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Working Capital Strategy and Operation Risk in the Food and Beverage Companies Listed in the Indonesia Stock Exchange

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Abstract

The purpose of this study is to investigate the effect of working capital investment and working capital financing on the operational risk of nine listed firms in the agricultural sector of the Indonesian Stock Exchange. The time period used is 12 years from 2008 - 2019. The operational risk variable is the deviation absolute value of ROA, ROE, Sales and Cost of Goods Sold. The independent variable is working capital investment strategy (WCIS) and Working Capital Financing Policy (WCFS). For control variables using debt ratio, size, age and current ratio variables. The analysis technique used is OLS regression. The results obtained by shows that shows that (1) WCIP have a negative and significant impact on the risk of ROA and ROE, (2) WCIP has a positive and significant effect on the risk of sales and CGS, (3) WCFP has a positive and significant impact on the risk of ROA and ROE, however, (4) WCFP has a negative and significant effect on the risk of sales and CGS. Debt ratio only has a positive effect on ROE risk. Company asset size has a positive and significant effect on Sales and CGS. Company age has a positive and significant effect on ROE risk. The current ratio variable has a positive effect on ROE risk and has a negative effect on the risk of sales and CGS.

Keywords: working capital, operation risk, food and beverage firm, Indonesia

1. Introduction

The management of sources and use of funds in the company can be grouped into 2 parts, namely management of short-term sources and uses of funds and management of long-term sources and uses. Management of short-term sources and uses of funds includes short-term sources such as elements in current liabilities and short-term uses includes elements in current assets. Management of sources and use of short-term funds is also known as working capital management. Working capital is part of the source and use of short-term funds (Bhunja, 2010).

This working capital is very important for the company, because this working capital element is related to the company's day-to-day activities. Therefore, working capital needs to be managed properly. According to (Appuhami, 2008) good working capital management will be able to bring companies to have the ability to compete in the market because they have a good competitive advantage (Boisjolya, Conine Jr, & McDonald IV, 2020).

Conversely, if working capital is managed in a bad way, it will become a major source of company bankruptcy (Dwommor & Nasiru, 2017), it is also reported by (Largay & Stickney, 1980) that the bankruptcy that occurred at WT Grant, a department store with a chain worldwide due to deficits in cash flow from operations that occurred in 8 out of 10 years of company operations.

Many studies have been conducted which explain that the working capital strategy used has an effect on profitability (Setianto & Pratiwi, 2019). Investing in a lot of working capital will cause low profitability or in other words, investing in large working capital is inversely proportional to profitability or has a negative relationship with profitability. However, there

are also studies that produce contradictory research such as that conducted by (Setianto & Pratiwi, 2019) which found working capital has a positive influence on profitability or the greater the working capital, the greater the profitability.

In Figure 1 below, there are observations of 3 companies in the agriculture sector, namely companies with the code TBLA, SMRA, and AALI. The blue line is a development of the comparison of current assets to total assets and the red line is the ratio of net income to total sales for 20 years (2000 - 2019). The three companies for 20 years have had a current asset ratio with total assets below 50 percent, but for TBLA and SMAR the growth graph is relatively stable and increasing, while for AALI it tends to decline. However, in terms of net income, only TBLA companies have a positive net income between 0 - 10%, while SMAR, although still positive, tends to decline, while AALI has a net income that tends to fluctuate downwards.

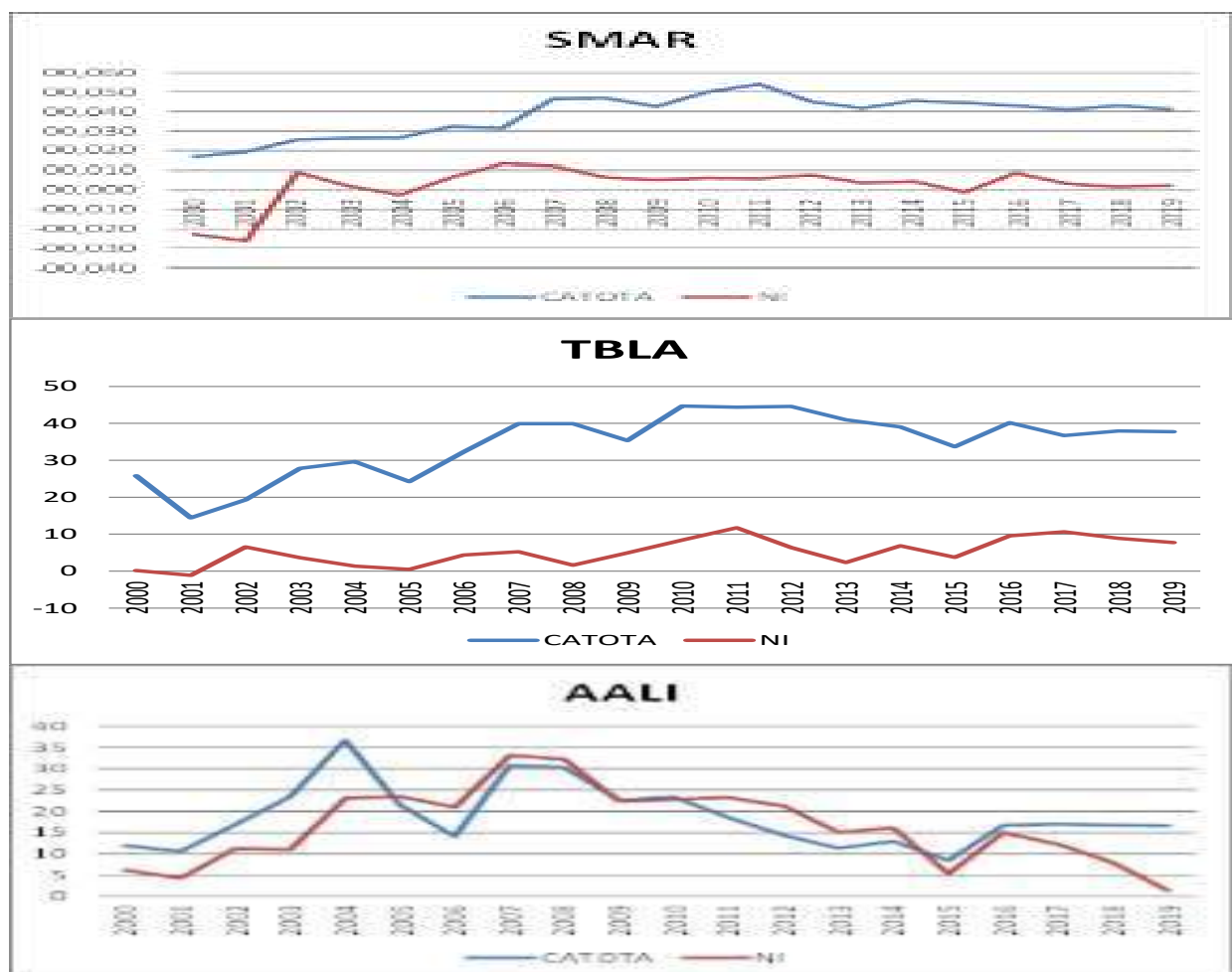


Figure 1. The ratio of current assets to total assets, and ratio of net income to total sales

From the three graphs above, it can be concluded that the development of the current ratio will be followed by the development of net income, because the development of current assets as a component of working capital will have an effect on net income. However, research on the effect of working capital on the operational risk of companies has not been carried out by many researchers. Therefore, researchers are interested in conducting research on working capital strategies implemented by these companies in relation to risk management. This

working capital management strategy includes an investment working capital strategy and a working capital financing strategy, operational risks include the risk of return on assets (ROA), return on equity (ROE), Sales and Cost of goods sold.

2. Literature Review

Working capital is a short-term financial planning policy that includes investments for current assets and sources of current liabilities. (Horne & Wachowicz, Jr, 2009). This working capital includes all current assets and current liabilities. The definition of traditional working capital is the amount of current assets available in a company or gross working capital (Brealy, Myers, & Allen, 2014). Meanwhile, Net working capital is the difference between current assets and current liabilities (Guthman & Huefner, 1948). From the definition of net working capital, working capital management is the management of short-term sources of funds and the use of short-term funds.

The main component of working capital from current assets can be accounts receivable arising from credit sales (Petersen & Rajan, 1997), inventory is merchandise inventory used for sales (Kim & Chung, 1990) and other securities (Sartoris & Hill, 1983), while the main component of current liabilities is trade payables (Brealy, Myers, & Allen, 2014).

The company's ability to manage receivables, inventory and current liabilities will have an effect on the company's success (Filbeck & Krueger, 2005) and conversely, the company's inability to manage this working capital component will affect the company's difficulties in its operations (Nazir & Afza, 2009).

2.1 Working Capital Strategy

The working capital strategy can be seen from two angles, the investment side of current assets and the financing angle of current debt (liabilities). Working capital from the point of view of current assets is called a working capital investment strategy (WCIS) and working capital from a financing point of view is called a working capital financing strategy (WCFS) (Weinraub & Visscher, 1998).

A working capital investment strategy (WCIS) is a working capital investment policy measured by the ratio of current assets to total assets. If the WCIS value is lower than 0.5 indicating the degree of use of current assets is smaller than the company's fixed assets, this condition illustrates that the company uses an aggressive investment strategy (AIS), meaning that the company relies on fixed assets as a component of the company's operations. Meanwhile, if the WSIS value is greater than 0.5, it indicates that the use of current assets is more than fixed assets, this condition is called the company using a conservative investment strategy (CIS), meaning that the company relies on working capital as the main component of business operations. (Nazir & Afza, 2009).

An aggressive investment strategy (AIS) is concerned with active control of the company and management of current assets with the aim of minimizing it. Under this policy, current assets are only required, as they are needed to facilitate business operations. However, an aggressive investment policy results in lower current assets, lower expenses, shorter cash conversion cycles, higher risk and higher returns required to compensate for risk (Nazir & Afza, 2009).

The working capital financing strategy (WCFS) is a policy that seeks to minimize excess liquidity while meeting short-term requirements. Companies can accept a greater risk of

bankruptcy to save long-term financing costs and thus to get a greater return (Panigrahi, 2014). Working capital financing policy is measured by the ratio of short-term liabilities to total liabilities, where the higher the ratio value indicates the more aggressive, and the lower the value of this ratio indicates not aggressive or conservative. In other words, the SFWC has two strategies, namely an aggressive financing strategy (AFS) and a conservative financing strategy, (CFS). An aggressive financing policy (AFS) uses a higher level of current liabilities and less long-term debt (Javid & Zita, 2014). Aggressive financing policies use higher current liabilities and lower long-term liabilities and lower capital, whereas aggressive financing policies can increase profitability. Aggressive Financing Policy is shown by the ratio between total current liabilities and total liabilities is more than 50 percent. Meanwhile, the financing policy is conservative if the SFWC value is less than 0.5. The formula for calculating a company's WCFS is as follows: total current liabilities / total liabilities.

Apart from aggressive and conservative financing, there is a moderate financing policy, a hedging funding policy. A moderate policy can be characterized by a low level of current assets as a percentage of current assets to total assets and a low level of current liabilities as a percentage of current liabilities to total liabilities or a high level of current assets as a percentage of current assets to total assets and a high level of current liabilities. High as a percentage of current liabilities of total liabilities (Brealy, Myers, & Allen, 2014); (Horne & Wachowicz, Jr, 2009).

Table 1 below illustrates the relationship between working capital financing strategies with the level of liquidity, profitability and risk. Conservative financing strategy, companies that have current liabilities will have high liquidity, but have low profitability due to low current liabilities that cause companies to make quick returns, besides conservative strategies have low risk, this is because These short current liabilities must be returned promptly, as opposed to long-term obligations where long returns will present a high risk of default. An aggressive financing strategy has a low liquidity and risk relationship, but has high profitability. Meanwhile, the moderate financing strategy has a relationship with liquidity, profitability and average risk.

Table 1. Resume of Working Capital Strategy

Policy	Liquidity	Profitability	Risk
Conservative	High	Low	Low
Moderate	Average	Average	Average
Aggressive	Low	High	High

Source : (Horne & Wachowicz, Jr, 2009)

Table 2 below shows other opinions regarding aggressive, conservative and moderate strategies conveyed by (Sierpiska & Nesterak, 1996) explaining the relationship between each working capital investment strategy ratio with each working capital financing strategy ratio. A low CA / TA ratio with a high CL / TL ratio is an aggressive policy that will produce high returns but has a high risk, a high CA / TA ratio with a high CL / TL ratio is a conservative policy, will produce low returns but also low risk. Whereas a high CA / TA ratio

with a high CL / TL ratio and a low CA / TL ratio with a low CL / TL is a moderate policy that will produce medium returns and risks.

Table 2. Working Capital Strategy , Risk and Return

Ratio	CA / TA Ratio	CA / TA Ratio
	Low	High
CL / TL Ratio High	High Return, High Risk, aggressive Policy	Medium Return, Medium Risk, Moderate policy
CL / TL Ratio Low	Medium Return, Medium Risk, Moderate Policy	Low Return, Low Risk, Konservative Policy

Source: (Sierpinska & Nesterak, 1996)

2.2 Working Capital Strategy and Operation risk

Operational risk is a concept related to the risk of loss resulting from failure resulting from inadequate internal processes, people and systems, or from external events. This definition includes legal risk, namely the risk of loss due to failure to comply with the law as well as precautionary measures against the destruction of ethical standards and contract agreements. It also includes exposure to litigation from all aspects of the institution's activities. The definition does not cover strategic or reputational risk. Company risk can be divided into two, namely business risk and financial risk. Business risk is the risk arising from the company's operations, while financial risk is the possibility of losses that arise due to external financing which is a fixed burden for the company. (Al-Shubiri, 2010).

This study conducted by (Hassani & Tavosi, 2014) aims to investigate the relationship between aggressive / conservative working capital policies and the risk of profitability in companies listed on the Tehran Stock Exchange. This study used a sample of 274 companies with a time span of 7 years during the 2006-2012 period. Profitability risk is measured by the absolute deviation of ROA, ROE, ROI and ROCE. The results showed that there is a negative relationship between working capital investment policies and measures of profitability risk. In addition, there is a positive relationship between working capital financing policies and measures of profitability risk. This means that the more companies that use conservative working capital policies, the lower the risk of profitability. Conversely, the more companies that use aggressive working capital policies, the higher the risk of profitability. Anand and Gupta (2001) investigated the effect of working capital management on company risk and returns. The results show that the effectiveness of working capital management will increase the return on investment and reduce company risk. Finally, inefficient management of current assets and liabilities can lead to the bankruptcy of many companies.

Bardia (1988) found that a higher investment in working capital was associated with a reduced firm risk. And a large number of current assets and using conservative policies leads to a reduction in corporate risk (Vahid, Mohsen, & Mohammad Reza, 2012) investigated the impact of working capital management policies (aggressive and conservative policies) on firm profitability and value. A sample of 28 Iranian Companies listed on the Tehran Stock Exchange for the 5 year period from 2005 to 2009 was selected. The results show that following a conservative investment policy and an aggressive financing policy has a negative

impact on company profitability and value. This study also found that company size and company growth have a positive effect on firm profitability and value, while firm leverage shows a negative impact.

3. Research Method

This study aims to determine the effect of working capital strategies on risk management. Companies that are the object of research are companies in the plantation sector which are listed on the Indonesia Stock Exchange, with 9 companies, namely with the industry code TBLA, SMAR, AALI, BWPT. The data used is data obtained from the respective company's financial statements from 2008 - 2019 or for 12 years. The dependent variable is risk management, and the independent variable is the working capital strategy. The proxy of risk management is to use absolute deviation from sales, gross profit, ROA and ROE. The independent variable for working capital investment strategy (WCIS) is obtained from total current assets divided by total assets, if the value of the WCIS is greater than 0.5, the company uses a conservative strategy. For the Working Capital Financing Policy (WCFS), it is obtained from the division between total current assets to long-term liabilities (long term debt), if the WCFP value is greater than 0.5, then the company uses a Conservative strategy. The control variables used were debt ratio (total liabilities is divided by total assets, Ln size, age firm and current ratio (Current asset / current liabilities). The data analysis technique will use panel data regression by OLS. The model used is as follows:

$$AD_{ROA\ it} = \alpha + \alpha_1 WCIS_{it} + \alpha_2 WCFS_{it} + \alpha_3 Debt_{it} + \alpha_4 Size_{it} + \alpha_5 AGE_{it} + \alpha_6 CR_{it} + \varepsilon_{it}$$

$$AD_{ROE\ it} = \alpha + \alpha_1 WCIS_{it} + \alpha_2 WCFS_{it} + \alpha_3 Debt_{it} + \alpha_4 Size_{it} + \alpha_5 AGE_{it} + \alpha_6 CR_{it} + \varepsilon_{it}$$

$$AD_{Sales\ it} = \alpha + \alpha_1 WCIS_{it} + \alpha_2 WCFS_{it} + \alpha_3 Debt_{it} + \alpha_4 Size_{it} + \alpha_5 AGE_{it} + \alpha_6 CR_{it} + \varepsilon_{it}$$

$$AD_{CGS_{it}} = \alpha + \alpha_1 WCIS_{it} + \alpha_2 WCFS_{it} + \alpha_3 Debt_{it} + \alpha_4 Size_{it} + \alpha_5 AGE_{it} + \alpha_6 CR_{it} + \varepsilon_{it}$$

$$AD = |X_i - \mu|$$

4. Findings and Discussions

The results of descriptive statistics of the variables used can be seen in table 3 below as follows:

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FIRM	108	.00	9.00	4.8649	2.68493
ROA	108	-.58	.84	.0633	.14804
ROE	108	-1.35	3.57	.1426	.42961
SALES	108	290.00	37391.00	6646.2778	9024.62298
CGS	108	174.00	32758.00	5065.8333	7609.97862
WC Investment P	108	.03	.84	.2941	.21903
WC Financing P	108	.03	24.41	1.9497	3.04926
Debt Ratio	108	.11	1.65	.4682	.24950
Size	108	6.92	10.29	8.8337	.89129
Age	108	7.00	78.00	35.3889	19.45848
Current Ratio	108	.10	8.47	2.0107	1.89533

Valid N (listwise)	108			
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For dependent variables such as ROA, ROE, Sales and GCS it can be explained as follows: The average value of ROA is 0.0635 or 6.35 percent, with a minimum value of - 58 or -58 percent obtained by UNSP companies in 2019 and a maximum value 0.84 or 84 percent was obtained by the BISI company in 2019. The average ROE value was 0.1426 or 14.26 percent, where the minimum value was achieved by GZCO in 2016 with a value of -1.35 or -135 percent and a maximum value of 3.57 or 357 percent obtained by UNSP companies in 2017. Average Sales of Rp. 6,646 billion where the lowest sales was Rp. 290 billion was achieved by the GZCO company in 2008 and the highest sales was Rp. 37,391 billion obtained by the SMAR company in 2018. Meanwhile, the average cost of goods sold was Rp. 5,065 billion with the lowest GCS value of Rp. 174 billion was obtained by the company GZCO in 2008 and the highest GCS was Rp. 32,758 billion was obtained by the SMAR company in 2018.

