as equal partners on the development of the best strategy thinking of all disciplines. The result may be a marketing program in which each plays a role, or it may be mutually determined that one discipline or the other is more or less essential for success. The resulting program may be driven by advertising or public relations or promotion, with the other disciplines playing supporting roles (Harris, 2018).

## **2.3 CLOSING THE MARKETING CREDIBILITY GAP**

Credibility is the key and of all the component of integrated marketing, public relations alone possesses a priceless ingredient that essential to every IMC program- its ability to lend credibility to the product message.

Advertising and promotional are about salesmanship. Customers know it and are on the defensive against being sold something they don't want or need. Public Relations, is about publicity that customer directly or through trusted third parties, public relations makes advertising more believable and promotion more actionable.

This is why public relations is the secret weapon of the integrated marketing, public relations to make integrated marketing work harder and better. It draws on the experience the tools and techniques of public relations to achieve marketing success (Harris, 2018).

## **2.4 BRANDING RULES**

a) Perception is a reality

Branding is creating customer perception. What the mind thinks right is the truth, and you do not deny it. Perception is reality. Branding is not a fight to determine the better brand (although it helps). Branding is a battle to determine who can create better perceptions.

b) Lucky way to pioneer brand

Being first is better than being better. This is important, though not a guarantee of success. Being the first gives you the opportunity to solidify your brand in the minds of customers before there are competitors.

c) Create the new categorize

If you are the first or second brand in the market, there is still hope for you to be the first to remember. You will need to promote aggressively, but your brand will grow as the category grows. You will be seen as a champion brand because of the promotions made.

d) Focused

When focused, brands will be strong. People remember with the one centre idea message from the brand.

e) Create the differentiation or sale with the cheaper price

The marketters cannot build a strong brand without differentiation. If the customer cannot differentiate your brand with your brand competitor's product, customer prefer to with the cheaper price.

f) Public Relations content to develop brand publicity

Advertising is what you say about yourself, and tend to say the right thing. Therefore, advertising has very little credibility. PR is what media say about your brand. Because the media is a third party, their opinions will more trusting. Public Relations have credibility that not owned by advertising, but we still need advertising to maintain the brand.

g) Create the great name for your brand

The business is already complicated without being the brand name that easy to forget. So work hard to make sure you have a unique and memorable brand name. After all, your brand is just a long term name. The great name that you have will be prompted by competitors.

h) Consistent

The consistency brandtouchpoints create the customer perception. To create brand awareness, the brand used expose with the consistency message.

i) Create the competitive atmosphere

To build a strong brand, the markeeters need to provide the existence and prove its appropriateness to remain.

j) Find the right time to create the second brand

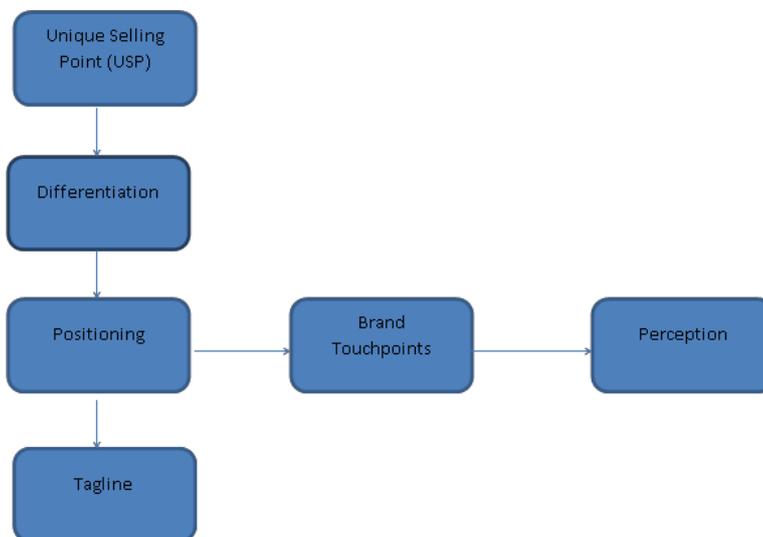
Brand need to become a top brand, yet to create the second brand (Chew & Tai, 2012).

## 2.5 DIFFERENTIATION

The livestock owners needed a way to recognize their cows, and to find a simple but clever solution. They make an iron stamp with the owner's logo. After that, livestock owners can recognize their cows easily, simple but effective. Branding is not only recognizes logo design, but at that time the logo serves as a differentiator. Branding is not a logo, but how to create customer perception.

The form may be changed, but its function remains: to distinguish your cow from your competitors. It's just that, "cow" is currently the company's tangible, service products, even people also require branding. From that point of view, differentiation can be regarded as the process of turning commodities into brands. The cow is a cow. What distinguishes our cow from your cow is a logo, and what the logo represents. Evian sells water, and water is not a limited commodity, the surface of the earth is covered with water. Evian turned into a great brand because Evian drinking water is processed through natural filtering of the Alps. This process enriches water with essential minerals. Water is water unless it is filtered, and Evian's drinking water is filtered because it comes from the Alps. (Tai, Chew 2012).

The Unique Selling points (USP) and differentiation are very important to create positioning. Positioning is describe that our brand want to know as what? or "What to say". Then the tagline is the derivative from Positioning that easy to remember or "How to say". Brand touchpoints is the any point of contact than describe the positioning. It can be tangible or intangible.



(Wahyuni,2017)

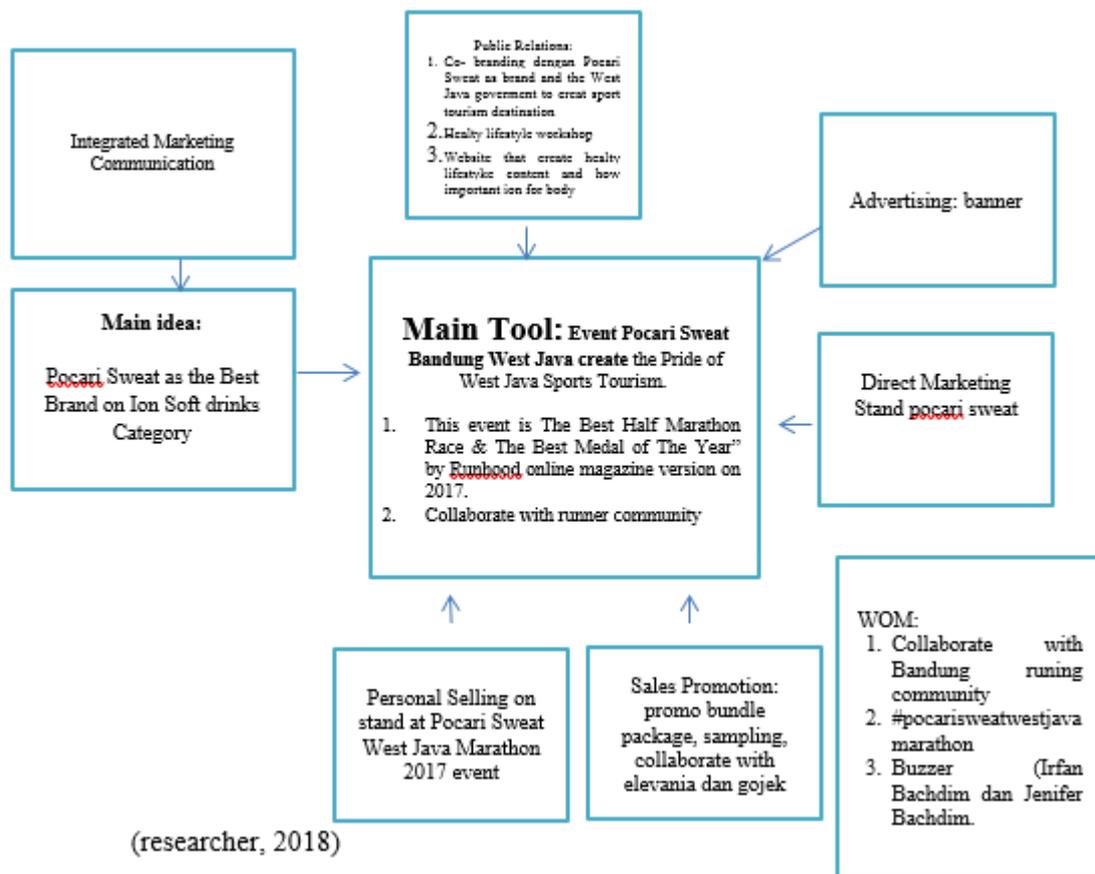
## 3. PARADIGM RESEARCH

Research paradigm is a framework that explains how the researchers think about the facts of social life and the science or theory treatment. The research paradigm also explains how the researcher understands issue, as well as the criteria answer the problem. The research need clear idea besides the

paradigm. Paradigm is the basis of research beliefs that conducted the researchers. (Pambayun, 2013: 20). This research uses post positivist paradigm. The Post positivism previewed the probabilities issue.

Post positivist characteristics are reductionist, logical, empirical, causally-oriented, and deterministic. This paradigm is seen as a series of logically connected steps and believes rather than a single reality. It supported by precise and thorough data collection analysis (Creswell, 2014: 31).

#### 4. RESULT AND CONCLUSION



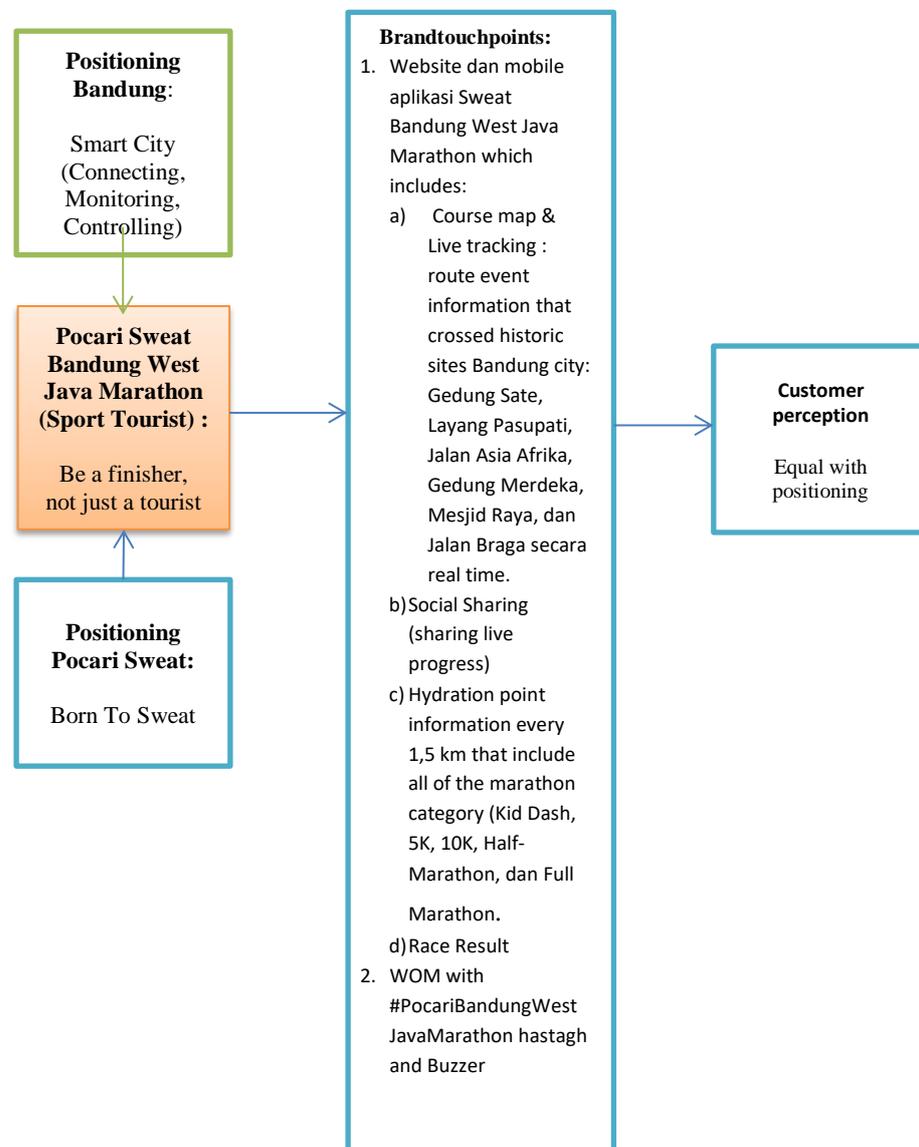
The main idea of Pocari Sweat integrated Marketing communication on 2017 is the best brand ion soft drink category. The Pocari Sweat Bandung West Java Marathon creates the Pride of west Java Sport Tourism concept. The Runhood magazine acclaims the event as the best medal of the year.

The Pocari Sweat java marathon event success collaborates with the Bandung running community. This community represents Pocari Sweat's target market as "Born to sweat" generation WOM which describes the active generation that has many activities and is aware of a healthy lifestyle. With so much activity that needed to regenerate the ion.

In addition to choosing events as the main tools in integrated marketing communication, Pocari sweat also used the other IMC tools as a support, there are Public Relations, advertising, direct marketing, WOM, sales promotion, personal Selling, and sponsorship. The main idea is used by all of the IMC tools.

