

THE EFFECT OF WORKING CAPITAL TURNOVER (WCT), CASH CONVERSION CYCLE (CCC), FIRM SIZE, SALES GROWTH AND LONG TERM DEBT (LTD) ON PROFITABILITY

**Andriyani Andriyani¹, Endang Triwidyarti¹, Krismonika Hidayat²,
Hersugondo Hersugondo^{1*}**

¹Faculty of Economics and Business, Diponegoro University,
Semarang, Indonesia

²Adiwangsa University, Jambi, Indonesia

Abstract

The purpose of this study was to test and analyze empirically the effect of working capital turnover (WCT), cash conversion cycle (CCC), firm size, sales growth and long term debt (LTD) on profitability. The object of this research is Indonesian companies listed on the Indonesia Stock Exchange for the period 2019-2023. Sampling using purposive sampling method, where there are 265 companies that meet the criteria. Panel data regression processed using Eviews 12 software. In the model selection test, the Fixed Effect Model was selected as the best model in the test. The results of this study indicate that working capital turnover (WCT), firm size and long term debt have a significant effect on profitability. While cash conversion cycle (CCC) and sales growth do not have a significant effect on profitability. However, the cash flow control variable has a significant effect on profitability, while firm age has no significant effect on profitability.

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**CORRESPONDING
AUTHOR:**

Hersugondo Hersugondo
hersugondo@lecturer.undip.ac
.id

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INTRODUCTION

The basis for assessing a country is described in its development income, one of which is by looking at the country's economic growth. It is used to consider economic growth which includes the entire process of continuously improving economic conditions during a period in a better state. Increased growth is expected to increase company profits. Increasing company profits is a strategy used to evaluate company performance and also plan for future goals and evaluate the success of company performance, which can be seen in the financial statements in one observation period (Charles et al., 2018). Profitability is a measurement of how capable the company is of making a profit, or maintaining a going concern or the continuity of activities in the company (Setiawan, 2019). The projection that can be used in describing the condition of the company's profitability is by measuring return on assets (ROA), this measurement variable is used because it is sensitive to any influence on the company's financial condition. An increase in the value of the company's return on assets (ROA) can describe the situation that occurs in the company, which means that the company is able to manage existing assets effectively (Zalaghi et al., 2019).

The results of increased economic growth are strongly influenced by high profitability in various industrial sectors, so to be able to achieve the expected level of profitability it is also necessary to be supported by adequate working capital in order to achieve company operations. The result of effective working capital management is one way to achieve this goal. Optimization of working capital will affect the performance and liquidity of the company, thereby increasing profits and firm value (Deloof, 2003). Efficient management of working capital is important in the company and will also have an impact on the liquidity, profitability and solvency of the company (Enqvist et al., 2014).

Working capital has an important role in obtaining company profits. Working capital turnover (WCT) is a method used in research to describe this ratio (Cahyani & Sitohang, 2020; Eksandy & Dewi, 2018; Jasmani, 2019; Pratiwi & Ardini, 2019; Putu Putri Wirasari & Ratna Sari, 2016; Riani et al., 2019; Riska Jafira et al., 2021; Sudarisman, 2019) where company value is influenced by working capital turnover (WCT), this ratio explains the effectiveness of working capital in achieving sales, in measuring this ratio can compare net income with working capital or by reducing current assets minus current debt.

Then the second method is the cash conversion cycle in research conducted (Akgün & Şamiloğlu, 2016; Amponsah-Kwatiah & Asiamah, 2020; Chowdhury et al., 2018; Dalci et al., 2019; Enqvist et al., 2014; Iqbal et al., 2020; Maenuddin et al., 2020; Pervaiz & Akram, 2019; Zalaghi et al., 2019), where a higher value of the cash conversion cycle will increase sales, as long as the company's inventory can be sold and receivables can be collected. A longer cash conversion cycle will also increase the chance and opportunity for the company to get a bigger discount for early payments made to suppliers. The short result of the CCC in the company will accelerate the cash cycle and result in increased cash availability, which is very important for the company because it can finance operational activities that can facilitate the running of production and lead to increased profitability. One of the things that can increase company profits is the role of working capital (Lyngstadaas & Berg, 2016).