Whereas for independent variables such as WCIS and WCFS it can be explained as follows: On average, the WC investment policy value is 0.2944 or 29.44 percent, meaning that the average value is below 0.5 or below 50%, so it can be said This company in the Agriculture Industry uses an aggressive working capital strategy. The lowest WC investment value was 0.03 or 3 percent obtained from the GZCO company in 2018 and the highest WCIS value was 0.84 or 84 percent obtained by the BISI company in 2016. As for the working capital financing strategy (WCFS) it had an average value of 1.9494 or 194.94 percent, meaning that companies in the Agriculture Industry use aggressive financing strategies, for the lowest WCFS is 0.03 or 3 percent for BWPT companies in 2019 and the highest WCFS value is 24.41 or 2441 percent for BISI companies in 2008.

For control variables such as Debt Ratio, Size and Age, it can be explained as follows: The average value of the Debt ratio is 0.4684 or 46.84 percent, with a minimum DR value of 0.11 or 11 percent obtained by BISI company in 2010 and the value The highest DR was 1.65 or 165 percent for UNSP companies in 2019. The average company size was 8.8337, and the lowest company asset value was 6.92 or Rp. 1,016 billion was obtained by the BWPT company in 2009 and the largest asset value was SMAR in 2018 with an Ln value of 10.29 or Rp. 32,758 M. The average age of the sample companies is 42 years and the lowest age of the company GZCO is 19 years and the oldest is 79 years old is UNSP company. The current ratio variable has an average value of 2.0107, this shows that the current assets of plantation companies are twice as large as their current liabilities. The minimum score of 0.1 was obtained by UNSP in 2019 and the maximum score of 8.47 was obtained by BISI in 2010 Working Capital Investment Policy and Working Capital Financing Policy

4.1 Working Capital Investment Policy and Working Capital Financing Policy

Table 4 shows the number of companies that use aggressive working capital strategies and conservative working capital strategies. 94 observations show that the company uses an aggressive investment strategy and the remaining 14 observations show that the company uses a conservative strategy. This is consistent with the WCIS average value of 0.2. The company that used a conservative strategy during the study period was the BISI company, AALI only implemented a conservative strategy 2 times the observation, the rest of the company used an aggressive strategy.

Table 4. Firm Strategy WCIS Crosstabulation

		Strategy WCIS		Total
		Konservatif	Agresif	
Firm	BISI	12	0	12
	AALI	2	10	12
	BWPT	0	12	12
	GZCO	0	12	12
	LSIP	0	12	12
	SGRO	0	12	12
	SMAR	0	12	12
	TBLA	0	12	12
	UNSP	0	12	12
	Total	14	94	108

Graph 2 below shows the distribution of the company's WCIS data, it can be seen that the data is mostly collected below 0.5 and only 3 bars have the WCIS value around 0.80. Agriculture companies have more assets in fixed assets because they have plantation land as productive land and also have heavy machinery or vehicles that support plantation products. This suggests that the uneven distribution of WCIS data is more leftward.

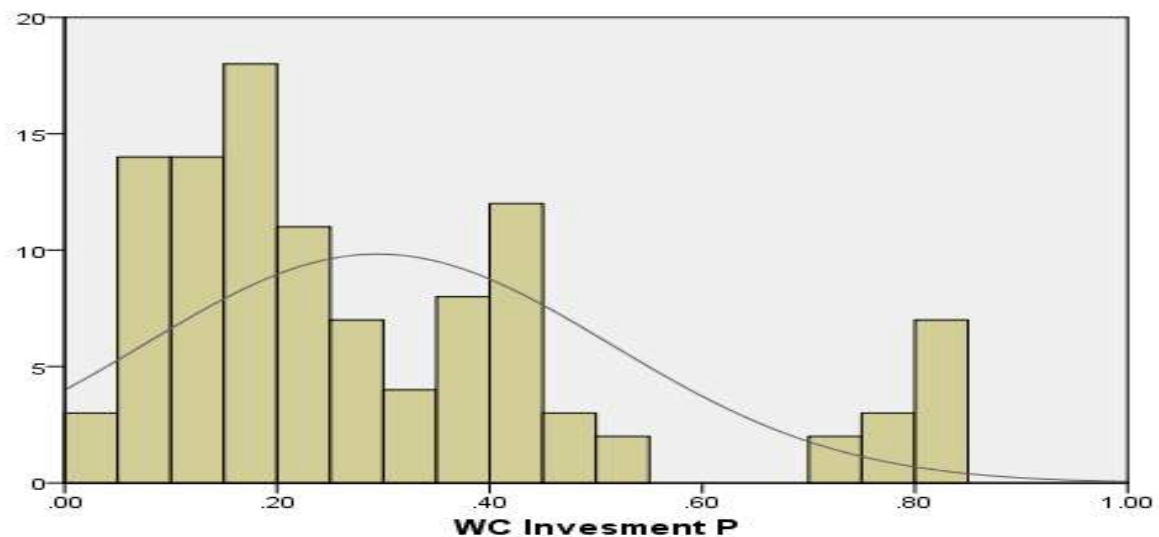


Figure 2. Graph of normal distribution of WCIP data

Table 5 below explains that for financing working capital, 75 observations or 69 percent of companies use aggressive financing strategies, and 33 observations or 31 percent of companies use conservative financing strategies. This means that companies in the agriculture sector use more short-term liabilities to finance their working capital.

Table 5. Strategy WCFS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	KONSERVATIF	33	30.6	30.6	30.6
	AGRESIF	75	69.4	69.4	100.0
	Total	108	100.0	100.0	

Table 6 below describes companies that use a working capital financing strategy. There are 3 companies that use aggressive financing strategies for 12 years of observation period, namely BISI, AALI, and SMAR, while companies that use a conservative financing strategy for 12 years of observation period are GZCO, while companies use a combination of aggressive and conservative financing strategies.

Table 6. Firm Strategy WCFS Crosstabulation

		Strategy WCFS		Total
		KONSERVATIF	AGRESIF	
Firm	BISI	0	12	12
	AALI	0	12	12
	BWPT	8	4	12
	GZCO	12	0	12
	LSIP	3	9	12
	SGRO	6	6	12
	SMAR	0	12	12
	TBLA	1	11	12
	UNSP	3	9	12
Total		33	75	108

The graph below shows the spread of WCFP data, more data spreads close to zero, the results show that the current liabilities to long-term debt ratio data is more than once and below 5 times.

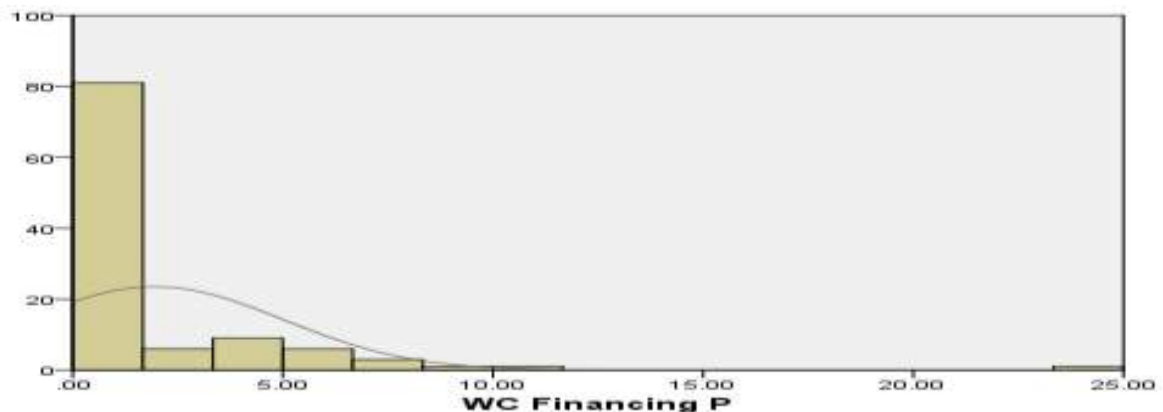


Figure 3. WCFS data distribution

Referring to the opinion Sierpinska and Nesterak (1996), there are 61 observations in which companies use low CA / TA investment strategies and high CL / TL financing strategies, so it can be said that these 61 observations use aggressive strategies which have high returns and high risks. . None of the companies used a high CA / TA investment strategy with a low CL / TL financing strategy, so there were no companies that used a conservative strategy in working capital management. The remaining 47 observations used a moderate strategy. Both companies that use a high working capital investment strategy with a high financing strategy or a low working capital investment strategy with a low financing strategy.

Table 7. Strategy WCFS Crosstabulation

		Strategy WC Inv		Total
		CA/TA Low Aggressive	CA/TA High Conservative	
Strategy WC Fin	CL/TL High Aggressive	61	14	75
	CL/TL Low Conservative	33	0	33
Total		94	14	108

Below are 9 graphs that describe the development of the company's WCIS and WCFS during the 9 years of observation.

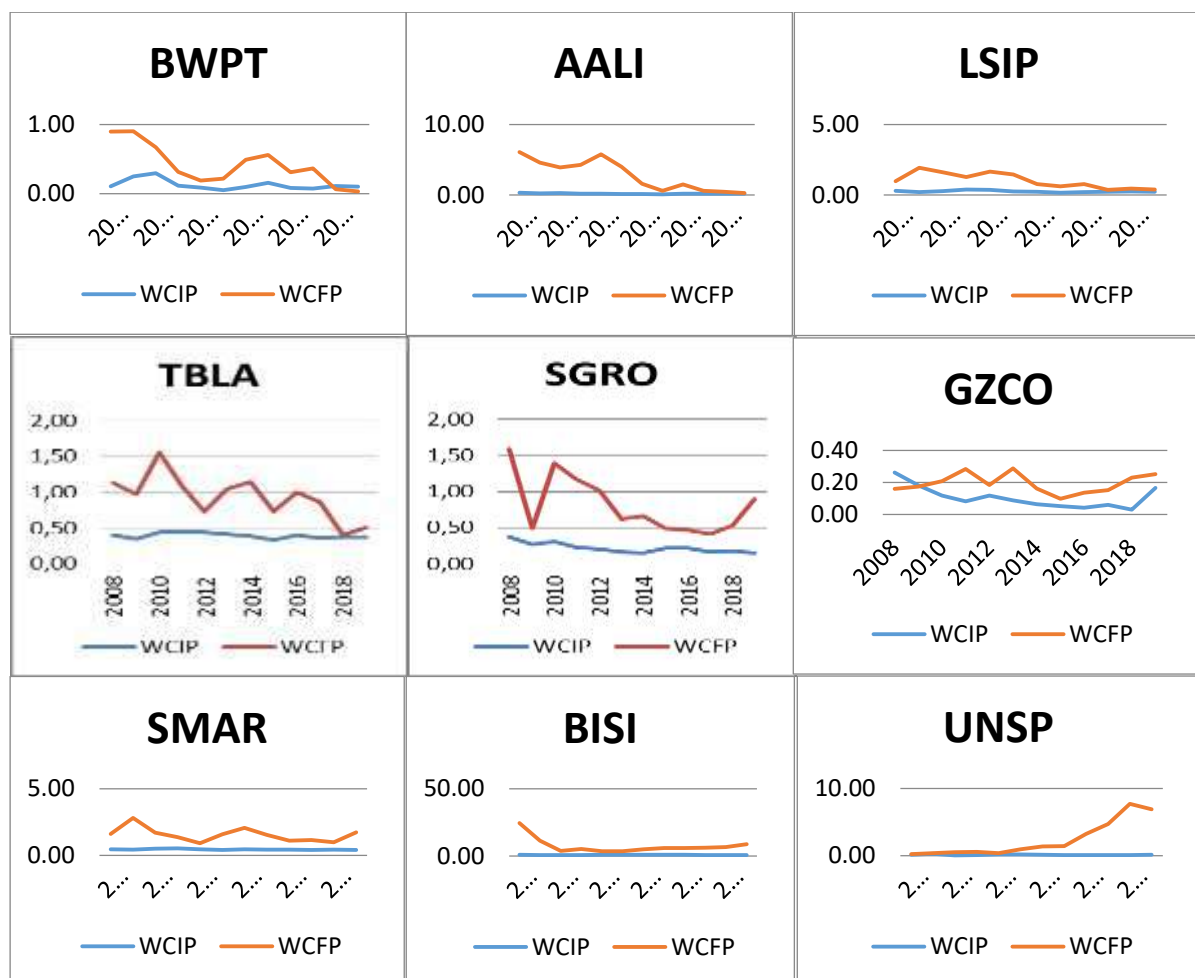


Figure 4. Graph of WCIP (WCIS) and WCFP (WCFS)

The graph above illustrates that, there are 4 companies (BWPT, AALI, LSIP, TBLA) that have decreased WCFS values, meaning that the use of short-term debt from the four companies is decreasing or the use of long-term debt is increasing. Meanwhile, WCIS for the four companies, only BWPT companies which fluctuate relatively high. Meanwhile, 4 companies (SGRO, GZCO, SMAR and BISI) have had WCIS values that have increased in recent years. In the graph, only SMAR companies have a relatively high WCIS value approaching 0.5, this shows that current and fixed asset users are relatively balanced. Only one UNSP company has an increasing WCFS value in recent years, meaning that the use of short-term debt is increasing.

4.2 Working Capital Strategy and Operational Risk

This study uses 4 models, where the dependent variable consists of operational risk which is measured from the absolute deviation of ROA, ROE, Sales and CGC. The results are presented in table 8 below:

Table 8. Regression Results for Working Capital Strategy with Operational Risk

Var dep Var Ind	SD ROA		SD ROE		SD SALES		SD CGS	
	Koef	Sig	Koef	Sig	Koef	Sig	Koef	Sig
Constanta	.120	.432	.239	.604	-28488.	.000	-23858.	.000
WCIP	-.170	.039	-.822	.001	20678.9	.000	18234.5	.000
WCFP	.019	.000	.043	.002	-445.34	.037	-411.79	.030
DEBT	.114	.057	.646	.000	2511.99	.377	1697.17	.503
LN SIZE	-.013	.432	-.054	.287	3670.16	.000	3015.900	.000
AGE	.000	.616	.004	.049	-60.431	.085	-40.183	.197
CR	0.13	.190	.059	.053	-898.34	.063	-794.577	.065
R ²	.208		.284		.337		.324	
F	4.430	.001 ^b	6.672	.000 ^b	8.565	.000 ^b	8.052	.000 ^b

Working capital investment policy has a negative and significant impact on ROA and ROE risks. This illustrates that if the WCIS ratio is greater, it means that the company uses a conservative strategy, it will have an effect on reducing the company's operational risk ROA and ROE, or the spread deviation from the average ROA and ROE will decrease. This is because many current asset investments are not productive. Based on the WCIS average data of 0.2944, this shows that the agriculture industry is using an aggressive working capital strategy, because the WCIS value is below 0.5.

Working capital investment policy has a positive and significant effect on the risk of Sales and Cost of Goods Sold. This illustrates that if the WCIS ratio is getting bigger, it means that the company uses a conservative strategy, it will have an effect on the increase in the operational risk of the sales company and CGS or the deviation of the spread of the average sales and CGS will increase. This is because a lot of current asset investments, especially inventory and a lot of sales policies, will make the company more ready to sell. Based on the WCIS average data of 0.2944, this shows that the agriculture industry is using an aggressive working capital strategy, because the WCIP value is below 0.5. Low WCIS value or plantation companies are more likely to invest in non-current assets such as productive plantation land and fixed assets such as plantation vehicles and processing machines. Therefore, if the company diverts more investment to investment in current assets, the risk of deviation in sales and CGS will also increase, this is because plantation products that have not been processed are easily damaged

which can reduce the quality of plantation product processing as well as limited sales.

The Working Capital Financing Strategy has a positive and significant impact on ROA and ROE. This shows that the greater use of short-term financing will be able to increase the risk of ROA and ROE or the deviation of the spread of ROA and ROE from the average will be as good. In this agriculture industry the average WCFS is 1.94, meaning that this agriculture industry company uses an aggressive financing strategy. This short-term financing has a fast turnaround, so it can lead to failure in payments to suppliers or creditors, thus causing a greater risk of achieving ROA and ROE.

Meanwhile, the effect of working capital financing policy has a negative and significant effect on sales and GCS. This means that if the short-term financing is greater, the risk of selling and GCS will be smaller. The Agriculture Industry uses an aggressive strategy, where short-term debt financing is more than long-term debt.

