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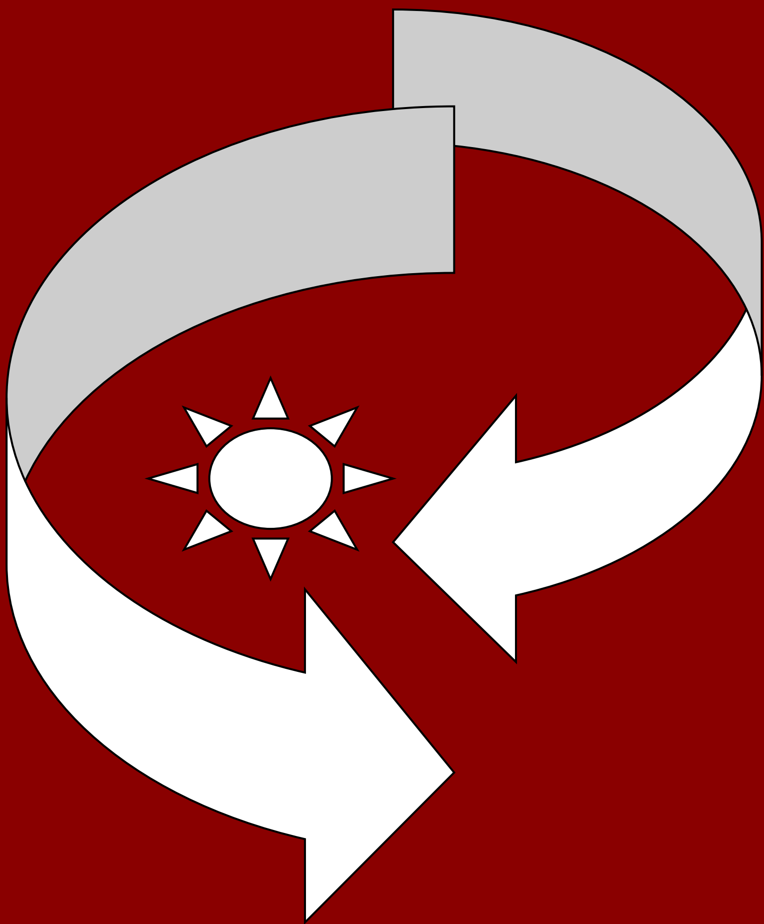

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# Jurnal
# Perspektif Pembiayaan dan Pembangunan Daerah

**(Journal of Perspectives of Financing and Regional Development)**

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## Editor’s Note

On its sixth year (Volume. 6, Number. 1), the Journal of Perspectives on Financing and Regional Development has two fundamental changes. First, this journal was originally published four times a year, and now has been published six times a year. This is based on consideration of the increasing interest of researchers / authors to publish their articles on this journal. Second, the journal has been nationally accredited with SINTA (Science and Technology Index) score of S4 which is valid from 9 July 2018 – 8 July 2023 based on the Decree of the Director General of Development and Research Enhancement, Ministry of Research, Technology & Higher Education of the Republic of Indonesia, Number 21/E/KTP/2018 concerning the Ranking of Scientific Journal.

In Vol. 6 number 3, 2018 is presented eight articles that come from Universitas Jambi (Indonesia), Universitas Siwijaya (Indonesia), Universitas Batanghari (Indonesia), Sembawa Research Center, Indonesian Rubber Research Institute (Indonesia), Bokkos Local Government Council, Plateau State (Nigeria) and Alex Ekwueme Federal University Ndufu- Alike (Nigeria)

Hopefully in the next issue can be presented articles with issues and from more diverse circles.

Happy joy reading

Editorial

# Nigeria's economic growth and The Sisyphus Odyssey: a theoretical retrospect

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**Abstract**

We posit in the paper that getting out of Dutch disease or resource curse in Nigeria will be a mirage if the more potent disease of institutional decay, ethnicity and religious bigotry are not settled. Those who have opportunity to advice the country has over the years wrongly fixated on the rise or fall of GDP and foreign investment flows as attention is now centered on extraction industry. We recognize institutional factors as major determinants of growth in Nigeria. From our analysis it is observed that Nigeria has indeed fallen into the trap of Dutch disease and resource curse phenomenon. We also observe that Nigeria is ethnic bias and highly religious in virtually everything. And every policy of the government (economic, social or political) is weighed on the scale of religion or ethnic benefit. It is equally sad to note the quantum of resources engaged to curtail ethnic clashes as well deaths and IDPs. As Nigeria is governed by ethnic sentiments and religious bigotry , it increases the tendency for corruption and its attendant negative economic consequences. These constitute serious impediments and make the task of growth Sisyphean.

**Keywords:** *Dutch disease, Economic growth, Resources curse, Sisyphus*

**JEL Classification:** 040, 043, 044

## INTRODUCTION

Nigeria, a multi-ethnic country of about 180 million people is in dire need to grow. Feeding the teaming population and giving hope of sustenance to this people largely depends on its growth trajectory and a clear understanding of the country's historical antecedents. We know economic growth may not necessarily account for development, yet the reality is that the material conditions of a people may not change for better in the absence of economic growth (Anochiwa and Maduka, 2014). The world is fast embracing institutional factors and gradually 'delinking' from the orthodox theories of (Solow, 1956; Chenery, Hollis and Strout, 1966; Harrod, 1939; Domar, 1946) in seeking for explanations for the backwardness of the less developed countries (LDCs). The idea that LDCs might suffer negative economic effects from over dependence on modernization theories has a long pedigree.

Even as attention is shifting towards the new growth models and its incorporation of human capital (Romer, 1993, Barro et al 1995), it is still not enough to account for the growth disparity. Models of growth must contextually, be situated. No growth model can operate in isolation of the environment. There is therefore a compelling need, perhaps due to its peculiar nature to go back to a political economy (historical science) approach in ascertaining determinants of growth in some LDCs, especially Nigeria (Jevons, 1879; Ordeshook, 1990).

That Nigeria has abundant oil resources is no longer debatable, as she ranks among the highest oil producing countries in Africa. Again, that oil is the mainstay of the economy of Nigeria is also a reality, a reality that gained prominence since Nigeria's independence in 1960. It is this prominence and dependence on oil over and above other sources of revenue and the necessary fall-outs, that made her gain a place in the 'Dutch disease syndrome'. Curbing the disease as it were to make Nigeria grow, has excavated similar 'diseases' like 'resource curse' and the deep rooted ethno-religious divide, such that it has become more complicated and intractable in solving. Regrettably, Nigeria is among the poorest economies in the world even when she is ranked the largest economy in Africa, which is a paradox of economic growth hypothesis (Anochiwa and Maduka, 2014). As the country forges ahead 57 years after independence, with up-swing and down-swing phenomenon in the economic front, never getting a footing to stand, one is being reminded of the 'Sisyphus Odyssey'.

While we appall the part of dishonor Nigeria has played in neglecting to learn lessons from mistakes of other mineral dependent countries, it will be equally revealing to look inwards to see other 'potent diseases' that has reinforced the crippling of the economy of Nigeria, than to constantly worship at the 'altar of orthodox theories' and latch on generalizations of Dutch disease. To this, the phenomenon 'Dutch disease', though pervasive and prevalent in Nigeria, may be too tangential when compared to other 'internal diseases' that have kept Nigeria low.

It is these crippling and contending factors that we refer to as 'the sons of Sisyphus at work'. In this paper, the sons of Sisyphus are not particularly Dutch disease but include, institutional factors, resource curse, ethnic and religious conflicts, which together act to hinder economic growth (Acemoglu et al 2005b). We shall be looking at the role these factors have played in frustrating the development stride of Nigeria. As a way of methodology, we shall explain the Sisyphus phenomenon, as we consider the role of Dutch disease to Nigeria's economic woes, resource curse and economic growth, economic growth and ethnicity, the role of religion to economic growth and finally economic growth in Nigeria beyond rhetoric's.

## NIGERIA'S ECONOMIC GROWTH AS SISYPHUS ODYSSEY

In Greek mythology Sisyphus was the son of a King named Aeolus of Thessaly and Enarete. He was the founder and first king of Ephyra (supposedly the original name of Corinth). King Sisyphus promoted business and commerce but was greedy and double-faced. He frustrated, killed and violate people's rights, even strangers. He took pleasure in the sufferings and killings because fear and docile polity. The gods finally threatened to make life so miserable for Sisyphus that he would wish he were dead. He was punished for his unashamed craftiness and deceitfulness by being forced to endlessly roll an immense huge boulder up a steep hill. The maddening nature of the punishment was reserved for King Sisyphus due to his belief that his cleverness surpassed that of Zeus himself. Zeus accordingly displayed his own cleverness by enchanting the boulder into rolling away from King Sisyphus before he reached the top, which ended up consigning Sisyphus to an eternity of useless and worthless efforts and unending frustration.

Looking at the dysfunctional growth pattern of Nigeria, where as one administration attempts to move the economy forward, then another administration comes in to destroy what its predecessor has built, it is easy to draw some valuable analogy. In Nigeria you will vividly see all the attributes of Sisyphus- hypocrisy, insincerity, morbid wickedness to its citizens, iron-fisted rule and craftiness etc. Regrettably, most Nigerian economists are weighed down by modernization theories that seem to dwell on orthodox growth models and on generalization of 'global economic down-turn' "that things will get better soon". But a good observer will notice that Nigeria's economy has been running a never-ending cyclical peak /trough pendulum for years, and this portrays the economy as suffering from the debacle of the Sisyphus Odyssey.

## NIGERIA AND 'DUTCH DISEASE PHENOMENON'

The term "Dutch Disease" was used to describe the experience of Netherlands after she discovered a massive natural gas field in Groningen in 1959. Incidentally and regrettably too, oil was discovered in large quantity in Nigeria at Oluobiri at the same period of time in history. The flow of oil and gas out of Dutch and the huge revenue that came out of it, made Netherlands to focus primarily on the new gas export. As a result, the Dutch currency grew at a quick rate which harmed the country's ability to export other products. In other words, it eventually led to a crowding out of other traditional export sectors in Netherlands; in case of Nigeria, it crowded out cocoa, Palm oil, and other agricultural produce and even the little industrial manufacturing, leading to a decline in their competitiveness. Many countries that are rich in minerals has fallen prey to this phenomenon - Angola, Nigeria, Sudan, Congo, Gabon, Venezuela, Iraq, Iran, Kuwait, Zambia, and Chad etc. Notwithstanding, some countries (such as Botswana and Norway) have managed to use their natural endowments in ways that have benefited their countries (O'Neil and Patrick (2004).

There may not be a definite pattern to 'Dutch disease' syndrome but a careful observer said it follows this process. Firstly, a nation discovers ample natural resource (oil, gas, gold, platinum etc). Secondly, in a centrifugal nature eeconomic activities begin to flow towards this high income industry. Thirdly, skilled workers from other sectors are attracted to it. Fourthly, other sectors like Agriculture and manufacturing begins to suffer under high cost of doing business. Fifthly, other sectors also begin to lose competitiveness and their export will decline. Sixth, there will be an increase in imports and rent seeking that will lead to crowding out, high exchange rate and inflation.

Various studies such as Sachs and Warner (2001), Weinthal and Luoug( 2006), show amazingly that Countries with great natural resources tend to grow slower than countries that have fewer resources. Based on their survey, GDP per capita in mineral-rich countries increased only by 1.7% while that of mineral-poor countries increased by 2.5-3.5% between 1960 to 1990; Gylfason (2001) also observed that from 1965 to 1998 gross national product per capita in Organization of Petroleum Exporting Countries (OPEC) decreased on average by 1.3 percent when per capita growth is an average of 2.2% in the rest of the developing world. That Nigeria, despite having vast oil riches has the same or perhaps less gross national product than it had forty years ago is a victim of this phenomenon. Countries rich in minerals like Iran, Venezuela, grew at 1 per cent per year from 1965-1998 and Iraq and Kuwait grew at 3 per cent. What this portrays is there is a negative effect of oil industry dominance of any economy.

In figure 1 below, we have the pictorial data of oil revenue and non-oil revenue as drawn from CBN bulletin 2015. Whereas within the period 1966-1970 non-oil revenue accounted for nearly 80% of total revenue, the oil revenue was a paltry 19%. Again, within the period 1970-1980 the oil revenue contribution has risen and overtaken the non-oil sector – 61% for oil and 39% for non-oil. Between 2001-2005 oil revenue was almost 80% while non-oil was about 20%. By 2015 the oil revenue began to drop, perhaps due to the oil glut and the international fall of oil prices. Figure 2, show vividly that from 1980 the percentage of Oil revenue to GDP was continuously increasing while the non-oil revenue (Agriculture) trailed behind. This is a simple illustration of crowding out effect. That is, the components of oil revenue are now far greater than agriculture, which was the main stay of the economy at Independence in 1960. The implication if any is that oil industry is capital intensive and creates minimal impact on employment. In other words, its income does not spread.

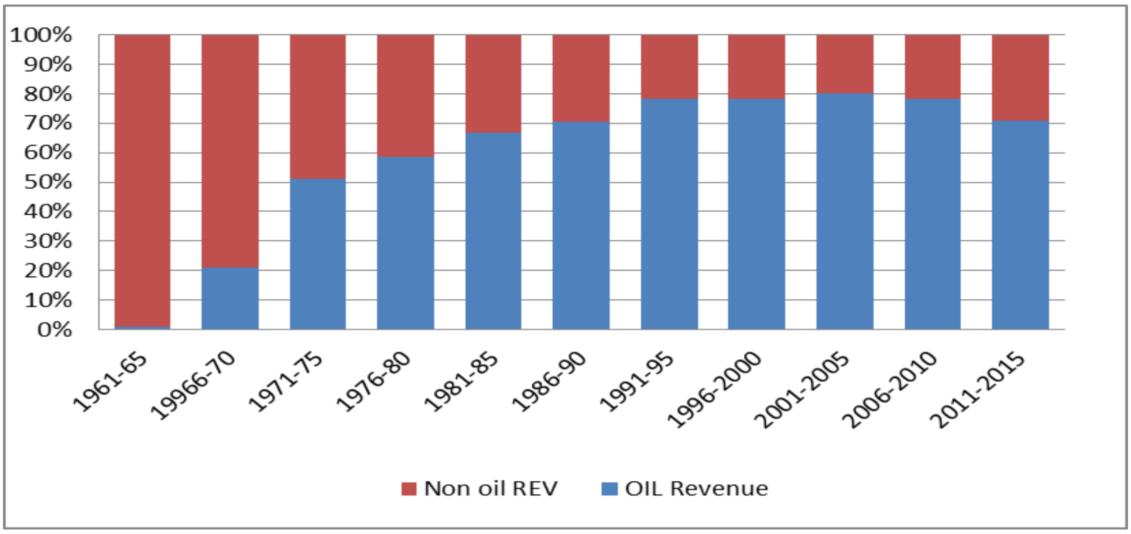


**Figure 1**. Oil and non-oil revenue as a percentage of GDP
***Source**: CBN 2015 Bulletin*

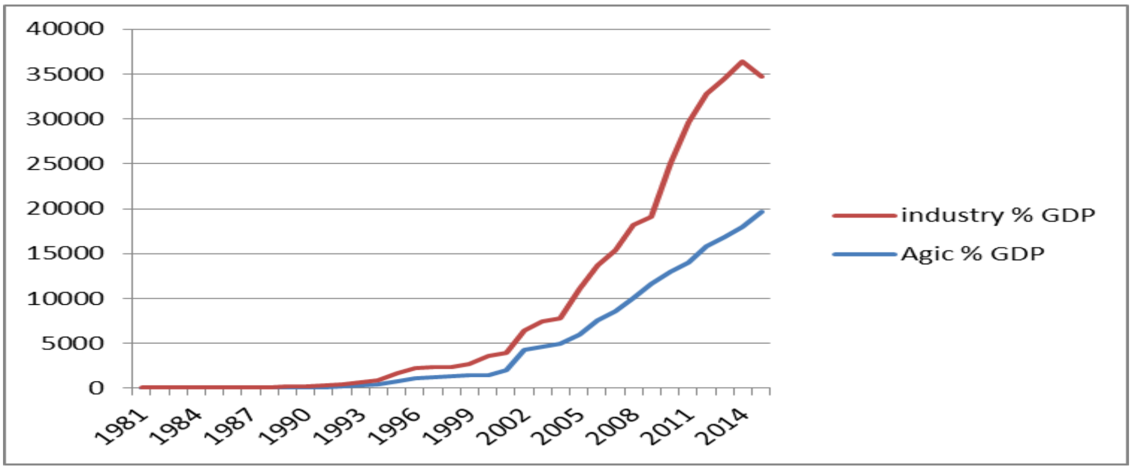


**Figure 2.** Oil and non-oil revenue as a percentage of GDP
***Source**: CBN 2015 Bulletin*

## NIGERIA'S ECONOMY AND 'RESOURCE CURSE' SYNDROME.

Resource curse theories began to emerge in the late 1980s. Though often people use it interchangeably with Dutch disease, but they are not the same, though the former may lead to the later. The term was used by Auty Richard (1995), to explain how countries rich in natural resources – oil, gas, diamond, and other minerals misuse their wealth and remain underdeveloped. Jeffery Sachs and Andrew Warner (2001) show the link between natural resources abundance and poor economic growth. They argued that between 1965 and 1998, the oil producing countries (OPEC) gross national product per capita growth decreased on average by 1.3% against 2.2% growth per capita in other non-oil producing developing world. There is increasing evidence that because the primary sector remains important in low income countries, the scale of the natural resource rents and the socio-economic linkages that they generate affect the aims of the government and the development trajectory of the economy in important ways (Sachs and Warner 1995a and Auty 2001). Resource rich countries have a tendency to depend on it to run the state at the detriment of other sources of income. Evidence abound that per capita income growth in developing countries has been inversely related to the share of natural resource rents.

Thus, their economic growth pattern is not rooted in production, but rather on fossil product. Resource curse has many negative effects. Nigeria has no doubt benefited from the extravagance and profligacy of resource curse hypothesis. Evidence abounds of the luxury and overindulgence of the elites of Nigeria, especially among the politicians. This luxury living is borne out of excess income and largess and the pervasive corruption found among politicians. The danger of resource curse is the creation of a decadent, dependent and largely consumption patterned, unproductive bourgeoisie. Resource curse increases inequality which even by bourgeoisie standards is dismal to growth. The unproductive nature of the ruling class has become a distortion in itself as people and energies are dissipated at non-essentials, as mobilization of the people for hard work is considered trivial. Regrettably, resource curse has remained with Nigeria since 1970 when Nigeria began to rely in the flow of abundant petrodollar. The situation was so bad that in the middle of 1970s, President Gowan said the only problem of Nigeria was how to spend its money. Resource curse has therefore deepened and reinforced the struggle to develop, and every effort to do so becomes futile. Those who have opportunity to advice the country has over the years wrongly fixated on the rise or fall of GDP and foreign investment flows as attention is now centered on extraction industry. The inability of economists to factor-in institutional factors in discussion of economic growth in Nigeria is to say the least regrettable. Thus, we consider this as acting out the institutional factor syndrome of the Sisyphus odyssey .

## NIGERIA'S ETHNIC DIVIDE AS AN OBSTACLE TO GROWTH.

Again, as a way of introduction, we can say that amalgamation and emergence of modern Nigeria in 1914, was an act of British colonial convenience. It occurred mainly because British colonizers desired a colonial territory stretching from the arid Sahel to the Atlantic Coast, or else the two regions are almost diametrically different or perhaps opposed to each other in virtually every conceivable human adventure. The Northern geopolitical blocs, is largely Muslim, and generally look to the Middle East and the wider Muslim world for solidarity and sociopolitical expression; while the South, an ethnically diverse geopolitical region, is largely Christian, predominantly influenced by Western culture and education and traditional African values(Ochonu, 2014). Again, each of the two regions contains ethnic and religious minorities who harbor grievances against dominant ethnic and religious majorities and see them as oppressors. These differences have been a source of political acrimony and mutual suspicions between the two regions since colonial times and have affected growth.

Soyinka (1997), have this to say ‘By virtue of its complex web of politically salient identities and history of chronic and seemingly intractable conflicts and instability, Nigeria can be rightly described as one of the most deeply divided states in Africa’. From its inception as a colonial state, Nigeria has faced a perennial crisis of territorial or state legitimacy, which has often challenged its efforts at national cohesion, democratization, stability and economic transformation. It is amazing that most economists in Nigeria do not seem to take this divide as a contending variable in the analysis of the Nigerian economy. The question we want to address is what has ethnic rivalry got to do with economic growth? The answer is Many. When there are profound ethnic divisions in the polity who are the gainers and who are the losers?

1. The first victim is the government itself. Everybody will treat the country like an orphan. Virtually nobody believes in the existence of Nigeria except when you are in power or at its corridor. So deep were these religious and ethnic antagonisms that one Northern Nigerian Muslim nationalist leader declared Nigeria ‘the mistake of 1914’ while a prominent Southern Nigerian Christian nationalist figure called Nigeria ‘a mere geographic expression’ (Ochuno, 2014).
2. Mismanagement of national resources (often called common wealth) and misrule by multi-ethnic and multi-religious coalitions of successive rulers since independence have impoverished and denied opportunities to the majority of Nigerians.
3. Through socialization and education, these historical legacies of mistrust and hatred has been genetically transmitted from one generation to another which has become a vivid part of current reality of Nigeria’s dysfunctional state.
4. It ends up creating a ‘victim mentality’ among the people (Richardson and Sen1996). Being a victim in the past, real or imagined, ethnic leaders seek control of state power not to promote industry, not to promote investment, not to promote economic growth or development but to ensure their ethnic group is never victimized again, to right past wrongs and to avenge past oppression. Thus, we hear some leaders come to power for ‘ethnic cleansing’.
5. It culminates and encourages political mobilization along ethnic lines. As ethnic differences begin to polarize a society, the formation of militant groups becomes more probable. Examples of such groups include IPOB, MASSOB, AFENERE, NIGER DELTA LIBRATION FORCE, BOKO HARAM, AVENGERS etc. When militant groups become strong, the task of managing the economy - let alone resolving - ethnic differences is greatly complicated.
6. Ordinarily, the conflict borne out of the dis-affections has greatly vitiated, dis-articulated, deformed, destroyed and distorted Nigeria’s economic growth. Government now build synergy to fight battles and not for growth. Human and materials resources are wasted to fight insurgencies. It will be parochial to ignore the

dismal effect of ethnicity to economic growth. And Nigeria has suffered this scenario since her independence because that was what led to the first civil war in 1967.

7. Running a non-inclusive government has also been at the center of corruption.This is bad because it is a good environment that will encourage investment and meaningful development, and the circle is bound to continue like the Sisyphus odyssey.

Therefore, it will be full heady and myopic to study the determinants of growth in Nigeria without recourse to the historical underpinning. This short coming to our mind immensely contributed to the nature and character of Nigeria's growth - higgledy-piggledy.

**RELIGION AND ECONOMIC GROWTH IN NIGERIA: A SYNTHESIS.**

Religion is a prominent aspect of culture that can be a substantial factor in one's quality of life. However, it is often overlooked as a potential determinant of economic growth. And failure to recognize it has created gaps economists are yet to fill. For example, of the six characteristics of modern economic growth that Kuznet, (1973) recognized, secularization was cited as a means of changing ideology in society over time and thus as an indirect cause of economic growth(Korman2015). The result is the restriction of the role of religion in modern economic growth theorizing.

Nigeria's national politics has been characterized by Christian anxieties about perceived Muslim's domination of the national political space, and possibly Islamize national institutions and impose Islamic Sharia law on non-Muslims. And this dates back to colonial times. Muslims on their part have shown dislike for Western ideologies (Boko Haram) and have sporadically sought refuge in obscure religious reforms. Yes, religious reforms that rather impoverish the people. The Emir of Kano is quoted recently to have said that the states that first introduced sharia laws are the poorest states in Nigeria today, and he is right as Zamfara is the poorest state in Nigeria. As a result, religious rhetoric accusing members of other religious communities are making proposals to the government for religious reform as a solution to society's ills. And the idea is beginning to gain currency among the elites and a section of the masses.

It will be recalled that the adoption of the Sharia criminal legal system by some of Northern Nigerian Muslim-majority states between 2000 and 2002 was the climax of this new politicization of religion. Once Sharia was introduced, it only added and reinforced the fear, the feud, the clashes, and the conflict between Christian and Muslim communities. The conflict has led to unprecedented damages of life and property and displacement of millions of people from their homes. Almost on a weekly basis hundreds of souls are lost to communal conflicts arisen from religious intolerance. In this charged environment where religion functions as the primary idiom of political identity, conflicts over resources, cattle, land, and political offices have often taken on a religious coloration, with Muslims pitted against Christians (Ochuno, 2014).The data below will open our eyes to the devastating and damaging effect of religious rascality.

