

THE ROLE OF FIRM SIZE AS A MODERATING VARIABLE ON THE EFFECT OF WORKING CAPITAL MANAGEMENT ON THE PROFITABILITY OF PUBLIC COMPANIES IN INDONESIA

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Abstract

This study aims to examine the effect of working capital management on profitability with firm size as a moderating variable in Indonesian companies listed on the Indonesia Stock Exchange for the period 2017-2021. Profitability is measured by return on assets (ROA). The independent variables used in this study are working capital turnover (WCT) and cash conversion cycle (CCC) which represent working capital management. The control variables used are sales growth, cash flow and long term debt. The samples used in this study were 57 companies in Indonesia listed on the Indonesia Stock Exchange for the period 2017-2021 using purposive sampling method. The method of analysis is panel data regression with moderate regression analysis (MRA) which has previously passed the classical assumption test. Fixed effect was selected in the classical assumption test analysis. The results that working capital turnover (WCT) has a positive and significant effect on profitability (ROA). Cash conversion cycle (CCC) has a negative and significant effect on profitability (ROA). Firm Size can moderate the relationship between WCT and profitability (ROA) and also Firm Size can moderate the relationship between CCC and profitability (ROA).

Keywords: Working Capital Management, Profitability, Working Capital Turnover.

INTRODUCTION

The basis of a country's assessment in describing its development income is one of them by looking at the country's economic growth. It is used to consider economic growth which includes the entire process of continuous improvement of economic conditions during a period in a better state. In measuring economic growth income, it is done by comparing the results of Gross Domestic Product (GDP), as a national indicator, Gross Domestic Product compared to the previous year and the year of measurement. Global growth since the beginning of 2020 has been affected by the covid-19 pandemic which is not only a threat to health but also a serious challenge to the global economy.

The development of the financial system requires the strengthening of human capital, as well as growth in technological innovation, which is not possible without the development of companies. In line with that, improving the quality of regulation and ensuring its effectiveness is a priority (Le et al., 2022). Trade can enhance economic growth for countries at different stages of economic development, as it brings efficiency in the transmission of resources within a country and links between other countries (Dragusha et al., 2023). Fixed asset investment is

also needed to stimulate economic growth in a country (Belev et al., 2022).

The company's way of increasing company profits is a strategy used in order to evaluate company performance, plan future goals and assess the success of a company seen through financial reports (Dioha et al., 2018). Profitability ratios are ratios used by companies to measure how much profit they make (Chabachib et al., 2020). The increasing economy can encourage companies to achieve profits and will maximize the value of shareholders. Efforts that can be made in achieving these intentions are with efficient working capital management. Optimizing working capital can affect the performance and liquidity of the company and will also increase profit and company value (Deloof, 2019).

Efficient working capital management is equally influential for large and small companies, the implementation of strategies in both is different because between the two have different dimensions of work (Dalci et al., 2019). Companies with smaller sizes tend to be riskier than companies with larger sizes (Chabachib et al., 2020). Firm size is projected by total assets, therefore based on economies of scale, if the result is large, it means that it has the potential to reduce costs associated with productivity, by running long-term production (Chabachib et al., 2020).

Table 1: Average ROA, WCT, CCC, SIZE, GROWTH, Cash Flow, Long term Debt (in millions)

| Variables | Years | | | | |
|--------------------|-------|-------|-------|---------|-------|
| | 2017 | 2018 | 2019 | 2020 | 2021 |
| ROA (%) | 5,66 | 5,24 | 4,31 | 3,13 | 2,59 |
| WCT (x) | 27,71 | 24,55 | 20,47 | 3,77 | 23,85 |
| CCC (days) | 69,66 | 69,94 | 72,58 | 79,32 | 78,54 |
| SIZE (Ln) | 28,79 | 28,95 | 29,02 | 28,99 | 29,57 |
| GROWTH (%) | 12,99 | 17,08 | 6,60 | (12,35) | 17,17 |
| CASH FLOW (x) | 9,54 | 8,98 | 8,12 | 7,70 | 6,02 |
| LONG TERM DEBT (x) | 14,33 | 13,91 | 13,30 | 15,03 | 11,39 |

Source: <https://www.idx.co.id/id> and Bloomberg (data processed)

Table 1, it is known that there was an average decrease in return on assets (ROA) from 2017 to 2021. It can be seen that there were fluctuations, with the largest decrease in each variable occurring in 2020.

