EFFECT OF RECEIVABLES, INVENTORIES, AND PAYABLES ON WORKING CAPITAL

Dian Oktavia1*
Menik Indrati2
1,2Faculty of Business Economics, Esa Unggul University, Indonesia
e-mail: dianokta.akm14@gmail.com, menik.indrati@esaunggul.ac.id
*Correspondence: dianokta.akm14@gmail.com

Submitted: 22 September 2021, Revised: 25 September 2021, Accepted: 27 September 2021

Abstract. The study aims to analyze the effect of receivables, inventories, and payables on working capital. Receivables are measured by dividing total credit sales by the company's average receivables, stocks are calculated by dividing the total cost of goods sold by the average inventory, and payables are measured by dividing the total purchases by the average trade payables. Firm size is measured by the logarithm of the company's total assets in year t, leverage is calculated by dividing total debt by total equity. The percentage of net profit measures profitability (ROA) after tax to total assets. The sample in this study was 30 companies with 90 data. The object of research is a manufacturing company listed on the Indonesia Stock Exchange in 2018 – 2019. The statistical methods used in this study are descriptive statistical analysis and inferential analysis, which include classical assumption testing, multiple regression analysis, and hypothesis testing using the SPSS program. The results of this study indicate that the receivables variable partially hurts working capital. Inventories partly have a positive effect on working capital. Debt somewhat does not affect working capital. The conclusion from the results of this study indicates that receivables, inventories, and payables affect working capital. The test results show that receivables have no partial effect on working capital. In contrast, the stock positively impacts working capital, and debt does not partially affect working capital.

Keywords: receivables; inventory; accounts payable; working capital.
INTRODUCTION

The global economy is in a severe downturn in 2020, and the IMF estimates that the permanent loss of output is around 5% during the covid-19 pandemic. The latest report data for June 2020 showed a decline in world economic output worth US$ 12 trillion (McKibbin & Vines, 2020). Since 2020, precisely in March, Indonesia has been shocked by one of the phenomena COVID-19 pandemic, which has hurt all parties (Nasution et al., 2020). Trusted research institutes in the world have predicted the negative impacts of the global economy due to the Covid-19 pandemic, which will worry the world. Then the world economy is expected to reach -2.2% by EIU, -1.9% predicted by Fitch EIU, indicates -2.2% by Fitch (Iskandar et al., 2020). These economic predictions are very worrying people globally, especially for every company that is still surviving. It is essential for every company today to create new policies that can bring considerable profits because currently, it is a complicated situation for a company to exist. The company's focus lies in management, which must continue to work to stabilize cash flow while increasing volume. Sales so that the company can survive the Covid-19 pandemic (Hadiwardoyo, 2020).

Generally, current assets and current liabilities are part of working capital which is quantitative due to the total funds used for short-term operating purposes at the company. (Weston, J.Fred dan Thomas E.Copeland, 1997) Provide an understanding of working capital as current assets minus current liabilities. Working capital is company investment in cash, securities, receivables, and inventories minus current liabilities used to finance existing assets. The operating capital mechanism generally refers to all parts of existing assets and current liabilities. (Ajibolade & Sankay, 2013) states that working capital management is essential in discussing liquidity and profitability issues that involve decisions about the amount and composition of current assets and their funding. Achieve profit can only achieve profit or profit if it is supported by adequate capital.

The mechanism for measuring receivables is receivable turnover. (Utami & Dewi, 2015) states that a high level of receivables turnover can indicate low working capital invested in the receivable. If it is low, the receivable has an excess investment. Low accounts receivable are usually caused by an inefficient credit or collection department or a policy change. According to (Haryanto, 2019), receivables come from company assets arising from credit sales transactions for goods and services produced by the company and must be repaid within one year. Receivable turnover can calculate estimated receivable collection time in accounts receivable turnover. In addition, current assets receivables in the working capital element and the role of inventory which is part of current assets,

also important to determine the effectiveness of inventory management, which can be seen from the calculation of the inventory turnover rate. The higher the inventory turnover rate, the lower the time-bound capital is in inventory. (Syamsuddin, 2002) states that a relatively smaller
amount of working capital is needed to meet the sales volume referred to in increasing inventory turnover.