Public Relations which are used as support the event tools is healthy lifestyle workshop. Besides that, the other public relations that used are the co-branding between West Java government with Pocari Sweat as brand to create the sport tourism destination. And banner as advertising tools used in running area.

Direct marketing that use was sells product in a booth with sales promotion such as bundle product, and sampling along the running that follow the event. There is also a promotional program by purchasing Pocari Sweat Java Marathon tickets at Go-tix, the runner will get a Go-ride voucher worth Rp. 15.000 and have a chance to win door prize worth 1 million rupiah. In addition to Gojek, Pocari Sweat also took elevania for ticket sales, by purchasing tickets pocari sweat java marathon in Elevania, runners get a discount for gadgetrun products. Word of Mouth done by Pocari Sweat is by making hastag #pocarisweatjavamarathon and buzzer selection such as Irfan Bachdim, Jenifer Bachdim, Dimas seto, and melani putria.



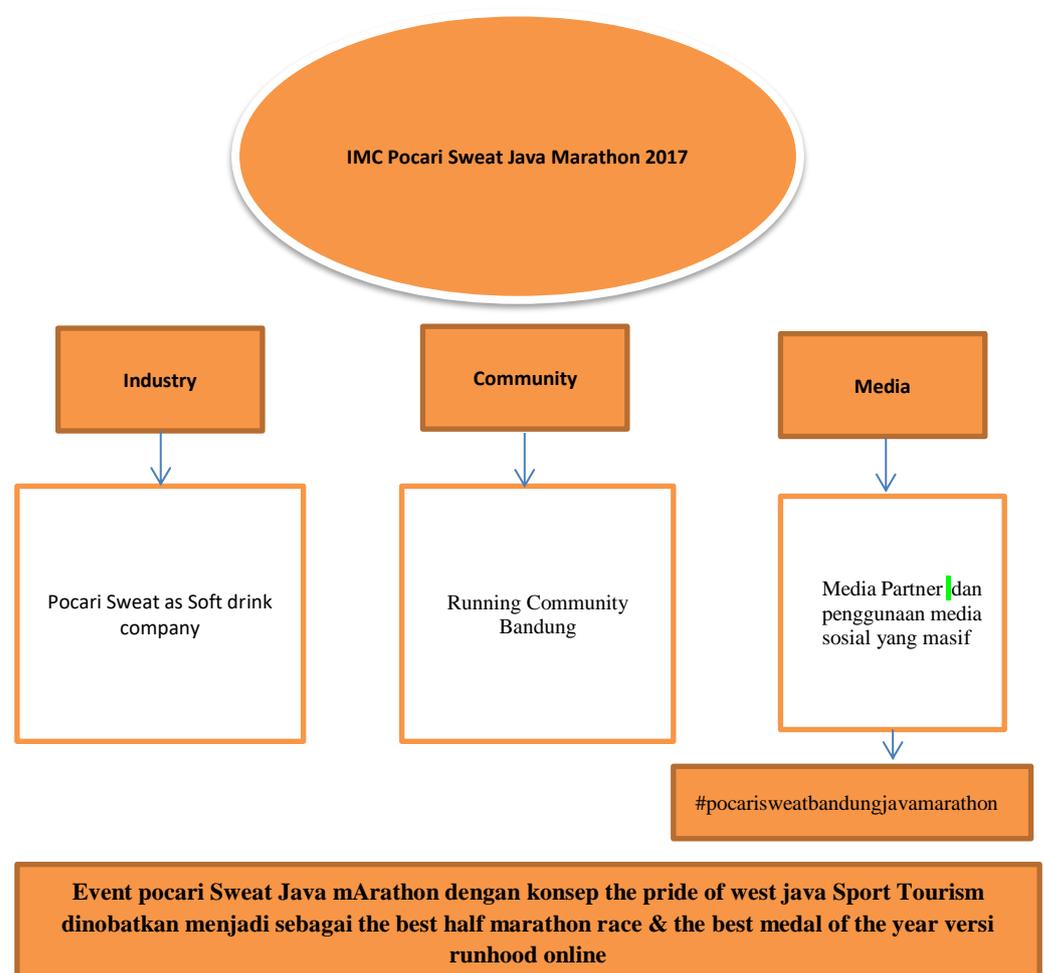
(Wahyuni 2017)

Bandung as a tourism destination has a positioning as Smart City. Smart city is defined with 3 indicators, there is connecting, monitoring and controlling. These three indicators show that Bandung supports infrastructure utilization of information technology. While the positioning of Pocari Sweat is born to sweat this signifies the superior generation with the use of new high media. Both brands do co-branding on the event Pocari Sweat Bandung Java Marathon which is part of the development of sport tourism from the concept of smart city Bandung. In the event tagline that used is "be a finisher, not just a tourist", which describes that coming to Bandung not only as a traveller but more than that. The Tagline "be a finisher, not just a tourist" also in accordance with the concept of drive to action tagline creation.

The brand touch points describing the positioning of Pocari Sweat Bandung West Java Marathon event that used digital media, such as website and mobile application which includes real-time information about : course map, live tracking, social sharing , hydration point and race result as the Born to Sweat generation. Course map and live tracking all content in Pocari Sweat mobile website and application is in accordance with urban people in smart concept of connecting, monitoring and controlling. All runners can be connected to other runners and know the update of information data from mobile applications when the activity takes place in real time. Pocari Sweat also monitor and controlling the placement of hydration point (each runner gets pocari sweat sample for free) and placement of first aid and ambulance that can be accessed from mobile application.

The websites, mobile applications and other digital media used is Instagram with #PocariSweatWestJavaMarathon used buzzer such as Jennifer Bachdim, Irfan Abchdim and Dimas Seto. The Selection buzzer among their many followers, and the third personality that matches the positioning of Pocari Sweat as influencers who have passion for health and sport.

Runners who follow the event Pocari Sweat Bandung West Java Marathon managed to bring in a runner who 75 percent is not the resident of Bandung city and also managed the tourists from Singapore, Malaysia, China and the United States. The perception formed by the Bandung Pocari Sweat Event West Java Marathon participants is not only as shopping paradise but also unique places that have historical value. In addition, the use of digital media that supports real-time access is very helpful to complete the route running smoothly and fun. That way the perception is formed almost in accordance with the tagline created. This signifies the description of brandtouchpoints in the Bandung Pocari Sweat West Java Marathon event as smart city and born to sweat generation.



(Wahyuni, 2017)

Event Pocari Sweat Java Marathon is a main tool of Integrated Marketing Communication from Pocari Sweat. This event collaborated on 3 important elements namely industry, community and media. In Pocari Sweat Industry has a positioning as a soft drink which regenerates the ions in the body by joining the community element which is a representation of its Brand Market target which is called "born to sweat generation" which represents an energetic generation that has many activities. Pocari Sweat want to be the best brand on Ion Soft drink Category.

The third element of the media, in Pocari Sweat Java Marathon event Pocari managed to create great and positive publicity that crowned Pocari Sweat as the best half marathon race and the best medal of the year runhood online version. In addition to media partner event pocari Sweat Java Marathon also make hastagh #pocarisweatbandungjavamarathon to create WOM.

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# ANALYZING USERS' EXPECTATION GAP OF AN INDONESIAN SHARIA ELECTRONIC BANKING SYSTEM

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## Abstract

*Sharia banking system has become a phenomenon in the last two decades. A bigger question arised when this banking system began to embrace open e-banking application and online versions of gadgets. It is interesting to see how sharia banking system can maintain service performance with e-banking and meet expectations of users. In this study, we examine WebQual (Website Quality) of an Indonesian sharia bank using variables usability, information quality, and service interaction. This study used a sample of 100 respondents and descriptive analysis technique followed by gap analysis. From the result, we found that overall there was negative value gap between the actual quality (performance) and ideal quality (importance). Based on this conclusion, the perceived quality was till yet to meet the desired ideal quality and good reputation of the website.*

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**Key Words:** website quality, e-banking, online commerce, electronic business

## 1. INTRODUCTION

In the current information age, the need for computer-based information systems is growing, in line with the current globalization and free trade that takes place around the world (Wardhana & Pradana, 2016). The success of computer-based information systems is supported by adequate facilities and infrastructure (Natyari, 2016). The use of information technology in daily life or business world in society has been very widespread all over the world. In addition, computer-based information systems can provide a competitive advantage for business (Laudon, 2016).

The role of information systems and information technology has opened up a new world and a world network without borders (Hussein & Aziz, 2017). It is realized that the development of technology called the Internet, has changed the pattern of life of the community, namely: business interaction, economic, social and cultural (Wardhana & Pradana, 2016). In today's banking world, information technology (IT) is evolving which drives companies develop strategy by using technology. This is also done by a private Indonesian sharia bank, BRISyariah, which since its inception in 2008, has set a vision to "become a modern retail bank by providing services that suit everyday needs".

Fueled by the development of the Internet, the more capable devices and software with high speed and the level of computer users including mobile gadgets, the more awake the BRISyariah customers will be the various conveniences obtained with the availability of online banking services / electronic banking. Responding to this, BRISyariah already has online banking / electronic banking services dedicated to BRISyariah customers, Teller Marchine Otomatis (ATM), Elektronik Data Capture (EDC),

SMS banking, mobile banking, internet banking, cash management system (CMS), open online table (Sohail & Shanmugham, 2003).

One of the companies that follow this trend is BRISyariah by launching an e-banking application in making online transaction website online named [www.brisyariah.co.id](http://www.brisyariah.co.id). BRISyariah comes with information services features, savings account information, savings / giro account information, deposit information, savings account transfers, transfers between BRIS accounts, online transfers to joint and prime network member bank accounts, interbank transfers through SKN (national clearing system), RTGS interbank transactions (real time gross settlement), electricity bill payment and prepaid electricity purchase.

Previously, there were no research results that measured the quality of BRISyariah mobile banking application website. Research on the level of quality can be used as a reference to improve website management for the better. With these indications, we are interested to examine the quality of BRISyariah mobile banking application website using Webqual

## **2. LITERATURE REVIEW**

According to Barreira et al. (2016), the information system is a flow of input, process and output that develops in an environment that circulate data and information. In the virtual era, internet is the most reliable information system, which referred to as virtual space or information superhighway. Now even at a relatively young age, everyone already understands about the internet. According to Wijaksana (2017), the Internet is a corridor for the various types of resources available to it and each resource is accessed.

People who use the Internet to control what is done through a client device on a computer, like a Web browser software, which is a mutually agreed standard system for storing, searching, formatting and displaying information using client / server architecture (Laudon, 2016).

E-banking is also known as internet banking is an activity that perform transactions, payments, and other transactions via the internet with a bank's website that has a security system. There have been several previous researches focusing on the quality on internet banking using WebQual method, which is one of the methods or techniques of measuring website quality based on end user perceptions (end users) developed by Barnes & Vidgen (2000) as told in Barnes & Vidgen (2014).

This method is the development of SERVQUAL which is widely used previously on the measurement of service quality in general. WEBQUAL (Website Service Quality) is based on the concept of Quality Function Deployment (QFD) which is "structured and disciplined process that provides a means of identifying and carrying the voice of the customer through each stage of product and service development and implementation" which can be interpreted as a structured and disciplined process that presents the means to identify and bring the voice of the customer through every stage of development and implementation of a product or service (Baccinello et al., 2017). The latest version is WEBQUAL 4.0 that uses three categories of measurements with 23 questions. WEBQUAL method is one method to measure the quality of website and improve website management to be better based on end user assessment. WEBQUAL is compiled based on three research criteria that is usability , information and service interaction (Venkatesh, 2012).

### 3. RESEARCH METHODOLOGY

Types of research methods used by the authors in this study is a qualitative method. Research with qualitative method aims to explain the phenomenon with deep depth through data collection, conducted through observation, in-depth interview and literature study (Madiawati, 2016).

Table 1: List of Indicators

Dimensions	Indicators	Number
<i>Usability</i>	Easy to learn and operate	Item 1
	Easy to use	Item 2
	Easy to navigate	Item 3
	Appealing display	Item 4
<i>Information Quality</i>	Accurate information	Item 5
	Detailed level of information	Item 6
	Appropriate formatted information	Item 7
<i>Service Interaction</i>	Safe transaction	Item 8
	Accurate service	Item 9
	Sense of community	Item 10

Population in this research is user of e-banking website of BRISyariah. Samples used counted 100 respondents but based on data obtained. sampling technique is done by incidental sampling. Isidental sampling is a sample determination technique based on chance, ie anyone who accidentally / isidentally met with the researcher can be used as a sample, when viewed by the person who happened to meet it is suitable as data source (Sugiyono, 2014). Data collection was done with an online questionnaire on a scale of 1-5 (1 = strongly disagree, 5 = strongly agree).

Importance Performance Analysis (IPA) or Quadrant Analysis is a descriptive analysis technique introduced by Martilla and James in 1977 (Malhotra, 2013). Importance Performance Analysis is an analytical technique used to identify what important performance factors should be demonstrated by an organization in fulfilling the satisfaction of their service users (consumers). Initially, Martilla and James mean these methods for use in the field of marketing research and consumer behavior. However, in subsequent developments, its use has now been widespread in hospital, tourism, school, and even research studies on the performance of the public bureaucracy (government). IPA is used to understand more deeply about the perception of service users on the quality of the service. Dimension of importance shows how important the quality attribute by the users, while the dimension of performance shows how good the quality attribute is perceived by the user significantly.