There have been many studies that link working capital management with company profitability but still have different results. Then various previous studies also chose various projections in measuring working capital, one of which was working capital turnover (WCT) (Jasmani, 2019; Wirasari & Sari, 2016; Sudarisman, 2019), analyzing the results that WCT has a significant positive effect on ROA. Then research (Cahyani & Sitohang, 2020; Eksandy & Dewi, 2018), has a significant negative effect on ROA. Then various previous studies have also analysed (Samiloglu & Akgün, 2016), where CCC is the independent variable and ROA is the dependent variable, suggesting that CCC has a significant positive effect on ROA. Then

in research (Amponsah-Kwatiah & Asiamah, 2020; Samosir, 2018), explained the significant effect of a positive relationship between CCC and ROA. Several previous studies that examine the relationship between working capital management and profitability by using firm size as a moderating variable. According to research (Dalci et al., 2019; Pervaiz & Akram, 2019), explaining that firm size affects the relationship between working capital management and profitability. Then in research (Zalaghi et al., 2019), explained that if the firm size results are large, there is a strong negative relationship between working capital and company performance using the ROA proxy. Therefore, this study tries to test the role of firm size in influencing the relationship between working capital management and profitability. Then this study tries to add control variables that are assumed to affect the company's profitability, namely sales growth, cash flow and long term debt.

Based on the background described above, the objectives of this study are as follows: (1) To analyze the effect of Working Capital Turnover on company profitability in Indonesia, (2) To analyze the effect of Cash conversion cycle (CCC) on company profitability in Indonesia, (3) To analyze the effect of Firm Size in moderating the relationship of Working Capital Turnover on company profitability in Indonesia, (4) To analyze the effect of Firm Size in moderating the relationship of Cash Conversion Cycle (CCC) on company profitability in Indonesia, (5) To analyze the effect of control variables in enlarging the contribution of their influence on company profitability in Indonesia.

LITERATURE REVIEWS AND HYPOTHESES

Trade-off Theory

According to (Jakpar et al., 2017), trade-off theory relates to companies with high liquidity potentially facing problems with low profitability or it can be said that there is a negative relationship between liquidity and profitability. When the company is liquid, the company will generate a large amount of net working capital, followed by a decrease in profitability because excess liquidity causes idle funds that cannot generate profits for the company. However, if liquidity is insufficient, it explains the company's obligation to pay short-term debt is weak. If too little working capital can increase profit but reduce liquidity, it happens because current assets are more expensive than fixed assets (Khan et al., 2018). In Trade-off theory, profitability and liquidity must be balanced in business.

Resource-Based Theory

This resource-based theory explains that companies can maintain their existence through effective resource management. Firm size is a metric that represents the company's resources, large companies tend to have better human, financial, physical, and organizational resources than small companies (Williams, 2014). In the theory explained (Alarussi & Alhaderi, 2018), the greater the company's resources and the greater its ability to manage existing resources, the greater the profit.

Working Capital Management

Working capital management is defined as the process of managing inventory and financial activities needed to support the availability of company inventory. Meanwhile, according to Subramarnyam & Wild (2010), working capital is the difference between current assets after deducting current liabilities. This shows the function of managing current assets and current liabilities. The resulting short-term liabilities are used to finance short-term assets. Poor working capital management contributes to a liquidity crisis and a decrease in company profits, which in turn can cause the company to not be able to operate optimally.

The Effect of Working Capital Turnover (WCT) on Profitability

Working capital management is said to be good if it shows the efficiency of working capital and can increase company profitability. This working capital efficiency can be seen from working capital turnover (WCT), where working capital that rotates quickly or has a short turnover period can increase the company's profitability. According to (Setiawan et al., 2021; Sudarisman, 2019), which states that the increasing WCT value means that it can increase the value of a company. This means that any increase in WCT, whose value is obtained through the comparison between current assets and current debt and net income, can significantly increase ROA.

Hypothesis 1 = Working capital turnover (WCT) has a positive effect on profitability

The Effect of Cash Conversion Cycle (CCC) on Profitability

According to (Lyngstadås & Berg, 2016) and (Pais & Gama, 2015) which states that the results of a longer cash conversion cycle (CCC) will affect the effectiveness of working capital management which can lead to an increase in working capital resulting in a decrease in profitability. Meanwhile, according to (Enqvist et al., 2014), there is a significant negative relationship between CCC and ROA, this result means that companies can achieve a higher level of profitability by managing inventory and reducing receivables collection time. Furthermore, a shorter CCC value can increase the company's profitability.

