

Firm Performance Responsiveness to Accounting Receivable and Working Capital Investment Policy

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Abstract

The performance of a business is closely tied to its success, which is influenced by corporate strategy and goal achievement. Effective management of accounts receivable and proper implementation of working capital investment policy are the critical factor in this success, as it directly impacts objectives twin of the firms. However, previous research has primarily focused on the relationship between accounts receivable and firm performance in developed economies, neglecting developing economies. To address this gap, the study examined how accounts receivable management and working capital investment policy affect the performance of 30 Tanzanian firms from 2011 to 2022, with a focus on liquidity and profitability. We conducted panel data analysis, considering variables such as average collection period, working capital investment policy, firm size, debt ratio, and business growth. The findings indicate a significant negative relationship between the independent variable (average collection period) and the control variable (debt ratio) with firm profitability. Conversely, there is a significant positive relationship between the independent variable (working capital investment policy) and firm profitability. Furthermore, the independent variables (average collection period and working capital investment policy) show a significant positive relationship with firm liquidity, while the control variables (firm size and business growth) also exhibit a significant positive relationship. However, the control variable (debt ratio) demonstrates a significant negative relationship with liquidity. In terms of specific sectors, the study results reveal conflicting findings, with inconsistent significant results observed within individual sectors. Therefore, financial managers should consider the levels of accounts receivable and industry-specific dynamics when making decisions regarding accounts receivable and working capital investment policy to achieve optimal outcomes.

Keywords: Accounts Receivable, Working Capital Investment Policy, Firms, Performance, Profitability, Liquidity.

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1. Background of the Study

1.1 Introduction

The economic viability of a nation depends on the efficient and effective operation of its businesses. Although companies play a significant role in global GDP, studies conducted across various countries have highlighted the prevalence of business bankruptcies caused by various factors. These factors encompass inadequate infrastructure, a fragile legal framework, unfavorable tax regulations, insufficient business expertise, and frequently, ineffective management of accounts receivable and poor implementation of working capital investment policy (Factsheet, 2015 and Kaka, 1965). The effective management of accounts receivable and proper implementation of working capital investment policy are considered as the critical determinant of a business's success or failure, irrespective of its size, nature, or ownership structure (Aminu & Zainudin, 2015; Shivakumar & Thimmaiah, 2016).

Numerous research studies have explored the relationship between accounts receivable, working capital investment policy, and business failure. The findings consistently indicate that a significant number of companies encounter difficulties or even failure due to inadequate management of their accounts receivable and improper implementation of working capital investment policy (Smith, 2009). The significance of accounts receivable and working capital investment policy cannot be overlooked, as they directly impact the twin objectives of a firm. Moreover, these aspects demand considerable attention from financial managers since it consume a substantial portion of company's assets (Knauer & Wöhrmann, 2013 and Boopathi & Leeson, 2016).

Various research studies have revealed positive effects of accounts receivable on firm performance, as demonstrated by (Lyimo, 2015; Nzioki et al., 2013). Conversely (Afrifa, 2013; Clos, 2015; Ndongye, 2015; Ponsian, 2014) found a negative relationship between the average collection period (ACP) and firm profitability. On the other hand, (Akanni, 2016) discovered an insignificant relationship between ACP and the profitability of the firm.

Regarding the relationship between firm's performance and working capital investment policy studies have asserted a positive relationship between the aggressive working capital and profitability of the firm. Contrastively, other studies found a negative correlation between the aggressive working capital and liquidity of

the firm (Panigrahi, 2014; Puraghajan et al., 2014).

1.2 Statement of the Problem

The significance of accounts receivable and working capital investment policy in ensuring a firm's survival and goal achievement is widely acknowledged. Liquidity is crucial for a firm's existence, as it cannot survive without it. It is crucial for businesses to manage their accounts receivable and implement effective working capital investment policies. Neglecting these aspects can lead to dire financial consequences, hindering the growth of the company. Therefore, it is imperative to prioritize these areas to ensure a smooth and prosperous future for the business. However, previous research has primarily focused on long-term investments, overlooking the impact of accounts receivable and working capital investment policy on firm's performance. Additionally, the limited studies conducted on this topics have conducted in developed countries where have produced conflicting results, making it difficult to draw general conclusions. Therefore, this study aims to fill this gap by examining the influence of accounts receivable and working capital investment policies on firm performance in Tanzania, considering the unique context and contributing to the existing body of knowledge.

1.3 General Objective

The primary purpose of this study is to determine the impact of account receivable and Working Capital investment Policy on the firm's performance.