#### 4. RESULT AND DISCUSSION

Based on gender, the number of respondents on the e-banking website users of BRISyariah is dominated by female gender that is as much as 68% of the 70 respondents, while the male gender as much as 32% of 30 respondents. The number of respondents in this study dominated by age > 30 years as many as 56% of 85 respondents, and age < 20 years as many as 10% of 15 respondents. The number of respondents in this study is dominated by private employees as much as 43%, housewives as much as 10% that is 10 respondents. The number of respondents in this study is dominated by the intensity sometimes (1-2 weeks) as much 41% of 45 respondents, (week 3-4 times) as much as 18% ie 10 respondents, as frequent intensity (5-6 times week) as much as 5.2% ie 4 respondents and very frequent intensity (week > 6 times) as many as 15.6% ie 12 respondents.

Ideally, the ideal score expected for the respondent's answer to 2 questions in each group is 1000. From the calculation in the table shows the value obtained for the Performance group of 738 (73.80%) of the ideal score of 1000; while in the Importance group of 827 (82.70%) of the ideal score of 1000. Thus the dimensions of Service Interaction in the Performance group are in both categories and the Importance group is in very good category. The weighting of questionnaire data using the liker scale (1-5) is done by frequency tabulation of all indicators of each WEBQUAL dimension ie usability, information quality, and service interaction.

Table 2: Average weighted values of indicators

Indicators			<i>Performance</i>	<i>Importance</i>
1	<i>Usability</i>	Item 1	4,09	4,20
2		Item 2	4,01	4,07
3		Item 3	3,86	3,93
4		Item 4	3,91	3,93
5	<i>Information Quality</i>	Item 5	3,81	3,87
6		Item 6	3,85	3,86
7		Item 7	3,87	3,96
8		Item 8	4,00	4,01
9	<i>Service Interaction</i>	Item 9	3,96	4,04
10		Item 10	3,88	3,82
Average			3,925	3,968

Sumber: Data diolah dari SPSS version 20 for windows

Gap analysis is done to see the level of quality website sunmall.com seen from the gap (gap) between the perceived quality (actual) and the desired quality (ideal). The actual quality is indicated by the respondent's assessment of the performance (performance) of website quality-building attributes based on WEBQUAL dimensions, while the ideal quality is directed from the respondent's assessment of the importance of the quality attribute. To determine the value of the gap, can be seen from the

difference between the value of the actual quality (performance) and the quality of the ideal (importance).

Where:

$Q_i$  = quality level

$P_i$  = actual quality score (performance)

$I_i$  = value of ideal quality (importance)

Table 3: Gap Value of Usability Dimension

Indicators		Performance (P)	Importance (I)	Q (P-I)
1	Item 1	4,20	4,09	0,11
2	Item 2	4,07	4,01	0,06
3	Item 3	3,93	3,86	0,07
4	Item 4	3,93	3,91	0,02
Average		4,03	3,96	0,07

Table 4: Gap Value of Information Quality Dimension

Indikator		Performance (P)	Importance (I)	Q (P-I)
5	Item 5	3,87	3,81	0,06
6	Item 6	3,86	3,85	0,01
7	Item 7	3,96	3,87	0,09
8	Item 8	4,01	4,00	0,01
Average		3,92	3,88	0,04

Table 5: 4.7 Gap Value of Service Interaction Dimension

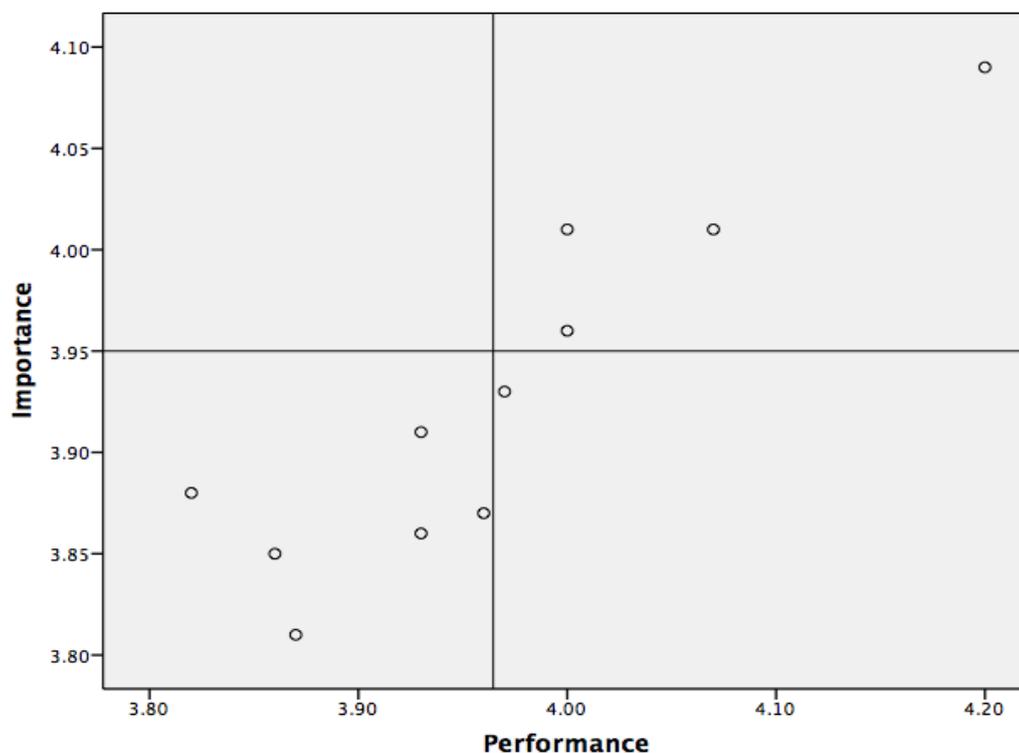
Indikator		Performance (P)	Importance (I)	Q (P-I)
9	Item 9	4,04	3,96	0,08
10	Item 10	3,82	3,88	-0,06
Average		3,93	3,92	0,01

Table 6: Gap Value of the whole WebQual Dimensions

Dimensiions	Perf. (P)	Imp. (I)	Q (P-I)
<i>Usability</i>	4,03	3,96	0,07
<i>Information Quality</i>	3,92	3,88	0,04
<i>Service Interaction</i>	3,92	3,93	-0,01
Average	3,93	3,92	0,01

The table above shows the gap value of all three dimensions of WEBQUAL. From the table above, overall, the value of the difference between the actual quality (performance) and the ideal quality (importance) has a positive value. The mean difference value is (0.01). the dimension that has the biggest gap is Information Quality by the difference of (0.07). From these results indicate a positive value or  $Q < 0$ , which means that the actual quality perceived today meets the ideal quality desired by users of e-banking BRI Syariah application website, then the quality level is stated to meet the user's ideal activities.

Importance Performance Analysis (IPA) is used to see which website quality indicators are compatible with the user's wishes and which ones need improvement. The results of the IPA analysis show the location of each indicator in the IPA matrix consisting of 4 (four) quadrants.



From the graphic above we can see the position of each indicator in the IPA matrix and can be explained as follows: Attributes / statements that are in quadrant I is the absence of the number listed in quadrant I which indicates should be further enhanced performance in order to satisfy the user.

Next, attributes / statements that are in quadrant II is item no 1 question "Easy to learn", question no 2 is "Good competitiveness", and question no 8 is "Have a good reputation" which signifies that attribute / statement is important and has a high performance, so it must be maintained for the next time because it is considered very important / expected and the results are very satisfactory

Furthermore, in quadrant III there are questionnaires item 3 which is "Good design", and question 4 "Accurate information", and question no 5 "Resolve the problem correctly", and question no 6 "Respond quickly "and Question # 7" Provide Detailed Information ", and Question No. 10" High Confidence Level ", indicating that improvements to the attributes / statements included in this quadrant need to be reconsidered by looking at attributes / statements that have an impact on the benefits perceived by the visitor is large or small and also to prevent the occurrence of user satisfaction.

Last but not least, attributes / statements that are in the quadrant IV is the absence of the number listed in quadrant IV which indicates should be further enhanced performance in order to satisfy the user.

## 5. CONCLUSION

From the results of research and discussion in the previous chapter, it can be concluded that the level of quality Open Library website has not been in accordance with user expectations. There is a discrepancy that indicates a gap between the two assessment perspectives between the performance level and the expected level of importance or ideal quality.

Overall, the difference between these two valuation perspectives is negative with a value of (-0.39). Of the three dimensions of measurement, the usability dimension has a gap value of (-0.28), then the information quality dimension has a gap value of (-0.39) and the last dimension of service interaction has a gap value of (-0.5). Of the three dimensions, the biggest gap value is service interaction with a value of (-0.5).

Given this, it can be concluded that the actual quality perceived can not meet the ideal quality desired Open Library website users, especially from the quality attributes associated with service interaction in the website.

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**Website**

[www.brisyariah.com](http://www.brisyariah.com)

## EMPLOYEES' EMPOWERMENT AND WORKLIFE QUALITY AT INDONESIAN STATE-OWNED COMPANY

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### Abstract

*Human resource management is the policy and practice of determining aspects of "human" or human resources in management positions. Human resources is the most important aspect in a company, so the company always wants employees to feel and implement Quality of Worklife (QWL or worklife quality), so that employees work maximally and increase the contribution of employees to the organization. One of the factors that influence the emergence of worklife quality is empowerment program. This study aims to determine the effect of empowerment on worklife quality of the employees of the main office of Electricity State-Owned Company (PLN) Center for Maintenance and Electricity (PUSHARLIS) Bandung, Indonesia. The method used in this research is quantitative with the type of descriptive analysis research. Respondents in this study were 73 employees of the Main Office of PT. PLN Center for Maintenance and Electricity Bandung. The results showed that the responses results can be interpreted that with increasing empowerment within the company will have an effect to improve worklife quality.*

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**Key Words:** *empowerment, worklife quality, personnel management, human resource management*

### 1. INTRODUCTION

Human Resources (HR) is a major element in an organization compared to other elements such as capital, technology, and money, because humans themselves are in control of others (Fakhri et al., 2014). In general, people want to work because of the desire to be able to meet their physical and spiritual needs. Therefore, a leader must strive to provide fair and reasonable remuneration and to treat employees as well as human beings. This can be done by considering the condition of the quality of work of its employees or known as the quality of worklife (QWL) or worklife quality, as proposed by Nadler & Lawler (1983) and Ilmarinen (2005), as a feeling of likes or dislikes from individual- individuals to their work environment.

The success of the organization in the implementation of quality of worklife will affect the work motivation of the members of the organization (Pangarso et al., 2017), and will continuously be useful in improving and improving its work performance, especially the reduced percentage of employee delay in the main office of PT. PLN PUSHARLIS Bandung. Quality of worklife at the main office PT. PLN Bandung is not equally felt by all employees, based on the results of pre-research questionnaires distributed by the author, it can be seen that there are still employees of the main office PT. PLN PUSHARLIS Bandung who feel reluctant to express the needs to colleagues and felt that he had not obtained sufficient

authority over his work. The impact of this is the occurrence of employee delay fluctuations that can be seen in Table 1 follows:

Table 1

Table of Late Employee Main Office PT. PLN PUSHARLIS Bandung July - December 2016

No.	Month	Year	Percentage of delay
1.	July	2016	9,20 %
2.	August	2016	3,65 %
3.	September	2016	3,09 %
4.	October	2016	6,29 %
5.	November	2016	4,08 %
6.	December	2016	3,48 %

*Source:* Data Processed Author from the HR Section Main Office of PT. PLN PUSHARLIS Bandung

Based on Table 1 can be seen graph of the delay of employees of the main office of PT. PLN PUSHARLIS Bandung in July - December 2016, Percentage of employee delay is fluctuate and not constant. Can be seen in July 2016 the percentage of employees reached 9.20%. According to Mr. Abdan Syakuro as Deputy Manager of Human Resources PT. PLN PUSHARLIS Bandung that the figure of 9.20% for the percentage of late employees is worrying because the main office of PT. PLN PUSHARLIS Bandung set 10% is the highest number for the percentage of delay, and 9,20% is close to 10%.

Based on the results of research conducted by Laschinger, (2008), Dowling, (2008), Deborah (2006), Frey (1993) in Hermawati (2015) which states that there is a significant relationship between empowerment and quality of worklife, where employee empowerment will contribute to a better quality of work life. According to Bragard et al. (2017), empowerment human resources is a process of business activities to further empower "human power" through changes and human development itself, in the form of ability, trust, authority, and responsibility and the framework of implementation of organizational activities to improve performance as expected.

Based on the phenomenon that occurred above, the authors are interested to conduct research on the main office of PT PLN Power Maintenance Center (PUSHARLIS) Bandung. This study was conducted to see the impact of empowerment on the quality of worklife employees in the daily life of employees in the company. Therefore, the authors are interested to conduct research entitled " the effect of empowerment on Quality of Worklife (QWL) on the employees of the main office of PT. PLN Center for Maintenance and Electricity (PUSHARLIS) Bandung ".