Part of the working capital there is current debt. Debt owed by the company generally occurs due to the company not meeting its operational needs with its capital. The company borrows funds from other parties or delays payments that become obligations. (KIPKEMOI, 2018) reveals that a well-known measure of Working Capital Management is the cash conversion cycle referred to here, the time lag between purchasing raw materials and collecting sales of finished goods. The longer this time lag, the greater the working capital investment. (Agbada & Osuji, 2013) explains that efficient liquidity management involves planning and controlling current assets and current liabilities, thereby eliminating the risk of inability to meet short-term obligations that are due and avoiding excessive investment in these assets. Firm size, leverage, and profitability can affect working capital in manufacturing companies. Therefore, these three factors will be used as control variables in this study.

**Critical Resource Theory**

based on the required resource theory proposed by (Hirdinis, 2019) which suggests that the larger the company’s scale, the profitability will also increase, but at a certain amount, the size of the company will decrease the company’s profit. The theory of critical resources is also used to explain the effect of leverage and liquidity on company profitability. Therefore, the idea of essential resources indicates that the larger a company is, the higher the profitability and vice versa. As for the leverage variable regarding the control by the company owner on the company’s debt, profitability is influenced by the cost of debt obligations. (Sharma, Naresh Kumar, et al., 2010) also revealed that there is a relationship between company size and the ability of company owners to control intangible factors that can encourage companies to be more profitable. This indicates that the larger the scale of the company, the profitability will also increase. On the other hand, the critical resource theory is related to liquidity. Namely, if the number of current assets can exceed the existing high debt, the company can fulfill its debt obligations to increase profitability.

Outsiders can also interpret increased debt as the company's ability to pay off the debt in the future or low business risk so that additional debt will send a positive signal (Brigham, Eugene F dan Houston, 2001). Outsiders are because companies that experience increased debt can be said to be companies that believe in the company's prospects.
Account Receivable

A receivable is selling's form product that has been made between two parties, but in the sale transaction, the payment system is not made in cash but is done on credit. But on the other hand, credit sales will provide market expansion opportunities that can increase operating profits, although not without risk (Fahlevi & Yani, 2021). (Kasmir, 2011) the higher the ratio shows that the working capital invested in receivables is lower, proving that capital can be used efficiently, which means good conditions for the company. On the other hand, the lower the ratio, the higher the investment in receivables. However, the opinion of (Fahmi dan Irham, 2012) explains where receivables are a form of sales made by a company where payments are not made in cash but gradually.

Inventory

Definition of Inventory according to (Supriati et al., 2017), as a form of asset that inventory must manage adequately, errors in management will result in other asset components being not optimal, it can even result in losses. Leadership by managing inventory turnover can be very decisive in controlling the continuation of the company's activities. The inventory turnover rate shows the number of times the inventory is replaced in being bought and resold. This Inventory Turnover Ratio is used to determine the process in which inventory turnover from the beginning to return to cash is (Munawir, 2010). the ratio obtained is high and can prove that the company is working efficiently and liquid, which causes better inventory. the inventory turnover ratio decreases, the company is working inefficiently or unproductively, resulting in a lot of inventory piling up. This will lead to investments with low rates of return and result in financial statements (Kasmir, 2014).

Account Payable

Based on research by (Alpi, 2020), debt is obtained from capital originating from outside the company that is temporarily working in the company concerned. This capital is a loan that capital must repay in time. To measure how far the company uses funding through debt, it can be measured using the debt ratio (debt to asset ratio), which compares total debt and total assets. The debt ratio means how much debt is used to finance the company's assets (Keown, A.J., Scott, D.F., Martin, J.D., Petty, 2011). If the debt ratio is high, it means that funding through debt is also increasing. As a result, it is increasingly difficult for the company to obtain additional funds from loans because it is feared that they will not pay them. Creditors are more interested in a low debt ratio because the lower it is, the greater the protection against creditor losses. When viewed from the side of shareholders, they are more concerned with high leverage because it will increase profits (Kasmir, 2014).