With about 2,152,000 people, Nigeria is reported to have the largest population of persons displaced by conflict in Africa (IDMC, 2016). The internal Displaced Monitoring Center (IDMC) and the Norwegian Refugee Council (NRC) stated that the number of internally displaced persons in Nigeria is approximately a third of the IDPs in Africa and 10 percent of IDPs in the world. The IDPs in Nigeria is bigger than population of some countries in Africa: For example Nigeria's IDP alone is bigger than

Gabon, Gambia, Guinea, Botswana, Swaziland and Lesotho etc. This figure is based on an assessment conducted from November to December 2015 by the International Organization for Migration's (IOM) Displacement Tracking Matrix (DTM) team in 207 Local Government Areas (LGA) covering 13 States of Northern Nigeria: Abuja (13,481IDPs);Adamawa (136,010); Bauchi (70,078); Benue (85,393); Borno (1,434,149);Gombe (25,332); Kaduna (36,976); Kano (9,331); Nasarawa (37,553); Plateau (77,317); Taraba (50,227); Yobe (131,203); and Zamfara (44,929) (IDMC, 2016).

Figure 3 below shows the composition and classification of the total figure of internal displaced persons (IDPs), the assessment indicates that 12.6 per cent were displaced due to communal clashes, 2.4 per cent by natural disasters and 85 per cent as a result of insurgency attacks by Islamic extremist. This number of healthy people that are quarantined because of Boko Haram would have made their small input to the national income accounting. In other words they have been denied access to good life and also disenfranchised from contributing to the economy's growth.

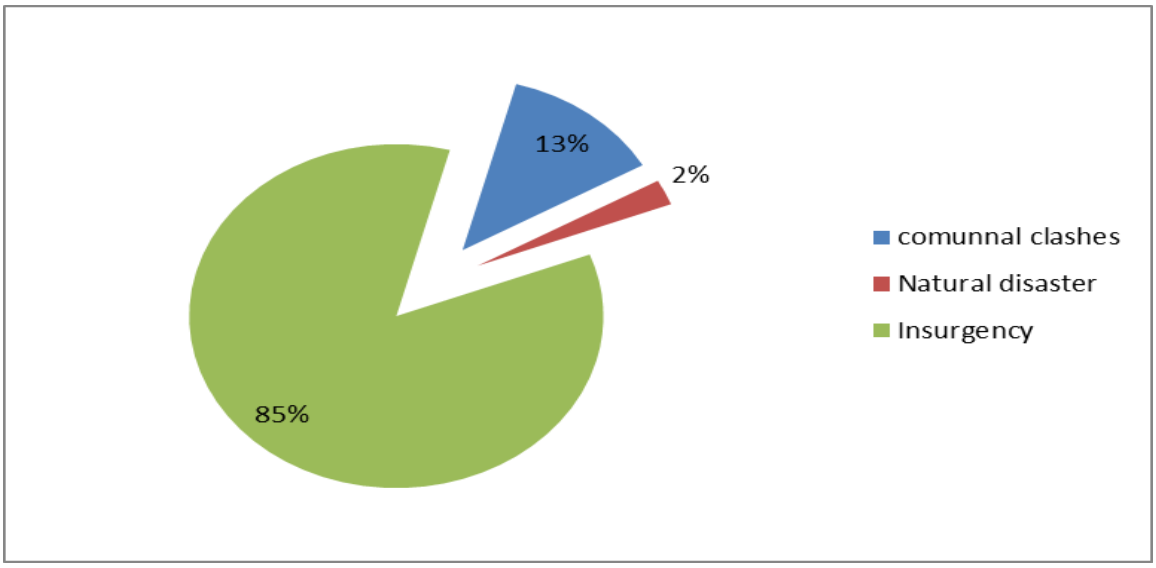


**Figure 3**: The composition of Nigeria's IDPs 'inmates'.

The following are some of the damaging effect of projecting religion over economic values.

1. Official graft and war against corruption will never be won because politicians and their surrogates hide under the cleavages of religion frustrate the economy..
2. Organized religion has influenced laws and regulations that affect economic incentives; especially in taxation, establishment of some industries, in banking etc. Nigeria does not have a stable education policy today because of differences in the educational attainment of the regions and religious groups. One group may be forward looking while the other will be 'slow going'.
3. The religious bigotry has limited cross breed of ideas and idea `and ideologies in the country. You will find excess lecturers in Universities South of the country and almost non-qualified lecturers on the other side of the divide.

4. The marking, the grading, and the promotion system in the tertiary institutions follows the same divide, they are not the same and the gaps are very wide.
5. The Boko Haram tragedy that has caused the loss of lives and displaced innumerable number of people is propelled by religion. And all these are harmful to economic growth.

**TAMING THE SONS OF SISYPHUS: BEYOND RHETORIC'S.**

Often we see over bloated recommendation that the way out of the Nigeria economic quagmire is diversification of economy. Over bloated because the call is not founded on realistic assumptions. Just as the dictum that agriculture (in the 21st century) is the only way out for Nigeria to grow. But because many Nigerian economists are carried away by econometric simulations, they give little or no attention to historical antecedents. They easily forget that the very essence of structural adjustment programme in 1986 was to diversify the economy. They are also ignorant or perhaps they have chosen to play the 'ostrich' that since 1986 till today, all regimes that have been in place in Nigeria, whether Military or civilian has risen to power on this platform and yet not one of these regimes has demonstrated readiness to initiate diversification. It is more like "no go area". There are fundamental reasons why diversification cannot work now in Nigeria. For example,

Only petroleum ( and Nigeria has enough of it) is consistently correlated with less democracy and more corruption, but both petroleum and other mineral resources have been statistically associated with civil wars (Collier et al. 2009, Besley & Persson 2011, Sorens 2011). Oil is more likely to spark conflict when it is found in regions that are poor relative to the national average (Østby et al. 2009) and populated by marginalized ethnic groups (Basedau & Richter 2014, Hunziker & Cederman 2012); when it is located in a region with a highly concentrated ethnic group (Morelli & Rohner 2014); and when ethnic minority entrepreneurs use it to promote collective resistance to the central government (Aspinall 2007). If you look at the case of Nigeria it is easy to discover all these indices vis-à-vis our Niger Delta region. The mismanagement of the petrodollar has created a veritable ground for disharmony in the polity. People have not been mobilized for production but consumption.

What should be clear enough is measurement of Nigeria's economic growth based on GDP, interest rate, FDI, capital formation and other macro-economic variables as determinants of growth may certainly amount to rhetorics. Realistically when we assess the causes and costs of prolonged ethnic conflict in Nigeria, one may begin to convince development planners that programs which significantly increase the risks of violence and ethnic conflict are not economically justifiable. We want to state categorically, that it is not economically justifiable to place one ethnic group alone to manage all economic ventures of a country of about 250 ethnic groups and a population of 180 million people. Nigeria is absolutely poor today not because it doesn't have the human or material resources, but there is no cohesion and mobilization of the right people for development. Our assessment should alert present and aspiring national leaders to a harsh reality: the short term benefits from ethnically divisive political strategies do not justify the long term social economic and political costs.

Therefore, a political economy approach, and dialectical process may be required to tame the sons of Sisyphus. As a matter of fact what Nigeria needs is a genuine, sincere dialogue between and among the component ethnic groups on how to establish harmonious co-existence which in turn will make the governance, and investment environment healthy for business. Patriotism cannot be won in isolation of trust and mutual relationship and belief in the polity.

## CONCLUSION.

Why has Nigeria's economic problem become highly intractable? The answer to this question is no longer far-fetched. What means nothing to many countries of the world mean something in Nigeria? Take for example when the CBN approved the opening of an interest free Islamic Bank, the Christians opposed it with the fear that they (Sanusi the CBN Governor then) wants to Islamize the country. The major opposing tribes are always involved as well as their religion. The issue becomes worse when a non-liberal Moslem or Christian is in the helm of affairs. This has played out over the years by given Nigeria an epileptic and dysfunctional growth pattern 56 years after independence and there is no end in sight as to the best way to fix it. The best economist from IMT or Harvard University will fail to move Nigeria forward if he does not take recourse to Nigeria's history. We say the ethnic divide and the religious bigotry has been entrenched in the psych of the people to the point that people are not mobilized for economic development but for war. Mutual suspicion has determined the way business of the economy is run; therefore meaningful development cannot take place here. So apart from the obvious Dutch disease syndrome, these other diseases(sons of Sisyphus) are perhaps more potent as a tool to destroy and destabilize the economy. The need to address them is urgent and it is now.

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# The effect firm characteristic on corporate social responsibility disclosure in the firms listed in Indonesia Sharia Stock Index

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**Abstract**

This study aims to analyze the effect of firm characteristics of corporate social responsibility disclosure. The population in this study is as many as 143 companies listed in the Indonesia Sharia Stock Index, whereas units of analysis in this study were 43 companies listed in the Indonesia Sharia Stock Index for the period 2012-2016. The type of data used is secondary data with multiple linear regression analysis. The result shows that firm size and profitability have significant influence, while leverage and firm growth have no significant effect on corporate social responsibility disclosure. This study supports signaling theory in which the information presented will be a good signal for external parties for sustainable development for the company.

***Keywords:*** *Corporate social responsibility, Firm size, Leverage, Profitability*

**JEL Classification**: G1, G32, M14

## INTRODUCTION

Social responsibility disclosure is the concept that a firm has a variety of responsibility to all the stakeholders in all factors of activities related to environment, social and economy. Therefore, social responsibility is closely related to the firm life sustainability.

The report about social responsibility which was voluntary based has become obligatory with the turning up of the law number 40 of 2007 concerning limited company. The law explains that annual report should provide much information, including the report of environment implementation and social responsibility (Maulida, 2014).

The effect of social impact on firms tends to be difference although the firms are in the same kind of business. Some factors which distinguish the effect from firm social effect are firm characteristic, such as size (size of firm), liquidity, profitability, leverage, firm age, firm profit, board of director structure and others.

In Islamic point of view, CSR can be defined as humanity activity or charity activity performed by a moslem to help the needy by means of zakat, infaq, and shodaqoh. Prior to CSR, zakat, infaq, and shodaqoh (ZIS) have come first because they are regulated in Alquran in At-Taubah at verses 60:103.

Indonesian Sharia Stock Index or better. Known as ISSI are all the sharia stocks listed in the Islamic effect and BEI list. On may the twelfth, 2011 ISSI issued the calculation method by using the average balanced form the market capitalization.

The firm size can classify how progressive the frame is, by indicating the amount of sales, total asset, human resource, stock values and so on, Andriyani (2014). Asset value usually have more stable value than sale and market capitalization by considering asset values as business size. Firm size of a firm indicates the amount of experience, rate of risk and the ability to manage investment to improve the firm prosperity.

Profitability in the firm effect to gain profit which will maintain both long period and shot period sustainability of the firm is profitability is high, social disclosure should also be higher (Hackston & Milne, 1996). Profitability is the variable which explains the variation in taking the firm social responsibility (Chauhan, 2014). Chauhan Research has found that profitability has positive effect on social responsibility disclosure.

Leverage is ratio of debt against capital, which illustrates a number of firm's assets imposed on by the external parties than its own capital. If the firm's debt is big, the risk to hold will get higher. The high rate of leverage in firm usually decreases the activity of social responsibility disclosure. According to Belkaouii in Marfuah (2011), the decision in providing social report results in the firm burden, which causes the decrease of the firm's income in Marfuah's research, leverage has significant negative effect on social responsibility disclosure.

Firm growth becomes the investors' consideration to invest. The firm which has distinct progress in striving to give much contribution in the future, hoping for best profit in so that the investors are interested in putting investment. The high growth will put the firm in the sport light so the firm is expected to perform more social responsibility (Sari,2012).

Based on the phenomena and background explained before, this research explain the effect firm characteristics on corporate social responsibility disclosure in the firms listed in Indonesia Sharia Stock Index.

## LITERATURE REVIEW

### Signaling theory

Signal is the step taken by the firm to give direction to investors about the firm's future goal. The signal in the information about the activities already performed by the management to realize the owner's expectation. The information from the firm will bring effect to the act of investing by the external parties. This information is important because the firm shows notes and illustration which contains about the firm's part, recent and future condition (Brigham, 2001).

Signaling theory mentions that the firm has the stimulus in sharing information about financial report for the external parties. This matters because there is asymmetrical information between the firm and external parties because the firm knows more about the information and future prospect than the external parties. The lack of information makes the external parties more alert by offering not high price to the firm. The firm value can be increased by restricting the asymmetrical information, including the sharing of signal with the external parties (Arifin, 2005).

### Firm size

It is the value that shows the firm value where if the scale is big, there will be more information revealed than small scale firm. It is clear that the big scale firm is regarded by the public as the firm has important role and is able to perform social responsibility.

Total assets are used as the measuring tool from the firm size. In Elzahar and Hussainey's research (2012), the firm size in using the amount of assets is identified to give significant effect on the interim financial report risk information of the firm in England. A big firm will get the spotlight from the public so that the firm will perform disclosure as the proof of its social responsibility (Purwanto, 2011).

**Profitability**

It is the effort of the firm achievement in one certain period. The profitability calculation guideline is the financial report in the forms of balance sheet and profit loss. From this report can be concluded analysis calculation can be reached to determine various aspect of firm activities (Oktania, 2013).

Profitability analysis is untended to review the profit achievement level, such as its relationship with the assets, sales, or own capital hence, profitability result can be basic accuracy of target for the firm performance that can be seen from the profit produced from sales or investment.

**Leverage**

Leverage shows the debt composition of debt against the stock holder's capital, which indicates how big the relationship of the firm debt is in the firm operational activity. If leverage is high, it will cause the high risk of finance which becomes the debt holders' concerns, so that the firm attempts to in form bigger profit and report the social information disclosure as well as possible (Anugrah, 2010).

**Firm growth**

Firm growth be comes the thing that investors can imagine in putting investment because it can illustrate financial performance progress which is measured with the sale level the fir which is predicted to be able to develop rapidly is expected to make high profit in the future, then attract investors to invest. The firm which is based on social responsibility because it becomes the sport light (Purwanto, 2011).

**Corporate social responsibility**

According to CSR forum (Wibisono, 2007 in Setyo 2012), Social Responsibility is defined as the activity performed transparently and based on moral values, which hold firmly to the mutual respect with the society and environment. The term CSR is closely related to the society and big scale firm. In essence, CSR is the form attention from the firm to the society and its surrounding environment.

Corporate social responsibility, according to World Business Council for Sustainable Development (WBCSD) is the advanced approval from the firm to contribute properly to the economic business development unit in the around environment and to improve the employees and their family's prosperity. While, according to ISO 26000, the characteristic of social responsibility is the firm effort to make decision with consideration to environment social aspect and to be responsible for the impact of society activity and environment.

**Corporate social responsibility disclosure**

Social responsibility disclosure is the information intended for the stakeholder in order that the firm can give information about social responsibility which has been performed at certain period. The regulation about social responsibility activity is ruled in law number 40 of 2007 about the limited company, provision referred to regulation in section 74 (1) says : "The company which performs its business activity getting in touch with human resource is obliged to run social and environmental responsibility".

In Financial Accounting Standards No. 1 paragraph 9 explains about disclosure to land environment impact, which says: "The firm has to make additional report dealing with living environment or added value, especially for the firm which is closely related to mean resource such as living environment, employees and other stake holders who we it".

CSR disclosure is defined as the communication of the social and environmental impacts resulting from an organization's economic actions on particular interest groups and on society at large (Gray *et al.*, 1996). It is necessary for executives to make efforts to facilitate the proper counselling and resource provision functions of the independent directorate system by disseminating information in a timely and appropriate manner to all concerned. Besides that, the establishment of relationship with external stakeholders enables the independent board members to access information sources and capture hands-on information. Knowledge sharing between the external and internal board members can be valuable to the board, and thus, enhances the decision-making process (Johansen and Pettersson, 2013).

**Related previous study**

The research that reviewed about firm size, leverage, profitability, types of industry, firm growth, and corporate social responsibility started from the research by Anugrah (2010) His research result started that firm size variable has positive effect on social responsibility disclosure. This is the same with the researches done by Purwanto (2011), Sari (2012), Setiawan (2013), Marina (2013), and Maulida (2014). However, Rindawati (2015) had another opinion that firm size does not have effect on social responsibility disclosure.

Besides that Widiyawati (2012) and Kamil (2012) found that profitability has effect on social responsibility has effect on social responsibility disclosure. This is the same with Purban (2015) and Aini (2015). Where is Handayati (2011) and Wakid (2013) had contrasting opinion that profitability does not have effect on social responsibility disclosure.

Then, the influence of leverage on social responsibility disclosure shows positive result, which was studied by Wakid (2013), Purban (2015), and Aini (2015). On the contrary, Utami (2012) and Sriayu (2013) stated that leverage does not have effect on social responsibility disclosure. Related to firm growth, Aini (2015) stated that firm growth has effect on social responsibility disclosure.

**Framework**

The framework in this research can be seen in the following chart

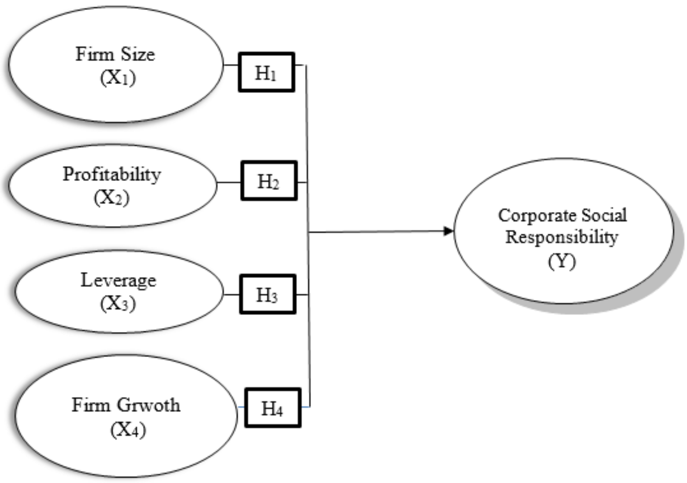


**Figure 1**. Framework

From the picture of the above framework, it can be seen that the first hypothesis shows that the Company Size directly influences Social Responsibility Disclosure and has a positive influence. Then the second hypothesis shows that Profitability has a direct effect on Social Responsibility Disclosure and has a positive influence. The third hypothesis shows that Leverage has a direct effect on Social Responsibility Disclosure and has a negative influence. The fourth hypothesis shows that Company Growth has a direct effect on Social Responsibility Disclosure and has a positive influence.

### Hypothesis

The hypothesis of this research is:

a. Firm size has positive effect on social responsibility disclosure.
b. Profitability has positive effect on social responsibility disclosure.
c. Leverage has negative effect on social responsibility disclosure.
d. Firm growth has positive effect on social responsibility disclosure.

## METHODS

### The scope of the research

This research is intended to explain about the subject concerning the effect of firm size, profitability, leverage, firm growth on social responsibility disclosure. To get the illustration about the subject, this research refers to empirical and theoretical studies in describing the relationship among the research variable. The intended object is the annual report and the financial report of the firms listed in Indonesian Islamic Stock Index in the official website of Indonesian Stock Exchange for the period of 2012-2016.

### Kind and sources of data

The kind of data in this research is the secondary data, including the annual report of the firm listed in ISS, in the form of historical report about the firm's financial condition and performance. The annual report was obtained from Indonesian Stock Exchange Website and the firm's original websites. Besides that, the other secondary data were obtained from related previous study, articles, text books and other references related to the research.

### Population and sample

This research used the population in the firms listed in Indonesian Islamic Stock Index (ISSI) from 2012 to 2016 by means of purposive sampling and in accordance with the determined criteria. 43 firm are treated as the samples, out of the total 132 population listed in BEI and the annual report has been issued for 5 years in succession, so the total of observation in this research is 215.

**Table 1.** Company sample

| No. | Firm (Tbk) | Code | No. | Firm (Tbk) | Code |
|---|---|---|---|---|---|
| 1 | Astra Agro Lestari | AALI | 23 | XL Asiata | EXCL |
| 2 | Mahaka Media | ABBA | 24 | Indofarma (Persero) | INAF |
| 3 | Ace Hardware Indonesia | ACES | 25 | Indofood Sukses Makmur | INDF |
| 4 | Aneka Gas Industri | AGII | 26 | Indosat | ISAT |
| 5 | Tiga Pilar Sejahtera Food | AISA | 27 | Kimia Farma (Persero) | KAEF |
| 6 | Alakasa Industrindo | ALKA | 28 | Kabelindo Murni | KBLM |
| 7 | Aneka Tambang (Persero) | ANTM | 29 | Kalbe Farma | KLBF |
| 8 | Asiaplast Industries | APLI | 30 | Matahari Department Store | LPPF |
| 9 | Arwana Citramulia | ARNA | 31 | Mayora Indah | MYOR |
| 10 | Arthavest | ARTA | 32 | Ramayana Lestari Sentosa | RALS |
| 11 | Astra International | ASII | 33 | Nippon Indosari Corpindo | ROTI |
| 12 | Alam Sutera Realty | ASRI | 34 | Sindomulyo Selaras | SDMU |
| 13 | Sepatu Bata | BATA | 35 | Sekar Bumi | SKBM |
| 14 | Bhuwanatala Indah Permai | BIPP | 36 | Holcim Indonesia | SMCB |
| 15 | BISI International | BISI | 37 | Semen Indonesia (Persero) | SMGR |
| 16 | Sentul City | BKSL | 38 | Timah (Persero) | TINS |
| 17 | Berlina | BRNA | 39 | Trisula International | TRIS |
| 18 | Budi Starch & Sweetener | BUDI | 40 | Ultra Jaya Milk Industry & Trading Company | ULTJ |
| 19 | Bukit Uluwatu Villa | BUVA | 41 | United Tractors | UNTR |
| 20 | Citra Marga Nusaphala Persada | CMNP | 42 | Wijaya Karya (Persero) | WIKA |
| 21 | Intiland Development | DILD | 43 | Waskita Karya (Persero) | WSKT |
| 22 | Elnusa | ELSA | | | |

*Source: www.idx.co.id*

### Data analysis

Descriptive Statistics is applied to describe the main variable shown by the firm of graph in annual report for the period from 2012 to 2016. Descriptive statistics is also applied to describe the level of the firm effect to deliver information from 2012 to 2016. This analysis is applied to provide the illustration about the researched variable.

This research uses the model that will be applied to calculate panel data regression analysis and data processing uses Eview 9 program. This model is intended to prove the effect of firm size, profitability, leverage and firm growth on social responsibility disclosure by means of panel data regression analysis with the following equation :

$$CSRDI_{it} = a + \beta 1Size_{it} + \beta 2Prof_{it} + \beta 3Lev_{it} + \beta 4Growth_{it} + \mathcal{E}$$

*Information:*
CSRDI : Corporate social responsibility disclosure index
Size : Firm size
Prof : Profitability
Lev : Leverage
Growth: Firm growth
a : Constanta
β1-β4 : Regresion Coeficient
Ɛ : Error
i : to firm (i)
t : in year (t)

## RESULT AND DISCUSSION

### Firm size

It is measured by using the number of firm's assets, obtained from financial report at the end of period or in annual report. From the firm size variable measurement result it can be seen from the recapitulation table of firm size from the lowest to the highest for the period of 2012-2016, the date are as follows :

**Table 2.** Firm size variable recapitulation data

| Year | Description | Code | Value |
|---|---|---|---|
| 2012 | Maximum | INAF | 34.71 |
| | Minimum | ALKA | 25.72 |
| 2013 | Maximum | INAF | 34.80 |
| | Minimum | ALKA | 26.21 |
| 2014 | Maximum | INAF | 34.76 |
| | Minimum | ALKA | 26.22 |
| 2015 | Maximum | INAF | 34.97 |
| | Minimum | ALKA | 25.70 |
| 2016 | Maximum | INAF | 34.86 |
| | Minimum | ALKA | 25.64 |

*Source: Result of data processing*

From the firm size recapitulation table it can be seen that in the period of 2012-2016 the highest value are obtained by PT. Indofarma (Persero), engaged in consumer goods industry where as the lowest in the period of 2012-2016 is PT. Alaka Industrindo, engaged in basic material and chemistry industry.

### Profitability

The aim of profitability analysis is to measure the firm effect to gain profit, from either sales, assets or own capital. Profitability is measured by means of the ration of return in asset (ROA) in which the result is obtained from the division between net profit and total assets.

From profitability variable measurement result it can be seen from the recapitulation table profitability from the lowest to the highest in the period of 2012-2016 it as follows :

**Table 3.** Recapitulation data of profitability variable

| Year | Description | Code | Value |
|---|---|---|---|
| 2012 | Maximum | LPFF | 0.26 |
| | Minimum | BIPP | -0.08 |
| 2013 | Maximum | APLI | 6.20 |
| | Minimum | INAF | -0.04 |
| 2014 | Maximum | ISAT | 0.04 |
| | Minimum | ANTM | -0.04 |
| 2015 | Maximum | LPPF | 0.46 |
| | Minimum | ABBA | -0.11 |
| 2016 | Maximum | LPPF | 0.42 |
| | Minimum | INAF | -0.01 |
| | | SMCB | |

*Source: Result of data processing*

From Table 3 it can be seen that the highest profitability value in 2012 was PT. Matahari Departement Store which is the firm engaged in trading, service and investment sectors with the profitability ratio value of 0.26, where as the lowest firm was in property and real estate sectors, namely PT. Bhuwanatala Indah Permai with profitability ratio value of -0.08. in 2013 it was PT. Asiaplast Industries which got the highest value and is the firm engaged in manufacturing sector with the profitability ratio value 6.20, where as the lowest one was PT. Indofarma (Persero) with the value of -0.04.