The size of the company's assets is represented by firm size, companies with larger assets tend to generate more profits through more complex business processes and easier financing (Sri et al., 2013). Firm size is a value that describes the size of the company (Ningsaptiti & Hidayat, 2010). According to (Riyanto, 2016), firm size or company size is a measurement of the total asset value, sales value, and equity value of the company. Firm size is used to categorize the size of a company by measuring total assets using the natural logarithm.

Sales generated from the Company's operations are recognized as revenue or income in the financial statements. At the same time, revenue indicates a company's profitability or ability to print through profit margins. However, it does not describe the company's cash operations (Ross et al., 2011). Thus, revenue growth is important in terms of revenue weighting. Describing the company's sales growth during the observation period is sales growth (Afeef, 2011). According to (Setyawan & Susilowaty, 2018), sales growth is the risk in reducing the company's increase in the results of sales in the year of observation with the year before observation.

Debt with a maturity of more than one year that the company must pay to creditors or third parties is known as long-term debt (Sartono, 2015). Long term debt shows how much long-term debt the company has invested in assets to generate profits (Warsono, Amalia, & Rahajeng, 2009). Higher long-term debt requires the company to obtain positive income and stable cash flow. This ratio is used by management in examining the company's debt structure and making decisions regarding the company's debt capacity. The result of long-term debt is obtained by comparing total long-term debt with total assets (Kasmir, 2017).

Trade-off Theory

In the trade-off theory, profitability and liquidity must be balanced, the company must have the liquidity to meet its short-term obligations and ensure profitable long-term flows. Therefore, the company needs to be run

effectively and profitably. However, profitability will be reduced if liquidity is given too much attention. As a result, managers of business entities face the challenge of balancing profitability and liquidity, and still always maximizing firm value (Abuzayed, 2012).

Resource-Based Theory

According to Resource-based theory, the company can continue to exist by actually handling the assets that have been contributed (Sugiono, 2018). In the theory explained (Alarussi & Alhaderi, 2018), the more resources the company has and the more its ability to manage existing resources, the more its profits.

Relationship of Working Capital Turnover (WCT) to Profitability

WCT is a ratio used to describe the effectiveness of working capital in achieving sales goals (Riyanto, 2010). Working capital turnover (WCT) is the ratio of sales and working capital. Where working capital is current assets minus current debt.

The results of this study are in line with those conducted by (Nugraha et al., 2021; serta Sudarisman, 2019), which states that the increasing WCT value means that it can increase the value of a company. This means that every increase in WCT, whose value is obtained through the comparison between current assets and current debt and net income, is able to significantly increase ROA.

H1 Working Capital Turnover (WCT) Affects Profitability in Indonesian companies listed on the Indonesia Stock Exchange.

Relationship of Cash Conversion Cycle (CCC) to Profitability

Cash Conversion Cycle (CCC) represents the period between payments made by the company for its production resources (materials and labor) and cash receipts from product sales by the company and cash payments for various resources needed by the company to be able to carry out production activities again (Brigham & Ehrhardt, 2017). An increase in the company's operating cycle period without an increase in the debt repayment period will extend the cash conversion cycle which ultimately increases working capital financing.

This is in line with research conducted (Enqvist et al., 2014), the results show the probability of CCC has a negative and significant effect on ROA which proves that companies are able to increase profits by increasing efficiency in working capital. One of them is by minimizing the cash conversion cycle. Then (Wang, 2002), the results of regression analysis show that CCC has a significant negative impact on ROA. According to research (Hoang, 2015), suggesting that CCC has a significant negative impact on ROA in research proves that reducing the cash conversion cycle significantly increases profitability.

H2 Cash Conversion Cycle (CCC) Affects Profitability in Indonesian companies listed on the Indonesia Stock Exchange.