Hypothesis 2 = Cash conversion cycle (CCC) has a negative effect on profitability

The effect of Firm Size in moderating the Working Capital Turnover (WCT) relationship with Profitability

Firm size can moderate the relationship between working capital turnover (WCT) and ROA, this is because firm size can affect the effectiveness of working capital management and the company's financial performance. In general, the firm size variable can be a significant factor in moderating the relationship between working capital turnover (WCT) and ROA in a company.

Research by (Riani et al., 2019), which states that firm size has a role in moderating the relationship between WCT and profitability.

Hypothesis 3 = Firm size can moderate the relationship between working capital turnover (WCT) and profitability.

The effect of Firm Size in moderating the Cash conversion cycle (CCC) relationship with Profitability

According to (Zalaghi et al., 2019), the size of a company is an indicator of the short cash conversion cycle or the company's cash conversion cycle. In resource-based theory, large companies have a large amount of assets and sales which illustrates that the company has good prospects and is recognized by the public (Samosir, 2018). Large companies can buy large quantities of inventory and get discounts and remain the company's inventory level. Then large companies collect cash from receivables more quickly, resulting in a shorter CCC and can increase company profitability (Sadono, 2016). Small companies have low bargaining power and provide more credit policies to generate sales. This makes the company invest more in inventory. Therefore, the investment made by small companies in current assets is higher than their fixed assets, resulting in a longer CCC (Manoori & Muhammad, 2012).

Hypothesis 4 = Firm size can moderate the relationship between cash conversion cycle (CCC) and profitability.

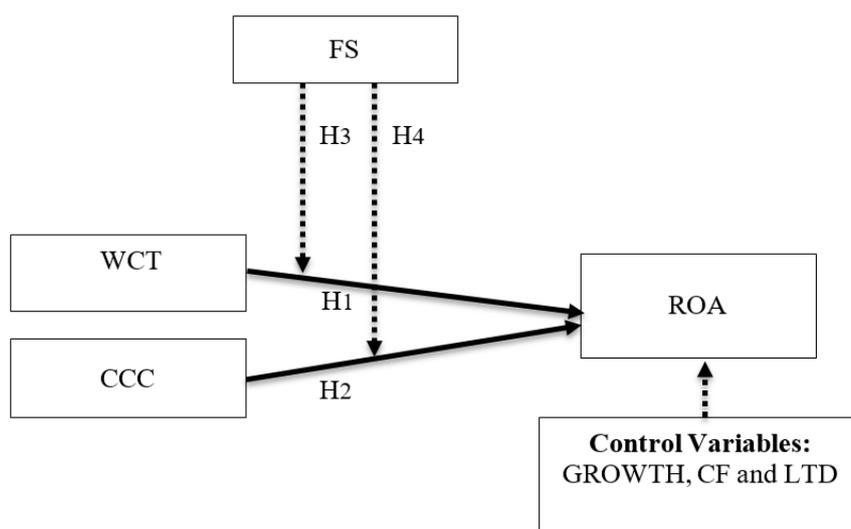


Figure 1: Framework

METHODOLOGY

The analysis method used is panel data regression using Eviews software version 12. To test the effect on moderation variables, the moderated regression analysis (MRA) method is used. Where one model will be selected from three models in panel data, namely, common effect model, fixed effect model, and random effect model. The regression model that will be used in this study is as follows:

REGRESSION MODEL 1 (testing the effect of working capital turnover on ROA with firm size as moderation):

$$ROA = \alpha + \beta_1 WCT_{it} + \beta_2 FS_{it} + \beta_3 WCT * FS_{it} + e_{it}$$

REGRESSION MODEL 2 (testing the effect of CCC on ROA with firm size as moderation):

$$ROA = \alpha + \beta_1 CCC_{it} + \beta_2 FS_{it} + \beta_3 CCC * FS_{it} + e_{it}$$

REGRESSION MODEL 3 (tests the influence between the independent variable, the dependent variable and the moderating variable by including control variables):

$$ROA = \alpha + \beta_1 CCC_{it} + \beta_2 FS_{it} + \beta_3 CCC * FS_{it} + \beta_4 GROWTH_{it} + \beta_5 CF_{it} + \beta_6 LTD_{it} + e_{it}$$