In 2014 the highest value was reached by PT. Indosat which is the firm engaged in infrastructure, utility and transportation sectors with the profitability ratio value of 0.04, where as the lowest was the mining firm, namely PT. Aneka Tambang (Persero) with the value of -0.04. In 2015 it was PT. Matahari Departement Store with the profitability ratio value of 0.46, mean while the lowest was the firm engaged in trading, service and investment sectors namely PT. Mahaka Media with the value of -0.11. in 2016 the highest score was obtained by PT. Matahari Department Store with the profitability ratio value of 0.42, on the contrary, the lowest one PT. Indofarma (Persero) and basic material and chemical industry firm, namely Holcim Indonesia with the value of -.0.01.

## Leverage

Leverage shows the firm financial impact which describes the firm capital condition and understands the risk of being unable to collect debt. Then, it is measured by means of Debt to Equity Ratio (DER) which is obtained from the division result between the total liability and the total equity. From leverage variable measurement result, it can be seen from the recapitulation table, the leverage from the lowest to the highest in the period of 2012-2016.

From table 4 it can be seen that the highest leverage value in 2012 was PT. Waskita Karya (Persero) which is the firm engaged in property and real estate sectors with ratio value of 3.17. where as the lowest leverage value was PT. Matahari Department Store with ratio value of -2.52. in 2013 the highest leverage value was the basic material and chemical firm namely PT. Alakasa Industrindo with the value of 3.05, mean while the lowest was PT. Matahari Department Store with ratio value of -4.76.

**Table 4.** Recapitulation data of leverage variable

| Year | Description | Code | Value |
|---|---|---|---|
| 2012 | Maximum | WSKT | 3.17 |
| | Minimum | LPPF | -2.52 |
| 2013 | Maximum | ALKA | 3.05 |
| | Minimum | LPPF | -4.76 |
| 2014 | Maximum | LPPF | 18.19 |
| | Minimum | BISI | 0.17 |
| 2015 | Maximum | EXCL | 3.18 |
| | Minimum | INAF | 0.16 |
| 2016 | Maximum | WSKT | 2.66 |
| | Minimum | BISI | 0.17 |

Source: Result of data processing

In 2014, the highest leverage value was PT. Matahari Department Store with value of 18.19, where as the lowest was PT. BISI International which is the firm engagement in farming sector with the ratio value of 0.17. In 2015 the highest leverage value was PT. XL Asiata, which is the firm engagement in infrastructure, utility and transportation with the value of 3.18, mean while the lowest was PT. Indofarma (Persero) with the ratio value of 0.16.

In 2016 the highest leverage value was PT. Waskita Karya (Persero) with the value of 2.66, where as the lowest was PT. BISI International with the ratio value of 0.17.

## Firm growth

Firm Growth shows the firm's ability to complete with the other in the similar industry sector, and this ratio also measures firm growth from year to year in two indicators, namely : asset growth and sale growth. Firm growth is obtained with the formula where the sale is substracted and divided with the sale from the previous year.
From the firm growth variable measurement, it can be seen from the recapitulation table that firm growth from the lowest to the highest in the period of 2012-2016 is as follows :

**Table 5.** The recapitulation data of firm growth variable

| Year | Description | Code | Value |
|---|---|---|---|
| 2012 | Maximum | ARTA | 1.56 |
| | Minimum | BISI | -0.13 |
| 2013 | Maximum | BIPP | 0.97 |
| | Minimum | WIKA | -0.81 |
| 2014 | Maximum | WIKA | 5.61 |
| | Minimum | AGII | 0.37 |
| 2015 | Maximum | AGII | 0.56 |
| | Minimum | INDF | -0.50 |
| 2016 | Maximum | BKSL | 1.16 |
| | Minimum | SDMU | -0.17 |

*Source: Result of data processing*

Table 5 shows that the highest firm growth value in 2012 was PT. Artha Vest which is the firm engaged in financial sector with the ratio value of 1.56, where as the lowest firm growth value was PT. BISI International with the ratio vaue of -0.13. In 2013 the highest firm growth value was real estate firm, namely PT. Bhuwanatala Inda Permai eith the value of 0.97. Where as the lowest was PT. Wijaya Karya (Persero) with ratio value of -0.81.

In 2014 the highest firm growth value was PT. Wijaya Karya (Persero) with the value of 5.61 mean while the lowest was the mining firm, namely PT. Aneka Gas Industri with the ratio value of 0.37. In 2015 the highest firm growth value was PT. Aneka Gas Industri with the of 0.56, where as the lowest was the firm engaged in consumer's goods industry, namely PT. Indofood Sukses Makmur with the ratio value of -0.50. In 2016 the highest firm growth value was PT. Sentul City which is the firm engaged in property and real estate sectors with the value of 1.16, while the lowest was the firm engaged in infrastructure, utility and transportation sectors, namely: PT. Sindomulyo Selaras with the ratio value of 0.17.

**Social responsibility disclosure**

All the firm activity which give direct effect to the environmental pollution will be the surrounding people's main concerns. This makes the firm require to apply CSR program to keep the environment Corporate Social Responsibility Disclosure Index (CSRDI) based on ISO 26000 Guidance Standard on Social Responsibility is the measuring tool used to measure the firm social responsibility disclosure. From Corporate Social Responsibility (CSR) variable measurement result, it can be seen from the recapitulation table that the corporate social responsibility variable from the lowest to the highest in the period of 2012-2016 are as follows :

**Table 6.** The recapitulation data of corporate social responsibility (CSR)

| Year | Description | Code | Value |
|---|---|---|---|
| 2012 | Maximum | ASII | 0.94 |
| | Minimum | ABBA | 0.52 |
| | | APLI | 0.52 |
| | | ASRI | 0.52 |
| 2013 | Maximum | ASII | 0.97 |
| | Minimum | ABBA | 0.52 |
| 2014 | Maximum | AISA | 0.97 |
| | | ASII | 0.97 |
| | | LPPF | 0.97 |
| | Minimum | ABBA | 0.52 |
| 2015 | Maximum | AISA | 0.97 |
| | | ASII | 0.97 |
| | | LPPF | 0.97 |
| | Minimum | ABBA | 0.52 |
| 2016 | Maximum | AISA | 0.97 |
| | | ASII | 0.97 |
| | | LPPF | 0.97 |
| | Minimum | ABBA | 0.52 |

*Source: Result of data processing*

From Table 6 it can be seen that the highest CSR disclosure level in 2012 was PT. Astra International, which is the firm engaged in manufacturing sector with the value of 0.94, where as the lowest was the firm engaged in trading, service and investment, namely : PT. Mahaka Media, PT. Asia Plast Industries, and PT. Alam Sutera Realty are property and real estate with the value of 0.52. Then, in 2013 the highest CSR disclosure was reached again by PT. Astra International, with value of 0.97, where as lowest was PT. Mahaka Media with the value 0.57.

In 2014 the highest CSR disclosure levelwas PT. Tiga Pilar Sejahtera Food, which is the firm engaged in consumer's goods industry followed by PT. Astra International and PT. Matahari Department Store with the value of 0.97 and also in 2015 and 2016 where as the lowest CSR disclosure level was PT. Mahaka Media with the value of 0.52 till the years 2015 and 2016.

## Estimated result

From the results that have been done by using the Chow Test and Hausman Test, obtained the effect method in this study, the method chosen is the Fixed Effect Method. The results of the Fixed Effect Method can be seen in the Table 7.

**Table 7.** Fixed effect method result

| Variable | Coefficient | Standard Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | -2.108059 | 0.383090 | -5.502782 | 0.0000 |
| UP? | 0.098083 | 0.013003 | 7.543292 | 0.0000 |
| PROF? | 0.118528 | 0.017311 | 6.847065 | 0.0000 |
| L? | 0.000165 | 0.000319 | 0.515066 | 0.6072 |
| GRO? | -0.011956 | 0.008771 | -1.363069 | 0.1747 |
| Fixed Effects (Cross) | | | | |
| AALI--C | -0.198155 | | | |
| ABBA--C | -0.000391 | | | |
| ACES--C | -0.141473 | | | |
| AGII--C | 0.036557 | | | |
| AISA--C | 0.058463 | | | |
| ALKA--C | 0.234502 | | | |
| ANTM--C | -0.105760 | | | |
| APLI--C | -0.414292 | | | |
| ARNA--C | 0.155412 | | | |
| ARTA--C | 0.254941 | | | |
| ASII--C | -0.180856 | | | |
| ASRI--C | -0.313818 | | | |
| BATA--C | 0.231453 | | | |
| BIPP--C | 0.181710 | | | |
| BISI--C | -0.078362 | | | |
| BKSL--C | -0.161849 | | | |
| BRNA--C | 0.150596 | | | |
| BUDI--C | 0.023250 | | | |
| BUVA--C | 0.031402 | | | |
| CMNP--C | -0.081527 | | | |
| DILD--C | -0.062759 | | | |
| ELSA--C | 0.083886 | | | |
| EXCL--C | -0.058815 | | | |
| INAF--C | -0.486133 | | | |
| INDF--C | -0.085478 | | | |
| ISAT--C | -0.276354 | | | |
| KAEF--C | 0.082650 | | | |
| KBLM--C | 0.255313 | | | |
| KLBF--C | -0.028402 | | | |
| LPPF--C | 0.170399 | | | |
| MYOR--C | -0.056981 | | | |
| RALS--C | 0.013719 | | | |
| ROTI--C | 0.132174 | | | |
| SDMU--C | 0.337365 | | | |
| SKBM--C | 0.149086 | | | |
| SMCB--C | -0.034919 | | | |
| SMGR--C | -0.057229 | | | |
| TINS--C | 0.067239 | | | |
| TRIS--C | 0.283019 | | | |
| ULTJ--C | 0.074256 | | | |
| UNTR--C | -0.187321 | | | |
| WIKA--C | 0.014402 | | | |
| WSKT--C | -0.010923 | | | |
| Effects Specification | | | | |

| Cross-section fixed (dummy variables) | | | |
|---|---|---|---|
| R-squared | 0.834114 | Mean dependent var | 0.781111 |
| Adjusted R-squared | 0.788693 | S.D. dependent var | 0.113661 |
| S.E. of regression | 0.052248 | Akaike info criterion | -2.875092 |
| Sum squared resid | 0.458617 | Schwarz criterion | -2.138254 |
| Log likelihood | 356.0723 | Hannan-Quinn criter. | -2.577375 |
| F-statistic | 18.36398 | Durbin-Watson stat | 1.421792 |
| Prob(F-statistic) | 0.000000 | | |

*Source: Eviews 9*

This model has the assumption that individual difference can be accommodated in its intercept difference. In fixed effect model panel data estimation, dummy variable technique is used, so it can catch the intercept comparison from the firm from fixed effect result above, it can be seen that each firm has different intercept. The firm with the highest intercept value was PT. Sindomulyo Selaras with the value of -1.77069, which is obtained from the firm's intercept result of 0.337365 added by regression equation constant of -2.10806, on the contrary, the lowest was PT. Indofarma (Persero) with the value of -2.59419, which is obtained from the firm's intercept result of -0.486133 added by regression equation constant of -2.10806. The intercept difference appears because of different managerial act, leadership and managerial culture, and incentive in each firm. However, the slop is the same among the firm's.

The descriptive statistic analysis equation test result shows the effect of the variable of firm size, profitability, leverage and firm growth individually. Firm size variable has the significance of 0.0000, which is smaller than sig probability value or 0.000 < 0.05 and the slop among firm is 0.098083, which means that firm size has significant effect on CSR disclosure, hence H1 is accepted.

Profitability variable has the significance of 0.000, which is smaller than sig probability value or 0.000 < 0.05 and the slop among firms is 0.118528, which means that profitability has significant effect on CSR disclosure, hence H2 is accepted.

Leverage variable has the significance of 0.6072, which is bigger than sig profitability value or 0.6072 > 0.05 and the slop among firms is 0.000165, which means that leverage does not have significant effect on CSR disclosure, hence H3 is accepted.

Firm growth variable has the significance of 0.1747, which is bigger than sig profitability value or 0.1747 > 0.05 and the slop among firms is 0.011956, which means that firm growth does not have significant effect on CSR disclosure and there fore, H4 is rejected.

**The effect of firm size on corporate social responsibility disclosure**

From the regression result it can be seen that firm size has significant effect corporate social responsibility disclosure with the probability amount of 0.0000 < α=005 and the slop among the firms is 0.098083, hence H1 in this research is accepted. From the result it can be illustrated that the more assets the firm has, the higher the social responsibility is to be disclosure it is relevant to the signaling theory, where the financial report was served by the firm management displays the information including the firm total assets. The displayed information can be used to take decision for the interest holders.

The evidence which emphasize that firm size has effect on social responsibility disclosure was discovered in the research done by Setiawan (2013) which stated that there is positive. Correlation between firm size whit significance value of 0.026 and coefficient of 0107. Big sale firm will not evade from the drive to give social responsibility. The source and financial from the firm has to provide its social responsibility information.

Besides that, usually the firm has got public request about better in quality information than small scale firm (Setiawan et al, 2013).

**The effect of profitability on corporate social responsibility disclosure**

From the regression analysis result, it can be seen that profitability has significant effect on social responsibility disclosure with the amount of probability of 0.0000 < $\alpha$=005 and the slop among the firm is about 0.118528, hence H2 in the research is accepted. The result slows that the high level of profitability will make social responsibility disclosure getting more. This is the same with the signaling theory where the information in the firm of the reversion level towards the assets, namely the calculation from profitability or how much profit can be obtained from the expended assets : therefore , if the profitability is big, it will send good signal to the interest holders.

This result is relevant to the previous research performed by Widyawati (2012), which showed that there is significant effect between profitability and ISR or Islamic based Social Responsibility disclosure. The t-statistic amount shows the value of 3.819 with lower significance than the amount if significance $\alpha$ = 5% is 0.000. Therefore, profitability variable has positive and significant effect ISR disclosure level. The firm with high profit condition will give high quality information.

**The effect of leverage on corporate social responsibility disclosure**

From the regression analysis it can be seen that leverage does not have significant effect on social responsibility disclosure with the amount of probability of 0.6072 > $\alpha$ = 0.05 and the slop among the firms is 0.000165 : therefore, H3 in this research is accepted, the result shows how the level of relationship between the firm operational and debt is. Leverage shows the firm's financial risk because it can indicate the illustration of the early balance and know about the risk of the debt no to be collected. The high leverage in the firm will cause the big risk in financial, which then becomes the debt holders main attention. This thing is related to the signaling theory where it can be bad signal for the external parties from analysis the information about the high leverage in a firm.

This research in similar with the previous research performed by Putri (2014) who stated the t-statistic amount is -1.472 and the significance is smaller than the significance value of 0.150 > $\alpha$= 5 % therefore, leverage does not have effect on CSR disclosure it is the case because many companies have admitted about how important social and the surrounding environment are, not only because it can gain profit, hence either high or low level of leverage does not have effect on CSR disclosure (Putri, 2014).

This result does not support the third hypothesis (H3) and the previous research which has the relationship with the effect of leverage on social responsibility disclosure has got the same amount as the research performed by Utami (2011), Sriayu (2013), Setiawan (2013), and Rindawati (2015). This research result shows that firm indeed has to reduce the financial risk by reducing the risk of the debts not to be collected because the high financial risk of the firm will be its own challenge in managing the firm and it will be difficult to disclose social responsibility.

**The effect of firm growth on social responsibility disclosure**

From the regression analysis calculation, it can be seen that firm growth does not have significant effect on social responsibility disclosure with the probability amount of 0.1747 > $\alpha$=0.05 and the slop between the firms is -0.0119, therefore $H_4$ in this research is rejected. This is relevant to the signaling theory where the rate of firm's sale is also reported in financial report, so it makes the external parties or the investors know the firm's sale development each year. However, in practice many firms endure instable sale from one year to the next one so that it causes the firm difficulty in disclosure social responsibility.

This research is relevant to the previous research performed by Sari (2012) who showed that firm growth variable which is measured with sale growth ratio based on t-test with t-count of -1.626 and significant of 0.111 > $\alpha$=0.05. it can be concluded that either high or low level of firm growth does not have effect social responsibility disclosure. This analysis does not support the fourth hypothesis ($H_4$) and the previous research dealing with the effect of firm growth on social responsibility disclosure (CSR) has got the same value as what Ani research (2015).

## CONCLUSION AND RECOMMENDATION

### Conclusion

Based on the research already performed, it can be conclude that Firm size partially has significant effect on corporate social responsibility disclosure. This result indicates that the bigger total assets the firm has, the more social responsibility disclosure the firm will have. Profitability partially has positive effect on corporate social responsibility. The highest level of profitability is the provides report of social responsibility disclosure the firm will have the provide. Leverage does not have effect on the corporate social responsibility disclosure. This research result describe that firm indeed has to reduce the financial risk by reducing the risk of the debt not to be collect. Firm growth does not have effect on corporate social responsibility disclosure. The conclusion of this research has revealed that many firms endure instable sales from one year to next year, so it makes firms difficult to disclose social responsibility.

### Recommendation

The next research is expected to be able to add up the firm characteristic variable competent, so that there are more independent variables which have significant effect. The next research is expected to be able to select more specific object of research to be sample. The next research is expected to apply different effect model in selecting estimation model.

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# Analysis of fiscal decentralization impact on community welfare in Jambi Province

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**Abstract**
The fiscal decentralization policy has made local governments have the authority to generate income and manage regional finance independently for public services and public welfare. This study aims to: 1) Analyze the degree of fiscal decentralization in Jambi Province; 2) Analyzing community welfare proxied from the human development index in Jambi Province; 3) Analyzing the impact of fiscal decentralization on the welfare of the community in Jambi Province. This study using panel data, a combination of time series data in 2010-2016 and cross section 11 districts/cities in Jambi Province. The method of data analysis is descriptive analysis and panel data regression analysis approach, namely the fixed effect model (FEM). Hypothesis testing uses the F test statistic and the statistical t test. The results showed that: 1) The degree of fiscal decentralization, namely the ratio of district own source revenue (PAD) to total regional income (TPD) in each district/city in Jambi Province was relatively relatively low, whereas for Jambi Province it was in good category; 2) Community welfare as illustrated by the human development index in each district/city including Jambi Province is still in the moderate category, except Jambi City (76.14) and Sungai Penuh City (73.35) are categorized as high; 3) Fiscal decentralization has a positive and significant impact on improving community welfare. it means that the better the implementation of fiscal decentralization, the higher the level of community welfare.

***Keywords:*** *Community welfare, District own source revenue, Fiscal decentralization, Human Development Index*

**JEL Classification:** H30, H50, H72

## INTRODUCTION

Human development is one indicator that assesses the success of development to improve the welfare and intellectual life of the nation. The United Nations Development Program (UNDP), through its Human Development Report, stated that human development is "a process of enlarging people 'choices" or a process that enhances aspects of people's lives (Harahap, 2011). In principle, human choices are very numerous and change at any time. But at all levels of development, there are three basic choices, namely to live long and live a healthy life, to get education and to have access to the necessary resources to live a decent life (BPS, 2016).

At present the use of the Human Development Index (HDI) as a welfare indicator can be widely accepted throughout the world, even at the regional level (Bappenas, 2011). Giving regional autonomy through fiscal decentralization and regional authority is expected to provide flexibility to the regions to improve the welfare of the community

(Harahap, 2011). The study of Lindaman and Thurmaier (2002) found that fiscal decentralization has a positive effect on people's welfare (achieving basic needs for society). Soejoto, et.al. (2015), stated that fiscal decentralization policies play an important role in supporting the success of Indonesian human development. Mirza (2012), in implementing fiscal decentralization, improving the quality of human life can be seen from the Human Development Index (HDI) which is measured through the quality of education, health and economic levels (purchasing power).

The development of HDI in various regions in Jambi Province in the period 2010-2016 showed an increase, from 65.39 in 2010 to 69.62 in 2016. During this period, the HDI of Jambi Province grew by an average of 1.05 percent per year. The increase in the Jambi Province HDI, of course, was accompanied by an increase in HDI in each district/city in Jambi Province. In 2016, the highest district/city HDI was in Jambi City, namely 76.14, followed by Kota Sungai Penuh at 73.35 and Kerinci Regency at 69.68, while the lowest HDI was in Tanjung Jabung Timur Regency at 61.88, followed by Tanjung Jabung Barat District at 65.91 and Muaro Jambi District at 67.55. In detail, look at the following table:

**Table 1.** HDI district/city and Province of Jambi, Year 2010 – 2016

| **No.** | **Region** | **Human Development Index** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
| 1. | Kerinci | 65.16 | 65.9 | 66.7 | 67.5 | 67.96 | 68.89 | 69.68 |
| 2. | Merangin | 63.85 | 64.4 | 65.3 | 65.8 | 66.21 | 67.4 | 67.86 |
| 3. | Sarolangun | 64.64 | 65.2 | 66.2 | 67.1 | 67.67 | 68.1 | 68.73 |
| 4. | Batanghari | 65.67 | 66.3 | 67.0 | 67.2 | 67.68 | 68.05 | 68.7 |
| 5. | Muaro Jambi | 62.84 | 63.4 | 64.2 | 65.1 | 65.71 | 66.66 | 67.55 |
| 6. | Tanjung Jabung Timur | 57.21 | 57.8 | 58.6 | 59.4 | 59.88 | 61.12 | 61.88 |
| 7. | Tanjung Jabung Barat | 61.49 | 62.0 | 62.9 | 63.5 | 64.04 | 65.03 | 65.91 |
| 8. | Tebo | 63.62 | 64.5 | 65.2 | 65.9 | 66.63 | 67.29 | 68.05 |
| 9. | Bungo | 66.28 | 66.7 | 67.2 | 67.5 | 67.93 | 68.34 | 68.77 |
| 10. | City of Jambi | 72.23 | 73.0 | 73.8 | 74.2 | 74.86 | 75.58 | 76.14 |
| 11. | City of Sungai Penuh | 69.91 | 70.6 | 71.2 | 72.1 | 72.48 | 73.03 | 73.35 |
| | Jambi Province | 65.39 | 66.1 | 66.9 | 67.8 | 68.24 | 68.69 | 69.62 |

*Source: BPS of Jambi Province, HDI, 2010 – 2016*

The description of this HDI shows the need for hard work of all Regional Government apparatus, both districts / cities and provinces to try to improve the HDI through improving regional economic performance, quality of education, and access to public health services. To be able to realize an increase in HDI in order to improve the welfare of the community, of course it must be supported by adequate regional financial capacity, especially the provision of funds sourced from the region's own revenues. The improvement in regional revenues will contribute to increasing the quality of people's welfare as measured by the HDI. More and more income is generated by the region, making the region able to finance and meet the needs expected by the community (Christy and Adi, 2009).

One of the most important sources of regional revenue in the implementation of decentralization (regional autonomy) is District own source revenue (PAD). The size of the PAD can increase or reduce dependence on the central government (Setyowati and Suparwati, 2012). The increase in PAD is certainly supported by efforts to extract local tax sources, regional retribution, business proceeds and regional wealth as well as other legitimate PAD. The ratio of PAD to total regional income illustrates the degree of fiscal decentralization or financial independence of a region.

Based on Table 2, the realization of PAD shows an increase, which in 2010 amounted to Rp.686 billion and in 2016 became Rp. 1,273 billion or grew by an average of 11.89 percent per year. This increase in PAD has not been fully reliable in supporting the Regional Government Budget (APBD) of Jambi Province, because the contribution of PAD to the Regional Government Budget is relatively low and tends to decrease. In 2010, PAD contributed 37.26 percent, in 2011 it increased to 40.46 percent, and in 2016 PAD was only able to contribute to the Jambi Province's APBD of 34.02 percent or a decrease of 6.44 percent compared to the realization of the annual budget 2011. This condition certainly causes a high dependency on funds from the central government, because the ratio of balancing funds to the Jambi Provincial Budget even though the trend tends to show a decline but until 2016 the ratio of balance funds (41.39 percent) still exceeded the PAD ratio. In detail the description of the ratio of PAD and balancing funds to the Jambi Provincial Budget can be seen in Table 2 below:

**Table 2.** Contribution of PAD and balancing fund to APBD of Jambi Province, Year 2010-2016

| YEAR | PAD (Rp.Billion) | Fund Balance (Rp. Billion) | APBD (Rp.Billion) | Ratio (%) PAD/APBD | Ratio (%) DP/APBD |
|---|---|---|---|---|---|
| 2010 | 686 | 932 | 1.841 | 37,26 | 50,62 |
| 2011 | 984 | 1.075 | 2.432 | 40,46 | 44,20 |
| 2012 | 995 | 1.332 | 3.287 | 30,27 | 40,52 |
| 2013 | 1.063 | 1.489 | 3.577 | 29,72 | 41,63 |
| 2014 | 1.281 | 1.514 | 3.679 | 34,82 | 41,15 |
| 2015 | 1.241 | 1.419 | 3.604 | 34,43 | 39,37 |
| 2016 | 1.273 | 1.549 | 3.742 | 34,02 | 41,39 |

*Source: BPS of Jambi Province, Regional Financial Statistics, 2010 – 2016*

Considering the different conditions and potentials of each region, the consequences of differences in ability to mobilize development activities and explore the potential of existing regions can cause various problems in the implementation of fiscal decentralization in each region, especially regarding the problem of managing resources regional finance, in order to increase regional independence and human development in order to improve people's welfare.