Relationship between Firm Size and Profitability

The size of a company can make an overview of the company's ability to obtain additional capital from outside funds when financing the company's operational activities. Company size is used by the company as a ratio to see information or an overview of the size of all total assets owned by the company in its annual report. According to (Mehari & Aemiro, 2013), said that there is a positive relationship between firm size on company profitability. this is supported by research from (Ehi-Oshio et al., 2013; Sardo & Serrasqueiro, 2022).

H3 Firm Size Affects Profitability in Indonesian companies listed on the Indonesia Stock Exchange.

Relationship between Sales Growth and Profitability

According to (Maçãs Nunes et al., 2009), in his journal said the company has the opportunity to develop its products and has the opportunity to increase sales growth. Sales growth has a strategic influence on the company because sales growth is characterized by an increase in market share so that it has a direct impact on increasing the sales value of the company, this will have an impact on increasing the value of profitability (Pagano & Schivardi, 2003).

H4 Sales Growth Affects Profitability in Indonesian companies listed on the Indonesia Stock Exchange.

Long term Debt Relationship to Profitability

Based on research (Abor, 2007) which examines the relationship of long term debt (LTD) to ROA in SME companies in Ghana and South Africa, it shows a negative relationship, this is because long term debt in SME companies in both countries has policies that tend to be complicated with very high interest costs so that it will increase the cost of

bankruptcy. Likewise by (Ahmed Sheikh & Wang, 2013), who examined 240 non-financial companies in Pakistan found the same results.

Research in Sweden by (Yazdanfar & Öhman, 2015), on SME companies for the period 2009-2012 showed negative results as well. Then, for research (Damar, 2014) found a negative relationship between LTD and ROA. Starting from the various studies described earlier.

H5 Long term debt affects profitability in Indonesian companies listed on the Indonesia Stock Exchange.

ANALYSIS METHOD

In this study, the analytical method used is panel data regression and the data collected will be analyzed quantitatively using Eviews 12 software. Testing one of the three models in panel data, namely, Common Effect Model, Fixed Effect Model, and Random Effect Model. The sample selection in this study was carried out using purposive sampling technique. The research object used in this study is Indonesian companies listed on the Indonesia Stock Exchange for the period 2017-2021. The number of companies used as samples was 265 companies, and the research period was for 5 years. Thus the total sample is 1.325 data.

Below is the operational definition and measurement of the dependent variable, independent variable and control variable:

MEASUREMENT VARIABLE	Operational Definition
(Y) Return On Assets (ROA)	$\frac{\text{Net Income}}{\text{Total Assets}} \times 100$
(X1) Working Capital Management (WCT)	$\frac{\text{Net Income}}{\text{Current assets} - \text{Current liabilities}}$
(X2) Cash Conversion Cycle (CCC)	$CCC = ACP + ITD - APP$
(X3) Firm Size	$\text{Natural Log (Total Assets)}$
(X4) Sales Growth	$\frac{[\text{sales (t)} - \text{sales (t-1)}]}{\text{sales (t-1)}}$
(X5) Long term Debt	$\frac{\text{Total Long term debt}}{\text{Total Assets}} \times 100$
(C1) Cash Flow	$\frac{\text{Net Profit} + \text{Depresiasi dan amortization}}{\text{Total Assets}}$
(C2) Firm Age	The time between the establishment of the company and the present (in years).

RESEARCH RESULTS

Descriptive Analysis of Research Variables

Table 1 Descriptive Statistics

	ROA	WCT	CCC	SIZE	GROWTH	LTD	CF	AGE
Mean	1.467434	3.408521	4.375140	3.368762	2.559449	1.916325	- 2.631011	3.388468
Median	1.370000	3.250000	4.350000	3.370000	2.730000	2.330000	- 2.650000	3.530000
Maximum	9.300000	9.360000	10.14000	3.510000	8.810000	9.740000	4.660000	4.840000
Minimum	- 2.400000	- 1.070000	- 0.670000	0.055236	-3.350000	- 5.020000	- 11.31000	0.000000
Std. Dev	1.235891	1.376437	1.468083	- 0.163687	1.304863	1.871049	1.121910	0.600638
Observations	1.325	1.325	1.325	1.325	1.325	1.325	1.325	1.325

Source: data processed, Bloomberg (2023)

Model Selection Test

Table 2 Chow Test Model 1 (Without Control Variables)

Effects Test	Statistic	d.f	Prob.
Cross-section F	19.246787	(264,1055)	0.0000
Cross-section Chi-square	2332.870551	264	0.0000

The significance level used is 5% at $0.0000 < 0.05$. This means that the fixed effect model (FEM) is more appropriate than the common effect model.