For the Debt ratio, only the risk of ROE is positive and significant, while the other variables, although influential, are not significant. This shows that the greater the use of debt, the greater the risk of ROE. The average debt ratio value in the agriculture industry is .4684 or 46.84%, although this shows that the company's total debt value is still smaller than its equity value. However, this value is closer to 50% or the debt value is equal to the equity value. Therefore, an increase in debt will increase the risk on ROE.

Size only has a positive and significant effect on sales and CGS risks. This means that the greater the assets owned by the company, the greater the risk to sales and CGS. This working capital is directly related to sales and cost of goods sold. The bigger the company's assets, the more the bargaining power position, so that it can easily make sales policies and large inventory availability will make the company's sales run smoother without having to run out of inventory, likewise with purchases from suppliers, large company sizes can have a good bargaining position towards suppliers. However, large assets with a strong bargaining power position will make the risk of selling even greater and so also GCS will have a large risk, meaning that the deviation of sales and CGS on average sales and CGS is also getting bigger. Size, although it has a negative effect, is not significant. Large company size will make the deviation of ROA and ROE from the average smaller, but not significant.

Company age only affects ROA, which has a positive effect on ROE. This means that the older the company is, the greater the deviation of ROE from its average. The older the company, the owner reduces his ownership in the company, this will lead to control over the company. Company age has a negative and significant effect on alpha 10%, this shows that the older the company is, the smaller the risk of sales deviation from the average, this can be because older companies are more familiar with consumers so that consumers trust more. The variable current ratio has a negative and significant effect on alpha 10 percent on the risk of sales and CGS alone. The bigger the current ratio, this means the more current assets in the company or the more liquid the company is. This large amount will cause many current assets to be idle, so that the risk of deviating sales and CGD from the average is getting smaller, indicating that the availability of large amounts of accounts receivable and sales can be managed properly, so that the risk to sales and CGS can be reduced. The effect of CR on the risk of ROA and ROE is positive but not significant. This is because the current asset is a component of short-term WCIP and WCFP, so it does not directly affect the components of total assets and equity directly.

5. Conclusion

WCIS has a negative and significant impact on ROA and ROE risks, meaning that an increase in investment in current assets will cause a decrease in the spread deviation (risk) on ROA and ROE. However, WCIP has a positive and significant effect on sales and CGS risks, meaning that an increase in investment in working capital will cause a deviation in the spread (risk) of sales and CGS to be even greater. WCFS has a positive and significant impact on ROA and ROE risks, meaning that an increase in investment in current assets will lead to an increase in risk on ROA and ROE. However, WCFS has a negative and significant effect on sales and CGS risks, meaning that an increase in investment in working capital will cause the risk of sales and CGS to be smaller as well. The debt ratio only has a positive effect on ROE risk, meaning that an increase in total debt will increase ROE risk. The size of company assets has a positive and significant effect on Sales and CGS, this means that increasing the number of company assets will cause an increase in risk on sales and CGS. Company age has a positive and significant effect on ROE risk, meaning that the older the company is, the greater the risk of ROE. The current ratio variable has a positive effect on ROE risk and has a negative effect on the risk of sales and CGS at 10 percent alpha. This illustrates that the greater the current ratio, the greater the deviation of ROE risk, and the larger the current asset, the lower the risk to sales and CGS.

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The Effect of Liquidity, Solvency and Profitability on Dividend in the Manufacturing Listed Firms on the Indonesian Stock Exchange

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Abstract

This study aims to investigate the effect of liquidity, solvency and profitability on dividend in the manufacturing listed firms on the Indonesian Stock Exchange for the period of 2010 to 2018. The variables employed in this study are liquidity, solvency, profitability and dividend per share. The Ordinary Least Square (OLS) regression is used to analyze the data. The data is collected from the Indonesian Stock Exchange (IDX) website. The results reveal that liquidity, solvency and profitability have a significant effect on Dividend Per Share of Manufacturing Companies on the Indonesia Stock Exchange. Current Ratio, Cash Ratio, Debt to Equity Ratio, Debt to Asset Ratio, Net Profit Margin, and Earning per Share have a positive and significant effect on Dividend per Share. Therefore, manufacturing companies listed on the Indonesia Stock Exchange must maintain stability, liquidity, solvency and profitability in order to increase Dividend per Share.

Keywords: liquidity, solvency, profitability, dividend, manufacturing sector, Indonesia.

1. Introduction

The Indonesian capital market, which in this case is the Indonesia Stock Exchange, plays a very important role in raising funds from investors who want to invest in the long term as well as for buying and selling activities in the form of shares. Investment activity is an activity that is faced with various kinds of risks and uncertainties that will occur, investors need various kinds of other relevant information such as economic and political conditions in a country. Information obtained from companies is usually based on the company's performance which is reflected in the financial statements. Most of the activities of a company are investment activities. In investing a number of funds, the main thing an investor expects is that there will be benefits that will be obtained in the future. For this reason, investors need to carry out an analysis to determine the basis that can be used in assessing the feasibility of a company's shares to be used as an alternative investment (Parica, 2013).

Financial ratio analysis reveals the numerical financial relationship between reporting in financial statements and uses it to rationally compare the current period to the previous period. Ratio analysis can guide investors to make decisions or considerations about what the company will achieve and what prospects will be faced in the future. Every investor or shareholder expects results from the company either in the form of dividends or in the form of shares. For the sharing of the results, it is necessary to distribute policies. According to Sutrisno (2012), one of the policies that must be taken by management is to decide whether the profits earned by the company during one period will be divided all or partially for dividends and partially not divided in the form of retained earnings.

The higher the dividends distributed to shareholders, the less the company's chances of

obtaining internal sources of funds in order to make reinvestments, so that in the long run it will decrease the value of the company, because dividend growth will decrease. Therefore, it is the duty of the financial manager to be able to determine the optimal dividend policy in order to maintain firm value (Sutrisno, 2012). Managers as company management agents are expected to be able to generate profits which can ultimately be distributed to shareholders in the form of dividends. Investors generally want dividend distribution that is relatively stable or tends to increase from time to time because dividend stability can increase confidence in the company, thereby reducing the element of uncertainty in investment. Dividend payment in cash (cash dividend) is more desirable for investors than in other forms, because it helps reduce investors' uncertainty in their investment activities into the company.

Dividend policy is a decision to determine how much dividends should be distributed to shareholders. This policy stems from how the management treats the profits obtained by the company, which is generally part of the net income after tax (Earning after Tax-EAT) distributed to investors in the form of dividends and partially reinvested in the company in the form of retained earnings. The size of the dividend paid depends on the policies of each company, so management consideration is needed. The dividend policy is a policy that involves two interested parties and both of them contradict each other, namely the interests of the shareholders with their dividends and the interests of the company with their retained earnings.

Based on agency theory, it is known that the interests of managers as company managers will be different from those of shareholders, so that it will cause agency costs. Agency problems that occur are due to the possibility of management acting not in accordance with the principal's wishes, because management wishes to increase its prosperity. In addition, management can also choose the company's capital structure, ownership structure and dividend policy that can reduce agency costs that occur in such conflicts of interest. So that often the discussion about dividends refers to the agency theory framework.

According to Rodoni and Ali (2010), the factors that influence dividend payments are liquidity, solvency and profitability. The liquidity of a company is a major consideration in many dividend policies. Because dividends for the company are cash out, the greater the cash position and liquidity of the company as a whole, the greater the company's ability to pay dividends. The company's liquidity has a huge influence on company investment and policies to meet funding needs. In general, the main purpose of financial ratios is used to assess a company's ability to meet its obligations, its measuring instruments are the current ratio and the cash ratio.

Apart from these factors, company debt also needs to be considered when investing. The use of debt in the company can reduce company profits because the company has to pay a number of costs in the form of loan interest. Where the debt to equity ratio is a part of every rupiah of its own capital which is used as collateral for the entire debt, the higher the debt to equity ratio will result in unfavorable symptoms for the company and will result in a smaller dividend distribution, so Debt to Asset Ratio is part of every rupiah of assets pledged as collateral for the entire debt.

According to Horne and Wachowicz (2012), companies that have good news regarding profitability will want to inform investors about this. Instead of making a simple announcement, dividends might be raised to further reinforce the statement. When a company has a stable dividend payment over time, and the company increases the amount of its

payment, investors will believe that the management will announce a positive change in the company's profitability (Frebumi, 2011). Profitability is the main attraction for company owners (shareholders) because profitability is the result obtained through management efforts on the funds invested by shareholders and also reflects the profit sharing that is due to them, namely how much is reinvested and how much is paid out as cash dividends. or share dividends to them (Ades Marsela, 2016). Profit margin is a ratio or number that shows what percentage of net income you earn from each sale. Dividends will be distributed if the company experiences profits. Earnings per share (earnings per share) is the total profit earned by investors for each share. The total profit is measured by the ratio of the net profit after tax (EAT) to the number of outstanding shares. The calculated net income after deducting dividends for priority / minority shareholders (preferred stock). Based on the Indonesian Capital Market Directory 2010 to 2018, the average magnitude of the independent variables Cash Ratio, Current Ratio, Debt to Equity Ratio, Net Profit Margin and Earning Per Share and the dependent variable Dividend Per Share in manufacturing companies listed on the IDX during the 2010 period up to 2018 can be seen in the following graph:

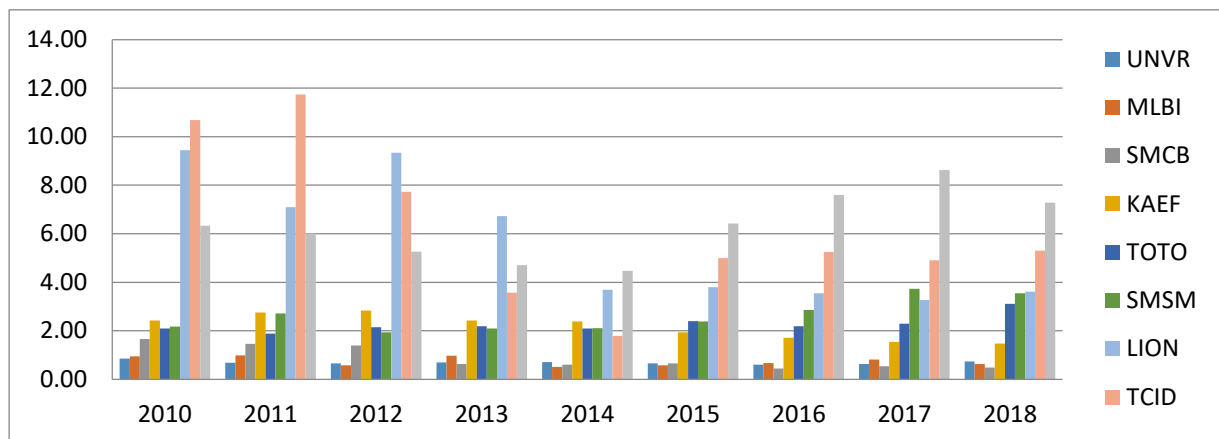


Figure 1. Current Ratio of Manufacturing Companies in the 2010 - 2018 Period

From the graph above, it can be seen that the Current ratio value every year has an up and down trend. PT Mandom Indonesia Tbk. (TCID) had the highest current ratio in 2011. However, for the last nine years PT. Delta Djakarta Tbk. (DLTA) has the highest average score. This is due to a significant decrease by PT Mandom Indonesia Tbk. (TCID) in 2014. PT Unilever Indonesia Tbk. (UNVR) has the smallest average value.

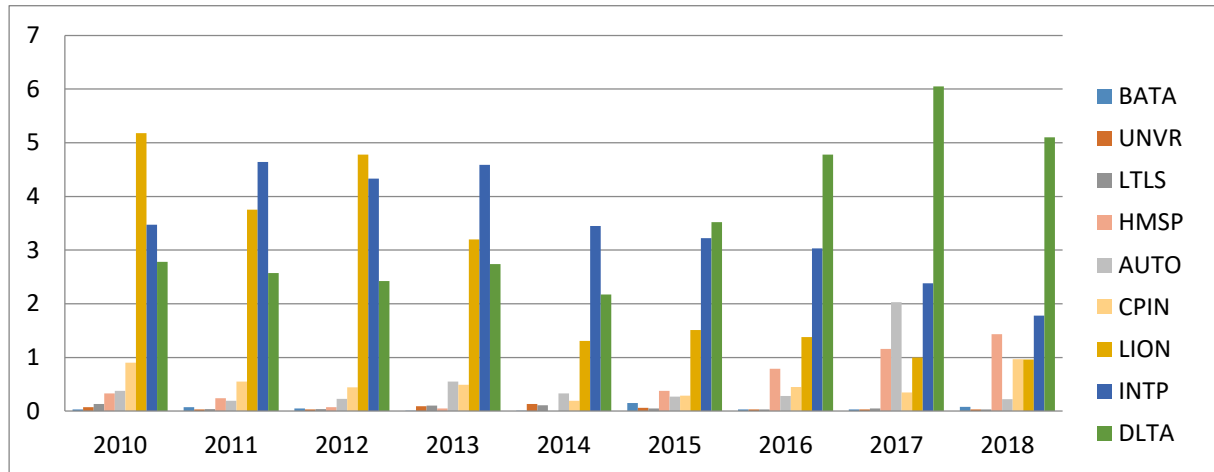


Figure 2. Cash Ratio of Manufacturing Companies in the 2010 - 2018 Period

The graph above shows the average cash ratio value per year experiencing an up and down trend. Bata Shoes Tbk. (BATA) has an average cash ratio value of at least 0.05. The quite high increase experienced by PT. Delta Jakarta. Tbk. (DLTA). This will affect the company's liquidity, which will also affect dividends paid so that the stronger the company's liquidity position is on the prospect of future funding needs, the higher the cash dividend paid.

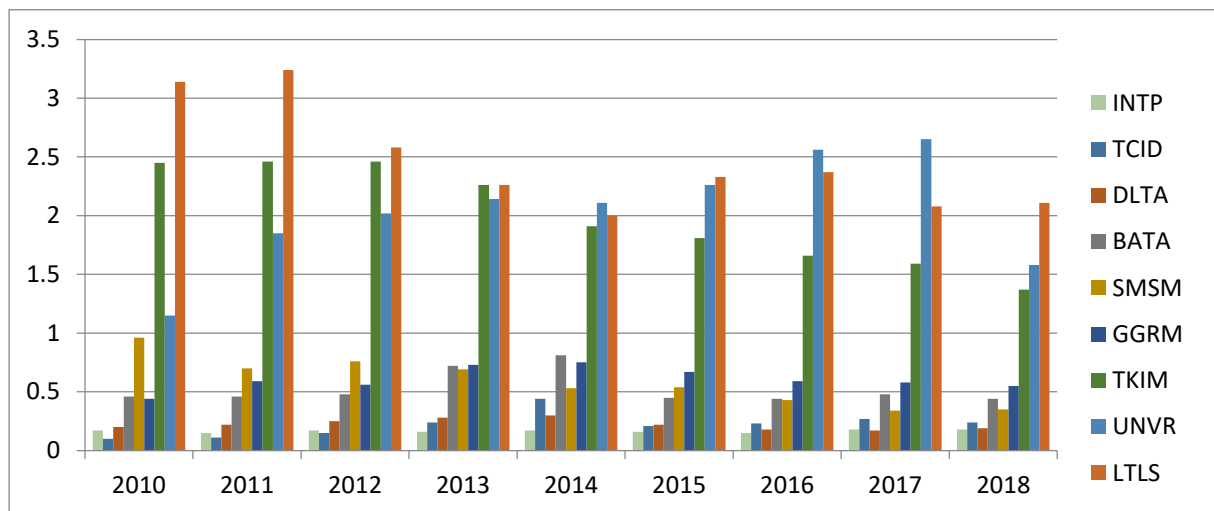


Figure 3. Debt to Equity Ratio for Manufacturing Companies in the 2010 - 2018 Period

Based on the graph above, it can be seen that the average DER value has an up and down trend. The high growth experienced by PT. Lautan Luas Tbk. (LTLS) While Indocement Tunggak Prakarsa Tbk. (INTP) has the smallest DER value. The higher the level of debt held, the greater the interest expense that must be borne. This will cause the profits to be smaller, thus affecting the lower dividends that can be paid to shareholders.

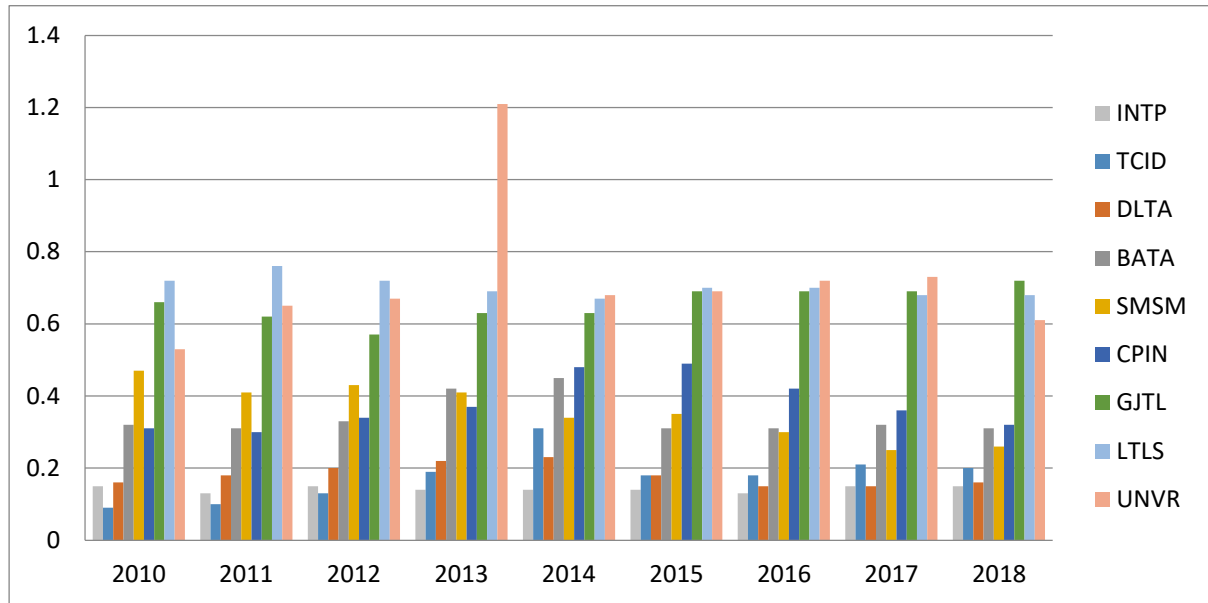


Figure 4. Debt to Asset Ratio for Manufacturing Companies in the 2010 - 2018 Period

The graph above shows that the average debt to asset ratio (DAR) value experienced an upward trend from 2010 to 2018. PT. Unilever Indonesia Tbk (UNVR) has the highest average DER value of 0.72. Meanwhile, Indocement Tunggal Prakarsa Tbk. (INTP) has the smallest DAR value of 0.14. The higher the DAR, the higher the risk to debt. This will worsen the company's performance.