Working Capital

According to the Indonesian Institute of Accountants (Ikatan Akuntan Indonesia, 2007), working capital is based on the company's production capacity in units of production per day. Meanwhile, according
to (Krapf et al., 2016), all short-term assets or current assets consist of cash, securities whose activities are traded by the company, inventories, and accounts receivable. Working capital factors affect high and low profitability. Every company in its operations requires capital because capital is very influential on the company to achieve its goals so that high profitability supports the company’s operations to the fullest (Bramasto, 2007). The purpose of working capital management is to manage each item of current assets and current liabilities as well as possible so that the amount of networking capital with the calculation of existing assets minus the desired current debt can be maintained. Good or bad working capital management will have a direct effect on the company's financial position. The level of working capital will affect investors when they invest their capital in a company. State-owned companies that have gone public need to pay attention to working capital management to attract investors to invest in companies (Margaretha & Ginting, 2016).

**Size**

Several factors are determined by the company's size with the company owner's control over technology, intellectual property, and assets described by (Rediana, 2017). Several parameters that can be used to determine the size of the company's scale are the number of employees used by the company to run company operations, the value of sales or income generated by the company, and the total assets owned by the company. Company to carry out company operations, the value of sales or income generated by the company, and the total assets owned by the company. (Becker-Blease et al., 2010) in his research using three economic measuring theories developed by (Kumar & Kaur, 2016) by showing the relationship between firm size and profitability. By using the company's size as a proxy for input and profitability as a measure of output. Company size can be assessed in several ways. The size of the company can be based on asset value, total sales, market capitalization, number of workers, etc. The greater the importance of these items, the greater the size of the company. (Indrati et al., 2018)

**Leverage**

Leverage is a ratio that projects the state of debt in the company's finances. Companies with excessive leverage are at risk of not meeting their debt obligations on time (Carpenter et al., 1994). Meanwhile, according to (Boissay et al., 2020) shows that companies with high levels of debt tend to choose to sell their receivables as a source of funding when they have high-quality credit, rather than using debt for future projects. This leverage ratio serves to measure to what extent the company's assets are financed by debt (Firman & Nasution, 2019). This leverage ratio compares the company's overall debt burden to its equity. In other words, this ratio shows how much of the company's assets are owned by shareholders compared to assets owned by creditors or creditors. If the shareholders have more assets, then the company is said to be less leveraged. However, if the creditor or lender has the majority of assets, then the company in question is said to have a high
level of leverage. Following the critical resource theory which proves that the higher this ratio, the higher the costs that must be borne by the company, which means the higher the obligations of the company, so this affects several things, namely the company’s profitability decreases and can result in the company’s ability to obtain profits. Profit is decreasing.

**On Assets Ratio**

Profitability is the ability of a company to generate profits which are also used for business continuity. The profitability calculation is intended to find out how far the company’s management can control the business efficiently. The company’s profitability is also influenced by the efficiency of working capital management and other factors such as the type, scale, age of the company, capital structure, and products produced, so the higher the profitability, the better the state of a company (Mielcarz et al., 2018). ROA can be interpreted as the result of a series of company policies or company strategies to obtain a good profit and also the impact of the influence of environmental factors. This analysis focuses on the profitability of assets and thus ignores ways to finance these assets (M.Hanafi, Mamduh, 2007). This ratio also shows the productivity of all company funds, both loan capital and own capital. The slighter (lower) this ratio is, the worse it is, and vice versa. The smaller means that this ratio is used to measure the effectiveness of the company’s overall operations. This means that the increased profit generated and the excellent condition of the company will attract the attention of investors to invest (Larasati, 2011). This study using a measuring instrument ROA (Return On Assets). This ratio is used as economic profitability, which measures the company's ability to generate profits by using the total assets or wealth owned by the company after adjusting for the costs intended to fund these assets (Sekti, 2017).