Table 3 Hausman Test Model 1 (Without Control Variables)

Test Summary	Chi-Sq. Statistic	Chi-sq. d.f.	Prob.
Cross-section random	546.931092	5	0.0000

The significance level used is 5%, so $0.0000 < 0.05$. This means that the fixed effect model (FEM) is more appropriate to use than the random effect model (REM).

Table 4 Chow Test Model 2 Model 2 (With Control Variables)

Effects Test	Statistic	d.f	Prob.
Cross-section F	13.385713	(264,1053)	0.0000
Cross-section Chi-square	1949.797825	264	0.0000

This means that the *fixed effect model (FEM)* is more appropriate than the common effect model.

Table 5 Hausman Test Model 1 (Without Control Variables)

Test Summary	Chi-Sq. Statistic	Chi-sq. d.f.	Prob.
Cross-section random	179.549055	7	0.0000

This means that the *fixed effect model (FEM)* is more appropriate than the random effect model (REM).

Classical Assumption Test

Table 6 Multicollinearity Test Model 1 (Without Control Variables)

	WCT	CCC	SIZE	GROWTH	LTD
WCT	1.000000	-0.182355	-0.040897	-0.009157	0.107440
CCC	-0.182355	1.000000	-0.026398	0.050404	-0.051656
SIZE	-0.040897	-0.026398	1.000000	-0.066968	-0.053464
GROWTH	-0.009157	0.050404	-0.066968	1.000000	0.068430
LTD	0.107440	-0.051656	-0.053464	0.068430	1.000000

The multicollinearity test resulted in a correlation value between each variable < 0.85 . Therefore, it can be concluded that this study is free from multicollinearity problems.

Table 7 Multicollinearity Test Model 2 (With Control Variables)

	WCT	CCC	SIZE	GROWTH	LTD	CF	AGE
WCT	1.000000	-0.182355	-0.040897	-0.009157	0.107440	0.323392	0.022845
CCC	-0.182355	1.000000	-0.026398	0.050404	-0.051656	-0.106962	-0.073705
SIZE	-0.040897	-0.026398	1.000000	-0.066968	-0.053464	-0.303040	0.180782
GROWTH	-0.009157	0.050404	-0.066968	1.000000	0.068430	0.030183	-0.167771
LTD	0.107440	-0.051656	-0.053464	0.068430	1.000000	0.164260	-0.063991
CF	0.323392	-0.106962	-0.303040	0.030183	0.164260	1.000000	0.038683
AGE	0.022845	-0.073705	0.180782	-0.167771	-0.063991	0.038683	1.000000

The multicollinearity test resulted in a correlation value between each variable < 0.85 . Therefore, it can be concluded that this study is free from the problem of multicollinearity.

Table 8 F Test Model 1 (Without Control Variables)

F-statistic	33.54548
Prob (F-statistic)	0.000000

Table 9 F Test Model 2 (With Control Variables)

F-statistic	49.26435
Prob (F-statistic)	0.000000

Table 10 Model 1 t test (Without Control Variables)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	97.14799	2.047682	47.44292	0.0000
WCT	0.340598	0.015051	22.62925	0.0000
CCC	0.001878	0.020718	0.090630	0.9278
SIZE	-28.74982	0.603105	-47.66968	0.0000
GROWTH	0.017831	0.011391	1.565371	0.1178
LTD	-0.022971	0.013536	-1.697010	0.0900

WCT has a coefficient value of 0.340598 which shows a positive value with a significance level of 0.0000 which is smaller than 0.05, meaning that WCT has a significant effect on profitability. CCC has a coefficient value of 0.001878 with a significant level of 0.9278, which means that CCC has no significant effect on profitability. SIZE has a coefficient value of -28.74982 with a significance of 0.0000, meaning that SIZE has a significant effect on probability. GROWTH has a coefficient value of 0.017831 with a significance of 0.1178, meaning that GROWTH has no significant effect on profitability. LTD has a coefficient value of -0.022971 with a significance of 0.0900, meaning that LTD has no significant effect on profitability.