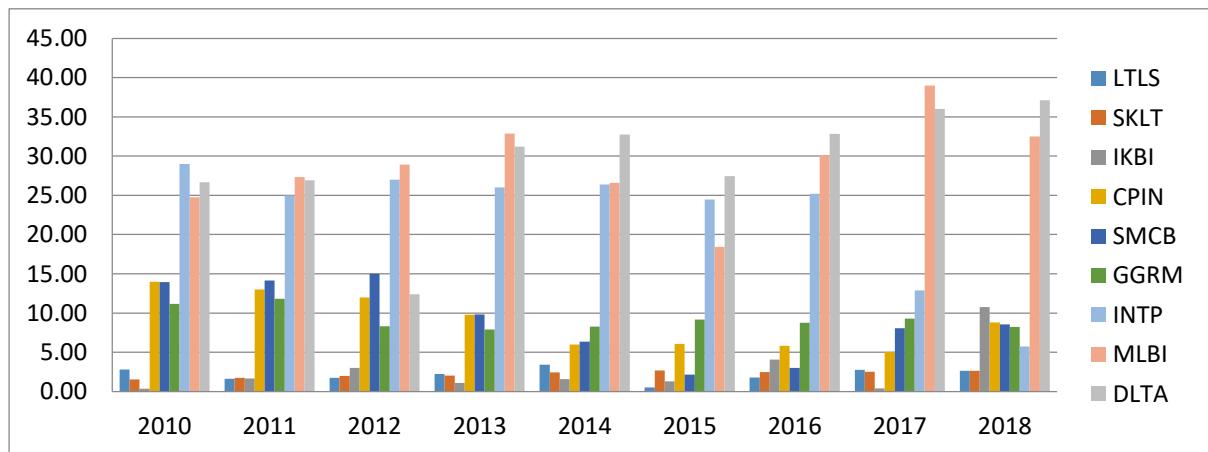


Figure 5. Net Profit Margin for Manufacturing Companies in the 2010 - 2018 Period

It can be seen that the average value of NPM has an up and down trend. Delta Jakarta Tbk. (DLTA), Multi Bintang Indonesia Tbk. (MLBI), Indocement Tunggal Prakarsa Tbk. (INTP) has a high and increasing average profit margin, while PT Lautan Luas Tbk. (LTLS) has quite a small Profit Margin.

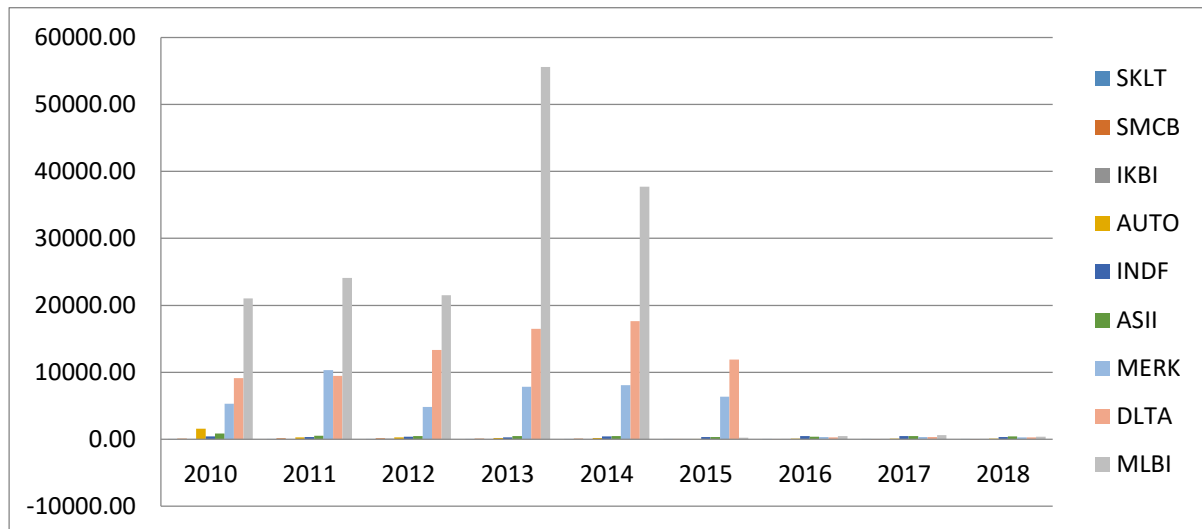


Figure 6. Earning Per Share of Manufacturing Companies for the Period of 2010 - 2018

Based on the graph above, it can be seen that the average EPS value has fluctuated, some have increased from 2010 to a very significant decrease until 2018. This is not consistent with changes in NPM which have decreased. PT Multi Bintang Indonesia Tbk. (MLBI) distributes substantial profits compared to other companies.

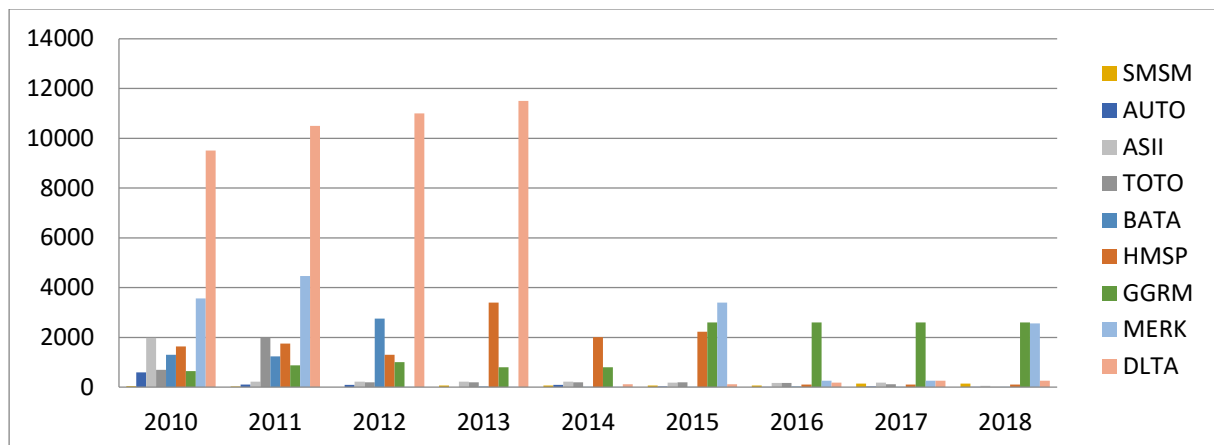


Figure 7. Dividend per share of manufacturing companies for the period 2010 - 2018

It can be seen that the average SSB experienced growth and decline from 2010 to 2018. In 2013 the DPS value decreased, this was not followed by an increase in the average value of the Cash Ratio (CR). Meanwhile, in 2012 the DPS value decreased. This change in DPS is not consistent with the change in DER value, which has decreased in the same year. PT Mandom Indonesia Tbk. has a relatively small DPS value compared to other similar companies, such as DLTA, HMSP, and MERK. This is inversely proportional to the company's liquidity. PT Mandom Indonesia Tbk had the highest CAR value, which was 11.74 in 2011. This condition was considered bad, as stated by Weaver and Weston. A current ratio that is too high indicates accumulated cash. This means that company managers do not utilize current assets properly and effectively, or in other words, the manager's creativity level is low.

2. Literature Review

2.1 Dividend Signaling Theory

The theory that can be used as a foundation in dividend policy is the signaling theory. Signaling theory was developed to take into account the fact that company insiders generally have better and faster information regarding the latest condition of the company, as well as the company's future prospects compared to outside investors. Dividend Signaling Theory was first coined by Bhattacharya in 1979. This theory underlies the assumption that changes in cash dividends contain information that results in stock price reactions.

This theory explains that information about cash dividends paid is considered by investors as a signal of the company's future prospects. This assumption is due to the occurrence of asymmetric information between managers and investors, so that investors use the dividend policy as a signal about the company's prospects. If there is an increase in dividends, it will be considered a positive signal, which means that the company has good prospects, causing a positive stock price reaction. Conversely, if there is a decrease in dividends, it will be considered a negative signal, which means that the company has not very good prospects, resulting in negative share prices (Pramastuti, 2017).

2.2 Agency theory

This theory was put forward by Michael C. Jensen and William H. Meckling (1976), agency relationships arise when one or more people (principal) employ other people (agents) to provide a service and then delegate authority in decision making to the agent. In practice, managers as company managers certainly know more about the company's internal information and prospects in the future than capital owners or shareholders. So that as a manager, the manager has the obligation to provide information about the condition of the company to the owner.

The shareholders expect the agents to act in their best interests and thus delegate authority to the agents. To be able to perform its function properly, management must be given adequate incentives and supervision. Supervision can be carried out through means such as binding agents, checking financial statements and limiting decisions that management can take. Supervision activities, of course, require a fee called agency fee. Agency fees are costs associated with management supervision to ensure that management acts consistently in accordance with the company's contractual agreements with creditors and shareholders (Chasanah, 2018).

2.3 Dividend Policy

Mamduh (2010) states that dividends are compensation received by shareholders, in addition to capital gains. This dividend is to be distributed to shareholders as a profit from company profits. Dividends are determined based on the general meeting of shareholders and the type of payment depends on the policy of the leader. Irham (2015) states that dividend payments can be made in cash, but there are also dividend payments made in the form of giving out shares, even in the form of giving property. There are several types of dividends which are the realization of dividend payments, namely (1) cash dividends, namely dividends that are declared and paid at a certain time and the dividends come from legally obtained funds. This dividend can vary in amount depending on the company's profit, and (2) Property dividend, which is a distribution of company profits in the form of property or goods.

Liquidation dividend, namely the distribution of company assets to shareholders in the event

that the company is liquidated.

2.4 Dividend per Share

Dividend is the right of common stockholders to get a share of the company's profits. If the company decides to share the profits in dividends, all shareholders can get the same rights. Dividend per Share is a measure used to show the amount of dividends when linked to shares.

Dividend per Share can be calculated using below formula:

$$DPS = \frac{\text{Dividend}}{\text{Shares Outstanding}}$$

2.5 Ratio and Cash Ratio

Cash ratio is a measure of the liquidity ratio, which is the company's ability to meet its current liabilities through the amount of cash (and cash equivalents, such as current accounts or other deposits in the bank that can be withdrawn at any time) owned by the company. The higher the cash ratio shows the company's cash ability to meet (pay) its short-term obligations. Cash Ratio or Cash Ratio is a tool used to measure how much cash is available to pay debts (Kasmir, 2018). The increasing cash ratio can also increase the confidence of investors to pay dividends (DPS) that are expected by investors. Mathematically the cash ratio can be formulated as follows:

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Equivalent}}{\text{Current Liability}}$$

Cash and its equivalents in the equation show the amount of cash and cash equivalents (demand deposits and other deposits which are not limited by time), which is reflected in the balance sheet (on the asset / current asset side). Meanwhile, current liability shows the number of short-term liabilities of the company which is reflected in the statement of financial position (on the side of liability / current liability). The current ratio is also a measure of the liquidity ratio (liquidity ratios) which is calculated by dividing current assets by current liabilities. The greater the current ratio, the higher the company's ability to meet its short-term obligations (including the obligation to pay outstanding DPS). Like the cash ratio, the high current ratio also shows investor confidence in the company's ability to pay the promised dividends. In other words, how many current assets are available to cover short-term obligations that are due soon, can also be said as a form of measuring the safety margin of a company (Kasmir, 2018)

Mathematically, the current ratio can be formulated as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The two liquidity ratios show the company's ability to meet its short-term obligations. The separation of the two liquidity ratios into the cash ratio and the current ratio is intended to determine which one has more influence on dividend income per share (Dividend per share).

2.6 Debt to Equity Ratio and Debt to Asset Ratio

According to Kasmir (2018) Debt to equity ratio is a ratio used to assess debt to equity. This ratio serves to determine each rupiah of own capital that is used as collateral for debt. The formula for finding a debt to equity ratio can be used in a comparison between total debt and

total equity as follows:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

Debt to Asset Ratio is a debt ratio used to measure the ratio of total debt to total assets. In other words, how much the company's assets are financed by debt or how much the company's debt affect asset management does? The formula used to find the Debt to Asset Ratio is as follow:

$$\text{Debt to Assets Ratio (DAR)} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

2.7 Net Profit Margin and Earning Per Share

According to Kasmir (2018) profit margin is a ratio or number that shows the percentage of net income obtained from each sale. Dividends will be distributed if the company experiences profits. Profits that deserve to be distributed to shareholders are profits after the company has fulfilled all interest and tax obligations. Therefore, dividends are taken from the net profit the company receives, so profits will of course affect the amount of dividends. Net profit margin is a measure of profit by comparing the profit after interest and taxes compared to sales. (Kasmir, 2018) This ratio is interpreted as the company's ability to reduce costs (a measure of efficiency) in the company in a certain period.

High Net Profit Margin indicates the company's ability to generate high profits at a certain sales level. Low Net Profit Margin indicates sales that are too low for a certain level of costs, or costs that are too high for a certain level of sales, or a combination of the two. In general, a low ratio can indicate management inefficiency. The formula used to find this number or ratio is to divide the net income that the company generates by the sales the company makes in a certain period of time:

$$NPM = \frac{EAIT}{\text{Net Sales}}$$

Earnings per share (earnings per share) is the total profit earned by investors for each share. The total profit is measured by the ratio of the net profit after tax (earnings after tax-EAT) to the number of outstanding shares. The calculated net income after deducting dividends for priority / minority shareholders (preferred stock). Mathematically, EPS can be formulated as follows:

$$EPS = \frac{EAT}{\text{Shares Outstanding}}$$

Research conducted by Pasadena (2013) entitled The Effect of Liquidity, Leverage, Profitability and Company Size on Dividend Policy in Manufacturing companies listed on the Indonesia Stock Exchange. This research was conducted to determine how the effect of liquidity, leverage, profitability, company size on dividend policy. The data used is secondary data taken from financial reports and the Indonesian Capital Market Directory (ICMD) of manufacturing companies listed on the Indonesia Stock Exchange (BEI). The analysis technique used is multiple regression with the least squares equation and hypothesis testing using t-statistics to test the partial regression coefficients and f-statistics to test the significance of the effect simultaneously with a level of significance of 5%. In addition, a

classic assumption test was also carried out which included normality test, multicollinearity test, heteroscedasticity test and auto correlation test. The results of his research analysis show that the variable Current Ratio, Debt To Equity Ratio, Company Size (Size) does not have a significant effect on the Dividend Pay Out Ratio (DPR), while return on investment has a positive and significant effect on the Dividend Pay Out Ratio (DPR). While simultaneously the variables of liquidity, leverage, profitability and company size have a significant effect on dividend policy. This is indicated by the value of F value greater than the significance value.

Research conducted by Marcia Julifarv Ardianto, M. Chabachib and Wisnu Mawardi (2016) with the title Effect of Institutional ownership, DER, ROA and Current Ratio on Firm Value with Dividend Policy as an Intervening Variable (study on Manufacturing companies on the IDX 2011 - 2015). This study uses multiple regression analysis to test the hypothesis. In addition, the coefficient of determination, the f statistical test and the t statistical test are used to assess the goodness of fit of the research model. Path analysis and sobel test are used to determine whether the DPR as an intervening variable has a mediating function. In this study, the company's value is proxied by Tobin's Q while dividend policy is proxied by the DPR. The results of the research conducted show that institutional ownership has a positive and significant effect on the DPR, but has a positive and insignificant effect on Tobin's Q. ROA has a positive and significant effect on Tobin's Q and DPR. Current Ratio has a negative but not significant effect on DPR, but has a significant and negative effect on Tobin's Q. DPR has a positive and significant effect on Tobin's Q. DPR as an intervening variable can mediate the effect of institutional ownership and ROA on Tobin's Q.

Research conducted by Frebumi (2012) entitled The Effect of Liquidity, Solvency, Profitability, Asset Growth, and Company Size against Dividend per Share in Manufacturing Companies on the Indonesia Stock Exchange. The data used in this research is secondary data obtained from the Indonesian Capital Market Directory 2006, 2008 and www.idx.co.id (2009 and 2010). The analytical tool used is multiple regression analysis method and classical assumption test in the form of normality test, multicollinearity, heteroscedasticity and auto correlation and is assisted by SPSS version 11.5. The results of his research show that liquidity (CR), Solvency (DER), Profitability (NPM, ROI, and EPS), Asset Growth and company size simultaneously have a significant effect on DPS and partially show that only DER and EPS variables have an significant effect to DPS. While the cash ratio, current ratio, net profit margin, ROI, asset growth and company size variables do not have a significant effect.