The research model does not discuss the effect of macroeconomic uncertainty risk on working capital. The research of (Dbouk et al., 2020) researched US manufacturing companies in the period 1990-2018 by showing that economic uncertainty was positively related to influencing the level of receivables, inventories, and debt on working capital. Therefore, the number of research objects and the year of analysis used distinguishes it from previous research. Researchers used index research objects on the Indonesia Stock Exchange manufacturing companies in the period 20–2019. Based on the explanation above, the purpose of this study is to examine receivables, inventories, and payables in manufacturing companies listed on the Indonesia Stock Exchange in 20–2019 on working capital. So that doing this test will provide benefits for the parties concerned.

**METHOD**

The research model will explain the relationship between the variables to be studied and aims to facilitate understanding the research direction. Based on the above review, the research model is shown in Figure 1, as follows:
Effect of Receivables, Inventories, and Payables on Working Capital

There is one dependent variable working capital in this study, and three independent variables receivables, inventories, and payables. Receivables are measured using the receivables turnover ratio by comparing credit sales to average receivables (Kasmir, 2014). Inventories are measured by the inventory turnover ratio by comparing the cost of goods sold to the average inventory (Kasmir, 2014). The debt ratio measures the size of the debt by comparing the total debt to the total assets (Hermanto B, 2015). Firm size, leverage, and profitability/ROA are used as control variables in this study. Firm size is measured using the logarithm of total assets in (Ines, 2017) while the leverage ratio is measured by dividing total debt by total equity (Ines, 2017) and profitability/ROA is measured by dividing net income by total assets multiplied by one hundred percent (Darmadji, Tjiptono dan Fakhruddin, 2012). The research design used is a quantitative approach using secondary data. The sampling technique is carried out by purposive sampling to obtain a representative sample adjusted to certain criteria, namely manufacturing companies that are consistently listed on the IDX in 2019 consecutively and companies attaching annual reports. 30 Manufacturing Companies meet the criteria listed on the Indonesia Stock Exchange and then obtained observations that determine the number of samples in this study as many as 90 sample data.

The data analysis technique used SPSS v25. In this study, the data analysis technique used is multiple linear regression to prove a significant effect of the independent variable on the dependent variable. The following are numerous linear analysis models, which can be stated as follows.

\[ Y_{i, t} = \beta_0 + \beta_1 \text{AR} + \beta_2 \text{INV} + \beta_3 \text{AP} + \beta_4 \text{SIZE} + \beta_5 \text{LEV} + \beta_6 \text{ROA} + \varepsilon \]

Description:
- \( Y_{i, t} \) = Working capital at all time periods \( t \)
- \( \beta_0 \) = Constant
- \( \beta_1,2,3,4,5,6 \) = Regression coefficient of each proxy
- 1AR = Accounts Receivable
- 2INV = Inventory
- 3AP = Debt
- SIZE = Company Size
- LEV = Leverage
- ROA = On Assets
- Ratio = Error

RESULTS AND DISCUSSION

RESULTS

Descriptive statistical analysis provides an overview of the data consisting of minimum, maximum, average values, the mean, and standard deviation. The
A descriptive statistical analysis test shows that N or the amount of data for each valid variable is 90, from 90 sample data on financial performance (Y), the minimum value is 0, the maximum value is 30.41, from the period 2017 - 2019, the mean value is 23.42, and the value is 23.42. The standard deviation of 5.31.

A normality test is used to determine whether the data is taken from a normally distributed population or not. Testing for normality using the Kolmogorov Smirnov test shows that the data used in this study is generally distributed because asymp sig 0.200, the figure is greater than the significance level of 0.05 the data can be used in testing with the regression model.

The multicollinearity test was used to test whether the regression model found a correlation between the independent variables. The multicollinearity test in this study uses the tolerance value and variance inflation factor (VIF). The results of multicollinearity show that the tolerance value for all variables is greater than 0.1 and the inflating factor value for all variables is less than 10, so this study does not occur multicollinearity symptoms.

The heteroscedasticity test aims to test whether there is an inequality of variance from the residual observations to other observations in the regression model. The heteroscedasticity test in this study shows that the distribution of the dots pattern is far apart and randomly spreads so that it does not form a pattern. Therefore, from the results of this study, it can be stated that there is no heteroscedasticity problem in the regression model.