Based on the problems described, this study aims to: Analyzing the degree of fiscal decentralization in Jambi Province, analyzing community welfare proxied from the human development index in Jambi Province, and analyzing the impact of fiscal decentralization on the welfare of the community in Jambi Province.

## LITERATURE REVIEW

### Concept of community welfare

Welfare is the dream of every person and every society, even every country. The prosperous conditions of community and state life are idealized (Soetomo, 2014). Welfare by some people is always associated with the concept of quality of life. The concept of quality of life is a picture of a good state of life. The World Health Organization (WHO) defines quality of life as an individual's perception of life in society in the context of existing cultural and value systems related to goals, expectations, standards, and also attention to life. This concept provides broader meaning because it is influenced by the physical condition of the individual, psychological, level of independence, and individual social relations with the environment. In the context of statehood, welfare is used in order to show that his government provides broad social services to its citizens (Fahrudin, 2012).

According to Todaro and Smith (2015), community welfare shows a measure of community development outcomes in achieving a better life which includes: first, capacity building and distribution of basic needs such as food, housing, health, and protection; second, increase in living levels, income levels, better education, and increased attention to culture and human values; and third, expanding the scale of the economy and the availability of social choices from individuals and nations.

The Human Development Index (HDI) is a tool used to measure welfare levels between countries or between regions (Todaro and Smith, 2006). Priambodo and Noor (2016), emphasizing the achievement of community welfare can be calculated one of them by the Human Development Index (HDI).

Starting in 1990 the United Nations Development Program (UNDP) published public welfare indicators known as the Human Development Index (HDI). In 2010, UNDP made changes in the preparation of the HDI indicator, namely on the dimensions of education and living standards. The indicator of literacy rates in the education dimension is replaced by the expectations of school length, while the indicator of GDP per capita in the dimensions of living standards is replaced by an indicator of gross national income (GNI) per capita. The HDI aggregation method undergoes improvements, health indexes and expenditure indexes from arithmetic averages to be geometric averages. Likewise, the education index changes from a geometric average to an arithmetic average. The calculation of these three indices is done by standardizing the minimum and maximum values of each index component. Each of these components is first calculated so that the value is between 0 (worst) and 1 (best). To facilitate the analysis, this index is usually multiplied by 100.

Indonesia began applying the HDI calculation with the new method in 2014. In general, the method of calculating the HDI used in Indonesia is the same as the calculation method used by UNDP. The formula used in calculating the HDI component index is as follows (BPS, 2017):

***Health Index***

$$I_{health} = \frac{AHH_0 - AHH_{0min}}{AHH_{0max} - AHH_{0min}} \quad \text{....... (1)}$$

***Education Index***

$$I_{HLS} = \frac{HLS - HLS_{min}}{HLS_{max} - HLS_{min}} \quad \text{....... (2)}$$

$$I_{RLS} = \frac{RLS - RLS_{min}}{RLS_{max} - RLS_{min}} \quad \text{....... (3)}$$

$$I_{Education} = \frac{I_{RLS} - I_{HLS}}{2} \quad \text{....... (4)}$$

To calculate the index of each component of HDI used maximum and minimum limits as shown in the following table:

**Table 3.** Components of HDI

| Component | Unit | Min | Max |
|---|---|---|---|
| Life Expectancy at Birth ($AHH_0$) | Year | 20 | 85 |
| School Old Hope (HLS) | Year | 0 | 18 |
| Average School Length (RLS) | Year | 0 | 15 |
| Per capita expenditure adjusted | Rupiah | 1.007.436 | 26.572.352 |

*Source: BPS, 2017*

The value of HDI can be calculated using the following formula:

$$IPM = \sqrt[3]{I_{health} x I_{education} x I_{expenditure}} \quad \text{....... (5)}$$

Where:

$I_{Health}$ = life expectancy index

$I_{Education}$ = education index (school expectation index + school mean index divided by 2)

$I_{expenditure}$ = Index Standard of decent living (expenditure value per capita and purchasing power parity).

Furthermore, BPS (2017) explains to see the achievements of human development in a region at a certain time can be grouped into four groups, ie low HDI (HDI <60), medium (60 ≤ HDI <70), high (70 ≤ HDI <80), and very high (HDI ≥80).

**Fiscal Decentralization**

The terminology of decentralization does not only have one meaning. But it can be translated into a number of meanings, depending on the context of their use. According to Kuncoro (2014) decentralization is the delegation of authority and responsibility (for public functions) from the central government to local governments. Slinko (2002) states that in the concept of "fiscal decentralization" it means the assignment of fiscal responsibility to lower levels of government, namely, the level of regional autonomy (local) and the authority of local governments to decide on their own expansion and their ability to generate local income.

Bodman et.al. (2009) states that theoretically fiscal decentralization is a devolution of fiscal responsibility and power from the central government to regional governments that can increase or reduce economic growth. The main function of fiscal decentralization is to increase the efficiency of the public sector and lead to long-term economic growth (Faridi, 2011).

Fiscal decentralization is measured using three approaches, namely the income approach, expenditure approach, and local revenue approach (Akai and Sakata, 2002; Iimi, 2005).

a. Approach to Acceptance.

The indicator of fiscal decentralization from this approach is measured by the provincial revenue ratio. Indicator of Revenue (RI) is the ratio of regional government revenues to central and regional government revenues. The receipt of local government used in this study consists of provincial revenues and district/city revenues in the province which can be formulated as follows:

$$\mathrm{RI}_{\mathrm{it}} = \frac{\text{Province Revenue}_{\mathrm{it}}}{\text{Cental}_{\mathrm{t}}+\text{Province Revenue}_{\mathrm{it}}} \quad \text{.......} (6)$$

$$EGit = \alpha_0 + \alpha_1 RIit + \alpha_2 Xit + \varepsilon it \quad \text{.......} (7)$$

b. Expenditure Approach.

The fiscal decentralization indicator of this approach is measured by the provincial spending ratio. Expenditure Indicator (EI) is the ratio of local government expenditure (provincial and district/city) to central and local government expenditures. The expenditures or expenditures of local governments used in this study consist of provincial expenditures and district/cities within the province which can be formulated as follows:

$$\mathrm{EI}_{\mathrm{it}} = \frac{\text{Province Expenditure}_{\mathrm{it}}}{\text{Cental}_{\mathrm{t}}+\text{Province Expenditure}_{\mathrm{it}}} \quad \text{.......} (8)$$

$$EGit = \alpha_0 + \alpha_1 EIit + \alpha_2 Xit + \varepsilon it \quad \text{.......} (9)$$

c. Local Own Revenue Approach.

This indicator shows the level of fiscal autonomy of local governments. Size of regional autonomy would be great if all the financial needs in the region could be self-financed by the local government, although the ratio of revenue and expenditure is small. Thus, the consideration of the degree of regional independence becomes very important in measuring fiscal decentralization. Indicators of local revenue (OR) are measured by the ratio of local government revenue (PAD) to the total revenue of local government that can be formulated as follows:

$$RI_{it} = \frac{\text{Province Own Revenue}_{it}}{\text{Total Province Revenue}_{it}} \quad \text{......} (10)$$

$$EGit = \alpha_0 + \alpha_1\, ORit + \alpha_2\, Xit + \varepsilon it \quad \text{......} (11)$$

**Relationship between fiscal decentralization and community welfare**

In an effort to improve the implementation of fiscal decentralization in order to achieve regional independence, the regional government is required to optimize the potential income of the regions. One of the factors that can encourage the increasing degree of regional fiscal decentralization is sourced from local revenue (PAD). Increasing the degree of fiscal decentralization will encourage an increase in the proportion of regional government capital expenditure that is used for the construction of public service facilities and infrastructure so that it will encourage an increase in economic growth and a human development index towards public welfare. Pose, et. Al., (2007) explains, there is a lot of literature which states that fiscal decentralization provides significant changes to welfare and economic benefits.

The main objective of the regional autonomy policy and fiscal decentralization is to accelerate the realization of an increase in the welfare of all people (Bappenas, 2007). Mehmood and Sidiq (2010) state that fiscal decentralization is the basic tool for efficient service delivery. The effectiveness of fiscal decentralization can improve human development and also strengthen the federation. Mehmood and Sidiq's research results show that fiscal decentralization on the expenditure and income side positively correlates with HDI, as well as the urbanization variable which has a positive and significant impact on the HDI. The Gogoi Study (2017) found that there was a fairly positive relationship between fiscal decentralization and human development. The study conducted by Harliyani and Haryadi (2016) found that the ratio of the degree of fiscal decentralization and direct expenditure harmony had a positive and significant effect on the HDI.

The results of other studies, Setyowati and Suparwati (2012) found that PAD proved to have a positive effect on the Human Development Index (HDI) through the allocation of the Capital Expenditure Budget. Jumadi, et.al (2013), there is a positive influence on the ratio of PAD to HDI. Anggarini and Sutaryo (2015), found that the Degree of Decentralization Ratio and Regional Financial Independence Ratio had an effect on the Human Development Index. Putra and Ulupi (2015), found an increase in PAD and DAK in a region would increase the human development index. Sarkoro and Zulfikar (2016) found that regional expenditures and local revenues affect the Human Development Index.

## RESEARCH METHODS

The type of research used in this study is a case study. According to Maxfield (Nazir, 2009), a case study is a study of the status of the subject of research that is pleasing to a specific or typical phase of the overall personality. Research subjects can be individuals, groups, institutions, and communities. The purpose of the case study is to provide a detailed description of the background, traits and characteristics that are typical of the case, or the status of the individual, which then from the above characteristics will be made into a general matter.

The data used for this study are panel data in the form of time series from 2010-2016, and cross section data consisting of 11 districts/cities in Jambi Province, Indonesia. Data is obtained from BPS, Ministry of Finance, and other relevant agencies.

The independent variable is fiscal decentralization measured by the level of fiscal decentralization, which is the ratio of local income to total regional income. The dependent variable of community welfare is measured from the Human Development Index through a three basic dimension approach, namely the dimensions of health, education, and decent life.

This study uses regression analysis with panel data. According to Juanda and Junaidi (2012), the general form of panel data regression (in matrix notation) is as follows:

$$Y_{it} = \alpha + \beta X_{it} + u_{it} \qquad (12)$$

Generally, the data panel application uses a one-way error component model for disturbances by:

$$u_{it} = \mu_i + v_{it} \qquad (13)$$

Based on the equation model presented by Juanda and Junaidi (2012), then to analyze the impact of fiscal decentralization on the welfare of the people in Jambi Province, panel data regression analysis using the econometric model approach is as follows:

$$KM_{it} = \beta_0 + \beta_1 DDF_{it} + \varepsilon_{it} \qquad (14)$$

Where:

- KM = Community Welfare is proxied from the HDI
- DDF = Degree of Fiscal Decentralization (ratio of local revenue to total regional revenue).
- $\beta_0$ = coefficient of intercept/constant
- $\beta_1$ = parameters for control variables
- i = Cross Section (district/city); i = 1, 2, ..., 11
- t = Time Series (time period of study); t = 1, 2, ..., 7
- $\varepsilon$ = disturbance term

Panel data regression analysis has three types of models, including Pooled Least Square, Fixed effect, and Random Efect (Gujarati, 2012). To choose one of the models that is appropriate for use in this study, it was first carried out by the chow test and the hausman test. Chow test is done to choose between Pooled Least Square (PLS) or Common Effect approaches with Fixed Effect. Hausman test is done to determine the best and right panel data estimation model between Fixed Effect Model with Random Effect Model. After testing, the research uses the Fixed Effect Model approach.

### Hypothesis testing

Hypothesis testing in this study uses the t test. According to Gujarati (2012), the t test is conducted to see the significance of the influence of independent variables on the dependent variable individually and assume other variables are constant.

## RESEARCH RESULT

### Degree of fiscal decentralization

The successful implementation of fiscal decentralization is reflected in the large capability of local governments in managing regional finances, especially those originating from the Locally-generated revenue (PAD). The ratio of PAD to total regional revenue (TPD) is known as the degree of fiscal decentralization. The calculation is done by summing the PAD in one area, then dividing it by the total revenue for the same area. The greater the ratio of PAD, the higher the degree of fiscal decentralization, which means that the financial capacity of the regions derived from own income is higher in the formation of regional income.

**Table 4.** Degree of district/city fiscal decentralization in Jambi Province

| No. | Region | Ratio of PAD to Regional Income (%) | | | | | | | Ave-rage (%) | Category of Fiscal Decentralization |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | | |
| 1 | Kerinci | 3.92 | 5.52 | 4.49 | 7.00 | 7.09 | 7.24 | 5.74 | 5.86 | Very less |
| 2 | Merangin | 6.81 | 5.61 | 3.79 | 4.80 | 5.21 | 7.48 | 6.11 | 5.69 | Very less |
| 3 | Sarolangun | 5.03 | 4.75 | 3.73 | 3.80 | 6.35 | 8.61 | 5.85 | 5.45 | Very less |
| 4 | Batanghari | 3.56 | 5.50 | 4.52 | 5.34 | 7.45 | 4.79 | 7.09 | 5.46 | Very less |
| 5 | Muaro Jambi | 2.79 | 3.95 | 4.31 | 5.07 | 6.20 | 4.74 | 4.82 | 4.55 | Very less |
| 6 | Tanjung Jabung Timur | 2.95 | 3.67 | 3.63 | 3.36 | 3.72 | 4.18 | 3.50 | 3.57 | Very less |
| 7 | Tanjung Jabung Barat | 2.95 | 4.53 | 4.50 | 4.96 | 6.85 | 7.31 | 7.44 | 5.51 | Very less |
| 8 | Tebo | 3.15 | 3.32 | 3.94 | 4.33 | 6.12 | 7.06 | 5.99 | 4.84 | Very less |
| 9 | Bungo | 7.52 | 8.55 | 8.14 | 8.52 | 4.45 | 9.95 | 8.97 | 8.02 | Very less |
| 10 | City of Jambi | 10.46 | 11.30 | 10.43 | 12.80 | 18.67 | 19.03 | 19.81 | 14.64 | Less |
| 11 | City of Sungai Penuh | 1.06 | 3.18 | 4.17 | 4.35 | 5.69 | 5.79 | 5.29 | 4.22 | Very less |
| **12** | **Jambi Province** | **41.86** | **47.35** | **37.51** | **36.86** | **40.48** | **39.66** | **37.01** | **40.10** | **Good** |

*Source: BPS, Regional Financial Statistics, 2010 - 2016, processed*

Table 4 shows that during the period of 2010-2016 the degree of fiscal decentralization in each district/city in Jambi province is generally very less, since the degree of fiscal decentralization of each district/city ranges from on average 3.57-14.64 percent. The degree of fiscal decentralization for Jambi Province has been categorized either by 40.10 percent.

## Community welfare

Human development is a development paradigm that places humans as the focus and the ultimate goal of all development activities, namely the achievement of mastery over resources, in order to obtain income to achieve decent life, increase health status to increase long and healthy life and improve education (literacy) and skills to be able to participate in society and economic activities. Human development performance as indicated by the HDI is a reflection of the level of community welfare. Increasing the HDI rate means an increase in the level of community welfare.

**Table 5.** Development index of each regency/city in Jambi Province in 2010 – 2016

| No. | Region | Human Development Index (HDI) | | | | | | | Category |
|---|---|---|---|---|---|---|---|---|---|
| | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
| 1 | Kerinci | 65.16 | 65.9 | 66.7 | 67.5 | 67.96 | 68.89 | 69.68 | medium |
| 2 | Merangin | 63.85 | 64.4 | 65.3 | 65.8 | 66.21 | 67.4 | 67.86 | medium |
| 3 | Sarolangun | 64.64 | 65.2 | 66.2 | 67.1 | 67.67 | 68.1 | 68.73 | medium |
| 4 | Batanghari | 65.67 | 66.3 | 67 | 67.2 | 67.68 | 68.05 | 68.7 | medium |
| 5 | Muaro Jambi | 62.84 | 63.4 | 64.2 | 65.1 | 65.71 | 66.66 | 67.55 | medium |
| 6 | Tanjung Jabung Timur | 57.21 | 57.8 | 58.6 | 59.4 | 59.88 | 61.12 | 61.88 | medium |
| 7 | Tanjung Jabung Barat | 61.49 | 62 | 62.9 | 63.5 | 64.04 | 65.03 | 65.91 | medium |
| 8 | Tebo | 63.62 | 64.5 | 65.2 | 65.9 | 66.63 | 67.29 | 68.05 | medium |
| 9 | Bungo | 66.28 | 66.7 | 67.2 | 67.5 | 67.93 | 68.34 | 68.77 | medium |
| 10 | City of Jambi | 72.23 | 73 | 73.8 | 74.2 | 74.86 | 75.58 | 76.14 | medium |
| 11 | City of Sungai Penuh | 69.91 | 70.6 | 71.2 | 72.1 | 72.48 | 73.03 | 73.35 | medium |
| **12** | **Jambi Province** | **65.39** | **66.1** | **66.9** | **67.8** | **68.24** | **68.69** | **69.62** | medium |

*Source: BPS Jambi Province, HDI year 2010-2016*

Based on the category of HDI achievement as defined by criteria by UNDP adopted by BPS (BPS, 2017), ie areas that are included in low HDI (HDI <60), medium (60 ≤ HDI <70), high (70 ≤ HDI <80), and very high (HDI ≥80). In general, until 2016 HDI in each district/city including Jambi Province is categorized as medium, except Jambi City (76.14) and Sungai Penuh Municipality (73.35) are categorized as high.

**Estimation result of regression model**

Data processing through E-views 8, obtained by estimation of fixed effect model as in table 6.

**Table 6.** Regression coefficient based on estimation result of fixed effect model

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 63.90160 | 0.462693 | 138.1080 | 0.0000 |
| DDF? | 0.515004 | 0.078960 | 6.522302 | 0.0000 |

*Source: Processed E-views data 8.*

From the panel data regression result, it can be explained as follows:

a. The constant coefficient value is 63.90160. This means that if the DDF (Fiscal Decentralization) is fixed or the value is 0, then KM (community welfare) reaches 63.90160.
b. DDF variable coefficient (Fiscal Decentralization)Fiscal decentralization variable regression coefficient of 0.515004. This means that every increase in the degree of fiscal decentralization by 1 percent, it will increase community welfare by 0.51 percent, assuming other independent variables are fixed.

**Coefficients of determination**

This test is used to measure how much variation of the value of the dependent variable, can be explained by independent variables. The coefficient of determination also shows the suitability of the regression line to the data. The commonly used in panel data analysis is Adjusted R-squared.

**Table 7.** Coefficient of determination based on fixed effect estimation results

| | | | |
|---|---|---|---|
| R-squared | 0.929787 | Mean dependent var | 66.79818 |
| Adjusted R-squared | 0.917905 | S.D. dependent var | 3.976101 |
| S.E. of regression | 1.139242 | Akaike info criterion | 3.240874 |
| Sum squared resid | 84.36175 | Schwarz criterion | 3.606142 |
| Log likelihood | -112.7737 | Hannan-Quinn criter. | 3.386978 |
| F-statistic | 78.25047 | Durbin-Watson stat | 0.727997 |
| Prob(F-statistic) | 0.000000 | | |

*Source: Processed E-views data 8.*

Adj Value R-squared = 0.917905, indicating that variation from independent variable able to explain dependent variable equal to 91.79 percent while the rest equal to 8.21 percent explained other variable not examined (outside model).

**Hypothesis testing**

The value of t table can be seen in table t statistics at df = nk-1 (77-4-1) = 72 (k is the number of independent variables), obtained results of t table with 2-sided test at significance $\alpha = 0.05$ of 1.99346. The result of tcount (t-statistic) fiscal decentralization variable is 6.522302. Compared with t table, the value of t count > t table (6.522302 > 1.99346) or probability significance value < $\alpha$ (0.0000 < 0.05), so that H0 is rejected and Ha is accepted. This means that the fiscal decentralization variable has a significant effect on the variable public welfare. The results of this study indicate that fiscal decentralization has a positive impact on people's welfare. This means that the higher the degree of fiscal decentralization the higher the level of public welfare.

### Discussion

Based on the estimation results show that fiscal decentralization has a positive and significant impact on the welfare of the district/city communities in Jambi Province. This condition identifies that an increase in fiscal decentralization has an impact on improving people's welfare or it can be said that the higher the degree of fiscal decentralization, the higher the level of welfare of the community. Thus it can be interpreted that during the 2010-2016 observation period proving that fiscal decentralization carried out so far has been able to improve the welfare of the people proxied from the HDI in each district/city in Jambi Province.

The results of this study support the fiscal federalism theory (Oates, 2005) and empirical findings including; Mehmood and Sidiq (2010) show that fiscal decentralization on the expenditure and income side is positively correlated with HDI. The results of the research by Harliyani and Haryadi (2016) found that the ratio of the degree of fiscal decentralization and direct expenditure harmony had a positive and significant effect on the HDI. Anggarini and Sutaryo (2015), found that the Degree of Decentralization Ratio and Regional Financial Independence Ratio had an effect on the Human Development Index, and Jumadi, et.al (2013), there was a positive influence on the ratio of PAD to HDI.

The results of this study reinforce the argument, where one of the objectives of the decentralization and regional autonomy policy is to make the government closer to its people, so that government services can be carried out more efficiently, quickly and effectively. This reasoning is based on the assumption that district and city governments have a better understanding of the needs and aspirations of their communities than the central government (Kuncoro, 2014). For this reason, fiscal decentralization will make the local government more aware of what the community wants and needs.

Todaro and Smith (2012), explained that the government through fiscal decentralization has an important role in providing goods that are not provided by the private sector, such as road and dam infrastructure that will improve the living standards of the population at a reasonable level because fiscal decentralization will improve efficiency based on the ownership of better information about the needs of the population by the regional government compared to the central government and fiscal decentralization will direct the government's development program to local interests that are tailored to the local environment.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The degree of fiscal decentralization, namely the ratio of district own source revenue (PAD) to total regional income (TPD) in each district/city in Jambi Province is relatively relatively low, whereas for Jambi Province it has been in a good category.

The welfare of the people described by the human development index in each district/city including Jambi Province is still in the moderate category, except Jambi City (76.14) and Kota Sungai Penuh (73.35) are categorized as high.

Fiscal decentralization has a positive and significant impact on improving community welfare. it means that the better the implementation of fiscal decentralization, the higher the level of community welfare.

**Recommendations**

In general, the level of fiscal decentralization of districts/cities in Jambi Province is still relatively very low. For this reason, it is expected that local governments will continue to look for potential sources of regional revenue to be extracted and managed, and reorganize the system of collecting regional taxes and retributions in an integrated manner to avoid leaks and illegal levies.

In addition, in an effort to improve the welfare of the community it is expected that the regional government to prioritize regional development related to the provision of infrastructure, must really touch the joints of people's lives such as education, health and the economy.

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# Effect of company size, liquidity and operational efficiency on bank profitability with problem credit risk as a moderating variable at commercial banks that are listed on the Indonesia Stock Exchange

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**Abstract**
This study aims to measure and analyze the influence of company size, liquidity and operational efficiency on bank profitability with problem credit risk as a moderating variable at commercial banks that are listed on the Indonesia stock exchange. The unit of analysis in this study is 30 commercial banks listed on the official website of Bank Indonesia for the period 2012-2016. The type of data used is panel data with data analysis using purposive sampling method. The results of the study found that the size of the company negatively affected profitability, liquidity did not affect profitability, operational efficiency negatively affected profitability, company size positively affected problem credit risk, liquidity did not affect problem credit risk, operational efficiency had a positive effect on problem credit risk. problem credit risk has a positive effect on profitability.

***Keywords:*** *company size, liquidity, operational efficiency, problem credit risk, profitability*

**JEL Classification**: G1, G2, G32

## INTRODUCTION

The banking industry as an intermediary plays an important role in the economy, where 80 percent of financing by financial institutions is carried out by banks through credit (Astohar, 2009). Banks can carry out the intermediary function well, if the bank is healthy. A healthy bank will maintain public trust, given that public trust is an important capital for the bank.

Achievement of high profit (profitability) from the banking industry is important to observe considering the size of a company's performance in general is to see how much profit the company or banking generates. The higher the bank's ability to generate profits or profitability, it is assumed that the ability of the banking system to survive in competitive economic conditions is assumed.

Company size is a determination of the size of the company. The higher total assets that indicate the assets owned by the company indicate that the company is classified as a large company. And conversely, the lower total assets indicate that the company is classified as a small company. The greater total assets indicate that the greater the assets owned by the company so that investors will be more secure in investing in the company.

Bank income is also inseparable from the amount of credit that can be channeled to the public. Credit service activities are considered to be very important and strategic in banking, resulting in the management of credit being the main focus of management. The main purpose of credit management is for banks to maximize the health of financial performance by increasing credit quantity and quality.

Credit quantity is seen and assessed from the amount and rate of growth of loans channeled, while credit quality is simple and short can be measured from the number and portion of bad loans or problem loans (Paramitha et al, 2014).