REGRESSION MODEL 4 (tests the influence between the independent variable, the dependent variable and the moderating variable by including control variables):

$$ROA = \alpha + \beta_1 WCT_{it} + \beta_2 FS_{it} + \beta_3 WCT * FS_{it} + \beta_4 GROWTH_{it} + \beta_5 CF_{it} + \beta_6 LTD_{it} + e_{it}$$

Table 2: Research Sample

| Sample Criterion | Sample Results |
|--|----------------|
| All companies listed on the Indonesia Stock Exchange for the period 2017-2021. | 708 |
| Companies on the Indonesia Stock Exchange that publish complete financial reports 2017-2021. | (651) |
| Companies that are used as Research Samples | 57 |
| Total Research Data 57 x 5 | 285 |

Source: Secondary data 2022 (processed)

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Table 3: Descriptive Statistical Analysis Results

| | ROA | WCT | CCC | SIZE | WCT*SIZE | CCC*SIZE | GROWTH | CF | LTD |
|--------------|---------|---------|---------|--------|----------|----------|---------|---------|---------|
| Mean | 1,1269 | 3,2173 | 3,9189 | 3,3679 | 10,8455 | 13,1889 | 2,5394 | 2,1264 | 1,8342 |
| Median | 1,1503 | 3,1588 | 3,9947 | 3,3752 | 10,7194 | 13,481 | 2,7023 | 2,1859 | 2,2551 |
| Maximum | 3,4633 | 5,7701 | 6,2166 | 3,4624 | 19,2161 | 20,8794 | 4,3877 | 4,6802 | 3,9942 |
| Minimum | -1,7104 | -0,5084 | -0,6733 | 3,2627 | -1,6745 | -2,2819 | -1,7038 | -5,0182 | -3,2719 |
| Std. Dev. | 0,8082 | 1,0944 | 1,1141 | 0,0378 | 3,705 | 3,7215 | 1,0509 | 1,3498 | 1,5985 |
| Observations | 285 | 285 | 285 | 285 | 285 | 285 | 285 | 285 | 285 |

Source: Eviews processing data

Model Selection Test

Model 1 (Without Control Variables)

Chow Test

Table 4: Chow Test Results Model 1 (Without Control Variables)

| Effects Test | Statistic | d.f. | Prob. |
|--------------------------|------------|----------|--------|
| Cross-section F | 11.549016 | (56,225) | 0.0000 |
| Cross-section Chi-square | 386.002981 | 56 | 0.0000 |

Source: Eviews processing data

The chow-test results in a cross-section F value of 11.549016 and a probability value of 0.0000. The significance level used is 5%, so $0.000 < 0.05$. This means that the fixed effect model (FEM) is more appropriate than the common effect model.

Hausman Test

Table 5: Hausman Test Results (Without Control Variables)

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 73.559793 | 3 | 0.0000 |

Source: Eviews processing data

The Hausman test produces a random cross-section value of 73.559793 and a probability value of 0.0000. The significance level used is 5%, so $0.000 < 0.05$. This means that the fixed effect model (FEM) is more appropriate than the random effect model (REM).

Model 2 (With Control Variables)

Chow Test

Table 6: Chow Test Model 2 Results (With Control Variables)

| Effects Test | Statistic | d.f. | Prob. |
|--------------------------|------------|----------|--------|
| Cross-section F | 10.517365 | (56,222) | 0.0000 |
| Cross-section Chi-square | 369.233648 | 56 | 0.0000 |

Source: Eviews processing data

The cross-section F value is 10.517365 and the probability value is 0.0000. The significance level used is 5%, so $0.000 < 0.05$. This means that the fixed effect model (FEM) is more appropriate than the common effect model.

Table 7: Hausman Test Results (With Control Variables)

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 86.831282 | 6 | 0.0000 |

Source: Eviews processing data

The Hausman test produces a random cross-section value of 86.831282 and a probability value of 0.0000. The significance level used is 5%, so $0.000 < 0.05$. This means that the fixed effect model (FEM) is more appropriate to use than the random effect model (REM).