The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding error in period t and the confounding error in period t-1 (previous). Autocorrelation arises because the residual (interference error) is not independent of one observation to another. One way to find out whether there is autocorrelation or not is to use a Run Test. The autocorrelation test in this study shows that the probability (sig) in each regression model used is more significant than 0.05 or 5%. It can be stated that there is no autocorrelation symptom.

From the calculation of multiple linear regression, it can be seen that the relationship between the independent and dependent variables can be formulated as follows:

\[ Y_{i, t} = 0.839 - 0.184AR + 0.321Inv + 0.054AP + 0.004SIZE + 0.297LEV + 0.294ROA + \]

Where the constant value in this study is 0.839 which states that if no independent variable is considered constant \((x1=0, x2=0, x3=0, x4=0, x5=0, x6=0)\), then working capital is 0.839. The coefficient of receivables is reduced by -0.184, meaning that if there is an increase in receivables of 1%, it will reduce working capital by 0.184 or 18.4%. The inventory coefficient increases by 0.321, meaning that if there is a 1% change in profitability, it will increase working capital by 32.1%. The debt coefficient increases by 0.054, meaning that if there is a 1% change in profitability, it will increase working capital by 5.4%. The coefficient of size is 0.004, and leverage is 0.297, Roa is 0.294.

The coefficient of determination test aims to measure how far the model’s ability to describe the variation of the
Effect of Receivables, Inventories, and Payables on Working Capital

The coefficient test of receivables, inventories, and payables can explain the working capital of 13.8% and 86.2% by other factors not examined in this study.

The f test determines whether the independent variables (X1 and X2) significantly affect the dependent variable (Y). The f test shows that the variable x simultaneously affects the variable y.

The t-test aims to determine whether the partially formed regression model equations the independent variables (X1 and X2) significantly affect the dependent variable (Y). The t-test shows that accounts receivable partly has no significant effect on working capital. The inventory variable partially has a significant positive impact on working capital. The debt variable somewhat does not affect working capital.

Table 1. Hypothesis results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Significance value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts receivable has a negative and insignificant effect on working capital</td>
<td>0.092</td>
<td>Rejected</td>
</tr>
<tr>
<td>Inventory</td>
<td>0.005</td>
<td>Accepted</td>
</tr>
<tr>
<td>Debt has a negative and insignificant effect on working capital</td>
<td>0.495</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: SPSS Data program

Relationship Between Variables

Relationship of Receivables to Working Capital

According to (Prakoso, 2014), the company's receivable management is required to manage its receivables properly and correctly following applicable company policies by using the correct calculations so that the goals set by the company are for short-term and long-term purposes. can be achieved optimally and adequately. (Ammy & Alpi, 2018) Suppose the amount of investment embedded in receivables is too high. In that case, it will cause low working capital turnover so that the company's ability to increase sales volume will be more minor. The reduced sales volume has an impact on the reduced profit to be obtained by the company. (Arianti, 2018) who prove that receivables do not affect profitability and working capital. This shows that the level of receivables does not involve working capital management. Based on the description above, the following hypothesis is proposed:

H1 = Receivables hurt working capital.

Inventory Relationships with Working Capital

According to (Munawir, 2010) the mechanism for the inventory turnover period is the time it takes for companies to hold inventory in warehouses, where the slower the company owns the inventory of
goods, it will reduce the cash generated from the sale of these inventories, where this will have an impact on reducing funds for working capital, and reducing the company's operational activities. According to (Dewi et al., 2016) (Murni & Uhing, 2018), inventory turnover has a significant positive effect on profitability and working capital. This shows that high inventory turnover can increase profitability. Based on the description above, the following hypothesis is proposed:

H2 = inventory has a positive effect on working capital.