Research conducted by Sugiarti, Surachman and Siti Aisjah (2013) entitled The Effect of Corporate Financial Performance on Stock Returns (Study on Manufacturing Companies listed on the Indonesia Stock Exchange) aims to examine and analyze the effect of the current ratio, Debt to Equity Ratio, Return on Equity and Earning per Share on stock returns, using quantitative and regression analysis methods. The population of this research is manufacturing companies listed on the Indonesia Stock Exchange that pay dividends continuously for the period 2009-2012. The population number of 28 companies observed over a period of 3 years found observations of 84 companies. The results showed that the Debt to Equity Ratio variable did not have a significant negative effect on stock returns and the Return on Equity variable did not have a significant effect on stock returns and the Earning per Share variable did not have a significant negative effect on stock returns.

Okky Safitri, Sinarwati, Anantawikrama (2012) with a study entitled Analysis of the Effect of

Profitability, Liquidity, and Leverage on Stock Returns in Manufacturing Companies Listed on the IDX 2009-2013. The results showed that, (1) profitability has a positive and significant effect on stock returns, (2) liquidity has a positive and significant effect on stock returns, (3) Leverage has a positive and significant effect on stock returns, (4) profitability, liquidity, and leverage have a positive and significant effect on stock returns.

Based on Puspita's research (2010), the cash ratio variable can be used as an indicator for investors in investing because if the cash ratio increases, the dividend payout ratio distributed will also increase. The positive sign in this cash ratio variable shows that an increase in the amount of cash from the company will also increase dividend payments by the company, so that the more liquid a company is, the greater the dividend payment from the company. The amount of cash the company receives has fulfilled its short-term obligations, so that the company can pay dividends each period it increases. This means that the dividends per share distributed will also increase. The results showed that the availability of cash showed the level of dividends distributed. The cash ratio (CR) position is an important variable considered by management in dividend policy. Cash ratio is a measure commonly used to measure liquidity, so the cash ratio is also thought to have an effect on dividend income. The higher the cash ratio of shareholders, the easier it will be to obtain cash funds.

Previous research did not implicitly include the current ratio variable as a variable that affects dividends. Because the current ratio is part of the liquidity ratio, previous research emphasizes the effect of liquidity on dividends. A high current ratio indicates an excess of current assets (high liquidity and low risk), but has an adverse effect on company profitability (Hanafi, 2014). The amount of the calculation of the current ratio shows the amount of current assets that can guarantee current liabilities. The greater the current ratio, the higher the company's liquidity. This ratio shows the extent to which current assets can cover current liabilities. The greater the current ratio, the higher the company's ability to meet its short-term obligations (including paying dividends). The high current ratio also shows investor confidence in the company's ability to pay the promised dividends.

3. Research Method

The secondary data needed in this study from 2010 - 2018 were sourced from www.idx.co.id in 2019. The research variables were liquidity, solvency, profitability and dividend per share. Liquidity indicators are Current Ratio and Cash Ratio. Solvency indicators are Total Debt to Total Equity Ratio and Total Debt Ratio. Profitability indicators are the profit margin ratio and Earning per Share. The dividend indicator is the dividend per share. Manufacturing is a branch of industry that applies equipment and a process medium to transform raw materials into finished goods for sale. This effort involves all the intermediate processes required for the production and integration of the components of a product. Some industries, such as semiconductor and steel manufacturers, also use the term fabrication or fabrication. The manufacturing sector is closely related to engineering or engineering (<http://id.wikipedia.org/wiki/Manufacturing>).

The population in this study is the secondary sector (management / manufacturing sector) on the Indonesia Stock Exchange. www.idx.co.id (2019) shows that the number of manufacturing companies registered in the 2010-2018 period is 168 issuers which are divided into 3 industry categories, namely the basic industry and chemicals sector, the Miscellaneous Industry sector (miscellaneous industry) and the consumer goods industry sector. The sampling technique used was purposive sampling (Fauzi, Dencik & Asiati, 2019) based on the following criteria:

(1) company shares that were always registered in the 2010-2018 period; and (2) Companies that always distribute dividends in the 2010-2018 period. Based on these criteria, 30 companies were obtained as research samples.

To determine the multiple regression equation, namely through the formula:

$$Y_t = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + e$$

Y_t = Dividend Per Share (DPS)

a = constant

$b_1, \dots, b_6$ = coefficient

X_1 = Current Ratio (CAR)

X_2 = Cash Ratio (CR)

X_3 = Debt to Asset Ratio (DAR)

X_4 = Debt to Equity Ratio (DER)

X_5 = Net Profit Margin (NPM)

X_6 = Earning Per Share (EPS)

e = error of term

4. Findings and Discussions

4.1 Redundant Test

To see a good research model in panel data regression, a redundant test is needed, here is a table of statistical test results:

Table 1. Redundant Test

Redundant Fixed Effects Tests

Equation: FIXED

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.265182	(29,233)	0.0000
Cross-section Chi-square	114.548112	29	0.0000

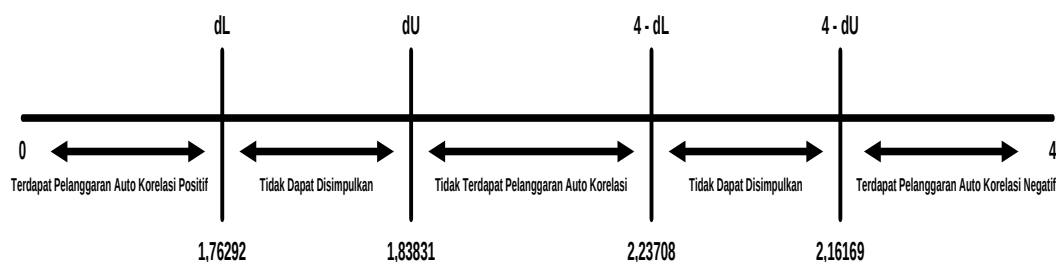
Based on Table 1, the redundant test is a statistical test to choose whether the model used is fixed or common effect, following the decision-making criteria (1) If the chi square count > the chi square table and the prob value. <0.05, the better model is the fixed effect, (2) If chi square count < chi square table and prob value. > 0.05, then the better model is the common effect. Chi table is 42.55697, while the calculated chi value is 114.548112, the calculated chi value is greater than the chi table, meaning that the model used is the fixed effect

The classical assumption test of panel-shaped data uses autocorrelation test, heteroscedasticity and multicollinearity tests. Autocorrelation test (Durbin Watson test) is one of the tests used to check the presence or absence of autocorrelation between independent variables. Almost all statistical programs provide facilities for calculating d values. The value of d ranges from 0 to 4, with the determination if the value of d: (1) lies between 0 - 1.76292; it means that H_0

rejects (there is positive autocorrelation); (2) Located between 1.76292 - 1.83831; then it means that it cannot be decided; (3) Located between 1.83831 - 2.23708; it means that H_0 is accepted (no autocorrelation); (4) Located between 2.23708 - 2.16169; it means that it cannot be decided; (5) Located between 2.16169 - 4.00; it means that H_0 is rejected (there is negative autocorrelation). The autocorrelation test in this study uses the Durbin Watson test, here is a table of statistical test results:

Table 2. Autocorrelation test with Durbin-Watson

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.409846	Mean dependent var	320.1384
Adjusted R-squared	0.321196	S.D. dependent var	758.8636
S.E. of regression	625.2244	Akaike info criterion	15.83808
Sum squared resid	91080990	Schwarz criterion	16.31916
Log likelihood	-2094.222	Hannan-Quinn criter.	16.03128
F-statistic	4.623202	Durbin-Watson stat	2.033326
Prob(F-statistic)	0.000000		



Based on Table 2, it is known that the Durbin Watson value is 2.033326; means that it is still in the range 1.83831 - 2.23708, so it can be concluded that the data used in this study does not contain autocorrelation, and is feasible to be analyzed by multiple linear regression.

The heteroscedasticity test in this study uses the Glejser test, the following is the table of statistical test results:

Table 3. Heteroscedasticity Test with the Glejser Method

Dependent Variable: RESABS

Method: Panel Least Squares

Date: 07/04/19 Time: 21:13

Sample: 2010 2018

Periods included: 9

Cross-sections included: 30

Total panel (unbalanced) observations: 269

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-25.10863	227.2981	-0.110466	0.9121
CURRENT	-58.07120	81.66122	-0.711123	0.4777
CR	35.39774	44.54281	0.794690	0.4276
DAR	-315.8370	507.4950	-0.622345	0.5343
DER	278.7389	145.1433	1.920439	0.0560

NPM	16.15440	7.592858	2.127578	0.0344
EPS	0.042351	0.007799	5.430059	0.0000

Based on table 3, the output display shows the probability value of all variables above 0.05, except for the NPM variable and the EPS variable, the probability value is below 0.05, it can be concluded that the variable Current Ratio (CAR) (X1), Cash Ratio (CR) (X2), Debt to Asset Ratio (DAR) (X3), Debt to Equity Ratio (DER) (X4) are not heteroscedasticity in the model, while the Net Profit Margin (NPM) (X5) and Earning Per Share (EPS) variables (X6) there is heteroscedasticity in the model.

A good regression model should not have a correlation between independent variables (multicollinearity does not occur).

Table 4. Multicollinearity Test with Correlation

	CURRENT	CR	DAR	DER	NPM	EPS
CURRENT	1.000000	0.818681	-0.620282	-0.490370	0.471560	0.055879
CR	0.818681	1.000000	-0.749135	-0.618889	0.298138	-0.006682
DAR	-0.620282	-0.749135	1.000000	0.908319	-0.230264	0.032213
DER	-0.490370	-0.618889	0.908319	1.000000	-0.201418	0.064580
NPM	0.471560	0.298138	-0.230264	-0.201418	1.000000	0.433842
EPS	0.055879	-0.006682	0.032213	0.064580	0.433842	1.000000

Based on Table 4, it is known that the correlation value of all independent variables <0.800, there is no classic multicollinearity assumption error, while the correlation between the Current Ratio (X1) variable to the Cash Ratio (X2) and the DAR (X3) to DER (X4) variable is a classic multicollinearity assumption error.

Table 5. Value of t test

Dependent Variable: DPS

Method: Panel Least Squares

Date: 07/04/19 Time: 20:09

Sample: 2010 2018

Periods included: 9

Cross-sections included: 30

Total panel (unbalanced) observations: 269

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-157.2143	302.3614	-0.519955	0.6036
CURRENT	47.18766	108.6292	0.434392	0.6644
CR	14.22866	59.25271	0.240135	0.8104
DAR	-302.5679	675.0910	-0.448188	0.6544
DER	421.1131	193.0757	2.181078	0.0302
NPM	14.02434	10.10034	1.388502	0.1663
EPS	0.015569	0.010375	1.500604	0.1348
R-squared	0.409846	Mean dependent var	320.1384	
Adjusted R-squared	0.321196	S.D. dependent var	758.8636	
S.E. of regression	625.2244	Akaike info criterion	15.83808	
Sum squared resid	91080990	Schwarz criterion	16.31916	
Log likelihood	-2094.222	Hannan-Quinn criter.	16.03128	

F-statistic	4.623202	Durbin-Watson stat	2.033326
Prob(F-statistic)	0.000000		

Based on Table 5 above, it can be seen that the t value of the effect of Current Ratio (X1) on Dividend Per Share (Y) is 0.434392 and the significance value (probability) is 0.6644, meaning the t-count value ($0.434392 < t \text{ table } 1.9689$) and a significance value $t (0.6644) > \alpha (0.05)$, so that H_0 is accepted and H_a is rejected, meaning that Current Ratio has no significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (BEI). The regression coefficient of the Current Ratio (X1) variable is 47.18766 and has a positive slope, meaning that when the Current Ratio increases in manufacturing companies, the Dividend Per Share of manufacturing companies increases.

The t value of the influence of Cash Ratio (X2) on Dividend Per Share (Y) is 0.240135; then t value ($0.240135 < t \text{ table } (1.9689)$) and a significant value (Sig. t) of 0.240135, meaning Sig-t ($0.240135 > \alpha (0.05)$), so that H_0 is accepted and H_a is rejected, it means that Cash Ratio has no significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). The regression coefficient of the Cash Ratio (X2) variable is 14.22866 and has a positive slope, meaning that when there is an increase in the Cash Ratio of the manufacturing company it causes the manufacturing company's Dividend per Share to increase.

The t value of the effect of Debt to Asset Ratio (X3) on Dividend Per Share (Y) is -0.448188; then t value ($-0.448188 < t \text{ table } (1.9689)$) and a significant value (Sig-t) of -0.448188, meaning Sig-t ($0.6544 > \alpha (0.05)$), so that H_0 is accepted and H_a is rejected, meaning that the Debt to Asset Ratio has no significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). The regression coefficient of the Debt to Asset Ratio (X3) variable is -302.5679 and has a negative slope, meaning that when there is an increase in the Debt to Asset Ratio of manufacturing companies, the Dividend Per Share of manufacturing companies decreases.

The t value calculated for the effect of Debt to Equity Ratio (X4) on Dividend Per Share (Y) is 2.181078; then t value ($2.181078 > t \text{ table } (1.9689)$) and a significant value (Sig. t) of 0.0302, meaning Sig-t ($0.0302 < \alpha (0.05)$), so that H_a is accepted and H_0 is rejected This means that the Debt to Equity Ratio has a significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). The regression coefficient of the Debt to Equity Ratio (X4) variable is 421,1131 and has a positive slope, meaning that when there is an increase in the Debt to Equity Ratio of manufacturing companies it causes the Dividend Per Share of manufacturing companies to increase.

The t value calculated for the effect of Net Profit Margin (X5) on Dividend Per Share (Y), is 1.388502; then t value ($1.388502 < t \text{ table } (1.9689)$) and a significant value (Sig-t) of 0.1663, meaning Sig-t ($0.1663 > \alpha (0.05)$), so that H_0 is accepted and H_a is rejected, meaning that the Net Profit Margin does not have a significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). The regression coefficient of the Net Profit Margin variable (X5) is 14.02434 and has a positive slope, meaning that when there is an increase in the Net Profit Margin of the manufacturing company, the Dividend per Share of the manufacturing company increases.

The t value of the effect of Earning Per Share (X6) on Dividend Per Share (Y) is 1.500604; then t value ($1.500604 < t \text{ table } (1.9689)$) and a significant value (Sig-t) of 0.1348, meaning

Sig-t (0.1348) > α (0.05), so that H_0 is accepted and H_a is rejected, meaning that Earning Per Share does not have a significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). The regression coefficient for the variable earning per Share (X6) is 0.015569 and has a positive slope, meaning that when there is an increase in Earning per Share, manufacturing companies cause Dividend Per Share to decrease in manufacturing companies.

It can be concluded that based on the t test, Current Ratio (X1) has no significant effect on Dividend Per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). Cash Ratio (X2) has no significant effect on Dividend per Share in manufacturing companies on the Indonesia Stock Exchange (BEI). Debt to Asset Ratio (X3) has no significant effect on Dividend per Share in manufacturing companies on the Indonesia Stock Exchange (IDX). Debt to Equity Ratio (X4) has a significant effect on Dividend per Share in manufacturing companies on the Indonesia Stock Exchange (BEI). Net Profit Margin (X5) does not have a significant effect on Dividend per Share in manufacturing companies on the Indonesia Stock Exchange (BEI). Earnings per Share (X6) has no significant effect on Dividend per Share in manufacturing companies on the Indonesia Stock Exchange. (IDX). Research conducted by Pasadena (2013) entitled The Effect of Liquidity, Leverage, Profitability and Company Size on Dividend Policy in Manufacturing companies listed on the Indonesia Stock Exchange. The results of his research analysis indicate that the variable Current Ratio, Debt to Equity Ratio, Company Size (Size) partially does not have a significant effect on the dividend payout ratio (DPR). Meanwhile, return on investment partially has a positive and significant effect on the Dividend Payout Ratio (DPR). Research conducted by Marcia Julifarv Ardianto, M. Chabachib and Wisnu Mawardi (2016) with the title Effect of Institutional ownership, DER, ROA and Current Ratio on Firm Value with Dividend Policy as an Intervening Variable (study on Manufacturing companies on the IDX 2011 - 2015). This study uses multiple regression analysis to test the hypothesis. In addition, the coefficient of determination, the f statistical test and the t statistical test are used to assess the goodness of fit of the research model. Path analysis and sobel test are used to determine whether the DPR as an intervening variable has a mediating function. In this study, the company's value is proxied by Tobin's Q while dividend policy is proxied by the DPR.

Research conducted by Frebumi (2012) entitled The Effect of Liquidity, Solvency, Profitability, Asset Growth, and Company Size against Dividend per Share in Manufacturing Companies on the Indonesia Stock Exchange. The results of his research show that liquidity (CR), Solvency (DER), Profitability (NPM, ROI, and EPS), Asset Growth and company size simultaneously have a significant effect on DPS and partially show that only DER and EPS variables have an significant effect to DPS. While the cash ratio, current ratio, net profit margin, ROI, asset growth and company size variables do not have a significant effect. Research conducted by Sugiarti, Surachman and Siti Aisjah (2013) entitled The Effect of Corporate Financial Performance on Stock Returns (Studies on Manufacturing Companies listed on the Indonesia Stock Exchange). The results showed that the Debt to Equity Ratio variable did not have a significant negative effect on stock returns and the Return on Equity variable did not have a significant effect on stock returns and the Earning per Share variable did not have a significant negative effect on stock returns. Okky Safitri, Sinarwati, Anantawikrama (2012) with a study entitled Analysis of the Effect of Profitability, Liquidity, and Leverage on Stock Returns in Manufacturing Companies Listed on the IDX 2009-2013. The results showed that, (1) profitability has a positive and significant effect on stock returns,

(2) liquidity has a positive and significant effect on stock returns, (3) Leverage has a positive and significant effect on stock returns, (4) profitability, liquidity, and leverage partially positive and significant effect on stock returns.