## 2. THEORITICAL FRAMEWORK

Empowerment is generally interpreted as "more empowered than ever, both in terms of authority, responsibility, and the ability of individuals who have it" (Ilmarinen, 2015). Human resources can be interpreted "power that comes from human". The power derived from this "human" can also be called power energy or power attached to man himself in the sense that it can be demonstrated in terms of power, ability, power, existence, role, authority, and responsibility possess the ability: knowledge, skills

and attitudes. Empowerment is a real potential enhancement, and its effort is less powerless (Fakhri, 2014).

According to Towns in Susarni (2015), the dimensions of empowerment are desire; which is the desire to delegate and involve workers, trust; the existence of trust between members of the organization will create good conditions for the exchange of information and advice without fear, confidence; raises employee confidence by appreciating the abilities they have credibility; where employees are confident with their skills and expertise, accountability; as a means of evaluation of performance in the settlement and responsibility of the given authority, last but not least is communication; openness between superiors and subordinates, fellow employees, and employees with consumers.

While Wayne (1989) in Nurbi (2013), argues that there are two views on the intent of quality of work life. First, the quality of work life is a number of circumstances and practices of the organization (e.g. enriching a democratic supervisor, employee involvement, and safe working conditions). While the second, the quality of working life is the perception of employees that they want to feel safe, willingly they are satisfied, and get a chance to grow and develop as human beings. Ilmarinen (2007) says that quality of worklife (QWL) are the level of individuals who are satisfied with their essential needs, such as the need for freedom.

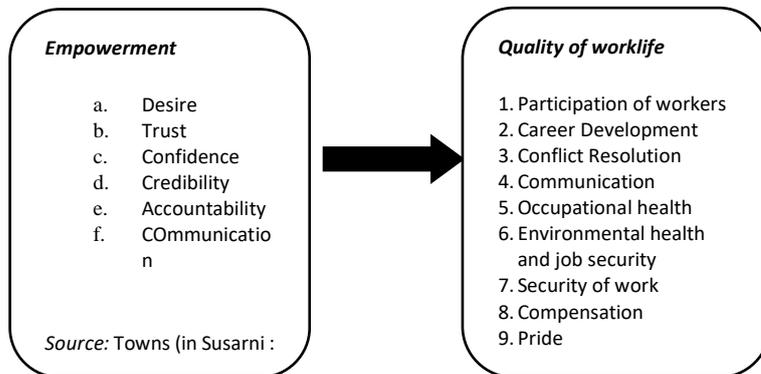
The quality dimensions of worklife quality according to Cascio (2006) in Nurbi (2013) comprise of participation of workers; provide an opportunity to convey ideas, suggestions, criticism, opinions, creativity, initiative, etc., career development; giving equal opportunity to attend training program and human resource development, conflict resolution; which involves conflict resolution procedures, communication; creation and development of effective communication, occupational health; administering a polyclinic or hospital or simply providing health funds to reimburse workers' medical expenses, environmental health and job security; protection against possible accident, security of work; avoid the fear of unemployment (contract termination) and the implementation of pension fund program, compensation; high performance creation can be realized by paying attention to direct compensation, incentives, bonuses, etc and pride; keeping the company's good name, and striving to maintain the company's image

According to Mahdad et al (2011 and Sheikhepoor (2015), most research on quality of worklife is influenced by variables such as human resource productivity, employee performance, and organizational commitment. However, there are several factors that can affect the quality of worklife that the company concerns to improve this factor, one of the most important factors is employee empowerment.

In the research results of Sheikhepoor (2015) it has been explained that there is significant influence of empowerment to quality of worklife, that is with empowerment it will improve quality of workwomen employees, if empowerment in a company low, hence worklife quality of employees is also low, empowerment in a company high, then the employees worklife quality also high.

## Research Framework

Figure 1 Framework



*Source* : Processed author data

Based on the above framework there are dimensions as attributes that describe or describe each variable in this peneneletion. To determine whether the dimensions of each variable have a relationship or not.

## 3. RESULTS AND DISCUSSIONS

### Partial significant test

To prove whether empowerment has a significant influence on the worklife quality, then tested by statistical hypothesis as follows:

Ho:  $\beta = 0$  Empowerment does not affect employee worklife quality at PT.PLN PUSHARLIS Bandung office.

H1:  $\beta \neq 0$  Empowerment affects employee worklife quality at PT.PLN PUSHARLIS Bandung office.

The worklife quality is a limitation of the value of the table by considering the degree of freedom (dk) and the level of significance so that from this limit it can be concluded whether H0 is accepted or rejected.

Based on Table, the value of obtained t-calculate is 7.943. While t-table at the level of significance of 5% and n = 73 is 1.994. Because t-calculate (7,943)> t-table (1,994) then H0 is rejected and H1 is accepted.

Based on table, we also obtained a significance value of 0.000 where the significance value of research <0.05 then it can be interpreted empowerment variable has a very significant value positive to worklife quality. The results of this test can be interpreted that the existence of empowerment in the company will improve the worklife quality of employees.

#### 4. RESEARCH METHODOLOGY

This study used 73 respondents distributed to employees of the main office of PT. PLN PUSHARLIS Bandung. Based on the results of tests conducted known that the position of empowerment variables on the continuum line included in the category of 'Good'. So overall, empowerment at the main office of PT. PLN PUSHARLIS Bandung is good with a score of 79.28%.

This study used 73 respondents distributed to employees of the main office of PT. PLN PUSHARLIS Bandung. Based on the results of tests conducted note that the position of quality of worklife variables on the continuum line included in the category very well. So overall, quality of worklife at the Main Office of PT. PLN PUSHARLIS Bandung has very good with score 84,81%.

Simple regression analysis is used to determine how strong the influence of independent variables (X) is the empowerment of the dependent variable (Y) is the worklife quality. The following table shows the coefficient of the results Regression analysis using SPSS 22, namely:

**Table 2 coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,881	,267		7,041	,000
	Empowerment	,542	,068	,686	7,943	,000

a. Dependent Variable: QWL

*Source:* Results of SPSS Processing 22

Based on the calculation of regression analysis using SPSS 22 in Table 4:21, obtained the regression equation as follows:

$$Y = a + bX$$

$$Y = 1.881 + 0.542X$$

The above equation can be interpreted as follows:

- a. The constant value of 1.881 states that if there is no value (0) of the variable X then the value of Y is 1.881.
- b. The value of regression coefficient X is positive 0,542 means that the variable X has a direct relationship with Y and each increase of one unit Empowerment (X) will affect the increase of worklife quality (Y) of 0.542.

#### Coefficient of Determination

**Table 3 Coefficient of Determination**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.686 <sup>a</sup>	.471	.463	.29446

a. Predictors: (Constant), Empowerment

b. Dependent Variable: QWL

Source: Results of SPSS Processing 22

Table 3 shows that the magnitude of empowerment influence on worklife quality of PT. PLN PUSHARLIS Bandung is shown by the coefficient of determination of R Square value with the following formula:

$$\begin{aligned}
 KD &= r^2 \times 100\% \\
 &= (0.686)^2 \times 100\% \\
 &= 47.1\%
 \end{aligned}$$

Coefficient of determination (R Square) shows the value of 0.471 or equal to 47.1%, meaning that this value indicates that empowerment variables consisting of several dimensions of desire, trust, confidence, credibility, accountability, and communication have an influence on variable worklife quality of 47.1% and the remaining 52.9% influenced by other variables not examined.

## 5. CONCLUSION

Based on the results of research conducted to employees of the Main Office of PT. PLN PUSHARLIS Bandung about the influence of empowerment on worklife quality, it can be drawn conclusion that empowerment applied to the Main Office of PT. PLN PUSHARLIS Bandung in the eyes of respondents as a whole is decent. Worklife quality on the employees of the Main Office of PT. PLN PUSHARLIS Bandung in the eyes of respondents as a whole is as well in satisfying sustainable level.

Empowerment has a significant and positive influence of 47.1% on worklife quality on the employees of the Main Office of PT. PLN PUSHARLIS Bandung.

The study shows strong relationship between empowerment and employee work quality life. it can lead to empowering work conditions and better QWL can have an escalating impact on employee commitment. Thus, it advances the literature on quality of work life and human resource management as a whole.

The result of this research further proves that workplace empowerment can foster the balance of work life to be more dedicated and committed. This indulgence in a symbiotic alliance will maximize the performance of company. The results may also provide meaningful insights to leaders or managers, administrators, and practitioners to design appropriate strategies and contingency plans to make the working environment more meaningful and value driven.

Empowerment can create the organisation culture of synergy, collaboration, flexibility and partnership. Furthermore, better it will create a synergetic effect on employee's attitudes and organisational outcomes. Employees will be motivated in withstanding work pressure, changes in situations and challenges and turn them into worthwhile life lessons.

The limitation of this research is that we conducted this study in a close environment that may differ if applied in different types of industry or institutions. It is recommended to dig more on this topic and add other variables to meet more satisfying results.

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## **DESINING PROJECT SCHEDULE FOR MIGRATION PROJECT STO DAGO IN PT. XYZ TO ACCELERATE PROJECT DURATION USING SCHEDULE COMPRESSION – A LESSON LEARN CASE STUDY FOR ANOTHER SIMILAR PROJECT**

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### **ABSTRACT**

*A project requires a mature planning, execution, and control. All requirements aforementioned for the project implementation are strongly supported by the availability of materials and labor. Inaccuracies in Project Schedule Management will lead to problems such as delays, soaring costs, etc. Projects that have delay indications should be addressed immediately by accelerating the schedule using the Schedule Compression. The delay indication could be seen during the Monitor and Control Project Work through the Earned Value Analysis (EVM). The aim of using schedule compression in this study is to accelerate the duration of Migration Project in STO DAGO which is one of the long-term projects of PT. XYZ. Migration project is the process of transitioning the telecommunication infrastructure from copper transmission media to fiber optic cable. The contract of Migration Project in STO Dago has been running since January 2014 but it has been terminated on February 2018 when the project has not accomplished yet. The result of schedule compression will suggest a Project Manager to specify some options that can be done to finish the STO DAGO migration project on time, where these options could be used as a preventive action so that other migration project will not experience the same thing as delay and terminated project.*

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**Key Words:** *Project Schedule Management, Schedule Compression, migration project, Monitor and Control Project Work, Earned Value Analysis*

## 1. INTRODUCTION

PT. ABC is intensively building fiber optic cable network system for internet service, home phone, and UseeTV. This company is targeting by 2020, all copper cables centered at STO (Sentral Telepon Otomat) are replaced with fiber optic cables. The project of replacing the copper cable to optical fiber is called the migration project. All migration projects are subcontracted to PT. XYZ. Activities on all migration projects are identical to each other. On the previous migration projects, the duration that set by PT. ABC for PT. XYZ is always inappropriate or late. As a result, PT. XYZ was late in accomplishing the project and must pay a penalty. And finally, the project is given extra time to complete. The extra time of PT ABC's project is in the form of contract extension.

**Table 1 Late Migration Project in 2016**

(Source: PT. XYZ)

Project	Plan 1 (Time and Unit)	Actual 1 (Time and Unit)	Status	Plan 2 (Time and Unit)
Migrasi TITO Jakarta Outer-1 2016	March, 9885 units	March, 1066 units	10.7%	April, 12500 units
Migrasi TITO Jabar 2016	March, 3999 units	March, 2359 units	58.9%	April, 18200 units
Migrasi TITO Jatim 2016	March, 4900 units	March, 654 units	13.3%	April, 5900 units
Migrasi TITO Bali 2016	March, 6001 units	March, 1556 units	25.9%	April, 8400 units

STO Dago Migration Project is one of the example of late project. This project subcontracted from PT. ABC to PT. XYZ, and subcontracted again to CV. In this project, CV is the company that became the project executor and provide materials. According to the interview conducted with the PT XYZ's Project Manager, resource/labor provided from CV for this project is 20 worker, where a team of consists of 2 technician. It means that there are 10 teams provided.

The contract of project started running since 30 January 2014, but this migration project has not completed until the project is terminated (in the 23rd Reconciliation or final stage) in February 2018 because the project has been running too long and never achieved the Scope of Work (SOW) that has been set. This research only focuses on using SOW on 23rd Reconciliation Stage as the target achievement (objective project), where the 23rd Reconciliation Stage start running from 28 December 2017 and ends on 19 February 2018.

Migration project only focuses on the Installation Work Package which is included in Provisioning Type 1 (PT1).

**Table 2 STO Dago Reconciliation Data**

(Source: PT. XYZ)

Reconciliation Stage	Scope of Work (Plan)	Actual Performance
20th	16111	6096
21st	7091	2715
22nd	4175	607
23rd	4735	903

Due to limited data, PT. XYZ can only show the Reconciliation Stage from 20th to 23rd. According to Table 1, it can be seen that the actual performance never reached the number of Scope of Work. Then, this project requires a corrective which can be the basis for preventive action to prevent delays in migration project.

## 2. LITERATURE REVIEW

Study that concerned in Earned Value Management that has been conducted by (Pratami, Puspita, & Afrizal, 2017) mentioned that EVM can be used in the project monitoring and controlling and may result in 2 important categories such as cost and schedule. Thus, the EVM in this study is used in the monitoring and controlling phase to determine whether the SPI project is ahead or behind schedule.

One of the pioneering studies on scheduling project management was conducted by (Vya, 2013). She designed the project schedule of Columbia Pkoana Precast Block Production using Critical Path Method in to obtain the optimal time and minimum total cost in project completion. After she designed the project schedule based on the activity list, she crashed the critical activities by using Crashing Method.