The rise and fall of profitability in each banking company is caused by several factors, including liquidity, operational efficiency, and credit risk owned by these companies (Paramitha et al., 2014). Liquidity analysis is conducted to determine the ability of banks to fulfill their short-term obligations or obligations that have matured and good LDR liquidity will support the ability of banks to create profits (profitability), so LDR liquidity has an effect on bank profitability (Susianis, 2012).

Another factor that influences bank profitability is operational efficiency because operational efficiency shows that the costs incurred to produce profits are smaller than the profits obtained from the use of these assets and the bank's profitability is highly dependent on operational efficiency. Bank profitability is also inseparable from the amount of credit that can be channeled to the community and the greater the credit disbursed, the higher the risk of credit or problem loans (Sudiyatno and Fatmawati, 2013).

## LITERATURE REVIEW

### Agency theory

The main principle of agency theory is the existence of a working relationship between the party that gives the authority, namely the owner or shareholder with the party that receives the authority (agent), namely the manager, in the form of a cooperation contract (Elqorni, 2009 in Primasari, 2011). Agency problems arise because there are conflicts of opinion (interests) between the owner (principle) with management (agent) (Siallagan and Machfoedz, 2006).

According to Jensen and Meckling (1976) agency relations is a relationship where the company owner (principle) entrusts the management of the company by another person, namely the manager (agent) in accordance with the interests of the owner by delegating some decision-making authority to the manager (agent). Managers in running the company have an obligation to manage the company as mandated by the principle of increasing the prosperity of the principal through increasing the value of the company, in return the manager (agent) will get a salary, bonus or other compensation.

Management as the company manager has more information about the company, knows more about internal information, and knows the prospects of the company in the future compared to the owner or shareholder, therefore the manager is obliged to provide information or signals about the condition of the company to the owner (Ujiyantho and Pramuka, 2007 in Primasari, 2011). But the information submitted is sometimes not in accordance with the actual conditions of the company. This condition is known as asymmetrical information or information asymmetry. In fact, in carrying out its obligations, the manager (agent) has other objectives, namely, prioritizing their own interests, obtaining maximum profits to improve their welfare, so that in the end it creates agency conflicts, namely conflicts of interest between management (agents) and owners or shareholders ( principle) (Haruman, 2007).

### Signalling theory

According to Brigham and Houstan (2006), signals are actions taken by company management that provide guidance for investors about how management views the company's prospects. This theory is based on the assumption that managers and shareholders do not have access to the same company information. There is certain information that is only known by the manager, while the shareholders do not know the information so there is no asymmetric information between the manager and the shareholders.

Signaling theory emphasizes the importance of information released by companies on investment decisions of parties outside the company. Information is an important element for investors and business people because information essentially presents information, notes or descriptions both for past, present and future conditions for the survival of a company and how the market effects. One type of information issued by companies that can be a signal to parties outside the company, especially for investors is the annual report. Information disclosed in annual reports can be in the form of accounting information, namely information relating to financial statements and non-accounting information, namely information that is not related to financial statements. The annual report should contain relevant information and disclose information that is considered important to report users both inside and outside parties. To reduce information asymmetry the company must disclose information that is owned by both financial and non-financial information (Sharpe, 1997 and Ivana 2005 in Butar, 2011).

**Previous research**

Ayu Widyamurti (2016) the results of the study showed capital adequacy, operational efficiency, liquidity, asset quality, and company size, had a significant negative effect on profitability. The type of bank does not moderate the influence of capital adequacy, liquidity and asset quality on the level of profitability. The type of bank moderates the influence of operational efficiency and firm size on the level of profitability. The difference in this study is by adding the variable capital adequacy, asset quality as an independent variable, the type of bank as a modernization variable and using multiple linear regression analysis techniques.

Andreana Oktaviani (2014) the results of the study showed that the amount of credit channeled had a positive effect on profitability. Credit Risk Moderates the Effect of the amount of Credit channeled on Profitability. Credit risk as moderation has a negative influence to weaken the relationship of the amount of credit channeled to profitability. The difference in this study is that there is only one independent variable, namely the amount of credit and using a simple linear regression analysis technique.

Ni Made Elin Sukmawati (2016), the results of the study show partially the growth of third party funds has no significant positive effect on profitability, credit growth has no significant negative effect on profitability, credit risk has a significant negative effect on profitability, liquidity has no significant positive effect on profitability and conditions economy has a significant positive effect on profitability. Simultaneously the growth of third party funds, credit growth, credit risk, liquidity and economic conditions have a significant effect on profitability. The difference in this study is to add the variable growth of third party funds, credit growth and economic conditions as independent variables using multiple linear regression analysis techniques.

**Framework**

The thinking framework in this study is arranged as in the Figure 1. In this study Financial Reports will be carried out as the main tool for companies to deliver financial information regarding management accountability (Schipper & Vincent, 2003). Information submitted through these financial statements needs to be done to meet the information needs of the company's internal and external parties. Management generally has different interests from the principal so that they will tend to compile financial reports that are in accordance with their objectives and not in the interests of the principal. Therefore, the role of an independent auditor is needed to provide an opinion on the fairness of the company's financial statements presented by management. Thus, it is expected that the provision of capital and other stakeholders can make investment, credit and other resource allocation decisions more accurately based on information that has been audited by an independent party.

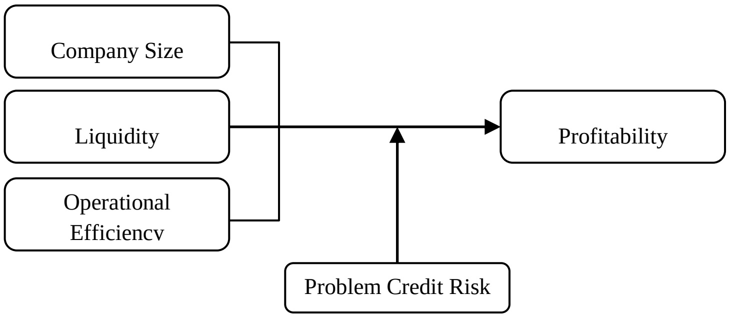


**Figure 1.** Research framework

Company size is a company scale that is seen from the total assets of the company at the end of the year. Total sales can also be used to measure the size of a company because the costs that follow sales tend to be larger, so companies with high sales levels tend to choose accounting policies that reduce profits.

The operational efficiency of the bank is aimed at making the bank concerned run more optimally in serving its customers. With the efficiency done, a bank can minimize expenditure figures, and conversely maximize income figures.

### Hypothesis

The hypothesis in this study are as follows:

1. Company Size has a positive effect on profitability
2. Liquidity has a positive effect on profitability
3. Operational Efficiency has a negative effect on profitability
4. Company Size has a positive effect on Problem Credit Risk
5. Liquidity has a Positive effect on problem credit risk
6. Operational Efficiency has a positive effect on Problem Credit Risk
7. Problematic Credit Risk has a negative effect on Profitability

## RESEARCH METHODS

### The scope of research

The scope of this study is limited to examining the effect of company size, liquidity and operational efficiency on bank profitability with problem credit risk as a moderating variable. this research will use path analysis as a hypothesis test. Path analysis is a technique for analyzing causal relationships that occur in multiple regression if the independent variable influences variables depending not only directly but also indirectly. (Retherford, 1993).

### Types and data sources

Data used in this study The type of data used in this study is secondary data or indirect data. Data sources were obtained from the site www.idx.co.id which included the Bank's financial statements from 2012-2016.

## Method of collecting data

In this study using the research method used in this study is the hypotesis testing empirical study, namely testing hypotheses from empirical studies that have been conducted, so that findings can be explained, both consistent and inconsistent from the results of empirical findings, especially those relating to the influence of independent variables on the dependent variable and using the Explanatory Survey Method.

## Data analysis technique

Data collection research is through literature studies by reviewing journals, books and papers to obtain a comprehensive theoretical foundation and reviewing the company's financial statements. The data in this study were collected through the documentation method, which is by recording or copying secondary data from the Indonesia Stock Exchange that are relevant to this study.

The structure (path) of the relationship between variables in this study is illustrated in the following figure:

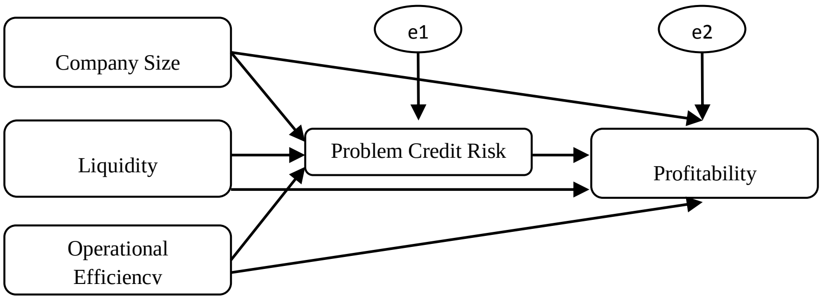


**Figure 2.** Relationship structure of research variables

To test the relationship between the independent variables, the dependent variable, the control variable and the moderating variable used multiple linear regression analysis, to examine the relationship between the independent and dependent variables that there are factors that strengthen or weaken (moderating variables) the test using moderated regression analysis (MRA ) Data that has been collected in the research, processed using statistical data processing application, namely SPSS version 22 software. Moderated Regression Analysis (MRA) or interaction test is a special application of linear multiple regression where the regression equation contains interaction elements (multiplying two or more independent variables) with the following formula (Liana, 2009) are as follows:

1. $\mathbf{Y = a + b_1 X_1 + b_4 Z + b_5 X_1 Z + \varepsilon_1}$
2. $\mathbf{Y = a + b_2 X_2 + b_4 Z + b_6 X_2 Z + \varepsilon_2}$
3. $\mathbf{Y = a + b_3 X_3 + b_4 Z + b_7 X_3 Z + \varepsilon_3}$

Information:

Y = Economic Growth (Profitability)
a = Constants
$b_1$ = Regression coefficient for $X_1$
$b_2$ = Regression coefficient for $X_2$
$b_3$ = Regression coefficient for $X_3$
$b_4$ = Moderating variable coefficient
$b_5$ = Moderating regression coefficient for $X_1$
$b_6$ = Moderating regression coefficient for $X_2$
$b_7$ = Moderating regression coefficient for $X_3$

$X_1$ = Company Size variable
$X_2$ = Liquidity variable
$X_3$ = Operational Efficiency variable
Z = Problem Credit Risk variable
ε = Residual Value

The first equation is regression to see the effect between variables X1, X2 and X3 towards Y (economic growth). The second equation is regression to see the influence between variables X1, X2 and X3 towards Y with Z (problem credit risk) as a moderating variable. This regression result will show which independent variables have a direct and indirect influence on the dependent variable namely economic growth. In this analysis the classic assumption test is still carried out, namely normality, heterocedasticity, multicollinearity, and autocorrelation.

**Definition of operational variables**

The definition of operational variables in this study can be seen in Table 1. This study will use Logistic Regression as a tool to assess the relationship of independent variables to the dependent variable. The independent variables used in this study were 3 variables consisting of company size, liquidity and operational efficiency and problem credit risk as moderating variables. The dependent variable used is profitability.

**Table 1.** Operationalization of research variables

| Concept | Concept Definition | Variable | Variable Measurement | Measurement Scale |
|---|---|---|---|---|
| Company Size | The company scale is seen from the total assets of the company at the end of the year. Total sales can also be used to measure the size of the company | Ln Total Assets | Company Size (Size) = Ln (Total Assets) | Ratio |
| Liquidity | The level of credit distribution also affects the amount of ROA, where the ratio measures the ratio of the amount of credit given by the bank to the funds received by the bank | LDR | $\frac{\text{Amount of Credit Provided}}{\text{Total Third Party Funds}} \times 100\%$ | Ratio |
| Operational Efficiency | Comparison between operational costs and operating income in measuring the level of efficiency and ability of banks to carry out their operations | BOPO | $\frac{\text{Operational Cost}}{\text{Operating Income}} \times 100\%$ | Ratio |
| Problem Credit Risk | Loans with a principal repayment and interest payments have been delayed for more than one year since they are due according to the agreed schedule | NPL | $\frac{\text{Total NPL}}{\text{Total Credit}} \times 100\%$ | Ratio |
| Profitability | The ability of bank management to obtain profits (profits) as a whole | ROA | $\frac{\text{Profit Before Tax}}{\text{Total Assets}} \times 100\%$ | Ratio |

## RESULTS AND DISCUSSION

With a span of 5 years research observation period, from 2012-2016, the number of years for the study sample was 150 samples, then a statistical description of the variable data was obtained in this study. Data processing in this study was carried out using Microsoft Excel 2010, SPSS 22, path analysis and Amos 23 to be able to process data and obtain results from the variables studied. Descriptive statistics of data between independent variables (Company Size, Liquidity and Operational Efficiency) with the dependent variable (Profitability) and moderating variables (Problem Credit Risk).

**Table 2.** Variable data descriptive statistics

| Variable | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Profitability | 150 | -7.58 | 11.15 | 1.8165 | 2.01094 |
| Company Size | 150 | 1.16 | 24.07 | 12.7057 | 4.72167 |
| Liquidity | 150 | 13.24 | 110.88 | 67.9675 | 20.11148 |
| Operational Efficiency | 150 | 56.04 | 195.70 | 86.8391 | 18.20312 |
| Problem Credit Risk | 150 | .11 | 9.89 | 3.3633 | 2.22503 |

*Source : Primary Data, 2018.*

**Effect of company size on profitability**

From the test results obtained the results of estimation parameters obtained by the Company Size variable ($X_1$) has a calculated t value of -3,236> 1,976 and a significance of 0,001 <0,05, then $H_0$ is rejected and $H_1$ is accepted, which means partially firm size variables have a significant effect on profitability (appendix 1) . Thus it can be concluded that the first hypothesis is proven, namely the size of the company influences profitability

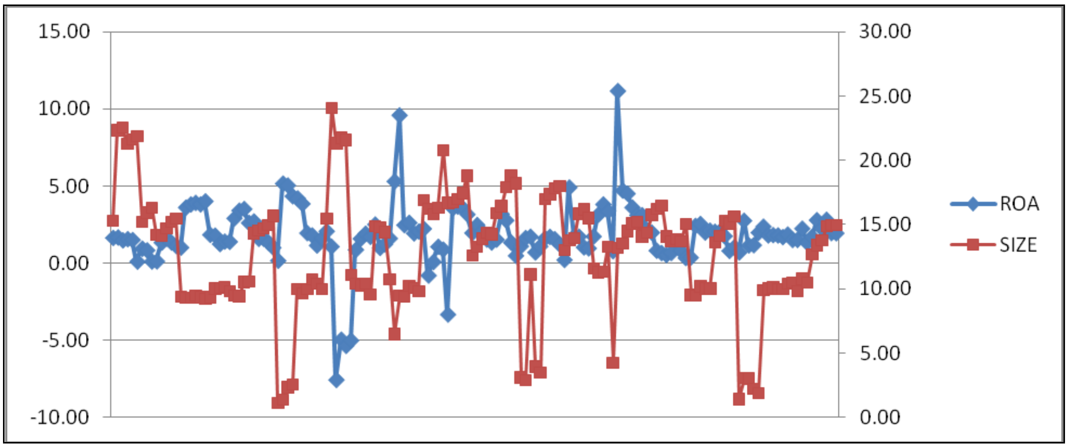


**Figure 3.** Data recapitulation graph company size for profitability
*Source: Primary data*

Companies with large assets, the use of existing resources can be used optimally and efficiently to obtain maximum business profits and companies with small assets will certainly produce profits in accordance with relatively small assets. In addition, if the number of assets owned by large companies will show the quality and good performance of the company. The larger assets owned by the company indicate the higher the profit generated.

**Effect of liquidity on profitability**

From the test results obtained the results of estimation parameters obtained Liquidity variable ($X_2$) has a calculated t value of 1.553 <1.976 and a significance of 0.123> 0.05, then $H_0$ is accepted and $H_2$ is rejected, which means that the liquidity variable does not significantly influence profitability (appendix 1). Thus it can be concluded that the second hypothesis is not proven, namely liquidity does not affect the Problem Credit Risk.

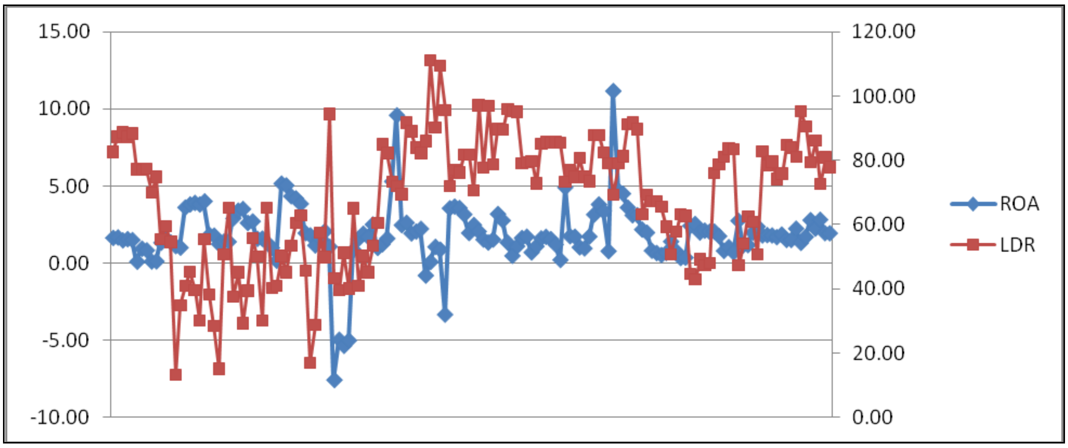


**Figure 4.** Data recapitulation graph liquidity towards profitability
*Source: Primary data*

The average banking company has a large number of assets and assets as well as the number of long-term and short-term liabilities held. The average banking company has a high level of liquidity, but the liquidity that continues to increase will reduce the opportunity for the company to obtain large profits. The higher the level of liquidity of the company, the better the ability to repay short-term debt of the company, but too many funds are idle or not played back quickly.

**Effect of operational efficiency on profitability**

From the test results obtained the results of estimation parameters obtained between Operational Efficiency variables ($X_3$) has a t value of -3.803> 1.976 and a significance of 0,000 <0.05, then $H_0$ is rejected and $H_1$ is accepted, which means that partially operational efficient variables have a significant effect on Profitability (appendix 1). Thus it can be concluded that the third hypothesis is proven, namely operational efficiency influences the Problem Credit Risk.

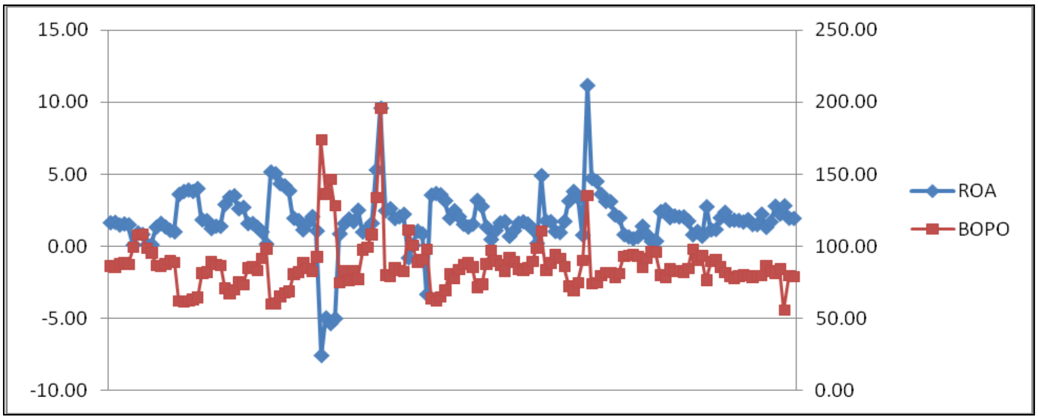


**Figure 5.** Data recapitulation graph operational efficiency towards profitability
*Source: Primary data*

The relationship between Operational Efficiency (BOPO) and Profitability (ROA) shows that the higher the BOPO, the ROA will decrease, which means the more efficient the operational performance of a bank, the greater the profits obtained by the bank. The results of this study are in accordance with the theory according to Bank Indonesia which states that if the BOPO ratio increases, it reflects the lack of the ability of banks to reduce operating costs and increase operating income, and this can cause losses because banks are less efficient in managing their business (SE. Intern BI , 2004).

Therefore, Bank Indonesia sets the best rate for the BOPO ratio which is below 90%, because if the BOPO ratio exceeds 90% to close to 100%, the bank can be categorized as inefficient in carrying out its operations. In order for this to be achieved, banks must pay attention to cost control so that they can produce BOPO in accordance with BI regulations.

**Effect of company size on profitability with problem credit risk as a moderating variable**

From the test results obtained the results of estimation parameters obtained interaction variable 1 (MRA_$X_1$) has a value of t count of -2.021> 1.976 and significant 0.045 <0.05, then $H_0$ is rejected and $H_4$ is accepted, which means there is an interaction between Company Size ($X_1$) and Problem Credit Risk (Z) to Profitability (appendix 2). This means that Problem Credit Risk is a moderating variable of Company Size to Profitability. Thus it can be concluded that the fourth hypothesis is proven, namely the size of the company influences the Problem Credit Risk.

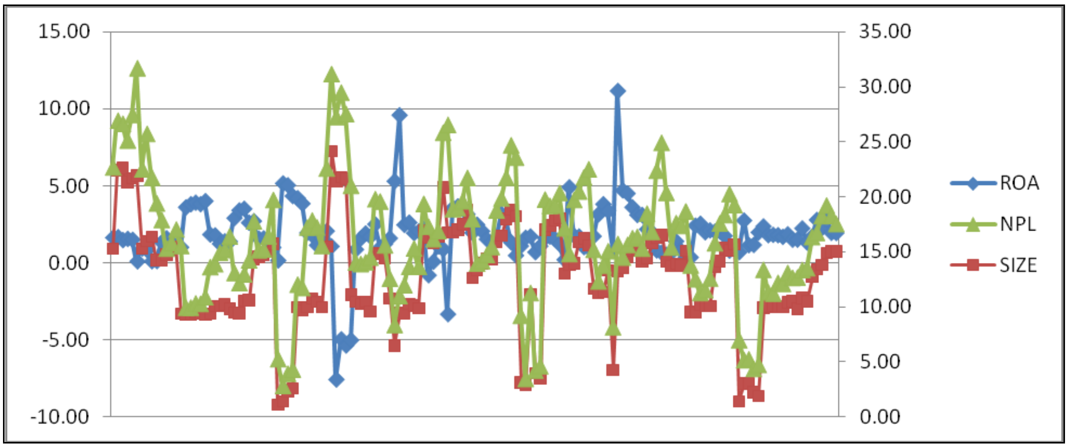


**Figure 6.** Data recapitulation graph company size for profitability with credit risk problems as moderating variables
*Source: Primary data*

The greater the size of the banking company (SIZE) as indicated by the ownership of large total assets also has a greater opportunity to increase the risk that must be borne by the bank. This risk borne in the form of increasingly large credit distribution. This credit distribution does not result in problem credit if the composition of the funds held is sufficient. If the assets owned by the bank are not managed and used optimally for bank operations, the bank has the potential to incur greater asset management costs (Syafitri, 2011)

**Effect of liquidity on profitability with problem credit risk as a moderating variable**

From the test results obtained the results of estimation parameters obtained by the interaction variable 2 (MRA_$X_2$) has a value of t count of --3.334> 1.976 and significant 0.001 <0.05, then $H_0$ is rejected and $H_5$ is accepted, which means there is an interaction between Liquidity ($X_2$) and Problematic Credit Risk (Z) to Profitability (appendix 3). This means that Problem Credit Risk is a moderating variable of Liquidity to Profitability. Thus it can be concluded that the fifth hypothesis is proven, namely liquidity has an effect on the Problem Credit Risk.

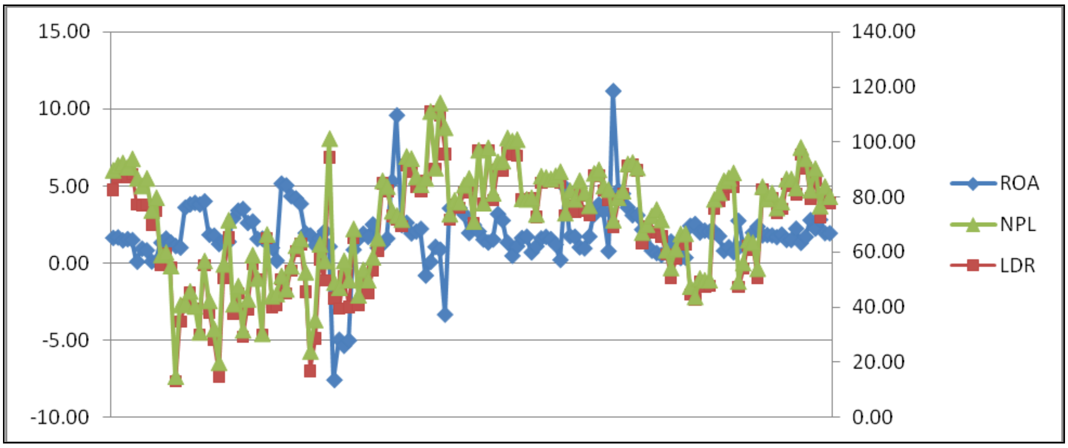


**Figure 7.** Data recapitulation graph liquidity to profitability with credit risk problem as moderating variable
*Source: Primary data*

**Effect of operational efficiency on profitability with problem credit risk as a moderating variable**

From the test results obtained the results of estimation parameters obtained interaction variable 3 (MRA_$X_3$) has a value of t count of 5.455> 1.976 and significant 0.001 <0.05, then $H_0$ is rejected and $H_6$ is accepted, which means there is an interaction between Efficient Operations ($X_3$) and Troubled Credit Risk (Z) to Profitability (appendix 4). This means that Problem Credit Risk is an Efficient Operational moderating variable to Profitability. Thus it can be concluded that the sixth hypothesis is proven, namely operational efficiency influences the Problem Credit Risk.