Then, based on the results of F count, the F-count is $4,623202 > F\text{-table of } 2,1331$ so that H_0 is rejected and H_a is accepted. Thus, the regression model is feasible and correct. The conclusion is that Current Ratio, Cash Ratio, Debt to Equity Ratio, Debt To Asset Ratio, Net Profit Margin, Earning per Share collectively, positively and significantly affect Dividend Per Share (Y) in manufacturing companies on the Indonesia Stock Exchange (BEI). This research is in line with research conducted by Pasadena (2013) entitled The Effect of Liquidity, Leverage, Profitability and Company Size on Dividend Policy in manufacturing companies listed on the Indonesia Stock Exchange. The results of his research analysis show that jointly the variables of liquidity, leverage, profitability and company size have a significant effect on dividend policy. For example, research conducted by Frebumi (2012) entitled The Effect of Liquidity, Solvency, Profitability, Asset Growth, and Company Size against Dividend per Share in Manufacturing Companies on the Indonesia Stock Exchange. The results of his research show that liquidity (CR), Solvency (DER), Profitability (NPM, ROI, and EPS), Asset Growth and firm size simultaneously have a significant influence on DPS. Okky Safitri, Sinarwati, Anantawikrama (2012) with a study entitled Analysis of the Effect of Profitability, Liquidity, and Leverage on Stock Returns in Manufacturing Companies Listed on the IDX 2009-2013. The results showed that, (1) profitability has a positive and significant effect on stock returns, (2) liquidity has a positive and significant effect on stock returns, (3) Leverage has a positive and significant effect on stock returns, (4) profitability, liquidity, and leverage have a positive and significant effect on stock returns.

5. Conclusion

Liquidity, solvency and profitability have a significant effect on Dividend Per Share of Manufacturing Companies on the Indonesia Stock Exchange. Current Ratio, Cash Ratio, Debt to Equity Ratio, Debt To Asset Ratio, Net Profit Margin, Earning per Share collectively, positively and significantly affect Dividend Per Share (Y) in manufacturing companies on the Indonesia Stock Exchange (IDX). Therefore, manufacturing companies listed on the Indonesia Stock Exchange must maintain stability, liquidity, solvency and profitability in order to increase Dividend per Share. Then, the shareholders of Manufacturing Companies Listed on the Indonesian Stock Exchange do not immediately withdraw their shares when the share price drops, because it is expected that it will not take too long, and will be stable and return to increased liquidity, solvency and profitability. Dividend per Share and share prices rose again.

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Analysis of Efficiency and Effectiveness of The Performance of Public Housing and Residential Area: The case of Palembang

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Abstract

Dinas Perumahan Rakyat dan Kawasan Permukiman (Pera KP) is an element of the Regional Apparatus Organization (OPD) of the regional government of Palembang City which operates in 4 (four) heads of fields, namely, the fields of Utilities, Environmental Sanitation, Housing and Environmental Roads. In 2018, there are several activities or programs that have not been realized but will be realized in 2019. This research identifies activities or programs in 2019 using the Efficiency and Effectiveness method. Based on the results obtained, the Pera KP Office is included in the Efficiency category. While the results of the questionnaire distributed using the Community Satisfaction Index, the effectiveness level was in the good category with a number of 68.5.

Keywords: Efficiency, Effectiveness, Pera KP

1. Introduction

With the rapid development at both the central and local government levels that have resulted in the emergence of public demands for programs managed by government agencies, the government can also reduce waste of funds and can detect programs that are not economically feasible to produce good performance. . Good performance for an organization is called achievement or the level of success achieved in realizing the goals, vision and mission of the organization. The high challenge for government performance is focused on measuring the performance of government agencies. Performance measurement is very important to do to assess agency management in producing better and more targeted public services.

Government performance does not merely show how public money has been spent but the ability to show how this money has been spent economically, efficiently and effectively. Mahmudi in his book *Public Sector Performance Management* (2019: 15) states performance measurement is carried out as a means of learning to improve performance in the future. This application in the long term aims to establish a culture of achievement in the organization. According to Mahmudi (2019: 83) Value for money performance measurement is a performance measurement to measure the economy, efficiency and effectiveness of an activity, program and organization. This performance measurement is a form of performance measurement that is specific and unique to the organization. The purpose of this study is to determine the performance of the PERA KP (Public Housing and Settlement) Office in 2019 as measured by using the Economic, Efficiency and Effectiveness approach.

2. Literature Review

Performance management is a systematic process, meaning that improving performance requires well-planned steps or stages. The performance improvement process is not a short-term work, but a long-term process. This performance-based management will ultimately have

an impact on improving the performance culture. Performance-based management is carried out in a sustainable and long-term manner which includes activities for setting strategic performance targets, measuring performance, collecting performance data, and reporting performance according to Mahmudi (2019).

Performance standards as described by Hamid, MSF 2015, Abdullah (2014) have an intermediate function as a benchmark to determine the success and failure of valuable performance. 2. Motivate employees to work harder to achieve standards. To make performance standards that can truly motivate employees, it is necessary to link rewards to the compensation system. 3. Provide direction for the implementation of work to be achieved, both in quantity and quality. 4. Provide guidance to employees regarding the work implementation process in order to achieve the set performance standards.

Performance indicators are a multidimensional and complex concept. In public sector organizations, such as the government, there is no single performance indicator that can be used for all work units (Mahmudi, 2019). Performance indicators are not only financial performance indicators, but also non-financial indicators. Financial indicators only emphasize indicators that are oriented towards input and output which are limited to the budget and its realization. Meanwhile, non-financial indicators, such as customer satisfaction, service quality, service coverage, service outcomes have not been widely accommodated.

Mahmudi (2019) Determination of performance indicators also needs to consider the following components (1) cost of service; (2) utilization rate; (3) Quality and service standards (quality and standards); (4) Service coverage and (5) Citizen satisfaction. According to Mahmudi (2019) Good performance measurement is the measurement of performance measured through the economic level, efficiency and effectiveness of an activity, program and organization.

Economics related to primary input in the form of financial resources (money/cash) becomes secondary input in the form of labor, materials, infrastructure, and capital goods consumed for the organization's operations. The economic concept is closely related to the concept of cost to obtain a unit of input.

Efficiency speaks of input and output. Efficiency is related to the relationship between output in the form of goods or services produced and the resources used to produce these outputs. An organization, program, or activity is said to be efficient if it is able to produce certain outputs with the lowest possible input, or with certain inputs it is able to produce the maximum output.

Effectiveness is related to the relationship between the expected results and the results actually achieved. Effectiveness is the relationship between output and objectives. The greater the contribution of output to the achievement of goals, the more effective the organization, program or activity is. If the economy focuses on inputs and efficiency on outputs, then effectiveness focuses on outcomes. An organization, program, or activity is considered effective if the resulting output can meet the expected objectives.

Endang Aprasari (2018) in this study entitled Analysis of Public Sector Organizational Performance with a Value For Money Approach. The results showed that the performance of the Public Works and Housing Office of Slamen Regency from all activities in 2016 showed economic performance, efficiency and the level of effectiveness as measured by the community decision index survey showed good results. Deni Aulia Arfan (2014) with the title Value For Money Analysis in measuring the performance of the Yogyakarta Special Region Agriculture Office. The results of this study are the improvement of farmers' welfare, food security and

marketing of agricultural products. From the economic and efficient elements that have been able to carry out all programs economically and efficiently. and the element of effectiveness is only able to implement two programs effectively with an effectiveness ratio of 100% and one less effective program, namely a program to increase farmer welfare with an effectiveness ratio of 99.29%.

3. Research Method

This research is a type of quantitative data with nominal and ordinal scales and qualitative data at the Palembang City Public Housing and Settlement Service, so that the results and conclusions drawn are only useful for the object under study (Fauzi, Dencik & Asiati, 2019).

This research was conducted at the Department of Public Housing and Settlements, which is located on Jl.Slamet Riyadi No.212, Kel. lawang kidul Kec. Ilir Timur Dua Palembang City. And the implementation time is from January 2020 to March 2020.

The data used are (1) general description of the Public Housing and Settlement Areas; (2) Activity Performance Measurement Report (PKK) 2019; (3) Public Satisfaction Index (IKM) Survey Data

In this study, data analysis was carried out using 3 (three) aspects including Economy, Efficiency and Effectiveness. While the indicators of these three aspects are divided into two parts, namely (1) indicators of cost allocation (economy and efficiency), and (2) indicators of service quality (effectiveness).

Economics related to primary input in the form of financial resources (money / cash) becomes secondary input in the form of labor, materials, infrastructure, and capital goods consumed for the organization's operations. The economic concept is closely related to the concept of cost to obtain a unit of input.

$$\text{Economic} = \frac{\text{Input}}{\text{Input Price(Rp)}} \times 100\%$$

The economic criteria according to Mahmud (2019) are:

- ($x < 100\%$) means economy.
- ($x = 100\%$) means the economy is balanced.
- ($x > 100\%$) means not economic.

Efficiency concerns input and output. Efficiency is related to the relationship between output in the form of goods or services produced and the resources used to produce these outputs

$$\text{Efficiency} = \frac{\text{Output}}{\text{Input}} \times 100\%$$

The efficiency criteria according to Mahmud (2019) are:

- ($x < 100\%$) means inefficient.
- ($x = 100\%$) means balanced efficiency.
- ($x > 100\%$) means efficient.

Effectiveness is related to the relationship between the expected results and the results actually achieved. Effectiveness is the relationship between output and objectives. The greater the

contribution of output to the achievement of goals, the more effective the organization, program or activity is.

$$\text{Effectiveness} = \frac{\text{Outcome}}{\text{Output}} \times 100\%$$

4. Findings and Discussions

4.1 Cost Allocation Indicators (Economy and Efficiency)

Based on the economic level in 2019, all activities of the Pera Kp Service can be seen in table 1:

Table 1. Economic Level in 2019

Year	Input	Input Price	Economic Level	Status
2019	309.112.243.351	405.538.230.917	76,22	Economic

The results of the calculations in table 1 for all activities in 2019 show a figure of 76.22%. This means that these activities fall into the economic category.

Based on the level of efficiency, a measurement between the percentage of results achieved in each activity (output) and the percentage of economic level (input). The greater the level of efficiency, the better, and vice versa.

Table 2. Efficiency Level in 2019

Year	Output	Input	Efficiency Level	Status
2019	5.770,00	4.323,41	133,45	Efficient

The result of calculating the level of efficiency in all activities in 2019 is 133.45%, which means that these activities are included in the efficiency category.

4.2 Service Quality Indicators

In the calculation of the Community Satisfaction Index, it is calculated using the "weighted average value" in the calculation of the IKM there are 14 question elements, each question element has the same weight as the following formula:

$$\text{Weighted average value} = \frac{\text{Total Weight}}{\text{Total Element}} = \frac{1}{14} = 0,071$$

To obtain the service unit IKM value, the weighted average value approach is used with the following formula:

$$\text{IKM} = \frac{(\text{The total of the perceived value per element})}{(\text{Total elements filled})} \times \text{Weighted value}$$

Analysis of measuring the level of effectiveness can be seen in table 3.

Table 3. Level of Effectiveness

No	Element questions	Total Perception Value Per Element	Weighted Value	Weighted Average Per Element
1	There is convenience between the conditions that must be met in getting service (Terdapat kemudahan antara syarat yang harus dipenuhi dalam mendapatkan pelayanan)	162	0,071	0,23
2	Services received are in accordance with the Pera KP Office procedures (Pelayanan yang diterima sesuai dengan prosedur Dinas Pera KP)	164		0,23
3	Field results received by the community of Kertapati and Plaju sub-districts are in accordance with the provisions set by the Pera KP Office (Hasil lapangan yang diterima oleh masyarakat kecamatan kertapati dan plaju sesuai dengan ketentuan yang telah ditetapkan oleh Dinas Pera KP)	154		0,21
4	The construction of street lighting carried out by officials of the Pera KP Office greatly helped the community in Kertapati and Plaju sub-districts (Pembangunan penerangan jalan yang dilakukan pegawai Dinas Pera KP sangat membantu masyarakat di kecamatan kertapati dan plaju)	166		0,23
5	Great sense of responsibility for the work done in the field (Rasa bertanggung jawab besar terhadap pekerjaan yang dilakukan saat dilapangan)	164		0,23
6	There are employees who are extortionate while on duty in the field (Adanya pegawai yang pungli saat bertugas dilapangan)	70		0,09

7	Employees who are consistent while on duty in the field (Pegawai yang konsisten saat sedang bertugas dilapangan)	154		0,21
8	Lack of officers in the field (Kurang nya petugas saat dilapangan)	90		0,12
9	Often there are employee delays when on duty in the field (Sering terjadi keterlambatan pegawai saat bertugas dilapangan)	95		0,13
10	Employees of the Pera KP Office provide full services to the community in Kertapati and Plaju districts (Pegawai Dinas Pera KP memberikan pelayanan penuh terhadap masyarakat di kecamatan kertapati dan plaju)	161		0,22
11	The time needed to get service is in accordance with the specified service time standards (Waktu yang diperlukan untuk mendapatkan pelayanan sesuai dengan standar waktu pelayanan yang ditetapkan)	156		0,22
12	Give pocket money to field officers (Memberi uang saku untuk petugas lapangan)	136		0,19
13	You are satisfied with the services of the Pera KP Office employees (Saudara/i merasa puas terhadap jasa pegawai Dinas Pera KP)	165		0,23
14	Officer certainty when to do street lighting construction (Kepastian petugas kapan harus pembangunan penerangan jalan dikerjakan)	147		0,20
TOTAL				2,74

Based on table 3 above, it shows the overall results of each question element perception where the results obtained are 2.74. The Community Satisfaction Index contains 14 Question Elements which are reviewed using the formula:

$$IKM = \text{Service Unit} \times 25$$

When viewed through the value of the Community Satisfaction Index is

$$2,74 \times 25 = 68,5$$

Based on the results of the value of the Community Satisfaction Index, the Performance Effectiveness Level of the Pera KP Office is in the "GOOD" category with a score of 68.5. Where the overall results of the question elements indicate that the quality of the performance of the Pera KP Office that is felt by the community is said to be good. With the following criteria:

Table 4. Community Satisfaction Index Criteria

No	Interval	IKM conversion	Service Quality	Service Unit Performance
1	1,00 - 1,75	25 – 43,75	D	Tidak Baik
2	1,75 - 2,50	43,75 – 62,50	C	Kurang Baik
3	2,50 - 3,25	62,50 – 81,25	B	Baik
4	3,25 - 4,00	81,25 – 100,00	A	Sangat Baik

Source : Hariany, Zulfida, dan A.Rahim Matondang, 2014.

5. Conclusion

The economic level of all activities in the Pera KP Office in 2019 is included in the economic category with a yield of 76.22%, so it can be said to be Economic. This means that the Pera KP Office is able to manage finances well. It is expected that the Pera Kp Office will include the outcome of each activity to calculate the level of effectiveness so that the calculation is more complete.

The efficiency level of all activities in the Pera KP Office in 2019 is included in the efficiency category. Based on the overall calculation of the performance of the Pera KP Office, the results were 133.45%. This means that the Pera KP Office is able to manage resources properly to produce maximum performance. So it is hoped that the Pera Kp Office will be able to plan and implement activities / programs better in order to produce efficient activities.

The level of effectiveness calculated based on the Community Satisfaction Index with 14 Question Elements of the Pera KP Office in 2019 is in the "GOOD" category. With a value of 68.5% from the results of this calculation, it is concluded that the quality of work of the Pera KP Office that is felt by the community is good.

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Impact of Tax Evasion Among tax Payers of Bale Robe Town Administration, Ethiopia

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Abstract

The main purpose of this study was to investigate the impact of tax evasion among tax payers of payers Robe town administration. To attain the intended objective the study used quantitative research method and logit method for the econometrics model. And to collect the necessary data from the respective respondents questionnaire was distributed and collected from 346 respondents. For the data analysis SPSS version 20.0 was used. The finding of this study revealed that; tax knowledge, efficiency of tax authority, equity, and tax audit are found to be significant factors that could affect the tax evasion perception of tax payers.

Keywords: taxpayers' perception, tax evasion, Logit method

1. Introduction

Taxation has gained importance not only as a tool for raising revenue to meet the administrative costs of governance as well as for the provision of public services but it also serves as a tool available to planners, policy makers and implementers aiming to regulate the economy in order to bring about desired economic development (Palil 2010). That is why citizens are expected to discharge their civic responsibility by paying their taxes as these contribute to the development and administration of the society at large (Murkur, 2001). However, significant taxes to be collected find their way out of the economy through tax evasion and due to the fact that people do not like to pay taxes and that tax authorities have difficulty imposing and collecting taxes (Fagbemi & Noah 2010). In fact, tax evasion is a phenomenon present in all societies (Uadiale, Fagbemi, & Ogunleye, 2010).

It is found to be threatening to tax authorities, especially in developing countries. Recently, there is drastic reduction in states budget all over the world because of practice of tax evasion by economic agents. The value of tax evasion in the world over all is in excess of US\$3.1 trillion approximately 5.1% of global GDP (Muhrtala & Ogundeji, 2013). Moreover, Murphy (2011); Ching, (2013), showed that the total size of shadow economy on total GDP, by region, South America (36.8%) is placed at the top of the list, followed by Africa (34.8%), Europe (20.5%), Asia (17.7%), Oceania (14.1%) and North America (10.8%). As per Tilahun and Yidersal (2014), Ethiopia has a tax to GDP of 12.2% which is lower than other African countries of Kenya 17.7%, zamibia 17%, Malawi 15.6% and Rwanda 14.1%. The country's tax mobilization is also the lowest among most African countries. Beside, Empirical evidences witnessed that the Ethiopian tax-to-GDP ratio is low. As per OECD.org (2017) report it has been mentioned in the second Growth and Transformation Plan (GTPII), the share of tax revenue amounted to only 13.3 percent of the GDP, which is far below the average tax-to-GDP ratio for Sub-Saharan countries. From this, it follows that the country has a room to increase its domestic revenues which is exactly what the government has done by

applying a business profit tax rate revision over the last months. The achievement of this intention will be unimaginable to attain without understanding perception of taxpayers towards tax evasion. Hence, this study was intended to investigate perception of tax evasion among tax payers of Robe town administration.