**Debt Relationship to Working Capital**

According to (Warren, Carl S. Reeve, James M. dan Fess, 2008), the explanation is that debt is capital that comes from bank loans, financial institutions, or by issuing debt securities or bonds. For this use, the company provides compensation in interest, which becomes a fixed burden for the company. However, (Lukman, 2011) states that debt is a bill that comes from creditors to companies that debt must pay with money or services at a time that is following the initial agreement made by both parties. (Sinaga et al., 2019) a company that chooses debt as a source of funding is a company that has a responsibility to do more work so that the equity used can create more profits so that the company can fulfill its obligations. However, if the company cannot manage its debt correctly and adequately, this can cause its debt to increase and reduce the company's profits. (Ferawati et al., 2020) prove that debt does not affect the profitability of working capital. Based on the description above, the following hypothesis is proposed:

H3: Debt hurts working capital.

**DISCUSSION**

This study is under hypothesis 1, where receivables harm working capital, and the results are rejected. The results of this study are the same or consistent with research conducted by (Arianti, 2018) which has proven that receivables have no significant effect on working capital profitability. This is because the high and low receivables ratio does not affect working capital management, so to analyze working capital management, the receivables instrument is not one of the guidelines. investors do not use the receivables instrument guidelines as a financial instrument to analyze working capital management.

Based on hypothesis 2, inventory has a positive effect on working capital; the results are accepted because the partial test results show that stock has a significant positive impact on working capital. The results of this study, inventory has a positive effect on working capital. The results of this study are in line and consistent with the results of research conducted by (Diana & Santoso, 2016) and (Murni & Uhing, 2018) which have proven that inventory has a significant positive effect on working capital profitability. This shows that the manufacturing companies can manage their inventory efficiently, thus resulting in an excellent inventory turnover from year to year, to increase its profitability.

Based on hypothesis 3, debt hurts working capital, the results are rejected because the partial test results show that
debt hurts working capital. The results of this study are the same or consistent with the results of research conducted by (Ferawati et al., 2020), which has proven that debt does not affect working capital management. The reason for this is because the high and low debt ratio does not involve working capital management. So that investors do not make the debt instrument guidelines a financial guide for analyzing working capital management.

CONCLUSIONS

Based on the results of data analysis and discussion, it can conclude that the receivables policy hurts working capital, which means that the high and low ratio of receivables does not affect working capital management. Inventory has a positive and significant effect on working capital. It means that there is a positive effect indicating that the higher the inventory turnover rate, the higher its profitability. This is because the inventory owned by the company must be by the company’s needs so that interest costs are reduced, minimize storage and maintenance costs in the warehouse. The company does not experience losses, so all of this will increase sales volume, and the profits earned by the company will be even greater. Debt does not affect working capital; these results mean that the high and low debt ratio does not involve working capital management.

The research conducted has limitations because the business sector is too broad in manufacturing companies. The receivables and debt variables seen from the statistical table have not affected working capital. Future research is expected to be able to conduct research with different types of businesses or the same type of business and compare each business sector in the manufacturing company and add cash turnover and sales variables. This is due to increased knowledge by showing the influence of these variables on working capital management. The managerial implication in this study is that it is expected that the company’s management needs to pay attention to working capital management in running the company because good working capital management can generate greater profits for the company. Therefore, company management needs to manage the efficient use of funds, accounts receivable, and inventory. Meanwhile, investors and potential investors should be more careful in making investment decisions in companies that are carried out by assessing profitability in the observation period in the presentation of financial statements.

REFERENCES


Technology and Social Sciences (Injects), 7(1), 1–4. 
https://doi.org/10.53695/injects.v1i1.5


https://doi.org/10.2307/2534655


https://doi.org/10.1016/j.ijpe.2020.107888


https://doi.org/10.51742/akuntansi.v1i1.55

Firman, D., & Nasution, E. S. (2019). The
Effect of Receivables, Inventories, and Payables on Working Capital


Sharma, Naresh Kumar, et al. (2010). Determinants of Capital Structure of Corporate Firms; Panel data Evidence from India.


Weston. J.Fred dan Thomas E.Copeland. (1997). *Financial Management Volume I*. © 2021 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (https://creativecommons.org/licenses/by-sa/4.0/).