Other past study that focuses on Project Schedule Management was conducted by Garg, 2016). His paper tells that crashing is a part of the schedule compression that used to compress the project schedule by decrement the total project schedule length. His study concerned on a case of civil engineering in project network with 8 different activities. The normal duration of project completion is 46 days. The final result shows that the optimum duration and cost is 18 days and 56,200.

## 3. METHODOLOGY

### 3.1 PARTICIPANTS

According to the brief explanation in introduction, the research question is to design the project schedule of STO Dago Migration Project in PT. XYZ to accelerate project duration using Schedule Compression to become a lesson learned case study for another similar project.

### **3.2 MEASUREMENTS**

In this paper, we use the Project Schedule Management discusses about the completion time of project. According to PMBOK (2017), there are several process in Plan Schedule Management such as:

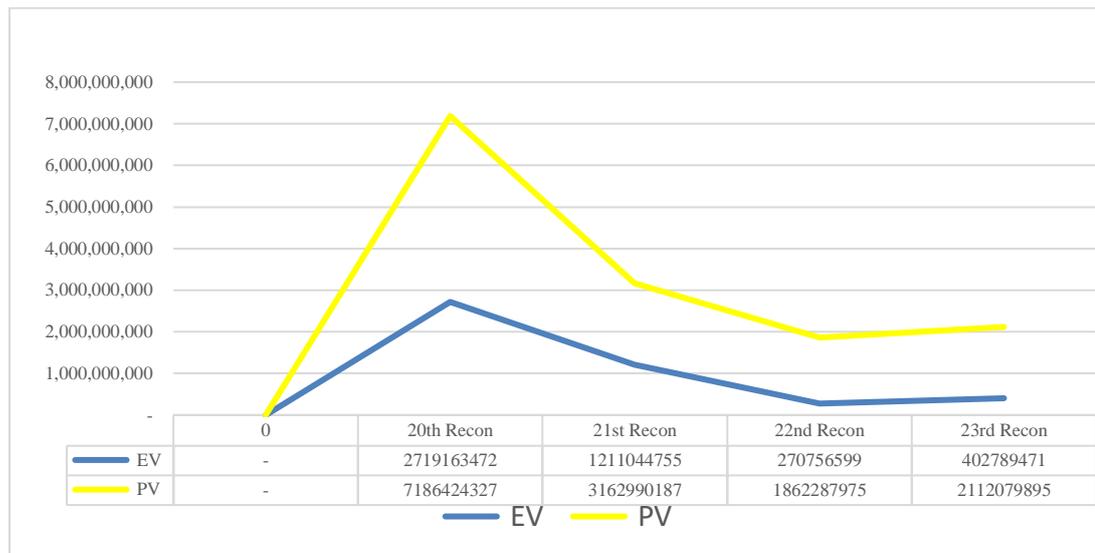
1. Plan Schedule Management, this process is undertaken to establish procedures, documentation, and for project planning, development, management, execution, and controlling of project schedule.
2. Define Activities, this process is done by identifying and documenting the specific actions to complete the project deliverables.
3. Sequence Activities, this processes is done by identifying and documenting the relationships of the project activities.
4. Estimate Activity Duration, this process is conducted to estimate the required working periods for the completion of individual activities cwith estimated resources.
5. Develop Schedule, this process is undertaken to analyze the sequence of activities, the duration, the requirement of resource, and the schedule constraints to generate a project schedule model for project execution & monitoring and control.
6. Control Schedule, this process is carried out to monitor the project status process to generate the project schedule update and manage the changes to schedule baseline.

According to PMBOK (2017), Schedule Compression is a technique that used to shorten or to accelerate the project duration without reducing the scope of the project to meet schedule constraints, specified dates, or other schedule objectives. There are 2 types of schedule compression, such as:

1. Crashing is a method for project duration shortening for the least incremental cost by reducing one or more critical activities duration. Crashing actions can includes to bringing additional resources, approving the project overtime, or paying expedite delivery to activities on the critical path.
2. Fast Tracking is a technique where activities that should be done sequentially using the original schedule are done in parallel way for some or all of their duration. In other words, fast tracking of a project means that activities are done simultaneously rather than waiting for each section to be completed separately. However, fast tracking can only be applied if the activity can actually be overlapped. In addition, fast tracking can save time but also add risks and may result in rework.

## **4. RESULTS AND DISCUSSION**

### **4.1 SPI CHART**



**Figure 1 SPI Chart**

According to Figure 1, it can be seen that the value of PV is greater than the EV. It means that the result of the division between EV and PV will be less than one. Since the SPI is less than one, it means that this schedule of migration project of STO DAGO are behind the schedule. Based on these result, STO Dago migration project should be addressed immediately by accelerating the schedule using Schedule Compression. This project requires a both corrective and preventive action to prevent repetition of delays in migration project.

#### 4.2 Schedule Development

**Table 3 Activity List and Dependencies**

Activity Code	Activity	Predecessor	Resource	Duration
A	Download the list of customer data from PT.ABC	-	1	1 hour
B	Sort the list of customer	A		1 hour
C	Forming the migration team	A	1	1 day
D	Mapping to match the current data with the geographical circumstances (field survey)	B, C	24	45 minutes
E	FO Drop Cable Order	A	1	1 hour
F	ONT Order	A		1 hour
G	KR/KG Order	A		1 hour
H	FO Drop Cable Delivery	E	-	14 days
I	ONT Delivery	F	-	14 days
J	KR/KG Delivery	G	-	14 days
K	Waiting time for pt2	B	-	14 days
L	Waiting time for pt3	K	-	21 days

**Table 3 Activity List and Dependencies (cont.)**

M	Material Preparation	D, H, I, J, K, L	12	30 minutes
N	Permissions	M	24	15 minutes
O	FO Drop Cable	N		45 minutes
P	Jointing/Termination	O		5 minutes
Q	KR/KG Installation	P		15 minutes
R	Roset Installation	Q		2 minutes
S	Power Budget	R		1 minute
T	ONT Installation	S		2 minutes
U	System Activation and Migration	T		30 minutes
V	Labeling	R		1 mintue
W	BAST Installation	U, V		30 minutes
X	Commissioning Test	W	1	7 days
Y	Publishing BAST-1	X	1	1 day
Z	Reconciliation	Y	1	1 day

The schedule development done by using Microsoft Project based on activity list in Table 3 is as follows:

**Table 4 Schedule Development**

ID	Task Name	Duration	Start	Finish	Predecessors
1	Shutdown SID DAGO	30,61 days	Thu 28/12/17	Thu 06/02/18	
2	Preparing	1,22 days	Thu 28/12/17	Fri 29/12/17	
3	Collecting list of customer data	0,25 days	Thu 28/12/17	Thu 28/12/17	
4	Download the list of customer data from	1 hr	Thu 28/12/17	Thu 28/12/17	
5	Sort the list of customer data	1 hr	Thu 28/12/17	Thu 28/12/17	4
6	Form the migration teams	1 day	Thu 28/12/17	Fri 29/12/17	4
7	Mapping	0,09 days	Fri 29/12/17	Fri 29/12/17	
8	Matching the current data with geographical situation with	45 mins	Fri 29/12/17	Fri 29/12/17	6,5
9	Material Order	0,13 days	Thu 28/12/17	Thu 28/12/17	
10	FO Drop Cable Ord	1 hr	Thu 28/12/17	Thu 28/12/17	4
11	ONT Order	1 hr	Thu 28/12/17	Thu 28/12/17	4
12	KR/KG Order	1 hr	Thu 28/12/17	Thu 28/12/17	4
13	Material Delivery	14 days	Thu 28/12/17	Wed 17/01/18	
14	FO Drop Cable Delivery	14 days	Thu 28/12/17	Wed 17/01/18	10
15	ONT Delivery	14 days	Thu 28/12/17	Wed 17/01/18	11
16	KR/KG Delivery	14 days	Thu 28/12/17	Wed 17/01/18	12
17	Idle	21 days	Thu 28/12/17	Fri 26/01/18	
18	Waiting time for pt	14 days	Thu 28/12/17	Wed 17/01/18	5
19	Waiting time for pt	21 days	Thu 28/12/17	Fri 26/01/18	18FF,5
20	Installation	0,36 days	Fri 26/01/18	Fri 26/01/18	
21	Material Preparatic	30 mins	Fri 26/01/18	Fri 26/01/18	8,19,14,16,15
22	Permissions	15 mins	Fri 26/01/18	Fri 26/01/18	21
23	FO Drop Cable	45 mins	Fri 26/01/18	Fri 26/01/18	22
24	Jointing/Terminati	5 mins	Fri 26/01/18	Fri 26/01/18	23
25	KR/KG Installation	15 mins	Fri 26/01/18	Fri 26/01/18	24
26	Roset Installation	2 mins	Fri 26/01/18	Fri 26/01/18	25
27	Power Budget	1 min	Fri 26/01/18	Fri 26/01/18	26
28	ONT Installation	2 mins	Fri 26/01/18	Fri 26/01/18	27
29	Activation by system and	30 mins	Fri 26/01/18	Fri 26/01/18	28
30	Labeling	1 min	Fri 26/01/18	Fri 26/01/18	23,26
31	BAST instalasi	30 mins	Fri 26/01/18	Fri 26/01/18	30,29
32	Closing	9 days	Fri 26/01/18	Thu 08/02/18	
33	Commissioning Test and Uji	7 days	Fri 26/01/18	Tue 06/02/18	31
34	Publishing BAST-1	1 day	Tue 06/02/18	Wed 07/02/18	33
35	Reconciliation	1 day	Wed 07/02/18	Thu 08/02/18	34

According to Tale 3, it can be seen that the critical path is on Activity 4 – 5 – 19 – 21 – 22 – 23 – 24 – 25 – 26 – 27 – 28 – 29 – 31 – 33 – 34 – 35. The completion day of STO Dago migration project takes 30,6 days from preparing tasks until closing tasks for one house. Schedule Compression will be done only on critical activities. (J.M. Nicholas & H. Steyn, 2011) stated that shortening the critical activities will impact the same to the project duration. It is because the critical path have 0 total float, where any delays occur in any critical path may result delay in project duration.

#### 4.3 Schedule Compression

##### 1. Schedule Compression Scenario I (Crashing Scenario)

According to Table 4, the installation for migration for a house takes 0,3 day. It means that 1 team can reached 3 houses for installation a day.

Available Team = 10 teams

SOW = 4735 houses

According to Table 2, the SOW of 23rd Reconciliation Stage is 4735 houses, with this SOW number, then this migration project of STO Dago will finish on:

$$\begin{aligned} \text{The expected duration should be} &= \frac{4735 \text{ houses}}{3 \times 10 \text{ teams}} \\ &= 159 \text{ days} \end{aligned}$$

While, the actual project duration in only from 28 December 2017 - 19 February which is only 38 days (working days from Monday – Friday at 8am-5pm). To pursue the delay to be resolved on 23rd Reconciliation, then the workers that should be added are as follows,

Duration = 38 days

Houses/day = 4735/38

= 125houses/day

1team/day = 3 house/day

Additional Team = (125/3) – 10

= 32 teams

= 64 workers

Crashing Scenario will be accomplished if the project team is added with 32 more teams. With this scenario, the project will reach the closing stage without being terminated where the scope of work (4735 houses) can be done in 38 days. In addition, this scenario assume that the project duration of 38 days already included with material availability (no longer need to order and delivery the material), the development of PT2 and PT3 has finished (in service) and the number of customer is fixed.

**Table 5 Service Price**

(Source: PT. XYZ)

Description	Service Price per installation unit
Migrasi FO 3P (Phone + Internet + IPTV)	Rp 446.057,-

**Table 6 Material Price**

(Source: PT. XYZ)

Description	Material Price per installation unit
Material	Rp 501.460,-

**Table 7 Salary Expenses**

(Source: PT. XYZ)

Position	Salary
Technician	Rp 3.400.000,-

If the 32 teams are provided by CV, then the SOW are accomplished. So, the crash cost that PT. XYZ should pay for,

PT. XYZ should pay the service cost = 4735 x Rp 446.057,-

= Rp 2.112.079.895,-

PT. XYZ should pay the material cost = 4735 x Rp 501.460,-

= Rp 2.374.413.100,-

Crash Cost = Rp 4.486.492.995,-

While if the 42 teams are provided by PT.XYZ, then the SOW are also accomplished. So the crash cost that PT. XYZ should pay for,

PT. XYZ employee salaries = 84 x Rp 3.400.000,- x 2month

= Rp 5.712.000.000,-

PT. XYZ should pay the material cost = 4735 x Rp 501.460,-

= Rp 2.374.413.100,-

Crash Cost = Rp 8.086.413.100,-

## 2. Schedule Compression Scenario II (Crashing and Fast Tracking)

According to Table 4, the installation activity is a part of critical path. In this scenario, the crashing is implementing the additional 32 teams which comes from the previous calculation. The fast tracking done by release the installation activity from its dependency against Idle Time (Waiting Time for Provisioning Type 2 and Waiting Time for Provisioning Type 3). It means that Waiting Time for Provisioning Type 2 and 3 release from critical path. The development of PT2 and PT3 could be completed from afar the day before the installation (leading supply) or it can be completed at the beginning of the migration project since the target of PT. ABC in 2020, all copper cables centered at STO (Sentral Telepon Otomat) are replaced with fiber optic cables. Soon or later, the PT2 and PT3 will loaded by the customers through the available ODP.