2. Literature Review

Tax evasion is a word used to describe efforts of individuals and corporate entities towards dishonest reduction of tax liabilities. It has been described by Alm & Martinez-Vazquez (2001) as a thoughtful and eagerly practices of not unveiling comprehensive taxable income in order to reimburse lesser tax. Sardjono (2013) Stated that the willingness of tax payers to pay tax depends on knowledge and understanding of tax rules and good perception of the effectiveness of the taxation system. And at the same period Fjeldstad et.al (2013) stated that compliance with tax depend on the taxpayers knowledge that they cannot evade taxes and that the more individuals are satisfied with the public services provides by governments the more the likelihood of tax compliance. They further stated that tax payer' intentions for compliance will increase if they perceive the government utilizing revenue generated form tax, otherwise they will become less committed towards compliance. While the findings of (Kamil and Nurlis, 2015) stated that taxpayer compliance is depends on tax awareness and tax penalties. Their finding showed that more effective application of tax penalties the higher the tax compliance. They further argued that knowledge hand awareness of taxpayers the more the likely to avoid tax liabilities.

Beside, Loo, Mckerchar and Hansford (2009) indicate that the ability of taxpayer's in complying tax by reporting taxable income, claim relief, rebates and compute tax liability correctly can be determined by the sufficiency of taxpayer's knowledge toward tax policy. Mukasa (2011) agreed that tax knowledge has a significant positive relationship with tax compliance behavior. As the result from their research, higher tax knowledge is expected to lead to higher compliance rates and lower tax knowledge lead to lower tax compliance rate in adverse. The survey among small and medium registered taxpayers operating in Kampala central division found that low tax knowledge is one of the significant factors which contributed to less compliance. This is because lack of knowledge of tax law coupled with inadequacy of taxation books in layman terms to guide them which will contribute to unintentional tax non-compliance.

Mughal & Akram (2012) have found a significant relationship between tax evasion and tax system in Pakistan. In other studies by Lutfi (2009) and Fakile & Uwuigbe (2013), tax system has a negative relationship with tax evasion. Corruption is an act by taxpayer to pay something to somebody in order to relief the taxpayer from taking part in paying taxes or evading taxes. Akinyomi & Okpala (2013) for example, assess the factors influencing tax evasion and avoidance in Nigeria through a survey and found that the level of corruption has a positive relationship with tax evasion. However, Tijani & Mathias (2013) when studying expert viewpoint of tax evasion in Nigeria, concluded that a negative relationship exist between corruption and tax evasion. Beside, Literature has identifies reason for the different perceptions towards tax avoidance. Several reason were identified by literature on different perceptions among which; willingness of taxpayers, understanding the tax rules and utilization of tax revenues.

Agyemang badu(2015) perform study on assessment of citizen's attitudes towards tax evasion and non-compliance, in Ghana. The study revealed that whereas tax evasion on total

or a huge portion of revenue is measured offensive, minor measure of tax evasion (between 9 to 12% on earnings) is estimated as allowable activity. Minor measure of evasion is well-thought-out as more suitable than entirely other wrongdoings counted in the study, plus thefts of stationeries in the office. Further discoveries showed that some individuals are convinced that tax evasion is mutual among their peers is absolutely linked to their reception of tax evasion, and as such, tax evasion is seen as a additional satisfactory action by less revenue sets, and by labor-intensive employees rather than directors and supervisors. according to Manik Asri in Rahayu (2010), the taxpayer is recognized as having awareness if they: (1) recognize the existence of the tax laws and regulations, (2) knowing that the tax function is to finance state, (3) understand that the task taxes must be paid in accordance with the applicable rules, (4) calculate, pay, and report their taxes voluntarily and accurately.

Study conducted by Suresh Vadde and Srinivas Gundarapu (2010), on major factors that influence attitudes of rental taxpayers and their compliance behavior with tax system in Mekele city administration and their study revealed that there were some dishonest rental tax payers. Even there are some individually who entirely don't report their taxable income to the concerned body. In addition to the above, the study also disclosed that with the exception of minority of the rental tax payers who hold certificate and diploma, majority of them were with an educational background of elementary and high school completed. Hence, it can be concluded that rental tax payers lack knowledge of easily understanding the laws and regulations of the tax system and how their taxable income is computed. Also the authors concluded that; still many respondents are not attending or participating in the tax training session. Also, Wollela A Yesegat and Helge Fjeldstad, (2011) jointly conducted study on tax payers views of business taxation in Ethiopia. The objectives of their study were to assess business peoples' views of paying taxes in Ethiopia and to identify (perceived) difficulties with the tax system and priorities for tax reform. Hence the result showed that the main reasons for tax noncompliance were; lack of predictability in the tax system forces taxpayers to reduce their current tax liability, difficult to compete with businesses that import goods at manipulated custom duties, It is those who are not paying taxes that are quickly growing, so why should I comply, discrimination by the tax administration forces honest taxpayers to evade taxes;

While Nuguss et.al, (2014) conducted study on the consequences of tax assessment on tax collection of category 'c' taxpayers in Ethiopia: a case study in Mekelle city, Tigray. The study found that unless good service delivery is provided, tax related laws are enforced and implemented, effective awareness creation is done and fair tax assessment is conducted, there may not be efficient and effective tax collection. Even though efficient tax assessment and collection cannot be made overnight, it is up to tax administrators to ensure sufficient tax revenue. Multiple approaches are needed to enhance tax collection efficiency. No single approach is likely to fully and effectively address the tax collection efficiency of category 'C'. Since it has multiple causes of tax related problems, the category "C" tax payers needs more attention.

The study made by Yohanne and Zerihun(2013) on identifying the gaps and problems that exist between the Dire Dawa business community and the tax authority results show that most of the taxpayers, especially those in the category 'C', do not exactly know how the tax is assessed or calculated and the procedures in the tax assessment and computations are not objectively understood by most of the taxpayers. The finding also revealed that; over taxation

as result of over estimation of daily/annual income, Nontransparent, non-participatory standard assessment by the authority on category "C taxpayers", Lack of fairness or equity of taxation among similar businesses of category "C taxpayers" Poor tax laws enforcement especially for VAT and large number of tax defaulters, Poor communication and understanding between the tax authority and taxpayers, Weakness in tax collection and unsatisfactory service delivery of tax authority.

As per the finding of Mukhlis, et.al (2015), there is a positive and significant relationship between tax education on tax knowledge and tax compliance on Handicraft SMEs Sectors in Indonesia support the above statement and note that there was a positive significant relationship between taxpayer's tax knowledge and tax compliance. The taxpayers who have equipped with the sufficient tax knowledge are able to access their tax liability correctly and file tax return forms on time. Taxpayer cannot be expected to submit complete, proper tax returns accurately unless they have sufficient knowledge to understand the system. However, Kasipillai, Aripin, and Amran (2013), oppose the argument on positive correlation between tax knowledge and tax compliance has opposed by some of the studies. They found that there is a significant negative relationship between tax knowledge and compliance behavior. They claim that the increasing knowledge of tax such as audit process and tax regulations expose taxpayers the opportunity to evade tax. In other word, taxpayer who has higher level of tax knowledge is well-know about the loophole in tax regulation and system know the legal way to reduce or even avoid tax. From their research, they found that tax compliance to be higher for taxpayers who were less well educated and older.

Under the self-assessment tax system, one of the objectives of the taxing authority is to achieve voluntary tax compliance by the majority of the taxpayers (Kasipillai et al., 2011). But, it is common that a large proportion of taxpayers may be unable to complete their own tax returns due to lack of knowledge and understanding of tax laws and regulations. It was also found that there was a strong positive relationship between tax knowledge and the level of voluntary tax compliance (Kasipillai, Mustafa, Noraza, & Munusamy, 2009). Hai and See (2011) and Clotfelter, 2012) found that the high tax rate results in high tax noncompliance. Spicer & Becker (2013) also argue that those taxpayers who are aware that their tax rate is higher than average tax rate paid by other have higher tendency of tax evasion and tax noncompliance. By the same token, those tax payers who perceive that paying tax rate can overshadow their high tax rate payment through tax evasion. They also claimed that decreasing tax rates is not the only policy that has the potential to encourage tax compliance and discourage tax evasion. Nevertheless, the tax rate is an important factor in influencing tax compliance attitude even if the exact impact is still controversial and unsolved. Beside, Tax audits, frequency of audit and prior audit experience have been ambiguously discussed in relation to tax compliance. Some studies found out that audits have a positive relationship with tax evasion (Tadesse& Goitom, 2014). These findings recommended that tax audits can play an important role in tax compliance. Frequency of audits and the carefulness of tax audits could encourage taxpayers to become more careful computing and submitting their tax returns. Conversely, taxpayers who have never been audited might be trying understating their income and over stating their deductions (Palil, 2010).

A study by Beron, Tauchen and Witte, (1988) and Tilahun and Yidersal (2014) argue that audits did not significantly relate with tax compliance; which indicated that previous studies have found controversial results about the association between tax audit and tax compliance.

If tax payers perceive that the government is wisely spending the tax revenue for public goods and services, it is expected that voluntary tax compliance will enhance. But, if taxpayers believe that the government is spending tax revenue unwisely on unnecessary things then taxpayers will feel be unfaithful to and attempt to avoid taxes (Palil & Mustapha, 2011). Also, Palil (2010), simplicity of tax system has one of an imperative factor that determines tax compliance behavior of tax payers.

3. Research Method

In this research, the authors used primary data and for the data collection structured questionnaires was made. The questionnaires were adopted and developed with some modification from previous similar studies such as MuleyeT(2016),Belachew et.al,(2015) and Alis and Brooke(2017) were used and Closed ended questionnaires were prepared in the form of five Likert-Scale, Where; Strongly Agree [SA] = 5; Agree [A] = 4; Neutral [N] =3, Disagree [D] = 2; and Strongly Disagree [SD] = 1; for continuous variables. The use of Likert scale is to make it easier for understanding, reduce confusion in reading and answering the questionnaire by respondents. The target population of this study were all business income tax payers of Robe Town Administration; South East Ethiopia. According to Robe town Revenue Authority Report of 2018, they are estimated to be 4,160 tax payers consists of 310 category “A”, tax payers 262 category “C” and 3,588 category ‘C’ business income tax payers are registered and taken as target population of this study by the authors.

The researcher considered three categories of taxpayers as clusters and selected sample out of each three clusters using simple random sampling because in scenario of selecting sample from clusters “the groups are termed clusters in this form of sampling and can be based on any naturally occurring grouping” (Kothari 2004).

To determine the sample size from total taxpayers in the town, mathematical formula of Yimane T (1967) is used by taking in to account the total population, the sampling error and the level of reliability. It is assumed that the sample would have 95% reliability about population and a sampling error will be 5%. This simplest formula is given as follows:

$$n = \frac{N}{1 + (0.5)^2 \times N}$$

Where; N= study population, n = sample size and e = error margin

Accordingly, sample was first determined from total target population by formula of Yimane T (1967) as $365 = 4,160 / 1 + (0.05)^2 \times 4,160$ then, to randomly select sample from three categories by the following formula of [29] was also used by the author and showed in the following table 1. This is: $n_h = (N_h / N_s) \times n$ Where, n_h = sample size from each site, N_h = total population, N_s = target population and n = sample size from target population.

Table 1. Determination of sample size from each category by applying formula

Sampling Cluster	Population of each Category	Sample calculation	Sample size
Category “A”	310	$(310/4,160) \times 365$	27
Category “B”	262	$(262/4,160) \times 365$	23
Category “C”	3,588	$(3,588/4,160) \times 365$	315
Total	4,160	$(4,160/4,160) \times 365$	365

Source: Personal survey

Tax evasion perception is discrete random variable and dummy in nature that could be measured through logit or binary logistic regression model. Accordingly, the researchers has developed the model by driving logit function from odds ratio and incorporated eight explanatory variables which disclosed as follows:

$TEP = F(TKN, TR, TA, ETA, PEQ, IL, PI, TP, CoC)$. Where; TEP, Is tax evasion perception, TKN is Tax knowledge, TR is Tax rate, TA is tax audit, ETA is efficiency of tax authority, PEQ is perception on equity, IL is income level, PI is peer influence, TP is tax penalty and CoC is compliance cost. Hence, the researchers have developed the logistic regression model to achieve the objective of this study. Logistic regression is one of binary choice models (or dichotomous models), which is designed to model the ‘choice’ between two discrete alternatives. This model essentially describes the likelihood of observing success event ($Y_i = 1$) is directly depends on observed explanatory variables which are exogenous to the model. Tax evasion as a binary choice: to evade or not. Yet, a recent experimental study by Alm et al. (2017) stressed the necessity to analyze tax evasion as a two-stage choice (see also Benjamini and Maital, 1985; Gordon, 1989): the binary decision to either evade or not, and the choice of the amount to evade. Since, dependent variable, (i.e., tax evasion perception) is a binary outcome (dichotomous) variable and treated as qualitative data and the researcher assumes one (1) for evading, otherwise zero (0). For this data, logistic regression is appropriate model to measure how explanatory variables (factors influencing tax evasion perception) affect individual’s likelihood of evade or not evade. The Logit function can be derived from odds ratios:

$$\begin{aligned} \log(Odds\ ratio) &= \log(Success/Failure) \\ &= \log(y_i = 1/y_i = 0) = \beta_0 + x_i' \beta \end{aligned}$$

Where, $y_i = 1$ represents an individual “i” is being not to evade (success), $y_i = 0$ represents an individual “i” is being to evade (failure), x_i is column vector of explanatory variables (ED, TKN, TR, TA, ETA, PEQ, IL, and PI, β is column vector of parameters (coefficients) to be estimated and β_0 is the intercept term.

A number of statistics were used to assess how the model was fitting the data. Hence, for the purpose of this study the omnibus test statistic was used to assess whether there was a linear relationship between the probability of success or failure and the independent variables. In the omnibus test statistic p-value less than 0.05 implied that the logistic regression could be used to model the data. So, as per omnibus test result indicated in table 2 below, p-value is 0.000. Besides, Enter methods were used for fitting binary logistic regression to establish the variables that are associated with tax evasion perception. Therefore, logistic regression is fitted to model the data.

Table 2. Omnibus Tests of Model Coefficients

Omnibus Tests of Model Coefficients				
Model		Chi-square	Df	Sig.
Enter	Step	126.057	9	.000
	Block	126.057	9	.000
	Model	126.057	9	.000

Besides, the Wald statistic was used to assess the importance on individual independent variables in predicting the probability of success or failure of evasion. A coefficient with a

Wald statistic p - less than 0.05 implies that the variable is important in the model and those variables with p -values greater than 0.05 were considered to be unimportant (Hosmer and Lemeshow, 2000) and which is given in table 3 below.

Table 3. Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	-.0804	.0116	47.733	1	.000	1.0448

4. Findings and Discussions

Table 4. Binary Logistic Regression Result

	B	S.E.	Wald	Df	Sig.	Exp(B)
Taxknowledge	.0134	.0301	6.146	1	.000*	1.705
Taxrate	.272	.167	2.659	1	.130	.313
Taxaudit	.096	.0286	3.112	1	.038*	1.100
Efficiency of taxauthority	.0354	.0221	5.583	1	.000*	1.425
Equity	-.0495	.0299	4.733	1	.000*	.610
Income level	-.0288	.0174	3.745	1	.054	.630
Peer influence	-.266	.185	2.069	1	.150	.767
Tax penalty	.052	.052	6.002	1	.110	1.053
Compliance cost	-.288	.185	2.432	1	.119	.750
Constant	-1.434	1.559	.846	1	.358	.238

a. Variable(s) entered on step 1: Taxknow, Taxrate, Taxaudit, Efficoftaxautor, Equity, Incomlevel, Peerinf, Taxpena, Complcost.

Source: Own computation, 2019

Wald statistics and significance level revealed that; tax knowledge, tax audit, efficiency of tax authority, and equity were found to be significance in influencing the perception of tax evasion of tax payers; which is indicated by p -values of less than 0.05.

As per the result of the study showed; tax knowledge is among the variables that highly determine the tax evasion perception of tax payers which is at 5% significance level, p -vale of 0.000. Since having good understanding of the benefit of tax contribution towards the government mandatory; the knowledge hand awareness of tax payers the more the likely to avoid tax liabilities. Also low tax knowledge is one of the significant factors which contributed to less compliance because lack of knowledge of tax law coupled with inadequacy of taxation books in layman terms to guide them which will contribute to unintentional tax non-compliance. Besides, Loo, Mckerchar and Hansford (2009) indicate that the ability of taxpayer's in complying tax by reporting taxable income, claim relief, rebates and compute tax liability correctly can be determined by the sufficiency of taxpayer's knowledge toward tax policy. This finding was supported by the findings of Fjeldstad et.al (2013), (Kamil and Nurlis, 2015), Mukasa (2011), Jatmiko (2006). Equity is the second variable that highly influences tax evasion perception of tax payers with p -value of 0.000. Equity/fairness in this study is significant and negatively influences the tax evasion perception of tax payers. This

finding implies that lack of fairness/equity of by tax authority especially at the time of assessment for those category 'C' tax payers directly lead them to tax evasion. Which is in line with the findings of Chain et.al, (2015), Jackson & Milliron (1986), Yohanne and Zerihun (2013); Lack of fairness or equity of taxation among similar businesses of category "C taxpayers" Poor tax laws enforcement especially for VAT and large number of tax defaulters, Poor communication and understanding between the tax authority and taxpayers, Weakness in tax collection and unsatisfactory service delivery of tax authority. The other factors that influence tax evasion perception of tax payers were the efficiency of tax authority with p-value of 0.000 at 5% significance level. This finding implies that the tax authorities were not diligent in awareness creation of the importance of paying tax towards the government, i.e they were too late to create awareness of the importance of tax contribution towards the economy. Also tax audit is factors that affect tax evasion perception of tax payers with p-value of 0.038. Which support the findings of Palil, (2010).) Stated that frequency of audits and the carefulness of tax audits could encourage tax payers to become more careful computing and submitting their tax returns. Conversely, taxpayers who have never been audited might be trying to understand their income and over stating their deductions.