Classical Assumption Test

Multicollinearity Test

Model 1 (Without Control Variables)

Table 8: Multicollinearity Test Model 1

| | WCT | CCC | SIZE |
|------|----------|-----------|-----------|
| WCT | 1,000000 | -0,26067 | 0,23246 |
| CCC | -0,26067 | 1,000000 | -0,238881 |
| SIZE | 0,23246 | -0,238881 | 1,000000 |

Source: Eviews processing data

The multicollinearity test results in the correlation value between each variable < 0.80 . Therefore, it can be concluded that this study is free from multicollinearity problems.

Model 2 (With Control Variables)

Table 9: Multicollinearity Test Model 2

| | WCT | CCC | SIZE | GROWTH | CF | LTD |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| WCT | 1,000000 | -0,26067 | 0,23246 | -0,078582 | 0,011177 | 0,188037 |
| CCC | -0,26067 | 1,000000 | -0,238881 | 0,118579 | -0,043354 | -0,323619 |
| SIZE | 0,23246 | -0,238881 | 1,000000 | -0,063481 | -0,095238 | 0,160618 |
| GROWTH | -0,078582 | 0,118579 | -0,063481 | 1,000000 | -0,054737 | 0,052803 |
| CF | 0,011177 | -0,043354 | -0,095238 | -0,054737 | 1,000000 | -0,00216 |
| LTD | 0,188037 | -0,323619 | 0,160618 | 0,052803 | -0,00216 | 1,000000 |

Source: Eviews processing data

The multicollinearity test results in the correlation value between each variable < 0.80 . Therefore, it can be concluded that this study is free from multicollinearity problems.

Heteroscedasticity Test

Model 1 (Without Control Variables)

Table 10: Heteroscedasticity Test Model 1

| | | | |
|---------------------|-----------------|-----------------------|---------------|
| F-statistic | 2,309030 | Prob. F(3,281) | 0,0767 |
| Obs*R-squared | 6,856668 | Prob. Chi-Square(3) | 0,0766 |
| Scaled explained SS | 6,880337 | Prob. Chi-Square(3) | 0,0758 |

Source: Eviews processing data

Model 2 (With Control Variables)

Table 11: Heteroscedasticity Test Model 2

| | | | |
|---------------------|-----------------|-----------------------|---------------|
| F-statistic | 1,996910 | Prob. F(6,278) | 0,0662 |
| Obs*R-squared | 11,77564 | Prob. Chi-Square(6) | 0,0672 |
| Scaled explained SS | 11,90455 | Prob. Chi-Square(6) | 0,0641 |

Source: Eviews processing data

F test Model 1 (Without Control Variables)

Table 12: Simultaneous Significance Test Results (F Test)

| | |
|-------------------|----------|
| F-statistic | 23.30938 |
| Prob(F-statistic) | 0.000000 |

Source: Eviews processing data

Table 13: Simultaneous Significance Test Results (Test F)

| | |
|-------------------|----------|
| F-statistics | 9.240769 |
| Prob(F-statistic) | 0.000000 |

Source: Eviews processing data

Model 2 (With Control Variables)

Table 14: Simultaneous Significance Test Results (Test F)

| | |
|-------------------|----------|
| F-statistics | 23.10650 |
| Prob(F-statistic) | 0.000000 |

Source: Eviews processing data

Table 15: Simultaneous Significance Test Results (Test F)

| | |
|-------------------|----------|
| F-statistics | 8.997284 |
| Prob(F-statistic) | 0.000000 |

Source: Eviews processing data

t test

Model 1 (Without Control Variable)

Table 16: Individual Parameter Significance Test Results (t test)

| Variables | coefficient | std. Error | t-Statistics | Prob. |
|-----------|-------------|------------|--------------|--------|
| C | 23.28970 | 9.577235 | 2.431777 | 0.0158 |
| WCT | 15.21391 | 2.283760 | 6.661782 | 0.0000 |
| SIZE | -6.885815 | 2.855283 | -2.411605 | 0.0167 |
| WCT* SIZE | -4.418383 | 0.682109 | -6.477535 | 0.0000 |

Source: Eviews processing data

Table 17: *t* test

| Variables | coefficient | std. Error | t-Statistics | Prob. |
|-----------|-------------|------------|--------------|--------|
| C | 132.8690 | 25.13421 | 5.286382 | 0.0000 |
| CCC | -11.86453 | 5.688185 | -2.085820 | 0.0381 |
| SIZE | -38.95578 | 7.435414 | -5.239221 | 0.0000 |
| CCC* SIZE | 3.484503 | 1.682559 | 2.070955 | 0.0395 |