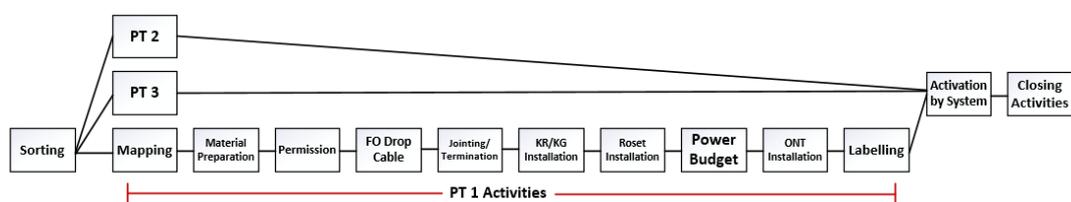


Figure 2 AoN of Existing Schedule

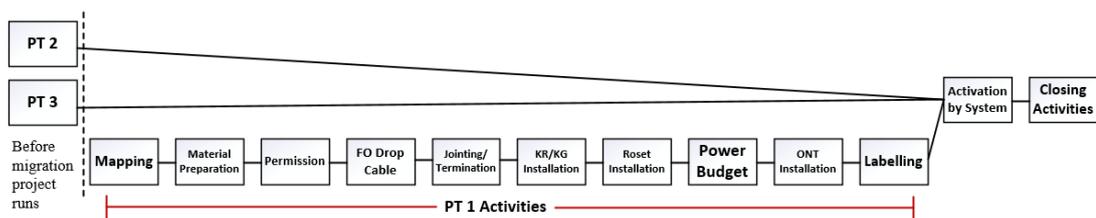
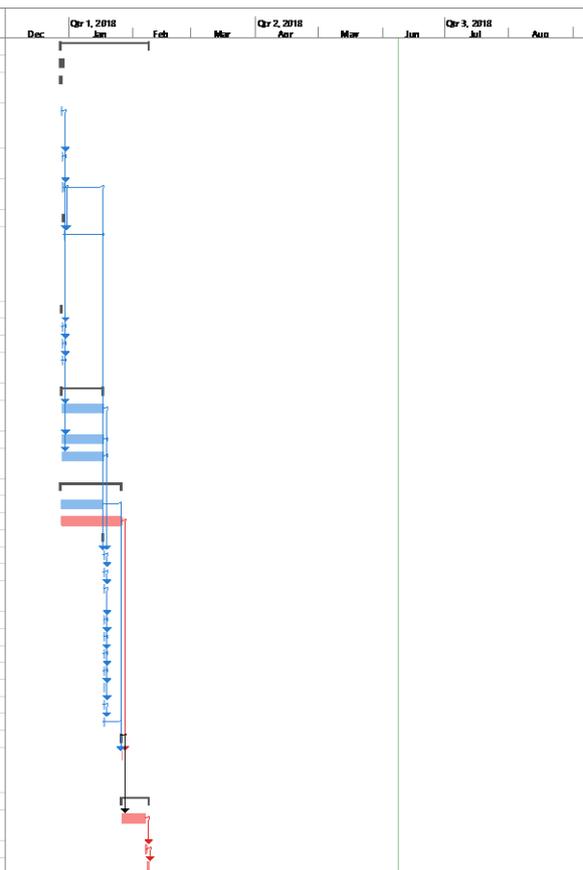


Figure 3 AoN of Scenario II

According to Figure 3, Activation by System done in the central office without back to the customer houses and and can be done simultaneously.

Table 8 Scenario 2

ID	Task Name	Duration	Start	Finish	Predecessors
1	Shutdown STO DAGO	30,06 days	Thu 28/12/17	Thu 08/02/18	
2	Preparing	1,22 days	Thu 28/12/17	Fri 29/12/17	
3	Collecting list of customer data	0,25 days	Thu 28/12/17	Thu 28/12/17	
4	Download the list of customer data from	1hr	Thu 28/12/17	Thu 28/12/17	
5	Sort the list of customer data	1hr	Thu 28/12/17	Thu 28/12/17	4
6	Form the migration teams	1day	Thu 28/12/17	Fri 29/12/17	4
7	Mapping	0,09 days	Fri 29/12/17	Fri 29/12/17	
8	Matching the current data with geographical situation with	45mins	Fri 29/12/17	Fri 29/12/17	6,5
9	Material Order	0,13 days	Thu 28/12/17	Thu 28/12/17	
10	FO Drop Cable Ord	1hr	Thu 28/12/17	Thu 28/12/17	4
11	ONT Order	1hr	Thu 28/12/17	Thu 28/12/17	4
12	KR/KG Order	1hr	Thu 28/12/17	Thu 28/12/17	4
13	Material Delivery	14 days	Thu 28/12/17	Wed 17/01/18	
14	FO Drop Cable Delivery	14 days	Thu 28/12/17	Wed 17/01/18	10
15	ONT Delivery	14 days	Thu 28/12/17	Wed 17/01/18	11
16	KR/KG Delivery	14 days	Thu 28/12/17	Wed 17/01/18	12
17	Idle	21 days	Thu 28/12/17	Thu 25/01/18	
18	Waiting time for pt	14 days	Thu 28/12/17	Tue 16/01/18	
19	Waiting time for pt	21 days	Thu 28/12/17	Thu 25/01/18	
20	Installation	0,3 days	Wed 17/01/18	Wed 17/01/18	
21	Material Preparatic	30mins	Wed 17/01/18	Wed 17/01/18	6,14,15,16,8
22	Permissions	15mins	Wed 17/01/18	Wed 17/01/18	21
23	FO Drop Cable	45mins	Wed 17/01/18	Wed 17/01/18	22
24	Jointing/Terminati	5mins	Wed 17/01/18	Wed 17/01/18	23
25	KR/KG Installation	15mins	Wed 17/01/18	Wed 17/01/18	24
26	Roset Installation	2mins	Wed 17/01/18	Wed 17/01/18	25
27	Power Budget	1min	Wed 17/01/18	Wed 17/01/18	26
28	ONT Installation	2mins	Wed 17/01/18	Wed 17/01/18	27
29	Labeling	1min	Wed 17/01/18	Wed 17/01/18	23,26
30	BAST Instalasi	30mins	Wed 17/01/18	Wed 17/01/18	29
31	System	0,06 days	Fri 26/01/18	Fri 26/01/18	
32	Activation by system and Migration	30mins	Fri 26/01/18	Fri 26/01/18	18,19,30
33	Closing	9 days	Fri 26/01/18	Thu 08/02/18	
34	Commissioning Test and Uj	7 days	Fri 26/01/18	Tue 06/02/18	31
35	Publishing BAST-1	1 day	Tue 06/02/18	Wed 07/02/18	34
36	Reconciliation	1 day	Wed 07/02/18	Thu 08/02/18	35



According to Table 8, the Scenario 2 release the Activation by System activity from installation. In this scenario, it means the time saved is 30 minutes x 4735 houses = 142050 minutes.

**5. CONCLUSIONS AND RECOMMENDATIONS**

The report of Reconciliation Stage from 20th – 23rd shows that the SPI of STO Dago migration project are behind schedule. This project requires the corrective and preventive action to prevent the repetition of delays such as:

- a. Scenario 1, provided more 32 teams so the total team should be 42 teams (84 workers) to complete the installation of migration (PT1) in 38 days. There are 2 options to provided the required additional resources, which are provided by CV or PT. XYZ.
- b. Scenario 2, using the 42 teams, release the installation activity from its dependency against Idle Time (Waiting Time for Provisioning Type 2 and Waiting Time for Provisioning Type 3), and conducting the Activation by System in Central simultaneously. When the Activation by System done in Central, time will be saved as much as 142050 minutes.

The recommendations which the project manager can consider are:

- a. Perform the Plan Schedule Management properly in all phase.
- b. Perform a leading supply system for PT1, PT2, and PT3 so the customers do not turn to other competitors.
- c. Use the previous project as lesson learned so that the same error will not happen again

Please follow Harvard Referencing Style.

- d. Documenting the project data completely.

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## READINESS OF KNOWLEDGE MANAGEMENT IMPLEMENTATION: A COMPARATIVE STUDY BASED ON EMPLOYEES CHARACTERISTICS

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### ABSTRACT

*This research intended to measure how high the level of readiness of the organization in applying Knowledge Management, focused in Knowledge Management Infrastructure (that composed of: Organizational Culture, Structure, IT Infrastructure, Common Knowledge, and Physical Environment) and finding significant differences regarding the readiness of employees in implementing Knowledge Management based on employee profile. It was considered an important thing, to support the company in the success of Knowledge Management implementation so as to realize the vision and mission of the company in facing the era of competition.*

*The research is conducted in A Certification Institution in Bandung, that focused in training and certification business, The research method used in this research is descriptive method. Approach conducted by researcher in this research using quantitative method. In this study the data were collected using questionnaires distributed to respondents. The measurement scale used in this research is ordinal scale (ordinal scale). The analysis used in this research is descriptive analysis. The participant in this research is 38 respondents.*

*Based on the data processing and discussion that has been listed previously, the researchers can draw the following conclusions. Organizational readiness in applying Knowledge Management. There is a significant difference regarding the readiness of employees in the implementation of Knowledge Management based on employee profile. Based on the crosstabulation test, the researcher found that demographic characteristics, ie gender, age, duration of work and education level can give rise to different levels of readiness in Organizational Culture*

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**Key Words:** *Knowledge Management Infrastructure, Organizational Culture, Organizational Structure, IT Infrastructure, Common Knowledge, Physical Environment, A Certification Institution*

**JEL Classifications:** *D83, C12, C83*

## 1. INTRODUCTION

Business competition in the era of globalization and the development of information technology cannot be avoided, including competition in the business of certification and training. The certification and training businessmen include MarkPlus, Inixindo, Comm Serve, Multimatrics, Sidola, Brainmatic, Informit and others. Consideration of customer in choosing certification and training institution, among others, include price aspect, expert or expert, facility, service, location and type of certification offered.

Reliable Human Resources are required to support the certification and training business. Every employee at A Certification Institution is demanded to always be friendly to customer, give fast delivery to customer, able to become Training Officer (TO), able to become expert in training, able to explain certification product, able to make report of responsibility from each training and able to prepare to others to be properly certified. Reliable Human Resources is an intangible asset for the company and must be maintained properly.

By 2015 the employee turnover rate at A Certification Institution is quite high. Here are employee turnover data in 2015 and 2016 at A Certification Institution:

**Tabel.1 Employees Turnover 2015**

Description	Out	Number of Exiting employee	Exiting Employee Ratio
Resigned	9	69	13,6%
Failing test	15		22,7%
Rotated to another position	4		6,1%

*Source: A Certification Institution (2016)*

**Tabel 1.2 Employees Turnover 2016**

Description	Out	Number of Exiting employee	Exiting Employee Ratio
Resigned	2	41	4,9%
Rotated to another position	2		4,9%

*Source: A Certification Institution (2016)*

Total turnover of employees in 2015 by 42.4% and in 2016 amounted to 9.8%. The turnover is quite high in 2015 in example on employees who failed the test by 22.7%. This happens because of the reduction of employees in order to perform cost efficiency in the company. Employees who fail the test have not done the process of knowledge sharing and knowledge storage optimally, thus causing some data is difficult to find with the exit of the employee. (Interview with A Certification Institution HR Staff, on July 17, 2017).

Employee turnover occurs due to employee resign, employee failed test in 2015 and mutations caused by Foundation policy. The mutation has not been accompanied by sharing knowledge, so there is no substitute employee who meets the requirements of knowledge or experience to fill vacant positions left behind. The vacant position is a crucial position, including Assistant Manager Marketing, Assistant Manager Finance, Expert Group Manager, Senior Manager Marketing and Senior Manager Solution. (Interview with a The Certification Institution Human Resource Staff, on July 17, 2017).

Good knowledge management process consists of knowledge sharing, knowledge creation, knowledge utilization and knowledge storage. Knowledge sharing in an enterprise environment is a process whereby the explicit or tacit knowledge of an employee is communicated or transferred to another employee. While knowledge utilization is the process of using knowledge possessed by employees (Becerra-Fernandez & Sabherwal (2010:56). Knowledge creation is the process of knowledge creation by employees arising from interaction through the process of knowledge conversion. Then the knowledge that has been communicated or knowledge that has been created is stored (knowledge storage) to be used or used by the employee (Kucza, 2001).

The knowledge sharing process at A Certification Institution is conducted routinely in the monthly meeting of the leaders, monthly budget committee meetings and sales meetings. Knowledge sharing process can be done incidentally, among others, if there is new knowledge for example obtained from newly published book, it will be sharing knowledge by the HR department to the related employees. The process of knowledge sharing that has not been effective in A Certification Institution among others has not been done sharing if there are employees who completed the training.

Sharing knowledge between units within the Certification Institution has not been carried out routinely as has been done by the leaders, it happens because each unit has a lot of busy in doing the job. Sharing knowledge in the Certification Institution can also be done top down and bottom up. Sharing top down is done by the Director or the leaders to his subordinates respectively. Sharing bottom-up is the occasional subordinate or suddenly sharing knowledge to his boss, especially when there are problems related to the customer or prospective customers.