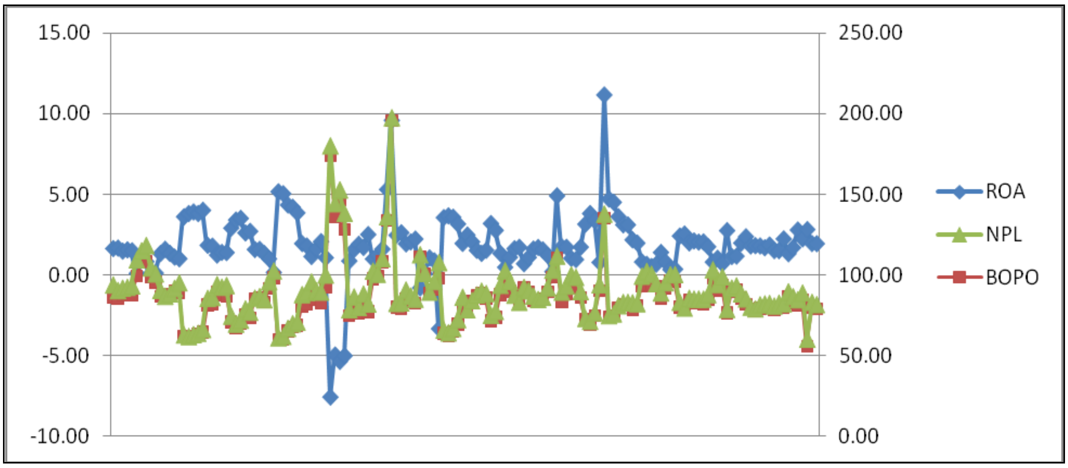


**Figure 8.** Data recapitulation graph operational efficiency towards profitability with problem credit risk as moderating variables
*Source: Primary data*

Operational efficiency emphasizes that efficiency is achieved when transactions are carried out with minimum transaction costs. The banking industry is an industry that experiences many kinds of risks in carrying out its operations. The banking industry's operational activities result in operational costs, generate operating income and involve assets in the process. One indicator of operational banking efficiency in terms of costs is the BOPO ratio.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

There are some conclusions from the results of the analysis described earlier, the first conclusion is the size of the company has a significant effect on profitability, meaning that the larger the size of the company is followed by the increase in profitability, the second conclusion is liquidity does not have a significant effect on profitability, meaning an increase in liquidity will not be followed by increased profitability, the third conclusion is operational efficiency has an effect on profitability meaning that the smaller operational efficiency is followed by increasing profitability, the fourth conclusion is there is an interaction between company size and problem credit risk to profitability. This means that problem credit risk is a moderating variable in the size of the company against profitability, the fifth conclusion is there is an interaction between liquidity and problem credit risk to profitability. This means that problem credit risk is a moderating variable in liquidity towards profitability, the sixth conclusion is there is an interaction between operational efficiency and problem credit risks to profitability. This means that problem credit risk is a moderating variable of operational efficiency on profitability.

### Recommendations

From these limitations, future researchers are advised to enter variables from external companies that can provide economic consequences, such as government changes, government policies, inflation rates, and natural disasters. Other than that, in taking samples, it can also use other types of non-financial companies such as agriculture, mining and others.

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## APPENDIX

**Appendix 1.** First model hypothesis testing

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 5.199 | .886 | | 5.868 | .000 |
| | Company Size (X1) | -.112 | .034 | -.262 | -3.236 | .001 |
| | Liquidity (X2) | .012 | .008 | .123 | 1.553 | .123 |
| | Operational efficiency (X3) | -.032 | .008 | -.292 | -3.803 | .000 |

**Appendix 2.** MRA variable X1 test results

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.476 | .476 | | 9.394 | .000 |
| | Company size (X1) | -.081 | .032 | -.191 | -2.581 | .011 |
| | Problem credit risk (Z) | -.366 | .067 | -.405 | -5.455 | .000 |
| | MRA_X1 | -.406 | .201 | -.145 | -2.021 | .045 |

**Appendix 3.** MRA variable X2 test results

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.974 | .593 | | 6.705 | .000 |
| | Liquidity (X2) | -.003 | .007 | -.033 | -.467 | .641 |
| | Problem credit risk (X3) | -.381 | .065 | -.421 | -5.836 | .000 |
| | MRA_X2 | -.561 | .168 | -.243 | -3.334 | .001 |

**Appendix 4.** MRA variable X3 test results

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 7.219 | .735 | | 9.826 | .000 |
| | Operational efficiency (X3) | -.060 | .010 | -.541 | -6.045 | .000 |
| | Problem credit risk (Z) | -.341 | .061 | -.378 | -5.578 | .000 |
| | MRA_X3 | 1.120 | .205 | .470 | 5.455 | .000 |

# Effort to increase rubber farmers' income when rubber low prices

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**Abstract**
Rubber is a plantation crop that has high economic value and the largest foreign exchange producer 10. Rubber producers in Indonesia consist of the islands of Sumatra and Kalimantan. Indonesia is one of the largest rubber producers after Thailand with the number of people involved in rubber farming reaching 2.2 million households. The recent decline in rubber prices has affected the decline in rubber farmers' income. So a strategy is needed to increase the income of rubber farmers. This paper provides an overview of the strategies that rubber farmers need to increase their income. The strategy that was carried out was an increase in the adoption of superior clones at the farmer level, optimization of rubber plantations by modifying the distance of rubber plants to be wider so that they could be used to plant intercrops during the rubber crop cycle and farmers using rubber marketing through UPPB (row rubber material processing and marketing unit)because it could increase the share price received by farmers so farmers get high prices.

***Keyword :*** *farmers' income, rubber price, strategy*

**JEL Classification:** Q1, Q11,Q13

## INTRODUCTION

Indonesia is the second largest rubber producing country in the world after Thailand, based on statistics from the Indonesian Directorate General of Agriculture (2015) and the Coordinating Ministry for Economic Affairs (2011). is one of the export commodities that contributes to the country's foreign exchange from the non-oil and gas sector and important commodities to improve the welfare of rubber farmers. This can be seen from the level of control of smallholder rubber by 85%, the rest is controlled by rubber private state and the government state. So that if a decline in rubber prices will affect the income of rubber farmers. The price of rubber in recent years has experienced sharp fluctuations.

The following are the rubber price fluctuations presented in Figure 1.In Figure 1 shows that rubber prices fluctuate every year. In 2009 it decreased to below 2 USD per kg and the peak of rubber prices occurred in 2011 reaching USD 4 per kg. But in recent years the price of rubber has decreased sharply, which only reached USD 1.4-1.5 per kg. This condition resulted in unstable rubber farmers' income. According to Syarifah et al. (2015), Regina (2016), and Hardiwan (2018) the negative impact of falling rubber prices for farmers is: 1) Many farmers stop their rubber farming activities and change professions; 2) Many rubber lands are converted to other commodities; 3) People's purchasing power is weak; 4) The level of community welfare decreases; 5) Many vehicle loans are stuck; 6) Crime increases; and 7) Quality of health and education is low. Based on these problems the author will review what effort should be done by smallholder rubber farmers to overcome low rubber prices so that farmers' income can be stable and can meet family needs.with these efforts, farmers are expected to be able to maintain stable income and even increase.

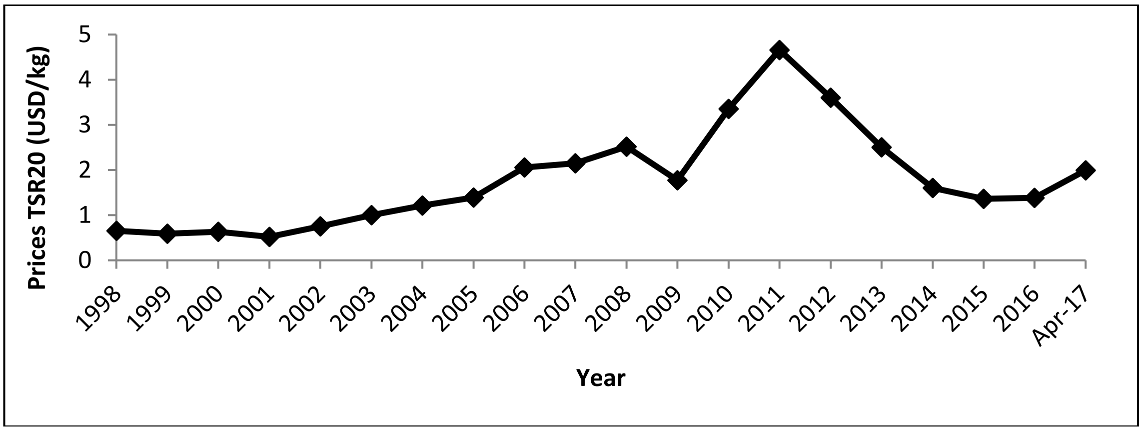


**Figure 1.** Rubber price fluctuations in 1998 - 2017
*Source : Sicom, 2017*

## METHODS

This research includes the type of literature study by looking for references to theories that are relevant to cases or problems found. Theoretical references obtained by means of literature study are used as the basic foundation and the main tools for research practice in the field.The type of data used by the author in this study is primary data by conducting observations and secondary data, namely data obtained from journals, documentation books, and the internet. Documentation is a method for finding documents or data that are considered important through newspaper / magazine articles, journals, libraries, brochures, documentation books and through electronic media, namely the internet, which has to do with the application of this research.

Literature study is a method used to collect data or sources related to the topic raised in a study. Literature studies can be obtained from various sources, journals, documentation books, internet and libraries.The data that has been obtained is then analyzed by descriptive analysis method. Descriptive analysis method is done by describing the facts which are then followed by analysis, not merely outlining, but also providing sufficient understanding and explanation.

## RESULTS AND DISCUSSION

Rubber is a strategic commodity because these commodities can increase the country's foreign exchange, open jobs and increase family income. The price of rubber at the time was relatively low, which affected the income of rubber farmers. Rubber prices occur based on market mechanisms so they cannot be changed. However, there are some efforts made by farmers so that they can increase the income of rubber farmers such as increased crop productivity, increased land productivity and Marketing of Row Rubber Material.

### Increased crop productivity

Rubber is one of the important plantation commodities, both as a source of income, employment opportunities and foreign exchange, a driver of economic growth in new centers in the area around rubber plantations and the preservation of the environment and biological resources. But as the country with the largest area and the second largest production in the world, Indonesia still faces several obstacles, namely low productivity. The low productivity of rubber in plantations is generally caused by the lack of optimal management of the use of recommended clones. Therefore, to optimize the productivity of rubber plants can be achieved by selecting high-producing clones (Boerhendhy and Amypalupy, 2010; Marimin, et. al, 2013).

Indonesia's rubber productivity occupies the lowest level among rubber producing countries such as Thailand and Malaysia. The productivity of folk rubber in Indonesia is 800-900 kg/ha while for new private estate it reaches 1,000 - 1,200 kg / ha (Ditjenbun, 2007; Indonesia Investment, 2018). According to Suharto (2013) and Riadi et al. (2011) one reason for the small productivity of Indonesian rubber is that more than 40% of smallholder rubber plantations still use seedling material and do not thoroughly adopt the recommended technology in implementing rubber cultivation. As an illustration, the use of Malaysian clonal plants is 90%, Thailand is 95%, India is 99%, and Vietnam is 100% (Ditjenbun 2008). Therefore, the productivity of other rubber producing countries has reached 1,500-1,700 kg / ha kk. So that one strategy to increase the growth of the plantation sub-sector can be done by replanting with clonal seedlings and expanding farming (Kirana Megantara, 2017; Budi, 2014). Old and damaged rubber farm also contributed to the decline in rubber plantation productivity because production per tree followed by a low population per hectare resulted in garden productivity being so low that it was not economical. Therefore, the replanting time needs to be based on the calculation of the amount of production and economic value. Low productivity farm (400-500 kg / ha / year) with dry rubber prices of Rp. 7,000 / kg are recommended to be replanting because they are not economical (Karyudi et al. 2001).

Increasing productivity of plants using superior seeds is very different from seedling because superior clone seeds have high productivity potential, reaching 1,500-2,500 kg / ha (Aidi-Daslin, 2005 and Nurhawaty and THS, 2013). However, to increase crop productivity is not separated from the correct guidelines for making the right seeds, starting from rootstock selection, selection of entres, and application of cultivation techniques which include tillage, fertilization with dosage, frequency, and proper application method, and control of fungal diseases white root, application of exploitation systems according to the physiological properties of clones and control of tapping grooves. If all that has been done, it will get high plant productivity. Increased productivity is important because with the higher productivity of plants, the yield received by farmers in quantity will also increase compared to the use of natural seeds (seedling).Rubber producer productivity can be seen in Table 1.

**Table 1.** Rubber producer productivity

| No | Country | Produktivity (kg/ha/yr) |
|---|---|---|
| 1 | Indonesian | 1.045 |
| 2 | Thailand | 1.700 |
| 3 | Malaysia | 1.500 |
| 4 | India | 1.400 |
| 5 | Sri Lanka | 809 |

*Source : Primary, 2018*

## Increased land productivity

The condition of low rubber prices is a problem for farmers because it will reduce the income level of farmers. To increase farmers' income, innovation is needed to optimize land productivity. One way to increase land productivity is by using rubber plantations to plant intercrops between rubber. Planting intercrops among rubber plants can increase farmers' income, soil organic matter increases, soil fertility increases both physically and chemically, and rubber plant growth increases (Rodrigo et al. 2004; Raintree 2005; Pathiratna & Perera 2005; Pathiratna 2006; Rosyid 2007 ; Ogwuche et al. 2012; Xianhai et al. 2012; 2015 Panic; Sahuri & Rosyid 2015). Financially, intercropping can also provide additional income for farmers. Corn farming as a rubber intercropping plant at a low price is still profitable with an R / C ratio of 1.62, whereas at a high price it is very profitable with an R / C ratio of 2.27 (Sahuri, 2017). So economically, intercrop farming benefits farmers even though the income will be lower than if the intercrops are planted in monoculture.

This low income is caused if intercropping, the land area used for intercropping cannot be done entirely for intercropping, and also every year the production will decrease along with the reduction in light intensity. For the spacing that was previously recommended is 6 m x 3 m, with the planting distance rubber farmers can only optimally utilize interlocutors between rubber for 0-3 years, this is not yet the limiting factor during that period (Saptabina, 2012). After more than 3 years the sunlight will be a limiting factor because the canopy of rubber plants has covered the sunlight so that the plants among the rubber do not get enough sunlight for photosynthesis.

Innovations that can be developed so that intercrops between rubber can run throughout the year using a wide spacing pattern. This innovation has been implemented in several provinces in Indonesia such as in South Sumatra, West Kalimantan, Jambi and others. Size of spacing used for wide spacing ranging from 18m – 20m (Sahuri, 2017). With the spacing, it can utilize the gaps between rubber by planting interlaced plants for a long time. In addition to increasing farmers' income, these innovations can also support government programs to accelerate food security (Hartati, 2015).

**Marketing of row rubber material**

Row rubber materal marketing is the end result of rubber cultivation activities that have been tapped by farmers. Rubber farmers conduct tapping to remove the sap that is inside the rubber tree by injuring the latex vessels found on the skin of rubber plants. Tapping is done every day by farmers. The reason for farmers tapping rubber every day is to get a lot of sap so that it can generate family income. Farmers sell sap products once a week. The decline in the selling price of rubber greatly affected the income and welfare of farmers. Based on the research of Hafsah et al. (2014) and Kurniawan et al. (2012) stated that 36.84% of farm income is lost and 66.67% of plasma rubber farmers' welfare decreases due to a decrease in rubber selling prices.

Rubber prices cannot be interrupted because they are formed by the mechanism of the world market so that if world rubber prices fall then domestic rubber prices will follow suit. But there are several ways that farmers can do to increase the portion of prices received by farmers so that the price received by farmers is also high. In general, rubber farmers still use traditional marketing, namely selling bokar to village traders, collecting traders and so on. The marketing chain makes the marketing chain inefficient and the bargaining position of farmers is weak because it is still dependent on intermediary traders (Lismarwati, 2016). The impacts of traditional marketing are as follows an intermediary trader will master the price of rubber, the absence of price transparency at the farmer level,the portion of prices received by farmers is low, and the quality of rubber is not in accordance with SNI.

On the other hand farmers still need middlemen for various reasons such as being bound emotionally (tied to loans) to traders, farmers still not paying attention to the quality of row rubber material bokar by using freezers not recommended and mixing tatal into row rubber material bokar so that bokar is heavier (Vachlepi et al. 2016). Without realizing it by farmers, all activities carried out by farmers will have an impact on the quality of the final bokar produced which will be low and the price received by farmers is also low.

Activities that can be done by farmers to increase the share of prices through organized marketing. One type of organized marketing is the Row Rubber Material Processing and Marketing Unit (UPPB). The existence of UPPB can be an intermediary to guide rubber farmers to always produce clean and good quality row rubber material bokar. Row rubber material bokar processing and marketing unit is a business unit formed by two or more planters groups to carry out technical guidance, processing and marketing activities for bokar. UPPB has legality with the existence of STR-UPPB, namely a registration certificate registered in the regency / city government. UPPB is one of the right choices for rubber farmer groups because it increases the bargaining position of farmers and farmer prices and can improve the quality of row rubber material bokar (Alamsyah, et al. 2017).

This marketing has rules of the game so that with these rules can improve the quality of bokar, the rules of the game are frozen latex using ant acids, free of contaminants, not soaked, selling bokar with the same age. The marketing chain of UPPB is also relatively short, ie farmers or farmer groups or Gapoktan collectively collect the sap in a location and then it will be auctioned to buyers from the factory, the buyer bidding the highest price will get the sap. With this system the marketing chain is very effective and efficient because the portion of the price received by farmers becomes large and farmers no longer think of shrinkage costs, transportation if they directly sell to the factory. The price difference received by farmers between using marketing through UPPB and traditional amounts to Rp. 2,000-Rp. 3,000 per kg (Junaidi, 2017). At present the UPPB (South Sumatra Province) has contributed 63,000 tons per year from the total of 169 UPPB to crumb rubber factories as factory raw materials (Anung, 2018).

**Government policy on rubber commodities**

Smallholder rubber farmers involved in rubber farming reach 2.2 million households (Junaidi, 2017). Therefore rubber farmers need to be supported to increase the income of their families to become more prosperous families. Indonesian rubber farmers still use a lot of seedling seeds so that the productivity of their crops is very low. In conditions of low rubber prices and accompanied by low crop productivity it will greatly affect farmers' income. Therefore a policy is needed to rejuvenate rubber using superior clones that have potential above 1,500 kg / ha. The policy will increase the adoption of superior clones of Indonesian rubber farmers, which are still below other rubber producing countries. On the other hand, the government can also recommend rubber farmers to optimize rubber plantations that have not yet been produced and can modify the spacing of rubber into a wide spacing. With this wide spacing, farmers can optimize rubber plantations to grow crops other than rubber such as seasonal crops so that farmers get income other than rubber plants. The use of annual crops can be carried out throughout the year because the distance between rubber plants reaches 18m - 20m, so that light between rubber when producing rubber plants is still available for annual crops. However, this policy should be accompanied by the provision of marketing so that farmers do not worry about the marketing of the products they harvest.

The Clean Bokar National Movement program through the UPPB, which is set forth in the form of regulations and provisions, must still be supported by the duties and responsibilities of the local government whose administrative area is the center of people's plantations. Regional governments are required to play a role in developing and supervising activities related to processing and marketing of bokar in their regions. Regional regulations are intended to provide guidelines for the management of natural rubber in their respective regions from the upstream to downstream sectors. Regional regulations which become guidelines in monitoring the continuity of bokar processing activities. So that farmers / farmer groups / farmer groups will feel more attention and the price portion received by farmers is always higher than traditional marketing. In addition, it also gives sanctions to each actor (farmer, trader and factory) if playing is not in accordance with the applicable rules. This sanction will give a deterrent effect to these business actors so as to create a sustainable and growing UPPB.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The decline in rubber prices is a problem for farmers that must be faced by rubber farmers. The low price of rubber has resulted in a decrease in the income of rubber farmers. The strategy that can be applied by farmers to deal with low rubber prices is to increase the adoption of superior seeds when replanting old rubber, optimizing rubber plantations by modifying wide spacing so that they can plant intercropping throughout the year and increasing farmers' awareness of conducting organized marketing through UPPB so that the the price received by farmers will be higher.

### Recommendations

Government provides support to smallholder rubber plantations in the form of increased adoption of superior clones through a rubber plantation replanting program, oversee Minister of Agriculture Regulation No. 38/2008 concerning clean row rubber material, and make regulations and support marketing of rubber so that the price of rubber can be uniform both in terms of price, quality and time of sale.

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# An analysis of determinants of deposit money banks lending in Nigeria, 1990-2014

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**Abstract**
Deposit money banks thrives on financial intermediation. Funds lending constitutes the largest income-earning asset in the portfolio of most deposit money banks generally. Hence, banks deploy huge resources to estimate, monitor and manage the quality of their loans and advances. This study aims at investigating the determinants of lending of deposit money banks in Nigeria. Secondary data was used to justify the relationship between commercial banks and lending in Nigeria. More so, the model used was estimated using Nigeria deposit money banks loans and advances (LOA) as dependent variable, and determinants (independent variables) such as volume of deposit (Vd), Interest rate (Ir), liquidity ratio (Lr) and annual average exchange rate (ExR) for the period of 1990 - 2014 (25 years). The techniques used in this investigation were : Augmented Dickey-fuller (ADF) test), multiple regression analysis and Granger causality test. The estimated result revealed that there is a positive relationship between loans and advances and volume of deposit and annual average exchange rate of Naira to dollar, while interest rate and liquidity ratio has a negative relation: all conform to the approri expectation. The study then suggests that commercial banks should focus on mobilizing more deposits as this will enhance their lending performance, and should formulate critical, realistic and functional plans that will ensure its profitability, liquidity and solvency. The government should ensure it uses monetary policy such that will create enabling environment for the deposit money banks to generate more deposits so as to channel it to investors for investment.

***Keywords**: Determinants, Deposit money banks, Lending, Nigeria*

**JEL Classification**: G21

## INTRODUCTION

Right from the time of evolution of money in the human society, there has been those who possess money in excess of their immediate needs i.e. surplus spending units and those whose current possession cannot finance their economic activities i.e. the deficit spending units. The realization by the surplus spending units that their excess can be used beneficially to meet the shortfalls experienced by the deficit spending units led to the introduction of a credit system. This system was initially characterized by lenders (surplus spending units) and borrowers (deficit spending units) having to search out themselves and deal directly, i.e. direct financing (Akpam, 2009 as cited in Olusanya Oyebo Ohadabere 2012, Akpanko and Acha, 2010), while indirect financing includes the aggregation of deposits from various household, firms and government by commercial banks for lending to the deficit spending units.

The practice of lending by deposit money banks undoubtedly constitute the fulcrum of their operations and businesses, this implies that lending administration and management require considerable expertise and deftness on the part of the bank management teams. Basically, deposit money banks are normally irreversibly committed to compensate depositors on their funds (deposits). Therefore, they are under operational obligations to determine appropriate avenues where deposit funds could be placed to generate reasonable returns, while striving to maintain liquidity through proactive lending policies (Adedoyin and Sobodum, 1996).

Commercial banks are the most important savings, mobilization and financial resource allocation institutions. Consequently, these roles make them an important phenomenon in economic growth and development. In performing this role, it must be realized that banks have the potential, scope and prospects for mobilizing financial resources and allocating them to productive investments. Therefore, no matter the sources of the generation of income or the economic policies of the country, commercial banks would be interested in giving out loans and advances to their numerous customers bearing in mind, the three principles guiding their operations which are, profitability, liquidity and solvency.

However, commercial banks decisions to lend out loans are influenced by a lot of factors such as the prevailing interest rate, the volume of deposits, the level of their domestic and foreign investment, banks liquidity ratio, prestige and public recognition to mention a few.

Furthermore, commercial banks by its nature is highly prone to volatility and fragility, arising from exogenous shocks in the economy, policy measures by regulatory authorities and it is therefore, more often than not subjected to regulations and supervisions. The guidelines embrace statutory regulations that are imposed externally. One of such guidelines is the provision of Banks and other financial Institution Act (BOFIA) as amended which restricts the terms and amount of loan that a bank can grant to its insiders (Oloyede 1999).