1.3.1 Specific Objectives

The specific objectives of the study included:

- i. To determine the effect of the Account Receivable on the performance of companies in Tanzania.
- ii. To establish the relationship between Working Capital Investment Policy and Firm's performance
- iii. To establish the relationship between debts, ratio, size of the firm, business growth and firm's performance

1.4 Research Questions

The study attempted to answer the following research questions:

- i. What is the effect of the account receivable on the performance of companies in Tanzania?
- ii. What is the effect of Working Capital Investment Policy (WCIP) on the Tanzanian firm's performance?
- iii. What is the effect of debts ratio, size of the firm and business growth on the Tanzanian firm's performance?

1.5 Research Hypothesis

The study formulated the hypothesis that reducing the average collection period (ACP) and implementing effective working capital investment policies (WCIP) lead to an improvement in the firm's profitability. Additionally, regarding liquidity as a measure of firm performance, the study hypothesized a positive relationship between ACP and WCIP. To test these hypotheses, the study conducted empirical analysis and investigation.

H0: Account Receivable has no effect on the performance of companies in Tanzania.

H1: Account Receivable affects the performance of companies in Tanzania.

H0: Working Capital Investment Policy has no effect on the performance of companies in Tanzania

H1: Working Capital Investment Policy affects the performance of companies in Tanzania.

H0: Debts ratio, size of the firm and business growth have no effect on the performance of companies in Tanzania

H1: Debts ratio, size of the firm and business growth affects the performance of companies in Tanzania.

2. Literature Review

2.1 Management of Accounts Receivable

Accounting receivable, also known as the average collection period (ACP), is the management of credit sales and represents the debts owed to a firm from credit transactions (Tahir, 2016). It involves converting accounts receivable into cash and is essentially the money lent to credit customers. Effective management of accounts receivable is critical in accelerating cash collections, and it involves implementing strategies that reduce the time between the delivery of goods or services and the receipt of payment.

The Average Collection Period (ACP) is a metric used to measure the efficiency of managing accounts receivable, and it represents the average number of days it takes a company to collect payment from credit sales. A longer ACP implies a higher investment in accounts receivable, while a shorter ACP indicates a lower investment (Tadesse, 2016 and Deloof, 2003).

A shorter ACP implies that a company has effectively managed its accounts receivable, and it signifies the efficiency of a company in recovering cash from credit sales. It indicates that the company has implemented

strategies such as timely invoicing, effective communication with customers, and a reliable credit management system. Companies that manage their accounts receivable efficiently can reduce their investment in accounts receivable and accelerate their cash collections, which can positively impact their cash flow, profitability, and liquidity.

In conclusion, effective management of accounts receivable is crucial for the financial health of a company. A shorter ACP reflects efficient management of accounts receivable and signifies the effectiveness of a company in recovering cash from credit sales. Therefore, companies that implement effective accounts receivable management strategies can reduce their investment in accounts receivable, accelerate their cash collections, and improve their financial performance.

The effectiveness of ACP is contingent upon a sound credit policy that encompasses factors such as the credit period, collection procedures, possible discounts, and credit standards (Brigham & Houston, 2007). The credit period specifies the time within which customers must settle their debts, while discounts refer to deductions granted for early debt settlement. Credit standards assess the creditworthiness of customers using credit scores, and collection procedures outline the methods employed by the firm to collect debts from credit customers (Siegel, 1998).

2.2 Working Capital Investment Policy

The Working Capital Investment Policy is an essential tool that helps managers make informed decisions to achieve organizational goals. It comprises rules, principles, and guidelines that govern the management of working capital investment. The policy's primary objective is to ensure that the organization has enough resources to operate efficiently and effectively while maximizing profits.

There are three investment policies that a company can adopt: aggressive, conservative, and moderate (Bandara, 2015). Each policy has its unique characteristics and benefits. An aggressive investment policy is characterized by a high level of investment in fixed assets and a low level of investment in current assets. This approach aims to maximize profits by increasing the company's production capacity, which helps to reduce production costs and increase revenues. However, it also exposes the company to a higher degree of risk, such as market volatility and uncertainty. On the other hand, a conservative investment policy involves a low level of investment in fixed assets and a high level of investment in current assets, such as cash, inventory, and accounts receivable. This policy aims to ensure that the company has enough liquidity to meet its short-term obligations and manage unforeseen events. While this approach is less risky, it might lead to missed opportunities to maximize profits and growth. A moderate investment policy strikes a balance between aggressive and conservative approaches. It involves a moderate level of investment in both fixed and current assets, providing the company with a reasonable degree of liquidity and profitability. This policy is suitable for companies that prioritize stability and growth while managing risks effectively (Tufail & Sidra, 2013).