Source: Eviews processing data
Model 2 (With Control Variables)

Table 18: *t* test

| Variables | coefficient | std. Error | t-Statistics | Prob. |
|-----------|-------------|------------|--------------|--------|
| C | 24.90068 | 9.683961 | 2.571332 | 0.0108 |
| WCT | 15.58305 | 2.268806 | 6.868394 | 0.0000 |
| SIZE | -7.344711 | 2.882775 | -2.547792 | 0.0115 |
| WCT* SIZE | -4.528224 | 0.677584 | -6.682901 | 0.0000 |
| GROWTH | 0.012676 | 0.022623 | 0.560324 | 0.5758 |
| CF | 0.016870 | 0.016735 | 1.008118 | 0.3145 |
| LTD | -0.070800 | 0.023266 | -3.043117 | 0.0026 |

Source: Eviews processing data

Table 19: *t* test

| Variables | coefficient | std. Error | t-Statistics | Prob. |
|-----------|-------------|------------|--------------|--------|
| C | 130.0656 | 25.58295 | 5.084074 | 0.0000 |
| CCC | -11.51542 | 5.687769 | -2.024593 | 0.0441 |
| SIZE | -38.13623 | 7.565503 | -5.040805 | 0.0000 |
| CCC* SIZE | 3.388529 | 1.682280 | 2.014248 | 0.0452 |
| GROWTH | -0.023948 | 0.032730 | -0.731687 | 0.4651 |
| CF | 0.041609 | 0.024499 | 1.698355 | 0.0908 |
| LTD | -0.047332 | 0.033932 | -1.394893 | 0.1644 |

Source: Eviews processing data
Coefficient of Determination (R^2)
Model 1 (Without Control Variable)

Table 20: Result Coefficient of Determination (R^2)

| | |
|--------------------|----------|
| R-squared | 0.859397 |
| Adjusted R-squared | 0.822528 |

Source: Eviews processing data
Model 2 (With Control Variables)

Table 21: Result Coefficient of Determination (R^2)

| | |
|--------------------|----------|
| R-squared | 0.865829 |
| Adjusted R-squared | 0.828358 |

Source: Eviews processing data

DISCUSSION

Effect of *Working Capital Turnover (WCT)* on ROA

Based on hypothesis testing with both model 1 and 2, the variable *working capital turnover (WCT)* which represents *working capital management* has a positive and significant effect on profitability proxied by *return on assets (ROA)*. Thus, Hypothesis 1 is accepted.

Regression results, *working capital turnover (WCT)* has a significant effect on *Return On Assets (ROA)*, which is indicated by the probability value of the t-statistic of 0.0000 with a significance level of 95% ($\alpha = 5\%$). WCT has a positive influence on ROA seen from the coefficient value, which is 15.58305. This shows that WCT significantly and positively influences company profitability. The results show that any increase in *working capital turnover (WCT)* of a company can increase the value of a company. *Working capital turnover (WCT)* and *Return On Assets (ROA)* are two key indicators of financial performance that are interrelated in measuring the efficiency and productivity of a company, when WCT increases significantly and positively this means that the company can generate more sales with less working capital. This shows that the company is able to manage working capital efficiently and generate more lots of profit from sales.

The results of this study are in line with those carried out by those (Setiawan et al., 2021; Sudarisman, 2019) who stated that the value of WCT which has increased means that it can increase the value of a company. This means that every increase in WCT whose value is obtained through a comparison between current assets and current liabilities and *net income* is able to drive a significant increase in ROA. The cause of WCT has a significant positive effect because the value of current assets in the company has a total value that is not much different from the value of current liabilities.

Effect of *Cash conversion cycle (CCC)* on ROA

Based on hypothesis testing with both model 1 and 2, the *cash conversion cycle (CCC)* variable which represents *working capital management* has a negative and significant effect on profitability. Thus, Hypothesis 2 is accepted.

Regression results, *cash conversion cycle (CCC)* has a significant effect on *return on assets (ROA)*, as indicated by the probability value of the t-statistic of 0.0441 with a significance level of 95% ($\alpha = 5\%$). CCC has a negative effect on *return on assets (ROA)* seen of the coefficient value, that is equal to -11.51542. This shows that CCC significantly and negatively affects the company's profitability, where an increase in the time needed by the company from using cash to obtaining cash from sales can reduce ROA.