The ability of commercial banks to ensure its liquidity and survival, will contribute towards promoting growth and development of the economy and this depends on their effective handling of lending operations. This requires that transactions on loan and advances are carried out with trust and confidence devoid of or at minimal lending risks. The required safe and sound bank lending practices involves taking into cognisance the regulatory requirements and the internationally entrenched factors affecting loan and advances (John, 1995).

Itune (1983) posited that a bank's ability to grant loans and advances is checked by the availability of cash in its vault. The demands by customers in terms of withdrawals from their deposits have to be met instantaneously. Commercial banks, therefore have to stock reasonable quantity of cash to meet customers' demands. Hence a commercial bank cannot afford to grant loan and advances in excess of its cashing ability, thus, the issue of liquidity in banking operations also affects the lending behaviour of commercial banks.

The main objective of this study is to investigate the main factors that influence lending of deposit money banks in the country i.e. to appraise the factors that determine lending of deposit money banks generally in the economy. By implication, this will aid the relevant regulatory authorities and policy makers in formulating appropriate policies that will enhance effective administration and management of loans, credits and other forms of lending by deposit money banks in the economy.

Banking activities majorly include the act of lending which is the fulcrum of deposit money banks. The world over, the operations of deposit money banks are regulated exogenously by supervisory authorities such as the apex bank, deposit insurance institutions and so on, and also endogenously by their boards of directors. Therefore, the lending activities of deposit money banks are regulated by both regulatory authorities and the board of directors of the various banks.

Consequently, it is obvious that some of the factors or determinants of lending by deposit money banks are subjected to the dictates of their directors, where control and manipulations are done within the organisations, whereas, the other determinants are outside their control, that is, exogenous to the banks.

While there are empirical studies on the determinants of lending of deposit money banks in the advanced economies, there has been only a few studies on lending of deposit money banks in developing economies such as Nigeria.

Nigeria being a mono-cultural economy that relies almost entirely on revenue generated from oil for its sustenance, and with the effort from the incumbent government to diversify into other areas, more specifically agriculture and mining, it is obvious that it does not have the financial muscle to do that all alone. Therefore, the deposit money banks will have to be engaged so as to avail loans and advances to investors in order that success is achieved.

However, as mentioned surpra, some factors can impede lending to the investors (e.g. volume of deposit, liquidity ratio, interest rate, exchange rate e.t.c.), as such the government will have to make effort towards proving enabling environment for the deposit money banks to thrive, and subsequently the economy at large.

## LITERATURE AND EMPIRICAL REVIEW

### Literature review

A lot of studies have been carried out in this area in an attempt to determining the factors responsible or that affect commercial bank lending within the Nigeria environment. Most studies divide the determinants of commercial banks lending into two (2) broad categories: Internal and External factors. The internal factors (endogenous) constitute: Profitability which is directly under the control of the bank management, and external factors which are not within the control of the bank management (exogenous factors) e.g. money supply, inflation, competition, regulations, market share, exchange rate e.t.c.

A lot has been written in terms of lending activities of various commercial banks. In the opinion of Nwanko (2000), “Credit constitute the largest simple income earning asset in the portfolio of most banks. This explains why banks spends enormous resources to estimate, monitor and manage credit quality.” This can be seen to be a great and critical factor to be considered in assessing the determining factors of banks lending in Nigeria as huge sums of money is involve.

Chodechai (2004), while digging deep into the factors that affect and influence interest rates, degree of lending volume and collateral setting in loans and advances decision stated that, “banks have to be careful with their pricing decisions as regard to lending as banks cannot charge loan rates that is too low, because the revenue from the interest income will not be able to cover the cost of deposits, general expenses and the loss of revenue from some borrowers that do not pay, and also, charging too high loan rates may also create an advance selection situation and moral hazard problems for the borrowers.”

According to Adedoyin and Sobodum (1991), “lending is undoubtedly the heart of banking business. Therefore, its administration requires considerable skills and dexterity on the part of the bank management.”

Osayaneh, (1996) further stated that “the major objective of commercial banks’ lending is to maximize profit”. Ojo, (1999), in his investigation of the role and failure of financial intermediation by banks in Nigeria revealed that “commercial banks can lend on medium and short-term basis without necessarily jeopardising their liquidity if they must contribute meaningfully to the economic development, and the maturity pattern of their loans should be on a long-term nature rather than of a short-term period.”

Chizea (1994), affirm that “there are certain aspects of fiscal and monetary policies which could affect the decision of the discerning and informed public to patronize the bank, and the lending function of commercial banks. Paramount amongst these measures is what could be called the interest rate disincentive.” It is obvious that as inflation increase, the purchasing power of money lodged in deposit account reduces to the extent that savers per force pay an inflation tax. There is also the fear that a hike in interest rate will increase inflation rates and make a negative impact on the rate of investment.

Usman (1999), in a treatise in bank regulation and supervision in Nigeria, posited that the factors that affect commercial banks’ lending depend on the choice of certain policy instruments in their banking operations. Such policies instruments (Usman, 1999) include a rigidly administered interest rate structure, direct credit, unremunerated reserve requirements and stabilizing liquidity control measures like the stabilization securities. Furthermore, Usman (1999), observed that “a major regulation affecting commercial banks’ lending in Nigeria is the restriction on the amount of interest banks are allowed to pay on deposits which in turn affects their efforts to attract reasonable volume of deposits, the interest they charge on their loans and advances and the liquidity ratio as fixed by the CBN.”

**Empirical review**

Felicia (2011), used regression analysis to investigate the determinants of commercial banks lending in Nigeria. The study discovered that commercial banks deposits have the greatest impacts on their lending.

Adofu and Audu (2010), used ordinary least square method to ascertain the assessment of the effects of interest rate deregulation in enhancing agricultural productivity in Nigeria. The study found out that interest rate play a significant role in enhancing economic activities.

Rasheed (2010), used error correction model (ECM) to investigate interest rates determination in Nigeria. The study found out that as the Nigerian financial sector integrates more with global markets, returns on foreign assets will play a significant role in the determination of domestic interest rates.

Achah (2011), probed into “the effect of banks financial intermediation in economic growth” in time frame of 1980-2008, adopting the Grandger causality test to ascertain the relationship that exist between savings mobilization and credit on one side, and economic growth on the other. Acha’s study could not identify any significant casual relationship between the variables.

Ajayi (2007) in his study investigated some major determinants of loan and advances in the Nigerian financial system. He used explanatory variables such as liquidity ratio, capital base, bank deposit and lending rates to determine their effect on loans and advances. The study discovered an existing relationship between dependent variable (bank loan and advances), and independent variables of total deposit, capital based, liquidity ratio and lending rate.

Therefore, this research work was conducted to appraise the determinants of deposit money banks lending in Nigeria, so that the government is able to create the enabling environment for the banks in order that it makes loans and advances accessible to investors in the country.

## HYPOTHESES

The main issues in this study were synthesized into the following hypotheses:

***Hypothesis 1***

**Ho:** There is no significant relationship between banks' loan and advances and volume of deposit in Nigeria.

**Hi:** There is a significant relationship between banks' loan and advances and volume of deposit in Nigeria.

***Hypothesis 2***

**Ho:** There is no significant relationship between banks' loans and advances, and interest rate in Nigeria.

**Hi:** There is a significant relationship between banks' loan and advances, and interest rate in Nigeria.

***Hypothesis 3***

**Ho:** There is no significant relationship between banks' loans and advances and liquidity ratio in Nigeria.

**Hi:** There is a significant relationship between banks' loan and advances and liquidity ratio in Nigeria.

***Hypothesis 4***

**Ho:** There is no significant relationship between banks' loans and advances and exchange rate in Nigeria.

**Hi:** There is a significant relationship between banks' loan and advances and exchange rate in Nigeria.

The methodology used to test the hypotheses mentioned above are: Augmented Dickey-Fuller unit root test which was used to ascertain the level of stationarity of the variables in question; Granger causality test to help identify if at all there is any causal relationship between the variables used, and finally, the ordinary least square test which was used to identify the type of relationship that exist between and among the variables.

## THEORITICAL FRAMEWORK

### Loan pricing theory

This theory has it that banks cannot always set high interest rates by trying to earn maximum interest income. Banks should consider the problems of adverse selection and moral hazard since it is very difficult to forecast the borrower type at the start of banking relationship (Stiglitz and Welss, 1981).

### Credit market theory

This is a model of the Neoclassical credit market, it has it that the terms of credit clear the market. If collateral and other restrictive (covenants) remain constant, the interest rate remains the only price mechanism. With an increasing demand for credit and a given customer supply, the interest rate rises and vice versa. It is thus belief that the higher the failure risk of the borrower, the higher the interest problem (Ewert, Szczesmy, and Schenk 2000).

### The signalling arguments

The signaling argument states that good companies should provide more collateral so that they can signal to the bank they are less-risky type of borrowers such that they are then charged lower interest rates. Meanwhile, the reverse signaling argument states that banks only require collateral and or covenants for relatively risky firms that also pay higher interest rates (Chodechai, 2004; Ewert and Schenk, 1998).

### Theory of multiple lending

This theory states that banks would be less inclined to share lending (loan syndication) in the presence of well-developed equity markets and after a process consolidation. Both outside equity and mergers and acquisitions increase banks' lending capacity, thus reducing their need of greater diversification and monitoring through share lending. (Carletle Cerasi, and Daltung 2006)

### Conceptual frame-work

Financial intermediaries are organisations that are inherently known with the function of financial intermediation: They mobilize funds or deposits from surplus spenders for lending to deficit spenders, mostly for investment purposes, which is expected to have a positive impact on the economic growth and development of a country. Business organizations can obtain the money or capital they need to buy capital goods and other things needed, such as machinery and equipment only if the necessary institutions, instruments and procedures have been established for making savings available for such investments (Ekezie 2006).

Generally, monetary policy also affects banks assets which arises because of their lending (loans) as well as banks' liabilities (deposits). The implication of operations of policy is that besides shifting the supply of deposits, it also shifts the supply of bank loans. For instance, an expansionary monetary policy that increase bank reserves and bank deposits increase the quantity of bank loans available. The crucial response of banks to monetary policy is their lending response.

## METHOD AND PROCEDURE

### Source of data

The sample analyzed in this paper consist of secondary data collected from 2014 statistical Bulletin of the central Bank of Nigeria (CBN) from the year 1990-2014, that is, a period of 25 years.

### Model specification

This analysis is to determine whether Vd, Lr, Ir and ExR have influence or affects the behaviour of deposit money banks in giving out loans and advances to the public or investors. Unit root test, multiple regression analysis, and Granger causality tests were employed.

LOA = f(Vd, Ir, Lr, ExR, U) ------------------------------------------------------ (1)

The explicit form of equation (i) above is shown as follows:

| | | |
|---|---|---|
| LOA | : | Loans and Advances |
| Vd | : | Volume of deposit |
| Ir | : | Interest rate |
| Lr | : | Liquidity ratio |
| ExR | : | Exchange rate |
| U | : | Disturbance term |

The model is thus formulated as:

$Y = b_0 + b_1 Vd + b_2 Ir + b_3 Lr + b_4 ExR + U$ ------------------------------------------- (2)

The approri expectation is Vd, ExR > 0 and Ir, Lr < 0

## RESULT AND DISCUSSION

The time series data used in this research work was obtained from the statistical bulletin of the Central Bank of Nigeria (CBN), Central Bank Annual Reports, publications, and National Bureau of Statistics (NBS) of Nigeria.

### Unit root test (ADF)

The result in Table 1 shows that Loans and advances (LOA) and interest rate (Ir) are stationary at first difference, that is, the variables are I(1) series, while Volume of deposits (Vd), Liquidity Ratio (Lr), Exchange rate (ExR) are stationary at levels meaning they are I(0) series. This is deducted from the fact that for the levels of variables, the absolute values of the ADF statistics are greater than the critical values of the ADF at 5% level of significance or their probabilities are all less than 5%.

**Table 1.** Augmented dickey-fuller (ADF) unit root test result

| Variables | ADF T- Statistics | Order of integration | Prob. |
|---|---|---|---|
| LOA | -3.811380 | I(1)** | 0.0123 |
| Vd | 3.887684 | I(0)* | 1.0000 |
| Ir | -6.601740 | I(1)* | 0.0001 |
| Lr | -3.509385 | I(0)** | 0.0201 |
| ExR | -5.333662 | I(0)* | 0.0005 |

*Note that **(*) denotes 5% and 1% levels of significance respectively.*

### Multiple regression test

The OLS is a method used to estimate the relationship between variables. Mason (1996) states that regression analysis is a technique for developing or modeling several variables into a linear equation, and later used for prediction or forecasting. It is used to determine the degree of association and the explanatory power of the independent variables on the dependent variable, and to determine the statistical significance of the coefficient of the variables. The choice of the OLS technique for the study is because of its Best Linear Unbiased Estimator (BLUE) properties (Gujarati, 2004).

The estimate of the model formulated is reported in Table 2. The result equally shows that there is direct (positive) relationship between deposit money banks' loans and advances and volume of deposit, that is, as the volume of deposit of commercial banks increases, it leads to an increase in loan and advances, at the same time as people realise the prospects of accessing such loans and advances, they equally increase their volume of deposit so as to be able to access it when needed and vice versa. Moreover, the coefficient of the parameter volume of deposit (Vd) is 0.633 and it indicates that 1% increase in Vd in commercial banks will lead to 0.633% increase in loans and advances (LOA). Moreover, the sign of Vd conform to our approri expectation and this shows that as Vd increases, commercial banks' LOA equally increase. Also, the t-statistics for parameter Vd shows that it is statistically significant at 5% level of significance.

Furthermore, it was discovered from the result that there is a negative or inverse relationship between commercial bank LOA and the lending rate (Ir), that is, as the Ir increase it leads to a decrease in commercial banks' LOA vice versa. However, the coefficient of Ir is -74.567 which goes to say that a 1% increase in Ir will lead to 74.567% decrease in LOA, moreover, the sign of Ir confirm with the approri expectation. Also, the t-statistics for parameter Ir shows that it is negatively statistically significant at 5% level of significance.

**Table 2.** Results of regression computation

Dependent Variable: LOA
Method : Least Squares
Sample : 1990 – 2014
Included observations: 25

| Variables | Coefficients | Standard Error | T-Statistics |
|---|---|---|---|
| C | 4352.056 | 3029.624 | 1.437 |
| Vd | 0.633 | 0.151 | 4.207 |
| Ir | -74.567 | 107.690 | -0.692 |
| Lr | -77.020 | 38.731 | -1.989 |
| ExR | 19.977 | 8.352 | 2.392 |

| | | |
|---|---|---|
| R-Square | : | 0.840 |
| Adjusted R-regression | : | 0.808 |
| S. E of regression | : | 1.588146 |
| F- Statistics | : | 26.185 |
| DW- Statistic | : | 2.266 |

T-table value 2.006 F-table value 2.87

More so, it was realized that there is an inverse relationship between deposit money banks LOA and liquidity ratio (Lr), that is, as the liquidity ratio increases, the deposit money banks LOA decreases vice versa. However, it can be seen that the coefficient of the parameter Lr is -77.020 which means that a 1%increase in Lr will lead to 77.020% decrease in deposit money banks LOA. Besides, the negative sign it carries conform to the approri expectation. Again that t-statistics for parameter Lr shows it is statistically insignificant.

Annual Average Exchange Rate (ExR) from table 2 above, has a positive and a direct relationship with commercial banks' LOA, that is, as ExR increase in favour of the naira, the deposit money banks LOA also rise, because people increasingly invest in export for profit, vice versa. Also the coefficient of the parameter ExR is 19.977% meaning that 1% increase in ExR leads to 19.977% increase in LOA of deposit money banks in Nigeria. Besides, the sign carried by the parameter estimate ExR (positive) conforms to the approri expectation. Also, the t-statistics of the parameters ExR shows that it is statistically significant at 5% level of significance.

Finally, the F-statistics shows that the overall parameters/model is statistically significant at 5% level of significance, and the R-square being 0.840 means that 84% variation in the dependent variable has been explained by the independent variables (Vd, Ir, Lr, ExR), while the remaining 16% are exogenously determined from the model.

Therefore, from our empirical results done thus far, we reject the null hypothesis ($H_o$) and accept the alternative hypothesis ($H_1$), and conclude that there is a functional relationship between the dependent variable (banks' loan and advances), and the specified number of independent variables (volume of deposit, interest rate, liquidity ratio and exchange rate) in Nigeria.

## Granger causality test

From the causality test result in Table 3, it revealed that there is a bi-directional causality running from Vd to LOA and LOA to Vd (i.e. Vd granger cause LOA, and LOA equally granger cause Vd), However, the result shows that there is no causal relationship between Ir and LOA. Again, we can see from the result that there is a uni-directional causality running from LOA to Lr (i.e. LOA granger cause Lr). Finally, the result shows that there is no causality relationship between LOA and ExR.

**Table 3.** Granger causality tests result
Sample: 1995 2014
Lags: 2

| Null Hypothesis: | Obs | F-Statistic | Prob. |
|---|---|---|---|
| VD does not Granger Cause LOA | 18 | 9.04846 | 0.0035 |
| LOA does not Granger Cause VD | | 17.4484 | 0.0002 |
| IR does not Granger Cause LOA | 18 | 0.42361 | 0.6634 |
| LOA does not Granger Cause Ir | | 0.89330 | 0.4330 |
| LR does not Granger Cause LOA | 18 | 1.44407 | 0.2714 |
| LOA does not Granger Cause Lr | | 16.0849 | 0.0003 |
| EXR does not Granger Cause LOA | 18 | 0.88741 | 0.4352 |
| LOA does not Granger Cause ExR | | 0.01356 | 0.9865 |

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

Commercial banks remain dominant in the banking system in terms of their shares of title assets and deposit liabilities. Their total loan and advances, a major component of total credits to the private sector are still on the increase in spite of the major constraints posted by the government regulations, institutional constraints and other macroeconomic factors. However, both government and commercial banks should be mindful of the fact that the environments in which they operate are important factors in the bank performance and behavior. Where the environment is conducive and supportive, performance is enhanced and good lending guaranteed, but where the environment is unstable and harsh, the bank's performance suffers.

The implication of this is that a change in the independent variables will have a great impact on banks' loans and advances with Vd and ExR having a positive or direct relationship with LOA, while Ir and Lr have a negative or inverse relationship with LOA of deposit money banks in Nigeria.

### Recommendation

Based on the findings of this study, it was recommended and considered important that deposit money banks in Nigeria build a system and skills in liquidity management, assets and liability management to ensure efficacy. There should be closer consultation and cooperation between commercial banks and the regulatory authorities, so that the effect of regulatory measures on commercial banks is taken into consideration at the state of policy formulation. The cost associated with lending to priority sectors as a national goal should be taken care of by the entire society through the government budget instead of burdening the commercial banks with such cost. This is necessary because the commercial banks cannot afford to overprice or under price their loans for efficient lending performance. Banks should try as much as possible to strike a balance in their loan pricing decisions, this will help them to be able to cover cost associated with lending and at the same time maintain good banking relationship with their borrowers. Commercial banks should strategise on how to attract and retain more deposits so as to further improve on their lending performance.

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# The effect of professional commitment and ethical consideration on the desire to do whistleblowing with locus of control as a moderating variable (study on the banking sector in Palembang)

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**Abstract**
This study aims to obtain empirical evidence regarding the effect of professional commitment and ethical considerations on the desire to conduct whistleblowing. This study also adds locus of control as a moderating variable that influences the relationship between professional commitment and ethical considerations. Respondents in this study were 53 internal auditors placed in the banking operational unit in Palembang and sampling by saturated sample method. The results of this study indicate: (1) The professional commitment of internal auditors has a positive effect on the desire to conduct whistleblowing, (2) Ethical considerations of internal auditors have a positive effect on the desire to conduct whistleblowing, 3) professional commitment of internal auditors moderated Locus of control does not affect desire do whistleblowing, and 4) ethical considerations of internal auditors moderated locus of control does not affect the desire to do whistleblowing.

***Keywords:*** *ethical considerations, locus of control, professional commitment, whistleblowing*

**JEL Classification**: G20, M42, M14

## INTRODUCTION

The need for the application of a business that not only prioritizes profit, but also people and planets that continue to increase. An organization is required to be able to improve the quality of financial reporting with ethical and effective internal controls. The internal control system (SPI) is needed by internal and external parties of the organization. Internal parties need SPI to prevent irregularities, while external parties, especially external auditors, require SPI in carrying out audits.

Management is the party responsible for designing and implementing SPI. However, the complexity of the organization's operational activities makes management need a new function / department called internal audit. Internal audit is an independent assessment function formed within the company to examine and evaluate its activities as services provided to companies (Sawyers, 2005).

The internal audit function is an integral part of internal control. Through effective internal control, organizational and financial goals can be achieved. Therefore, a system is needed to convey wrongdoing, even fraud that occurs within the organization. Based on the results of a survey conducted by the Association of Certified Fraud Examiners (ACFE) in 2016 categorizing cases of fraud / fraud based on the banking and financial services industry, government and public administration, and manufacturing is the sector most represented in cases of fraud / fraud (fraud ) Being a whistle-blower is not an easy matter. Someone who comes from an internal organization will generally face an ethical dilemma in deciding whether to "blow the whistle" or keep it hidden.

Internal factors and external factors influence the actions of individuals to conduct information providers. Internal auditors, especially in matters of internal control, work to provide added value to the organization. Internal auditors are professions that play an important role in a company. The internal auditor acts as an independent appraiser to verify the company's activities by measuring and evaluating the adequacy of controls and the efficiency of the company's activities. Therefore, internal auditors are very useful for managers to improve company performance and achieve company goals. Similarly, if it is about disclosure of information, the first auditor is expected to be the first party to determine whether there is a red flag that is unethical or fraudulent.

The study was carried out at the same scope by Taylor and Curtis (2010) on bigfour external supervisors in the United States, based on the concept of the theory of impact at work. In this different analysis, Taylor and Curtis have determined that professional identity (professional commitment), commitment and moral intensity have a significant impact on intention to learn, and that accountability and continuity of reporting are assessed.

Chiu (2003) conducted a study of MBA students who worked as executives and professionals in China and examined their intentions to control the impact of ethical considerations and establish moderate locus of control. Chiu found that people tend to falter when they think this is the right thing. Individuals with internal locus of control will act when they see violations and commit to enlightenment, but people with external locus of control will not sue because they feel that it is not the responsibility itself. Based on the background described, the author raises title, "The effect of professional commitment and ethical consideration on the desire to do whistleblowing with locus of control as a moderating variable (in Banking Sector in Palembang)".

## LITERATURE REVIEW AND HYPOTHESIS

### Attribution theory

The behavior of each individual is of course based on various reasons or motives underlying the emergence of these behaviors. Some explanations for reasons or reasons are explained using quote theory (Gibson et al., 1996). This theory explains how to evaluate human behavior both internally and externally (Robbins and Judge, 2008).

### Theory of planned behavior

Theory of Planned Behavior (TPB) is a theory that explains whistleblowing intentions, in this case the actions taken are based on very complex psychological processes (Gundlach et al., 2003).

### Effect of professional commitment on the desire to do whistleblowing

Professional commitment is defined as the strength or strength of identity and participation in an organization or work. Professional commitment is the love and loyalty of a person to his profession (Aranya, 1981). Kaplan and Whitecotton (2001) found a positive relationship between professional involvement and auditor demand for inquiry; Accountants with high professional commitment are more likely to provide information. In line with the fact that Smith and Hall (2008) and (Joneta, 2016) have a significant impact on professional commitment and the desire to whistle. Similarly, (Nugraha, 2017) states that professional commitment affects the desire to create awareness. Taylor and Curtis (2010) found a positive relationship between professional commitment (CA auditor) and unprecedented predictive probability. Auditors because of professional dedication, you can determine the fraud that occurs in the company.

Professional commitment is related to the desire to create a bulletin, there are signs that auditors who are more vulnerable to the profession are more likely to raise awareness. This result is ideal because high professional commitment must encourage auditors to act in accordance with their responsibilities. Thus, the hypothesis can be formulated as follows:

$H_1$ : Professional commitment of internal auditors influences the desire to do whistleblowing.

**Effect of ethical considerations on the desire to do whistleblowing**

In (Chiu, 2003) In addition to professional commitment, ethical considerations are a factor that someone will do whistleblowing, namely by finding a positive relationship between ethical considerations and the desire to conduct whistleblowing. This research is in line with Taylor and Curtis (2010). Likewise in (S. Ahmad, Smith, Ismail, Ahmad, and Smith, 2012) towards auditors in Malaysia, that ethical considerations have a positive and significant relationship to internal whistleblowing.

So it can be concluded that someone with high ethical considerations will disclose fraud so that the hypothesis can be formulated as follows:

$H_2$: Ethical considerations of internal auditors influence the desire to do whistleblowing.

**The influence of locus of control in moderating professional commitment to the desire to do whistleblowing**

According to Lord and DeZoort (2011) auditors with high professional commitment will behave in harmony with the public interest and will not damage their professionalism. Likewise (Wawo et al., 2015) in his research states that professional commitment can moderate the influence of experience on auditor ethical considerations in making decisions. According to (Nasution and Östermark, 2012), professional commitment is one factor that has the potential to influence auditor behavior in determining ethical considerations.