5. Conclusion

Since tax is the main sources of government revenue and hot as current issues, beside tax evasion is a series problem that hindered to attain the objective of revenue authority in tax collection. Hence, investigation on the area is unquestionable; so the study identified the following core findings; Majority of tax payers doesn't know the benefit of tax contribution towards the government even though they know the payment is compulsory. This is due to lack of awareness/knowledge of tax payment which leads to less compliance with the tax law, beside there was lack of fairness/equity of tax authority at the time of tax collection among similar business through assessment and has corrupt employees. Also the tax authority is not efficient in creating awareness and collecting the intended amount from tax.

Therefore, the tax authority has to do on creating awareness concerning the benefit of paying taxes. Especially as the payment of tax is compulsory they perceive as if the return from tax doesn't reach them by any means. Also The tax authority has to be fair in assessing similar business by following the ability to pay principle and punish their corrupt employees those who are involved on assessment and enforce as the tax payers has to audited their business; this enables the tax payers to disclose the accurate tax return.

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Lift above Poverty Micro-Finance Bank, Rural-Women Financial Security and Crime Reduction Strategies in Nigeria: Evaluation of Selected Communities in Badagry, Lagos State, Nigeria

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Abstract

This paper assessed Lift above Poverty Organization (LAPO), rural-women financial security as means of crime reduction Lagos State, women are involved in entrepreneurship to avert criminalities like arm-robbery, kidnapping, cultism, online fraud, terrorism and other security challenge. The study employed cross sectional survey design and was descriptive, combining both qualitative and quantitative techniques. The secondary data were obtained through content analysis of journals, books and online resources. The data were analyzed with Statistical Package for Social Sciences version 20.0. Findings showed that 100% of the respondents were females, 72% of the respondents used credit facilities from LAPO for investments.

Keywords: LAPO, rural women, financial security, crime reduction, Badagry, Lagos State

1. Introduction

Poverty is a global issue, at international level the zeal to mitigate poverty especially among the developing nations led to creation of organizations like the International Monetary Funds, World Bank, International Bank for Economic Reconstruction and Development, The Economic Community of West African State. In developing countries, there are more than fifteen organizations that fight poverty. In Nigeria, there have been various strategies to combat poverty, from her independence in 1960. There were National Development Plans, which spanned over twenty years (Jidefor, 2012). During military regimes various arrangements were instituted, till present now there have been several other failed attempts by government to alleviate extreme poverty among the populace. According to the last reports by the World Poverty Clock over 92 million Nigerians live in extreme poverty, this means that more than half of the country population is currently affected; they spend below 1.9 Dollars per day, (*Nigerian Bureau of Statistics, 2010*). The World Poverty Clock uses indices like income, distribution and production supply by the World Bank and IMF. In the late 1980s LAPO Micro Finance Bank was established primary to give the people access to affordable loans to boost their financial security, the organization has recorded huge success in terms of provision of soft credit facilities to people at the grassroots, most of the beneficiaries of the loans were rural women who have been evidently applied them to establish small and medium enterprises thereby reduce poverty which most of the government establishments failed to achieved for many years. The study conducted by Armstrong and Zegher (2006), supported by Weatherburn (2002) extreme poverty is linked to high wave of crime in Nigeria, in recent times there has been unprecedented increase in the rate of crime like arm-robbery, kidnapping, theft, murder, suicide, child trafficking and drug trafficking, women were not

exempted from these criminal acts. Hence, his study assessed LAPO, rural -women financial security and crime reduction strategies in Nigeria: - a study of selected communities, Badagry, Lagos State. The research was guided by the major research questions. What is the relationship between LAPO and crime reduction among rural women? Other specific questions are; what are the other areas of poverty alleviation by LAPO and rural populace?

2. Literature Review

2.1 LAPO

The acronym is referred to as Lift above Poverty Organization, it is one of the micro finance banks that was licensed to operate in Nigeria under the control of the Central Bank of Nigeria. It was created in the late 80s among its mandate were provision of soft credit to the less-privileged individuals to improve their socio-economic status. Since its inception over one million customers have accessed credits (Abel and Emily eds. 1983). This microfinance bank has wider coverage and popularity in Nigeria, its activities spread to rural communities in Nigeria. Rural women mobilize themselves in groups; each group has a leader and secretary with distinct name. This organization has reduced penury and misery through women entrepreneurship.

2.2 Needs for Women Financial Security

2.2.1 Discrimination against Women

As explained by Maggie (2003), there is no country where gender inequality does not exist, it occurs in every sector of social existence. In most societies women are considered as second class citizens and they are subjected to various degrees of sub-ordinations. In terms of access to loans. There are huge conditionality like collateral security, sureties and other administrative formalities to credit facilities. Most women in Africa lack these conditions hence; their access to credit facility is limited. LAPO has provided avenue for women to overcome these challenges through liberal loan requirements.

2.2.2 Dominance of Informal Sector

According to Aigbokhan, (2000), women has highest number among participants in the informal sector like tailoring, business centers, catering services, other small and business enterprises. There is need for financial security to boost their operational capital.

2.2.3 Women Financial Capacity

One of the rationales for LAPO financial security is promotion of good financial standing for the women group; this will promote their capacity to contribute to the societies in terms of their child education, family upkeep and other areas (Duffield, 2010).

2.3. Strategies Adopted by LAPO

As explained by John et al., (2001)

2.3.1 Right Target

In order to ensure prudent utilization of loans and other credit facilities LAPO targets appropriate populace and ensure those that are needed loans have access to them as at when due

2.3.2 Group Borrowing

In other to boost financial safety, one of the strategies adopted is group lending; this enhances financial group commitments in terms of loan recovery and disbursement.

2.3.3 Client Engagement

One peculiarity of LAPO over other micro finance institution is dedication to improvement of the lots of its members who are women, before loan approval and disbursement is done the beneficiaries business feasibility is duly discussed and assessed.

2.3.4 Multiple products and services

LAPO offers various products and services that are targeted towards improvement of lives of the clients. It offer educational , ICT Information Communication Services, financial, health, energy services, household appliances in order to improve the living conditions of the its members.

2.3.5 It provides Legal aid Disinheritance/ paternal responsibilities, domestic violence

All these related services are targeted to improve the yearnings of their members. This gives LAPO customer's confidence in the organization and increase in membership drive.

2.3.6 Health Services Small Scale Literacy

Health is wealth; one of the rationales for LAPO is provision of health care services for both staff and clients on the ground strong commitment to provision of health care. It offers literacy services to its members to boost their financial educational and general human development.

Figure 1. LAPO Members in a Weekly Meeting



Source: https://en.wikipedia.org/wiki/Lift_Above_Poverty_Organization

2.4 Financial Security

As defined by Yusuf (2014), it is the easy access to various credits facilities by people at a particular period of time to overcome financial stress and its unsuitable circumstances. The

opposite of financial security is financial insecurity. Financial security is the engine of life; money provides capital for businesses to thrive. According to AFI (2017) financial insecurity leads to social and psychological problems in a social structure. There are many benefits of financial security. It provides opportunities for investments and creation of wealth; this reduces the level of unemployment in the country and its undesirable consequences like crime, violence and the anti-social behavior. Idleness or unemployment has been established as the major cause of crimes in Nigeria and other African countries. The establishment of LAPO has created ample opportunities to the people especially the women to invest in gainful business ventures financial security has the following components (Obodo, 2014).

Table 1. Percentage of Population living in extreme Poverty SDGI Status

Nigeria	46.7	Poverty rising
Democratic Republic of Congo	77	Poverty rising
Ethiopia	23.4	On track
Tanzania	35	Off track
Mozambique	61.8	Off track
Kenya	30	Off track
Uganda	34.2	Off track
South Africa	24.6	Off track
South Sudan	93	Poverty rising
Zambia	57.2	Poverty rising

Source: <https://borgenproject.org/organizations-fighting-poverty-developing-countries/>

2.4.1 Components of Financial Security :Financial security has the following components (Obodo, 2014)

Effective Budget; Realistic budgeting is key to financial security, a failure to plan is planning to fail; rational human beings who is conscious of his or future should be able to assess its income and expenditure and know his offer pressing needs and appropriate time to satisfy them.

Long time Need: One of the retrain for effective financial security is ability of person to plan for his or her long time needs like investment. Children school; fees and other financial obligations (Obodo, 2014).

Scale of Preferences: In a bid to avert financial crises is need to spend on those items that required immediate needs and suspend those items that are of pressing needs.

Tracking Long Time Needs. There is need to enhance present and longtime needs as solidification for financial peace and harmony.

Good Financial Experts. There need for guidance in very field of human endeavor, in everything, this will promote effective utilization of resources.

2.5 Crimes Committed by Women-folks in Nigeria

Sighted in Heidersohn (2002)

Violence. One of the criminal activities in Nigeria is violence; violence could be defined as act that could be defined as any activity that could lead to loss of lives, property or physical or psychological harm in any degree. Violence has different varieties this could be domestic, political and other form of violence. The frequency of domestic violence is unacceptable; many families have been destroyed in the acts (Stubbs, 2004).

Theft. Taking the property of others without their consent, this crime is committed in various degrees; there are minor and major thieves (Bottom, 2003).

Kidnapping: In recent times the spate of kidnapping in Nigeria is worrisome, both print and electronic media are fraught with reports of kidnapping. These crime is committed by both male and female group, the female kidnappers target children and are usually sent by the rituals. Kidnappers target wealthy and highly placed members of society who can afford to pay huge ransom.

Murder. One of the heinous crimes in Nigeria, it is a serious crime that involves loss of lives. There are cases of domestic murder, which involve husbands and wives. Other of murder is matricide and fratricide. The current herd men attacks have resulted in murder of over millions of persons (Friedrichs, 2009).

Vandalism. Other type of criminal activities that are perpetrated in Nigeria is vandalization of oil and gas installation which led to disruption of supply of energy in the economy. The aftermath of this crime is burdensome in terms of inferno which has consumed millions of people and revenue loss to the government; women have been evidently involved in this act.

Table 2. The Ten Countries with Gender Gap Pay in 2018

S/N	COUNTRY	PERCENTAGE. Euro Average 16.2
1	Estonia	28.3
2	Australia	22.9
3	Czech Republic	22.1
4	Slovakia	21.6
5	Germany	21.6
6	Span	18.8
7	United Kingdom	18.3
8	Finland	18.0

9	Netherlands	16.2
10	Denmark	15.8

Source: https://en.wikipedia.org/wiki/Gender_equality#/media/File:EU_27_Gender_Pay_Gap_2018.png,

2.6 The links among LAPO, Women Financial Security and Crime Committed by Women in Nigeria

LAPO is committed to uplift of the social and economic well beings of the women through soft loans and other means of alleviation their difficulties. Most women who engaged in criminal activities have advanced unemployment as reason for that. LAPO as a credible financial institution provides multiple avenue for women to access loans for their self-reliance and entrepreneurship.

2.7 Theoretical Framework

Strain theory by Robert King Merton. According to Robert King Merton, every society has social goals and institutional means of achieving those goals (*Agnew, 2001*). When people are prevented from achieving those goals, through lack of opportunities they engage in negative innovative acts, examples of those innovative acts are criminal activities. Most women are involved in criminal acts because of their inability to achieve social goals like financial success.

Feministic Theory. This theory addresses various issues like inequality, oppression, patriarchy, stereotyping and other forms of abuse against women (*Dow, 2009*). It was propounded by Marry Wollstonecraft in 1787 and other followers of the theory have made tremendous amendments to it. The theory dwells on issues surrounding female inequality like patriarchy, oppression, discrimination against women in politics, economy, education and other aspects of social engagements. LAPO is one viable economic institution that addresses issues affecting financial incapacity of women by giving those opportunities to access loans and other moderate financial instruments (*Linda, 2000*).

Research Hypothesis Based on the aforementioned introduction and literature review, this research aims at testing the following hypothesis

Null Hypothesis

H₀: There is no relationship between LAPO's capacity to create financial security and women commission of criminal activities

Alternative Hypothesis

H₁: There is a relationship between LAPO's capacity to create financial security and women commission of criminal activities.

3. Research Method

The study employed cross sectional survey design and was descriptive, combining both qualitative and quantitative techniques. The primary data were obtained by administering 200 questionnaires to the active women-clients of LAPO in Iworo-Awori, Ajido, Imeke and Ilado communities in Badagry, Lagos, 174 questionnaires were returned consequently the response rate was 87%. Furthermore, simple and stratified random sampling techniques were adopted

in distribution of questionnaires; fifty questionnaires were administered to each chosen community, the choice of those communities was motivated by availability of active LAPO members in them in groups. The secondary data were obtained through content analysis of journals, books and online resources; in this regard the meanings of LAPO, functions, financial security and crimes were explored. The data were analyzed with Statistical Package for Social Sciences version 20.0.

4. Findings and Discussions

Table 3. Socio-Demographic Characteristics of The Respondents

	Socio – Demographic Characteristics		
1	Sex	N	%
	Females	174	100%
		174	100.0
2	Age (years)	N	%
	20 – 30	10	5.75
	31 -41	37	21.26
	42 – 52	118	67.82
	53 – 63	7	4.02
	Above 64	2	1.15
	Total	174	100.00
3	Educational Status	N	%
	No formal Education	10	5.74
	Primary School	30	17.24
	SSCE	94	54.02
	NDE/DIPLOMA	23	13.22
	Bachelor	12	6.90
	Postgraduate	5	2.87
	Total	174	100.00
4	Marital Status	N	%
	Married	149	85.63
	Divorce	21	12.07
	Separated	4	2.30
	Total	174	100.00

5	Monthly Income from Self-employment	N	%
	Undecided	7	4.02
	Below ₦5,000	54	33.91
	₦5,000 – ₦45,000	59	31.03
	₦46,000 – ₦86,000	21	12.07
	₦87,000 – ₦168,000	16	9.10

	₦169,000 – ₦209,000	7	4.02
	₦210,000-- ₦250,000	8	4.60
	₦251,000— ₦291,000	2	1.15
	Total	174	100.00
6	Self-employment Activities	N	%
	Trading	81	46.7
	Farming	22	12.64
	Pure water production	11	6.32
	Frying and sales of snacks	35	20.11
	Others	12	6.90
	No response	13	7.47
	Total	174	100

From Table 3, all respondents were females; this implied that women were the major target of LAPO, 67.82% of the respondents felt within ages bracket of (42—52) years, this demonstrated their productive age to actively engage in production by channeling financial assistance from LAPO to more lucrative ventures and ability to return gains from investments. Furthermore, 54.02% of the respondents had SSCE as their highest educational attainment; this justifies the educational commitment of LAPO to their clients and the need to take advantage of education for enhanced productivity. In term of their marital status, 85.63% of the respondents were married and with this, they have some responsibilities to discharge to their families in terms of children education, moral upbringing and the entire society, as par their monthly income 31.03% of the respondents earned monthly income between ₦5, 000 – ₦45,000, this gives LAPO this vindicates LAPO commitment to improvement their financial capacity of the rural women in order to upgrade their income capability through soft loans, 46.7% of the respondents engage in trading of commodities, this promotes the goal of LAPO in advancing commercial commitment of its clients.

Table 4. Percentage distribution of the respondents by expenditure of credit facilities from LAPO

	Usage of credit facilities from LAPO	N	%
	Investment on business	125	71.84
	Payment of child school fees	20	11.49
	Payment of house rents	17	9.77
	Other uses	12	6.90

	Total	174	100
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From table 4, 71.84% of the respondents used credit facilities they obtained from LAPO for investment, 11.49 expended it on payment of school fees, and 9.77% used it for settlement of their house rents, and 6.90 for other purposes. This implies that most of the LAPO clients use the credit facilities for investment on their businesses and while other use remaining parts of credit facilities for other activities.

Table 5. Hypothesis Testing

Categories of Responses	Frequency	Percentage	X ² value	Degree of Freedom	Critical Value	Remark
Agree	101	58.05	11.87	5	7.30	Significant
Disagree	49	28.16				
Undecided	24	13.79				
Total		100				

Source: Field Survey, 2018.

As mentioned earlier, the Null hypothesis was, “There is no relationship between LAPO and rural women financial security and crime prevention”. From Table 5, the calculated chi-square value of 11.87, with 5 degrees of freedom was than the table value of 7.30, at 5% (0.05) level of significance hence, the alternative hypothesis is here accepted and the null hypothesis is rejected, therefore, there is relationship between LAPO financial security and crime prevention among rural women.

5. Conclusion

Findings from the research showed that there was significant relationship between LAPO financial security and crime prevention among rural women; 71.84% of the respondents spend their credit facilities from LAPO on business expansion. And LAPO concentrates mainly on the rural women’s capacity development. The current crime wave in Nigeria could be mitigated through LAPO’s enhanced financial capacity to rural women, because research has established relationship between women unemployment and their perpetration of criminal activities, credit expansion from LAPO and other financial institutions is a viable means of creating employment and capacity building among women folks. The study will be useful to rural women, community banks, Central Bank, commercial banks, NGOs that are involved in poverty reduction and researchers in the field of financial security and crime reduction can further explore other angle to the research like LAPO and rural poverty generally because this study concentrated on LAPO and rural women financial security towards crime alleviation.

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