The results of this study are in line with those conducted by (Lyngstadås & Berg, 2016) and (Pais & Gama, 2015) who stated that the results of a longer *cash conversion cycle (CCC)* will affect the effectiveness of *working capital management* which can lead to an increase in *working capital* resulting in a decrease in profitability. Meanwhile, according to (Enqvist et al., 2014) said there is a significant negative relationship between CCC and ROA, this result is that companies can achieve a higher level of profit ability by managing inventory and

reducing the time to collect receivables. Furthermore, a shorter CCC value can increase the company's profitability.

The Effect of *Firm Size* in Moderating the Relationship between *Working Capital Turnover* and Profitability

Working capital turnover (WCT) and *firm size* (WCT* *SIZE*) variables have a significant effect on profitability. This means that *firm size* can moderate the relationship between *working capital turnover* (WCT) and ROA. So that hypothesis 3 is accepted.

Regression results, *firm size* can moderate the relationship between *working capital turnover* (WCT) and ROA, which is indicated by the probability value of the t-statistic of 0.0000 with a significance level of 95% ($\alpha = 5\%$). *Firm size* can moderate the relationship between *working capital turnover* (WCT) and ROA, this is because *firm size* can affect the effectiveness of *working capital management* and the company's financial performance. In general, *firm size* can be a significant factor in moderating the relationship between *working capital turnover* (WCT) and ROA in a company.

The Effect of *Firm Size* in Moderating the Relationship between *Cash Conversion Cycle* (CCC) and Profitability

Based on hypothesis testing both with model 1 and 2, variable *cash conversion cycle* (CCC) and *firm size* (CCC* *SIZE*) has a significant effect on profitability. This means *firm size* can moderate the relationship between *cash conversion cycle* (CCC) and ROA. So that hypothesis 4 is accepted.

Regression results, *firm size* can moderate the relationship between *working capital turnover* (WCT) and ROA, which is indicated by the probability value of the t-statistic of 0.0452 with a significance level of 95% ($\alpha = 5\%$).

According to (Zalaghi et al., 2019), the size of a company is an indicator of the short *cash conversion cycle* or the company's cash conversion cycle. In *resource-based theory*, large companies have a large number of assets and sales, which illustrates that the company has good prospects and is known by the public (Samosir, 2018). Large companies can buy inventory in large quantities and get discounted prices and maintain the company's inventory levels. Then large companies collect cash from receivables more quickly resulting in a shorter CCC and can increase the company's profitability (Sadono, 2016). Small companies have less bargaining power and provide more credit policies to generate sales. This makes the company invest more in inventory. Because of this, the investment made by small companies in current assets is higher than their fixed assets, resulting in a longer CCC (Manoori & Muhammad, 2012).

This research is supported by research conducted by which (Dalci et al., 2019; Pervaiz & Akram, 2019; Zalaghi et al., 2019), states that *firm size* has a role in moderating the relationship between CCC and profitability.

CONCLUSION

The results of this study explain that working capital turnover (WCT) has a significant positive effect on profitability and the cash conversion cycle (CCC) has a significant negative effect on profitability which represents working capital management. Firm size has a negative effect on profitability. Firm size can moderate the relationship between working capital turnover (WCT) and ROA and firm size can moderate the relationship between cash conversion cycle (CCC) and ROA.

Company managers must manage working capital management to increase company profitability by taking several actions (1) increasing operational efficiency, (2) optimizing inventory, (3) increasing sales, (4) accelerating billing, (5) optimizing payment policies. By managing working capital properly, company managers can increase liquidity, reduce costs, and increase overall company profitability.

For further research, other working capital measurements can be used, such as the current ratio, quick ratio, cash ratio and current debt to asset ratio. These measurements can assist company managers in managing working capital and maintaining a balance between current assets and current liabilities, so as to minimize the risk of cash shortages and maximize company profitability or also on profitability measurement variables can use return on equity (ROE), gross profit margin (GPM) and net profit margin (NPM). In addition, future research can also analyze the effect of each component on the value of the cash conversion cycle (CCC). The control variables used in this study are not significant except for the long term debt variable in hypothesis 1 which is significant for return on assets (ROA). For further research using control variables, it is recommended to use variables that can affect company profitability, for example, firm age and leverage.

Acknowledgments

This article is the result of research funded by Diponegoro University's international publication research scheme from non-state budget funding sources in 2023.

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