Table 11 Model 2 t test (With Control Variables)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	56.19579	2.575713	21.81757	0.0000
WCT	0.241483	0.013524	17.85621	0.0000
CCC	-0.018169	0.017426	-1.042595	0.2974
SIZE	-15.90113	0.803689	-19.78518	0.0000
GROWTH	-0.003722	0.009593	-0.387990	0.6981
LTD	-0.024385	0.011380	-2.142860	0.0324
CF	0.439421	0.020887	21.03824	0.0000
AGE	-0.204359	0.133931	-1.525847	0.1273

WCT has a coefficient value of 0.241483 which shows a positive value with a significance level of 0.0000 which is smaller than 0.05, meaning that WCT has a significant effect on profitability. CCC has a coefficient value of -0.018169 with a significant level of 0.2974, which means that CCC has no significant effect on profitability. SIZE has a coefficient value of -15.90113 with a significance of 0.0000, meaning that SIZE has a significant effect on profitability. GROWTH has a coefficient value of -0.003722 with a significance of 0.6981, meaning that GROWTH has no significant effect on profitability. LTD has a coefficient value of -0.024385 with a significance of 0.0324, meaning that LTD has a significant effect on profitability. CF has a coefficient value of 0.439421 with a significance of 0.0000, meaning that CF has a significant effect on profitability. AGE has a coefficient value of -0.204359 with a significance of 0.1273, meaning that AGE has no significant effect on profitability.

Table 12 Coefficient of Determination Model 1 (Without Control Variables)

R-squared	0.895324
Adjusted R-squared	0.868634

Table 13 Coefficient of Determination Model 2 (With Control Variables)

R-squared	0.926893
Adjusted R-squared	0.908079

Based on the coefficient of determination (R^2) results, model 1 without control variables has an Adjusted R-squared value of 0.868634 or 86.86%. In model 2 with control variables, the Adjusted R-squared value increases to 0.908079 or 90.80%. It can be concluded that the control variables can increase the contribution of influence on the profitability of companies in Indonesia.

CONCLUSION

Based on the analysis that has been done, it can be concluded that for the independent variables working capital turnover (WCT), firm size and long term debt have an influence on profitability, this means that changes in each variable can affect company profitability positively or negatively. While cash conversion cycle (CCC) and sales growth have no effect on profitability, this indicates that variations in CCC and sales growth do not consistently affect the profitability of the company. As for the control variable cash flow has an influence on profitability, so changes in cash flow can have a real impact on the profitability of the company. While firm age has no significant effect on profitability. this explains that firm age is not a significant factor in determining profitability. These conclusions explain that factors affect the profitability of the company, and the results of this analysis can be used as a basis for decision making in company management or financial strategy planning in the future.

Future research can use other working capital measurements such as gross working capital and net working capital or other profitability variables such as return on equity, net profit margin and gross profit margin. In addition, cash flow and firm age used as control variables in this study resulted in a significant relationship from cash flow but not significant in firm age. It is suggested that future research can use variables that are thought to affect profitability as control variables such as quick ratio and current ratio.

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Conflicts of Interest

The authors have disclosed no conflicts of interest.

Author's Affiliation

**Andriyani Andriyani¹, Endang Triwidyarti¹, Krismonika Hidayat²,
Hersugondo Hersugondo^{1*}**

¹Faculty of Economics and Business, Diponegoro University, Semarang, Indonesia

²Adiwangsa University, Jambi, Indonesia

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