A Certification Institution employees strive continuously to create new products or services and different from the products or services of competitors. Structurally there is a special unit that handles knowledge creation, namely unit solution (research and development). Each unit is expected to have new ideas in creating new products or services (innovation) so as to outperform its competitors in the field of certification and training business.

Knowledge storage in the Certification Institution uses a local server because the data storage volume is still limited and not large. Storage of data without adequate back up, in case of loss of data then knowledge will be difficult to recover. Well-kept data is a company asset, so that when more employees come out, their knowledge data can be utilized by their replacement employees.

Knowledge utilization within A Certification Institution has not been maximally utilized and become less effective. Employees are still less aware to use data history resulting in difficulty in retrieving data (inefficient in time and effort). Likewise with the knowledge storage in A Certification Institution felt not effective because there is no data center that can be accessed by all Employees

Furthermore, A Certification Institution Director asserts that Knowledge Management needs to be implemented in A Certification Institution environment, so that the process of knowledge management activities from sharing, creation, storage to utilization or utilization can be done well. Therefore, it is necessary to immediately apply Knowledge Management and be included in A Certification Institution's

annual program. Implementation of programmed Knowledge Management in each unit is expected to help improve company performance. (Interview with Director of A Certification Institution, on May 27, 2017).

Some studies say that the failure rate of implementation of knowledge management is quite high. Research on the failure of knowledge management, one of which was conducted by Braganza et al., Who conducted research on Pharma Corp. Braganza et al. in Liliana (2010) states that the failure of Pharma Corp in applying knowledge management in the company occurred due to several things, such as generalization of knowledge management programs in all departments / processes, the preparation of isolated knowledge management plans, too focused on explicit knowledge so that the tacit knowledge lack of attention, cultural changes that are not received by staff, the use of external consultants and there is no process of monitoring the process of adding knowledge management.

Some studies say that the failure rate of Knowledge Management implementation is quite high. The risk of failure to implement Knowledge Management can be reduced if the organization is prepared to implement Knowledge Management (Widiastuti and Budi, 2016). Therefore, prior to the application of Knowledge Management, careful preparation is required by conducting a Readiness analysis first. Based on the background that has been described above, the authors are interested in choosing the title "Readiness Of Knowledge Management Implementation: A Comparative Study Based On Employees Characteristics"

### **Research Questions**

The main problem formulation in this research is the high turnover of employees in A Certification Institution, but Knowledge Management in in A Certification Institution has not been effective, so it needs Implementation of Knowledge Management and will become the program in in A Certification Institution. Based on the above problem formulation, question (s) addressed in this research will be:

1. How high the level of readiness of the organization in applying Knowledge Management. More specifically the research question is as follows:
  - a. How high is the readiness of Organization Culture in measuring the application of Knowledge Management
  - b. How high the readiness of Organization Structure in measuring the application of Knowledge Management
  - c. How high is the readiness of Information Technology Infrastructure in measuring the application of Knowledge Management
  - d. How common is the knowledge of common knowledge in measuring the application of Knowledge Management
  - e. How high is the Physical Environment preparedness in measuring the application of Knowledge Management
2. Are there any significant differences regarding the readiness of employees in implementing Knowledge Management based on employee profile? (More specifically the research question is as follows:)
  - a. Are there any significant differences regarding employee readiness in Knowledge Management implementation based on gender?
  - b. Is there a significant difference in the readiness of employees in the implementation of Knowledge Management by age?

The purpose of this study is to do a comparative study based on employee characteristics of in A Certification Institution to support the company in the success of Knowledge Management implementation so as to realize the vision and mission of the company in facing the era of competition.

## **2. LITERATURE REVIEW**

Knowledge is information that changes something or someone, it happens when the information becomes the basis for action, or when the information enables a person or institution to take different actions or actions more effectively than the previous action. (Drucker in Tobing, 2007)

Knowledge is information with decision making and actions that lead to usability and purpose (Becerra-Fernandez & Sabherwal, 2010)

Becerra-Fernandez & Sabherwal (2010) classifies knowledge into six types:

1. Procedural knowledge

Procedural knowledge focuses on the procedure or sequence of steps to achieve the desired goal.

2. Declarative knowledge

Declarative knowledge focuses on facts; or focusing on beliefs about relationships between variables.

3. Tacit knowledge

Tacit knowledge is the knowledge attached to each individual. Tacit knowledge is insight, intuition and hunch.

4. Explicit knowledge

Explicit knowledge is knowledge that has been expressed in terms of words and numbers. Such knowledge may be communicated in the form of data, specifications, manuals, documents, images, audio and video tapes, computer programs, patents and the like.

5. General Knowledge

General knowledge is knowledge shared by most individuals and can be transferred easily between individuals.

6. Specific Knowledge

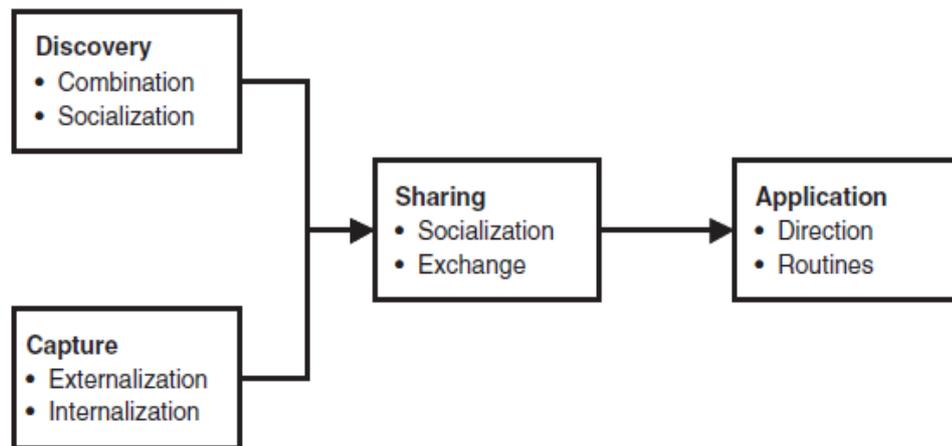
General knowledge is shared by some individuals and is expensive to transfer this knowledge.

Knowledge management is systemic approaches that help to arise and flow information and knowledge to the right people at the right time to create value. Is the definition of American Productivity and Quality Center. (Tobing, 2007).

Knowledge management is seen as an increasingly important discipline that encourages the creation of creation, sharing, and leveraging of corporate knowledge. (Becerra-Fernandez & Sabherwal, 2010:4).

Knowledge management is the practice of creating, capturing, transferring and accessing the right knowledge and information when needed to make good decisions and actions to support business strategy (Horwitch and Armacost in Huang and Lai, 2014).

According to Becerra-Fernandez & Sabherwal (2010), the knowledge management process consists of four types:



**Figure2.1**  
**Knowledge Management Processes**

1. Knowledge Discovery

Knowledge discovery is defined as the development of tacit or explicit new knowledge of data and information or from a combination of prior knowledge. Consists of :

- a. Combination: Explicit knowledge changes from one form to another.
- b. Socialization: The interaction of knowledge between individuals is usually through shared activities, for example by sharing ideas.

2. Knowledge Capture

Knowledge capture is a process of taking knowledge, either explicit knowledge or tacit knowledge residing within people, artifacts, or entities of the organization. Consists of :

- a. Externalization: Changes in tacit knowledge become explicit like word, concept, visual or figurative language.
- b. Internalization: The change of explicit knowledge becomes tacit like word, concept, visual or figurative language. An example is a consultant reading a book about innovation and capturing knowledge from the book.

3. Knowledge Sharing

Knowledge sharing is the process by which explicit or tacit knowledge is communicated to other individuals.

- a. Socialization: Sharing knowledge face-to-face.
- b. Exchange: Focuses on sharing explicit knowledge.

4. Knowledge Application

Knowledge application is the process of using the knowledge that some individuals have with other individuals without actually obtaining or learning the knowledge.

- a. Direction: Directs the actions of other individuals without transferring to the individual.
- b. Routines: Involves the use of embedded sinking in procedures, regulations and norms.

Knowledge management technologies and mechanisms rely on knowledge management infrastructure, reflecting the long-term foundation for knowledge management. In organizational discussion, knowledge management infrastructure consists of 5 major components: Organization Culture, Organization Structure, Information Technology Infrastructure, Common Knowledge, and Physical Environment. Becerra-Fernandez & Sabherwal (2010) grouped the components in 5 sections.

1. Organization Culture

Becerra-Fernandez & Sabherwal (2010) defines organization culture as a set of norms and values that influence and guide very individual of the organization in their behavior

2. Organization Structure

Becerra-Fernandez & Sabherwal (2010) defines that knowledge management is highly influenced by *organization structure* of the company.

3. Information Technology Infrastructure

Knowledge management is also supported by information technology infrastructure of a company. Although information technology and information systems are developed directly to achieve knowledge management, a company's overall information technology infrastructure is developed to support the needs of information systems, while facilitating knowledge management. (Becerra-Fernandez & Sabherwal, 2010).

4. Common Knowledge

Common knowledge (defined in Becerra-Fernandez & Sabherwal, 2010: 48) is another important component of Infrastructure that enables knowledge management. Referring to the company's experience in mastering the categories of knowledge and activities and also in managing the principles of communication and coordination support (Becerra-Fernandez & Sabherwal, 2010).

5. Physical Environment

Physical environment in an organization is often underestimated, but it is an important foundation in which knowledge management resides. The core aspects of the physical environment include the design of the buildings and their separators, location, size, and type of office; type, number and type of meeting room, etc. (Becerra-Fernandez & Sabherwal, 2010: 48).

This research is focused on readiness level. Readiness is a necessary prerequisite for a person or organization to succeed in the face of organizational change. (Shirazi et al., 2011). Knowledge management readiness is the ability of organizations, departments or working groups to successfully adopt, use and utilize knowledge management. Thus, it is important for companies that want to adopt knowledge management to analyze their business to ensure that their performance is productive and rewarding. But knowledge management strategies are not easy to implement an organization because they require significant structural and cultural change at all levels of the organization that inevitably lead to resistance to change. In other words, the readiness of knowledge management largely depends on the readiness for change. (Shirazi et al., 2011).

Organizational readiness for KM means readiness to identify, collect, organize, store, distribute, and share knowledge, and ability to adopt and use profits (Shahidi et al., 2015) Implementation of knowledge management covers a wide domain and different aspects. Therefore, without the appropriate infrastructure and organizational preparation, successful implementation of knowledge management is not possible. In addition, organizational readiness for knowledge management implementation includes the organization's ability to adopt and use its advantages. (Shahidi et al., 2015). Readiness Knowledge Management is divided into five levels according to Rao (2005), namely:

1. Not ready
2. Preliminary (exploring knowledge management)
3. Ready (accepted)
4. Receptive (advocating and measuring)
5. Optimal (institutionalized knowledge management)

### **3. METHODOLOGY**

#### **3.1 RESEARCH METHODOLOGY**

according to Sugiyono (2017: 147), that descriptive statistics are statistics used to analyze data by describing or delineating collected data as they are without intending to make general conclusions or generalizations. Type of research in this research is census research. The census study is a study that takes one population group as a whole and uses a structured questionnaire as a primary data collection tool to obtain specific information (Usman & Akbar, 2008). The analysis used in this research is descriptive analysis. Measurements were made using a questionnaire and each respondent was given five possible answers. The purpose of doing research using descriptive method is to gain an understanding of the underlying problems and factors.

#### **3.2. PURPOSE OF THE RESEARCH**

The purpose of this research is to know the level of readiness of Knowledge Management implementation in A Certification Institution. So the research method used in this research is descriptive method. In this study the data were collected using questionnaires distributed to respondents. The distribution of questionnaires aims to obtain descriptive data so that it can be used in testing the research hypothesis. The calculation scale used is the Likert scale, which consists of a scale of 1-5 with a strongly agree statement (5), agree (4), hesitate (3), disagree (2) and strongly disagree (1).

#### **3.3. DATA**

Type of research in this research is census research. In this research, the focus point is the factors that can measure the level of readiness of Knowledge Management implementation in in A Certification Institution. Variables, sub-variables and indicators are taken from Becerra-Fernandez & Sabherwal book (2010), an indicator adapted to the condition of the research object that is A Certification Institution. The measurement scale used in this research is ordinal scale (ordinal scale). Ordinal scale (ordinal scale) is a measurement scale that states something more than (things) to another. Measurement scale inside research instrument using Likert scale. The questionnaire in this study used Ordinal scale with Likert scale type with five points scale:

- a. Strongly Agree (SS) = 5
- b. Agree (S) = 4

- c. Hesitant (R) = 3
- d. Disagree (TS) = 2
- e. Strongly Disagree (STS) = 1

The population in this study is all employees of A Certification Institution in Bandung. A Certification Institution employees that consisted of 38 people in 2017. The sampling technique used in this method is by the census or saturated sampling technique, where all employees are used as respondents in the research that will fill out the questionnaires distributed by the researcher. In this research used saturated sampling method so that the research results can be close to the real value and can minimize the occurrence of irregularities. The sample used is all employees of the Certification Institution which amounted to 38 people.