In (Purwantini, Waharini, and Anisa, 2017) states that the higher the level of self efficacy associated with the internal locus of control of employees, the intention to report fraud in the company will increase. With the interaction between professional commitment and Locus of control, the auditor is expected to be able to make decisions about his desire to conduct whistleblowing. So the hypothesis can be formulated as follows:

$H_3$ : Locus of control moderates the professional auditor's internal commitment to the desire to do whistleblowing.

**Effect of locus of control in moderating ethical considerations towards the desire to do whistleblowing**

Locus of control is one of the individual variables that can be used to estimate behavior or actions carried out by someone. As an argument, (Nasution and Östermark, 2012) states that Locus of Control influences auditor decisions. Another study (Dali et al., 2017) states that the Chamber of Control and Organizational Culture has a positive and significant effect on auditors when making ethical decisions simultaneously. Jalil (2012) states that auditors with independent and ethical locus of control. Therefore, if someone is connected with his profession and has an internal locus of control, he has more intention to enlighten (Taylor and Curtis, 2010).

Ethical problems that are controlled by locus of control can affect the willingness of internal auditors to practice together. Individuals with internal locus of control are more consistent between moral judgment and moral action, and evaluation of actions that disclose information is ethical. Thus, the hypothesis can be formulated as follows:

$H_4$ : Locus of control moderates the Ethical Considerations of internal auditors towards the desire to do whistleblowing.

## RESEARCH METHODS

The population in this study is that all internal auditors working in the operational work units of banks that have a network in Palembang consisting of 50 banks, the position of January 2018 there are 53 internal audits in 23 branches in 16 types of banks. The sampling technique in this study is saturated samples. The data collection technique is using primary data with questionnaires. The number of questionnaire distributions based on the number of Banks in Palembang that accept to be respondents is that there are 16 banks, each of which is distributed as many as the number of internal auditors placed in the work unit.

The method of data analysis used is multiple linear regression and moderate regression analysis. Measurement the desire to conduct whistleblowing in this study was measured using a scenario developed by Sagara (2013). Professional commitment variables were measured using the Allen and Meyer (1991) questionnaire with 20 questions. The ethical considerations variable in this study using a scenario from Aai (2013). The locus of control variable is measured using an instrument developed by Spector (1988).

The testing model used to test the hypothesis in this study also uses multiple regression analysis and moderation regression analysis. The equations used are as follows:

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e}$$

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_1 X_3 + \beta_5 X_2 X_3 + e}$$

Information:

| | |
|---|---|
| $Y$ | = The desire to do Whistleblowing |
| $\alpha$ | = Constants |
| $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$, $\beta_5$ | = Regression Coefficient |
| $X_1$ | = Professional Commitment |
| $X_2$ | = Ethical Considerations |
| $X_3$ | = Locus of Control |
| $e$ | = Error |

## RESULTS AND DISCUSSION

All questionnaires distributed were 53 questionnaires. Questionnaires returned were 53 questionnaires (100%), questionnaires that could be processed were 52 questionnaires (98.12%), and 1 questionnaire (1.88%) could not be processed because the answer was incomplete. The profile of all respondents based on the type of bank where the respondent works is dominated by Private Banks, which are 27 respondents (51%), while from BUMN Banks there are 15 respondents (28%) and the last from BUMD Banks have the lowest percentage of 11 respondents (21%) .

.***Validity test.*** Obtained results that $r_{table}$ value of 0.2732 and $r_{count} > r_{table}$ so that all questions for the variable desire to do whistleblowing, professional commitment, ethical consideration and locus of control can be said to be valid.

***Reliability test results.*** The results of the calculation of the reliability correlation coefficient for each study variable using the Cronbach Alpha method show the cronbach's alpha value for each variable above 0.6. Thus it can be said that all the research variables are close to one so it is declared reliable and can be used as a research instrument.

***Classical assumption test results.*** From the results of the calculation of the regression model this study fulfills the assumptions of normality, is free from multicollinearity, and does not occur heterocedasticity.

## Analysis of multiple linear regression

The estimation on the influence of professional commitment and ethical considerations on desire to do whistleblowing are shown in Table 1.

**Table 1.** Results of Multiple Linear Regression Analysis

| Model | Unstandardized Coefficients | | T | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | .327 | .749 | .436 | .665 |
| Professional Commitment | .099 | .022 | 4.412 | .000 |
| Ethical Considerations | .317 | .070 | 4.512 | .000 |

*a. Dependent Variable: whistleblowing*

$$\mathbf{Y = 0{,}327 + 0{,}099\ X_1 + 0{,}317\ X_2}$$

## Moderate Regression Analysis

The estimation on the influence of professional commitment, ethical considerations, locus of control, moderation1 variables (professional commitment x locus of control) and moderation2 (ethical consideration x locus of control) on desire to do whistleblowing are shown in Table 2.

**Table 2.** Results of moderation regression analysis

| Model | Unstandardized Coefficients | | T | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | -11.719 | 5.704 | -2.054 | .046 |
| Professional Commitment | -.128 | .192 | -.664 | .510 |
| Ethical Considerations | 1.523 | .599 | 2.543 | .014 |
| Locus of control | .247 | .118 | 2.083 | .043 |
| Moderation1 | .005 | .004 | 1.163 | .251 |
| Moderation2 | -.024 | .012 | -2.018 | .049 |

*a. Dependent Variable: whistleblowing*

$$\mathbf{Y = -11.719 - 0.128\ X_1 + 1.523X_2 + 0.247X_3 + 0.005\ X_1{*}\ X_3 - 0.024\ X_2{*}\ X_3}$$

It is known that $F_{table}$ is 2.79 and the value of $\alpha = 0.05$, which is $0.00 < \alpha = 0.05$, then the hypothesis is accepted. This can be said that the variables of professional commitment and ethical considerations of internal auditors have a significant effect on the variable desire to do whistleblowing (Table 3).

**Table 3.** F test results

| Model | | F | Sig. |
|---|---|---|---|
| 1 | Regression | 144.751 | .000[b] |

*a. Dependent Variable: whistleblowing*

## Coefficient of Determination ($R^2$ Test)

The coefficient of determination shows the percentage of the variation in the value of the independent variable that can be explained by the regression equation produced. The coefficient of determination is as follows:

**Table 4.** Second determination coefficient test results

| Model | R | R Square | Adjusted R Square |
|---|---|---|---|
| 1 | .936[a] | .877 | .864 |

*a. Predictors: (Constant), Moderasi2, Locus of control, Professional Commitment, Ethical Considerations, Moderation1*

Based on the calculation of the value of determination coefficient obtained the adjusted $R^2$ is 0.864 or 86.4%. This means that the ability of professional commitment variables, ethical considerations and locus of control (moderating variables) to desire whistleblowing is 86.4% while the remaining 13.6% is explained by other variables not observed in this study.

**The effect of professional commitment on the desire to do whistleblowing with locus of control as a moderating variable**

Based on the results of data processing can be seen the influence of locus of control to moderate the relationship between professional commitment of internal auditors in realizing the desire to do a whistleblowing as follows:

**Table 5.** The results of moderating $X_3$ with $X_1$

| Model | Unstandardized Coefficients | | T | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | -10.136 | 6.900 | -1.469 | .148 |
| Professional Commitment | .338 | .097 | 3.504 | .001 |
| Locus of control | .233 | .143 | 1.630 | .110 |
| Moderation1 | -.003 | .002 | -1.581 | .120 |

*a. Dependent Variable: whistleblowing*

Based on Table 5 the results of the analysis of Moderated Regression Analysis (MRA), the moderating variable is the interaction between the professional commitment of internal auditors with locus of control ($X_3$ * $X_1$). The output results above show that the value of $t_{count}$ is known for the professional commitment variable ($X_1$) which is moderated by Locus of control ($X_3$) of -1.581 and the value of sig. 0.120> $\alpha = 0.05$, this means that the moderating variable ($X_3$ * $X_1$) is not significant at the 5% level so this study cannot accept $H_3$.

**The effect of ethical considerations on the desire to do whistleblowing with locus of control as a moderating variable**

Based on the results of data processing can be seen the influence of locus of control to moderate the relationship between ethical considerations of internal auditors in realizing the desire to do a whistleblowing as follows:

**Table 6.** The results of moderating $X_3$ with $X_2$

| Model | Unstandardized Coefficients | | T | Sig. |
|---|---|---|---|---|
| | B | Std. Error | | |
| (Constant) | -14.483 | 6.524 | -2.220 | .031 |
| Ethical Considerations | 1.247 | .289 | 4.324 | .000 |
| Locus of control | .326 | .135 | 2.418 | .019 |
| Moderation2 | -.014 | .006 | -2.274 | .027 |

*a. Dependent Variable: whistleblowing*

Based on the results of the analysis of Moderated Regression Analysis (MRA) in Table 6, the moderating variable is the interaction between ethical considerations of internal auditors with locus of control ($X_3$ * $X_2$). The output results above show that it is known that the $t_{count}$ for ethical consideration variables ($X_2$) which is moderated by Locus of control ($X_3$) is -2.274 and sig. 0.120 <$\alpha = 0.05$, this means that the moderating variable ($X_3$ * $X_2$) is significant at the 5% level so that this study can accept $H_4$.

**The influence of the internal auditor's professional commitment to the desire to do whistleblowing**

From the results of testing the first hypothesis the research proves that the professional commitment variable is significantly positive affecting the variable desire to do whistleblowing. Can be seen in table 1 that $t_{count}$ (4.412) > $t_{table}$ (2.011) with a significant value of 0 (zero) with an error rate of $\alpha = 0.05$. It can also be proven that the regression coefficient (Beta) of 0.474 shows that the direction of influence is positive, namely the higher the professional commitment of the internal auditor, the higher the desire to do whistleblowing.

**Effect of ethical considerations on internal auditors on the desire to conduct whistleblowing**

Based on table 1, it can be seen that $t_{count}$ (4.512) > $t_{table}$ (2.011) with a significant value of 0 (zero) with an error rate of $\alpha = 0.05$. From the results of the test it can be concluded that $H_2$ is accepted, namely there is an influence of ethical considerations on the desire to do whistleblowing. In addition, the test results show that the Beta value is 0.485, this indicates that the direction of influence is positive, namely the higher ethical considerations held by internal auditors, the higher the desire to do whistleblowing.

**The effect of the professional commitment of internal auditors on the desire to conduct whistleblowing which is moderated by locus of control**

Based on table 5, it can be seen that $t_{count}$ (1.581) < $t_{table}$ (2.011) with a significant value of 0.120> $\alpha = 0.05$ with a level of error (alpha) 0,05. From the test results it can be concluded that $H_3$ is rejected, namely the Locus of control variable does not moderate the relationship between professional commitment and the desire to do whistleblowing.

**The effect of ethical considerations of internal auditors on the desire to conduct whistleblowing which is moderated by locus of control**

Based on table 6 it can be seen that $t_{count}$ (2.274) > $t_{table}$ (2.011) with a significant value of 0.027 <$\alpha = 0.05$ with an error rate (alpha) of 0.05. From the test results it can be concluded that $H_4$ is accepted, that is, Locus of control variable moderates the relationship between ethical considerations and the desire to do whistleblowing.

## CONCLUSSIONS AND RECOMMENDATIONS

### Conclusions

There are some conclusions from the discussion above, the first conclusion is professional commitment has a positive effect on the desire to do whistleblowing, the second conclusion is ethical considerations have a positive effect on the desire to do whistleblowing, the third conclusion is locus of control does not moderate the relationship of professional commitment to the desire to do whistleblowing, and the fourth conclusion is locus of control moderates the relationship of ethical considerations towards the desire to do whistleblowing.

### Recommendations

This study only takes the independent variable professional commitment ethical consideration variable, and locus of control so that it only limits the influence on the desire to do whistleblowing. Therefore, it needs to be developed again for further research by entering other variables which affects the desire to do whistleblowing, so that it gets better results.

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# Coffee development strategy in the surrounding areas of Kerinci Seblat National Park (case study of Lempur Village)

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**Abstract**
This study aimed to analyze the coffee development strategy in the surrounding areas of Kerinci Seblat National Park (KSNP). The study was conducted in Lempur Village, as one of the villages bordering KSNP. Primary data was obtained from coffee farmers and secondary data was obtained from relevant agencies. SWOT analysis was used and the data were analyzed descriptively. The study found that the main strategy in the development of coffee in Lempur Village was the expansion of the coffee marketing area. In addition to that, other strategies are needed, such as giving information about branding and guidance for independent export, promotion both through print, electronic, and social media, using better quality coffee seeds, optimizing the use of information technology to support marketing, maximizing the empowerment of farmer institutions, optimizing coffee farming management and providing training in product innovation and diversification to increase value added in production.

***Keywords:*** *branding, coffee, diversification, farmer*

**JEL Classification:** Q12, Q13, Q18

## INTRODUCTION

Kerinci is one of the regencies in Jambi Province which has the potential for the development of agricultural commodities. Various agricultural and plantation commodities are existed in this area, from vegetables such as red chili, cabbage, potatoes to plantation crops such as Cassiavera, tea, sugar cane, and coffee. Initially, Cassiavera was the main commodity, however, as time goes by this commodity has rarely been cultivated. Today farmers in Kerinci began to switch from Cassiavera to coffee.

Arabica coffee is the type of coffee that is widely planted. Coffee production in Kerinci reached 40 tons per month. It still has not been able to meet the demand for coffee from abroad, which reaches 5,000 tons per month. It means that there is a great opportunity for coffee farmers to increase their area and coffee production.

Nevertheless, Kerinci has limited land area to develop agricultural commodities, especially coffee. This is because most of Kerinci area has been claimed to be the Kerinci Seblat National Park (KSNP) area. Only 49.63 percent (189,027.7 ha) of the total area of Kerinci can be used as agricultural land.

Lempur is one of the villages in Kerinci regency that relies on coffee as one of its main commodities. It is located in the foothills of Gunung Raya and is a buffer zone for the KSNP (Kerinci Seblat National Park). As an area in KSNP, the selection of plantation commodities is important. The commodity must be adjusted so as not to damage the KSNP land. Even so, the land for coffee plantation is currently limited while demand for coffee exports continues to increase. It becomes a difficult choice for the community to increase land area without damaging the KSNP.

As an area in the TNKS region the selection of plantation commodities is important. Planting plantation commodities must be adjusted so as not to damage the KSNP land. Even so, coffee plantation land is currently limited while demand for coffee exports continues to increase making it a difficult choice for the community to increase land area without damaging the KSNP.

Coffee demand continues to increase and it is accompanied by an increase in selling prince of coffee. It encourages farmers to try increasing production from their own area. Based on this, the main objective of the study was to analyze the coffee development strategy in the surrounding area of Kerinci Seblat National Park (KSNP).

## RESEARCH METHODS

This research was conducted in Lempur village, Gunung Raya district, Kerinci, Jambi Province. It used primary data and secondary data. Primary data is related to the social conditions of coffee farmers including education level of farmer, education level of their children, dependency burden of family, working hours, and income of coffee farmers. Primary data was obtained directly from observation and interviews with farmers in the production center area.

Secondary data is related to the development of area for coffee, coffee production, and number of coffee farmers. Secondary data was obtained from several publications such as Kerinci Dalam Angka, Plantation Statistics of Jambi Province, Central Bureau of Statistics of Kerinci Regency, and Kerinci Plantation Agency.

Data were analyzed descriptively to describe the socio-economic conditions of coffee farmers. SWOT analysis was done to the development strategies of coffee. The SWOT matrix describes opportunities and threats from external factors that can be adjusted to the strengths and weaknesses by SWOT. Through SWOT analysis, strategic planning can be prepared to evaluate strengths, weaknesses, opportunities, and threats in a project or a business speculation (Freddy, 2014).

## RESULTS AND DISCUSSION

### Socio-economic conditions of coffee farmers

The majority of coffee farmers have high school diploma. Of the total farmers, 57.14% were graduated from high school, 20.00% were graduated from junior high school, and 11.43% had undergraduate education. The relatively high level of education makes it easier for farmers to exchange experiences with fellow farmers and get more input for better farming techniques and methods.

About one third (37.14%) of coffee farmers have relatively small dependency burden (less than 4 people) and around two-thirds (62.86%) have large dependency burden (4 or more people). Coffee farmers have a lot of burden because there are dependent children who have not been married. While coffee farmers have a little burden because their children are adults and already married.

The working hours of coffee farmers are short. About 87.14% of farmers only work 5-6 hours per day. With short working hours, coffee farmers can do side jobs. While waiting for the harvest, farmers look for side jobs. Income from these side jobs is used to fulfill daily needs.

The income of coffee farmer is calculated per number of harvest, in the period of 6 months. Coffee harvesting cannot be done simultaneously. Most farmers collect the harvest for few months, and then mill it to separate the skin and coffee beans at one time. The peeled coffee beans are sold at Rp. 22,000/kg.

88.57 percent of coffee farmers earn Rp. 45,000,000 or more, per harvest, while the remaining (11.43 percent) earn less than Rp. 45,000,000 per harvest. Coffee farmers use the income from coffee plantations for household use, buy luxury goods such as vehicles or build/renovate homes. The high income of farmers from coffee plantations has also increased farmers' interest in sending their children to college or university with the aim of improving family social status.

**Coffee development strategy in Lempur village**

In an effort to develop agribusiness of coffee, besides subsystems that support agribusiness, there are other factors that must also be considered. These factors include the availability of land, human resources as labors, the presence of local, regional, and international markets, local government support, and the availability of other supporting institutions (Hariance, et al., 2016). In this regard, various aspects of coffee development strategy in Lempur village are given as follows:

***Cultivation aspect***

The cultivation is the most important and most prioritized aspect to be carried out in the farming development strategy. Farming is defined as a collection of natural resources in an area that is needed to carry out agricultural production activities such as soil and water, repairs on land (e.g. weeding and fertilizing), and buildings above land and water (Mosher in Dervish, 2017).

The low productivity of coffee is due to 95 percent of coffee plantation in Indonesia being smallholder plantations, which generally don't use superior or high quality coffee seeds, simple cultivation techniques, slow rejuvenation of plants, and lack of supporting facilities and infrastructure (Nalurita, et al., 2014). In cultivation, there are three alternatives which are used as references in developing coffee farming, including counseling, revitalization of coffee land and aid of superior/high quality seeds, training in proper coffee cultivation techniques, assistance on production facilities in the right time, increased use of organic fertilizers and botanical pesticides.

The strategy that became the main priority is to improve the quality and production of coffee. Through proper cultivation, the output will have high added value. Training in coffee cultivation techniques that refers to export standards will produce higher quality of coffee. This strategy can be carried out through cultivation training, to improve and update people's knowledge about coffee cultivation.

The large number of land transfers of perennial crops to annual crops can reduce coffee production. Therefore, counseling is needed to build awareness of the importance of land as the main capital in the agricultural sector. It is also necessary to have counseling of good land management and choosing superior/high quality seeds to produce better quality output.

Aid for agricultural production facilities is a support for agricultural cultivation, such as fertilizers, seeds, equipment and other supporting tools. Assistance provided by the government includes subsidized fertilizers, seeds, and some agricultural equipment. Punctuality in distribution is very important. The distribution of fertilizers must be done when the fertilization period arrives, modern equipment must be given when the farmer is ready to use and manage it.

***Marketing***

Marketing is an important aspect in the development of coffee farming. The community has not been able to market its products optimally, due to the emergence of various internal and external constraints that hinder the process of coffee marketing directly or indirectly (Suwali, et al., 2013). Constraints that arise include the marketing area of coffee (the majority of which are still in the scale of local market), the conventional management of coffee from harvest to post-harvest, less effective management of coffee in terms of processing, packaging, and storage. In the marketing aspect, there are three alternatives. Those are including counseling/training of branding and guidance for independent exports, creating market opportunities that benefit farmers, and promoting the products widely.

Creating market opportunities that benefit farmers is the government aid to oversee the marketing process carried out by coffee farmers. Providing training and counseling is done to discuss about how to get an opportunity in the market that doesn't make farmers in loss, so they get information in terms of prices, the amount of demand for coffee, and the quality needed by the market. Promoting widelt is one of the strategies in marketing. Proof of the success in promotion is the recognition of coffee products in regional, national, and international levels, and also the ease of business access. Promotion is an important thing because it can be the beginning of open and easy access to business. Promotion can also be the strength in protecting brand rights for a product.

***Post-harvest handling***

Coffee becomes a commodity that is much sought after and continues to be developed. It is expected that farmers can maintain and improve the quality and quantity of coffee in order to remain a distinctive characteristic. According to Mayrowani (2013), the quality of coffee beans is expected to be in accordance with national standard of Indonesia, namely accommodating the principle of good and proper handling of post-harvest coffee beans (Good Handling Practices – GHP).

The development of technology requires farmers to play an important role and accept change, so that the commodities have competitiveness with similar products on the market. The criteria for post-harvest handling have several alternatives; those are growing awareness of proper post-harvest handling and handling assistance, training in innovation and diversification of coffee processing.

Post-harvest handling is very important after harvesting. Because of its importance, guidance to increase farmers' awareness for proper post-harvest handling is necessary. There are two types of processed coffee, i.e. wet processed coffee and dry processed coffee. The difference between two lies in its drying process. Dry processed coffee is done with wet coffee dried in the sun until it is completely dry, while wet processed coffee is done with a wet milled tool thn soaked in water repeatedly and then dried. Of the two types of processed coffee, the best one is the wet processed coffee. That is because the water content and quality of the seed can be controlled well. The processing also affected the taste and aroma of ground coffee.

Training in innovation and diversification of processed coffee is aimed to get added value of processed coffee and its cultivation. In addition to that, innovations in processed coffee can also be done with training in proper brewing of coffee (as drinks) to produce a stronger and better taste and aroma.

***Institutions***

Pratiwi (2016) argued that the important empowerment of farmer institutions is in the form of developing partnerships and business capital assistance. Assistance from the government and the private sector is needed in supporting and facilitating farmer partnership activities to increase cooperation partners in business networks. In this aspect, there are three alternatives. Those are counseling to strengthen the effectiveness of coordination between farmer institutions, capital assistance for institutions, and empowering farmer institutions to form partnerships.

Counseling to strengthen the effectiveness of coordination between farmer institutions becomes an option to facilitate the government to supervise and coordinate. Related to the capital assistance for institutions, the business problems commonly felt by farmers are a lack of capital and land. To increase farming, it is necessary to provide capital assistance that can be done through farmer groups. Besides improving their farming, farmers can also practice to manage their own group's finances and being responsible to it. However, there are difficulties for farmers to get capital assistance. It is because they only rely on their annual crops which has uncertain selling price and various conditions that are difficult to fulfill by them.

***Policy***

There are two alternatives related to the policy, namely the adoption of regulations on price protection and coffee trading system, and on the strengthening of coffee branding. Problem often experienced by farmers is the long marketing chain. The government should be able to formulate policies that benefit farmers in terms of marketing of crops and legal protection. Related to this, Ministry of Trade has issed Permendag No. 10/M-DAG/PER/5/2011 as amendment to Ministry of Trade Regulation No. 41/M-DAG/PER/9/2009 concerning Provisions on Coffee Exports (Sudjarmoko, 2013) with the principle of revoking provisions on payment of exporters' fees and providing convenience in reporting on export. Ministry of Agriculture in collaboration with Ministry of Trade and the International Coffee Organization (ICO) technical team has also established Indonesian national standards (SNI) and facilitated the implementation of Warehouse Receipts at the coffee production center.

The trade system that will be determinded should be able to benefit all parties involved so that no one in a disadvantage. With the adoption of regulations on price protection and coffee trading, it is hoped that it can provide a sense of security, profitability, and transparency of coffee trading. Furthermore, the adoption of regulations for strengthening coffee branding could be in the form of patent right on a product.

**Impact of the development of coffee plantation on the land of KSNP in Lempur Area**

The development of coffee, today, is very rapid. The demand from within the country and from abroad for coffee continue to increase every year, and even predicted to increase along with the increase in coffee consumers. With sucha a rapid market growth, it will encourage various parties, especially coffee farmers, to clear land to expand coffee plantation area and increase productivity in various ways even though it isn't environmentally friendly. It is seen by the presence of forest clearing, land conversion, and the use of chemicals such as the use of chemical fertilizers and pesticides. Although Lempur is the border of Kerinci Seblat National Park (KSNP) which has an area of 1,386,000 hectares, it doesn't make the farmers clear KSNP forest to plant coffee. People plant coffee in areas outside KSNP. If they plant in KSNP area, they will have difficulty on transport because there is no road. Maryanti (2018) argued that the farmers are aware of the importance of maintaining the KSNP area.

## CONCLUSION AND RECOMMENDATION

### Conclusion

The main strategy in developing coffee in Lempur village is the expansion of the coffee marketing area. In addition to that, other strategies are needed, such as giving information about branding and guidance for independent export, promotion both through print, electronic, and social media, using better quality coffee seeds, optimizing the use of information technology to support marketing, maximizing the empowerment of farmer institutions, optimizing coffee farming management and providing training in product innovation and diversification to increase value added in production.

### Recommendation

In implementing coffee development strategy, active role of all parties is needed so that the objective of increasing land productivity, product quality and farmer welfare can be realized. Also it is necessary to pay attention to environmental aspects, especially those related to the existence of KSNP which borders on coffee plantations of community.

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