### **3.4. VALIDITY AND RELIABILITY OF THE MEASUREMENT**

A valid and reliable measurement is a prerequisite of an good instrument. From this research, it was found that the instrument that was used was valid and reliable enough. The validity was using the Person Product moment, using *Software Statistical Program of Social Science (SPSS)*, using the r-table method. Based from this result, the item(s) that was used was considered valid enough to be used as a measurement. The result of validity analysis shows that the item(s) used was valid enough, as the Pearson's correlation was over 0.300. From the reliability analysis, the researcher was using the Alpha Cronbach, that results in every item was considered reliable enough, as the measure of Alpha Cronbach value was over 0,700, that has been the stated as a prerequisite.

### **3.5. NORMALITY TESTING**

Before conducting a comparative test, the researchers need to test the normality. In this study, the Normality test will be calculated using the Shapiro-Wilk Test. The Shapiro Wilk test is used because the measured data has a total of less than 50 data. Based on data processing, it was found that the calculation significance value for Shapiro Wilk normality calculation for the five variables, when compared with demographic data, showed a tendency of normal distribution in almost all sub variables, with values above 0.05. Thus, the comparative test data processing for gender will use parametric data calculation that is by using ANOVA method.

## **4. RESULT AND DISCUSSION**

Based on the above research framework, the hypothesis in this study are as follows:

1. The degree of readiness of the organization is in the category of at least ready for the application of Knowledge Management. Measurement of readiness in Knowledge Management in this study using Knowledge Management Infrastructure theory based on Becerra-Fernandez & Sabherwal's theory (2010). Knowledge Management Infrastructure consists of Organization Culture, Organization Structure, Information Technology Infrastructure, Common Knowledge and Physical Environment.

More specifically the research hypothesis is as follows:

- a. Organization Culture is in the category of at least ready for the application of Knowledge Management
- b. Organization Structure is in the category of at least ready for the implementation of Knowledge Management

- c. Information Technology Infrastructure is in the minimum ready category for the implementation of Knowledge Management
  - d. Common Knowledge is in the category of at least ready for the implementation of Knowledge Management
  - e. Physical Environment is in the category of at least ready for the implementation of Knowledge Management
2. There is a significant difference regarding the readiness of employees in the implementation of Knowledge Management Infrastructure based on employee profile. More specifically the research question is as follows:
- a. There is a significant difference regarding the readiness of employees in the implementation of Knowledge Management Infrastructure by sex
  - b. There is a significant difference in employee readiness in the implementation of Knowledge Management Infrastructure by age
  - c. There is a significant difference regarding the readiness of employees in the implementation of Knowledge Management Infrastructure working period
  - d. There is a significant difference regarding the readiness of employees in the implementation of Knowledge Management Infrastructure based on education level

**Table 4.1**  
**Implementation Levels of Knowledge Management**

<b>Organizational Culture Infrastructure</b>	<b>Actual Score</b>	<b>Ideal Score</b>	<b>Percentage</b>	<b>Readiness Level</b>
Organization Culture	1930	2470	78,14%	<i>receptive</i>
Organization Structure	1058	1520	70,01%	<i>receptive</i>
Information Technology Infrastructure	2045	2470	82,79%	<i>receptive</i>
Common Knowledge	468	760	61,58%	<i>ready</i>
Physical Environment	932	1330	70,08%	<i>receptive</i>

*Source: Hypotheses testing with IBM SPSS 20.0*

The actual score for the sub-variable organization culture is 1930 and the ideal score of 2470 with the percentage value obtained is 78.14%, including in the receptive category is in the interval range 68.00% - 84.00%. Thus, the level of readiness of the organization culture is within the level of receptive readiness.

The actual score for the sub-variable organization structure is 1058 and the ideal score of 1520 with the percentage value obtained is 70.01%, included in the receptive category which is in the interval range 68.00% - 84.00%. Thus, it can be concluded that the readiness of the organization structure in measuring the application of knowledge management including the receptive level.

The actual score for sub variable of information technology infrastructure equal to 2045 and ideal score equal to 2470 with percentage value obtained equal to 82,79%, included in category receptive is in interval range 68,00% - 84,00%. Thus, it can be concluded that the readiness of information technology infrastructure in measuring the application of knowledge management including receptive level.

The actual score for common knowledge sub variable equal to 468 and ideal score equal to 760 with percentage value obtained equal to 61,58%, including in ready category is in interval range 68,00% - 84,00%. So, it can be concluded that the readiness of Common Knowledge in measuring the application of knowledge management including ready level.

The actual score for the sub-variable physical infrastructure is 932 and the ideal score of 1330 with the percentage value obtained is 70.08%, included in the receptive category is in the interval range 68.00% - 84.00%. Thus, it can be concluded that the readiness of physical infrastructure in measuring the application of knowledge management including receptive level.

**Table 4.2**  
**Differential Tests between Gender on Dimensions of Knowledge Management**

Dimension	F-value	F-table	Fvalue	p-value	Result
Organization Culture	1.394	2.035	.172	.050	Null hypotheses supported
Organization Structure	1.529	2.030	.135	.050	Null hypotheses supported
Information Technology	1.544	2.032	.132	.050	Null hypotheses supported
Common Knowledge	1.640	2.030	.110	.050	Null hypotheses supported
Physical Infrastructure	3.066	2.030	.004	.050	Null hypotheses rejected

Source: Hypotheses testing with IBM SPSS 20.0

Based on the above values, researchers found that for Physical Infrastructure variables, obtained t count value of 3,066 is greater than the value of t table of 2.030 and the significance value of 0.004 is smaller than the requirement value of 0.050. Thus, Ho is rejected, which means that the difference between male and female concerning implementation of Knowledge management in physical infrastructure is significant

**Tabel 4.3**  
**Differential testing between Age groups in the dimensions of Knowledge Management**

Dimension	F-value	F-table	Fvalue	p-value	Result
Organization Culture	1.849	2.485	.131	.050	null hypotheses supported
Organization Structure	.440	2.485	.817	.050	null hypotheses supported
Information Technology	.566	2.485	.725	.050	null hypotheses supported
Common Knowledge	.957	2.485	.459	.050	null hypotheses supported
Physical Environment	1.177	2.485	.342	.050	null hypotheses supported

Source: Hypotheses testing with IBM SPSS 20.0

Based on the above values, researchers found that there is no discernible variation among the dimension of KM Infrastructure, Thus, the null hypotheses is accepted, which means that the age does not correspondents to higher degree of preparedness in any of the of KM Infrastructure readiness.

**Table 4.4**

**Differential testing between Education in the dimensions of Knowledge Management**

Dimension	F-value	F-table	Fvalue	p-value	Result
Organization Culture	2.423	2.485	0.047	.050	null hypotheses supported
Organization Structure	-2.928	2.485	0.025	.050	null hypotheses rejected
InformationTechnology	.513	2.485	.764	.050	null hypotheses supported
Common Knowledge	.569	2.485	.723	.050	null hypotheses supported
Physical Infrastructure	0.948	2.485	.464	.050	null hypotheses supported

*Source: Hypotheses testing with IBM SPSS 20.0*

Based on the above values, researchers found that for Organization Structure variable, obtained F-count value of -2.928 is greater than F-table value of 2.485 and 0.025 significance value smaller than the value of 0.050. Thus, Ho is rejected, which means there is a significant difference between the mean scores for the educational group studied in the Organization Structure readiness level. The F value has a negative value, whereas respondents with higher levels of education actually have lower levels of Organization Structure readiness.

**Table 4.5**

**Differential Test between the Length of Work on the Dimensions of Knowledge Management**

dimension	F-value	F-table	p-value	p-value	Result
Organization Culture	2.523	2.485	.049	.050	null hypotheses rejected
Organization Structure	-2.328	2.485	.054	.050	null hypotheses supported
Information Technology	.513	2.485	.764	.050	null hypotheses supported
Common Knowledge	.569	2.485	.723	.050	null hypotheses supported
Physical Infrastructure	0.948	2.485	.464	.050	null hypotheses supported

*Source: Hypotheses testing with IBM SPSS 20.0*

Based on the above values, researchers found that for Organization Culture variable, the value of F-counted 2,523 is smaller than the F-table value of 2,485 and the significance value of 0.049 is smaller than the requirement value of 0.050. Thus, Ho is rejected, which means there is a significant difference between the mean scores for the long working group studied in the Culture Organization dimension.

## 5. CONCLUSION AND RECCOMENDATION

Based on the data processing and discussion that has been listed previously, the researchers can draw the following conclusions:

1. Organizational readiness in applying Knowledge Management, specifically as follows:
  - a. Readiness Organization Culture in measuring the application of Knowledge Management including receptive category.
  - b. Organization Structure Readiness in measuring the application of Knowledge Management including receptive category.
  - c. Readiness Information Technology Infrastructure in measuring the application of Knowledge Management including receptive category.
  - d. Readiness of Common Knowledge in measuring the application of Knowledge Management including ready category
  - e. Readiness Physical Infrastructure in measuring the application of Knowledge Management including receptive category.
2. There is a significant difference regarding the readiness of employees in the implementation of Knowledge Management based on employee profile. More specifically is as follows:
  - a. There is a significant difference between gender in Physical Infrastructure, where male sex has readiness in the larger Physical Infrastructure dimension more than female respondents.
  - b. There were no significant differences between age groups in the level of readiness of Knowledge Management application. Thus the difference in age level does not give different levels of readiness to the respondents.
  - c. There is a significant difference between the level of education in the level of readiness of Knowledge Management implementation, where higher education level has higher degree of Organization Culture readiness, and the younger / lower education level has higher organizational preparedness level.
  - d. There is a significant difference between the length of work in the level of readiness of the implementation of Knowledge Management, where respondents who work longer will have higher levels of Organization Culture readiness.
3. Based on the crostabulation test, the researchers found that various demographic characteristics, ie gender, age, duration of work and education level can lead to different levels of readiness. In Organizational Culture the higher the level of education the level of employee readiness becomes higher on the respondents Telyber employees PCC. Meanwhile, for the Organizational Structure, an increase in the level of education can lead to the level of preparedness within the Organzational Structure becomes lower.

Based on the results of research and research process undertaken, researchers can provide suggestions as follows:

1. To other researchers who want to conduct similar research, researchers suggest to be able to select populations and samples with business activities and work activities vary, so the application of Knowledge Management in various businesses can be seen with more in-depth application.
2. Researchers suggest to the next researcher to be able to conduct research on companies with larger population / sample size, so that research results have better generalization capability.
3. Researchers suggest to the next researcher to be able to conduct research in the form of causal explanatory (test of influence / regression), so that application of KM Infrastructure can be

seen its influence to other variables, such as motivation, employee performance, or work effectiveness of company.

Based on the analysis conducted by researchers, the researchers can make suggestions as follows:

1. For the A Certification Institution company, the researcher found that the employee respondents have a level of readiness tend to be positive (Receptive) for the four dimensions of KM Infrastructure, namely Organizational Culture, Organizational Structure, IT Infrastructure and Physical Infrastructure. Therefore, the company can maintain the KM Infrastructure dimension, while continuing to practice the dimensions of Organizational Culture, Organizational Structure, IT Infrastructure and Physical Infrastructure that already exist in the company environment in order to achieve optimum level of readiness. To achieve optimal readiness, the company can actively undertake activities aimed at supporting the movement of information, improving the analytical ability of information, and storing and utilizing important information owned by the company to improve the quality of decision making. Companies regularly conduct activities to engage employees to exchange ideas, share information that can help implement work activities to increase creativity and problem-solving skills, and their implementation to help improve the efficiency and effectiveness of decision-making in organizations.
2. Researchers advise the company to improve the readiness of Physical Infrastructure for Women respondents, by providing physical facilities that can support better implementation of Knowledge Management, such as meeting room, air conditioning, and office conditions so as to be more conducive for women respondents.
3. Researchers found that demographic characteristics of education turned out to differentiate the degree of readiness in Organization Culture. In Organization Culture the respondents with higher levels of education will have a higher degree of readiness. Conversely, respondents with lower levels of education will have a lower degree of readiness tendency. Some of the things that can be done by A Certification Institution to improve the higher readiness of respondents with low education can be done by providing training and improving skills that can help employees with higher levels of education to be able to view the situation of the company, especially in terms of Organization Structure becomes more objective. Thus, employees not only criticize the situation, but also improve the interaction quality of different social strata within the organization.
4. Researchers found that long demographic characteristics of work turned out to differentiate the degree of readiness in Organization Culture. Respondents with longer tenure will have higher levels of readiness. Conversely, respondents with shorter working periods will have lower levels of readiness. Some of the things that can be done by A Certification Institution to improve the higher readiness of the respondents with the recent working period such as conducting orientation and on-the job training activities accompanied by the employer
5. Researchers advise companies to be able to encourage higher levels of readiness, especially for the Common Knowledge dimension (where there are more individuals who have preliminary readiness levels on the outcome of cross tabulation). To that end, A Certification Institution needs to hold sharing units and inter units regularly so that Common Knowledge can be owned by each employee in A Certification Institution . With the sharing of these units, it is expected to dilute the boundaries between units and sections, and train employees to be able to communicate effectively, which in turn can increase employee insecurity to apply Knowledge Management in work activities and daily decision making in Company environment. With the opportunity for employees to exchange useful information for

Knowledge Management implementation, so the dimension of Common Knowledge owned by employees can increase, marked by the information known by all employees.

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