In conclusion, the Working Capital Investment Policy is a crucial tool for any organization. It helps managers make informed decisions that can have a significant impact on the company's profitability, growth, and long-term success. By adopting the right investment policy, companies can manage their working capital effectively and achieve their set goals.

2.3 Responsiveness of Account Receivable, working capital investment policy on Firm's Performance

Several studies have been conducted to explore the relationship between accounts receivable, working capital investment policy and firm performance.

Masri & Abdulla (2018) expanded a stochastic model and found a positive relationship between accounts receivable and firm liquidity. They also discovered a positive relationship between accounts receivable and profitability.

Tahir & Anuar (2016) analysed 127 textile firms in Pakistan and discovered a negative association between average collection period (ACP) and profitability. They also observed positive relationships between sales growth, firm size, and profitability, while variables such as debt ratio, inflation, and GDP showed negative relationships.

Gardner, Mills and Pope in (Ville Virkkala, 2015) conducted a study on 36 firms and found a positive correlation between an aggressive working capital investment policy and firm profitability. Conversely, a conservative policy was negatively correlated with profitability.

Bandara (2015) examined 74 Sri Lankan companies and identified negative relationships between working capital investment policy (WCIP) and working capital financing policy (WCFP) with firm profitability.

Rizwan & Shah (2015) focused on 10 textile spinning companies in Pakistan and found a positive relationship between ACP and return on equity (ROE).

Javid (2014) analysed 54 SMEs and found a negative relationship between ACP and profitability and firm value.

Muscettola (2014) examined 4226 Italian SMEs and found a positive relationship between ACP and

profitability.

Rasyid (2017) studied 393 Indonesian listed companies and found a positive relationship between aggressive working capital investment policy and profitability, but a negative relationship between aggressive financing policy and profitability.

Elbadry, (2018) analyzed 138 Egyptian SMEs and found a positive relationship between ACP and return on assets (ROA).

Yahaya (2016) examined 6 pharmaceutical firms in Nigeria and found a statistically significant positive relationship between ACP and financial performance.

Mathuva, (2015) studied 30 firms listed on the Nairobi Stock Exchange and found a negative relationship between ACP and profitability.

Lastly, Lyimo (2015) explored cement companies in Tanzania and found a positive relationship between gross operating profit (GOP) and ACP for both companies.

The studies reviewed provide valuable insights into the relationship between accounts receivable, working capital investment policy, and firm performance. They highlight that the average collection period and the implementation of an appropriate working capital investment policy have a significant impact on a firm's performance. These factors play a crucial role in shaping the financial success and overall performance of a company.

3. Research Methodology and Data

3.1 Data Used in the Study

In this research, financial data from Tanzanian companies was utilized to examine the influence of accounts receivable management and working capital investment policy on firm performance. The study relied on audited financial statements, which are widely recognized for their reliability, stability, and provision of comprehensive data. These statements are highly valued by stakeholders as they aid in informed decision-making processes (Tadesse, 2016). The research spanned from 2011 to 2022, focusing on data availability. 30 companies from agriculture, industry, and services were studied, with varying sector representation. 14 were listed on the Dares Salaam Stock Exchange, and 16 were not.

3.2 Sampling Method

The study used a non-probability sampling method using purposive sampling as used by the following authors when investigating the impact of working capital management on firm's performance (Dinku, 2013, Puraghajan, Ramzani, & Bin, 2014, Bulin, Bassit, 2017, Ponsian, 2014, Konak & Güner, 2016, Gowri, 2014). The researcher used non-probability sampling because of insufficient information on firms doing business in Tanzania, and it is advised to undertake non probability sampling if the researcher has limited knowledge or has no adequate information regarding the whole population (Djamba & Neuman, 2002).

3.3 Measurement of Variables

The main objective of the study was to investigate the correlation between accounts receivable, working capital investment policy, and firm performance. The variables were categorized into Average Collection Period, Working Capital Investment Policy, performance measures (ROTA and CR), and control variables.

3.4 Average Collection Period

The Average Collection Period (ACP) represents the time needed to convert debt into cash and reflects how efficiently a company collects payments from its credit customers. A lower ACP indicates greater efficiency for the firm (Siegel, 1998). In this study, I operationalized the construct of Average Collection Period (ACP) to measure the effectiveness of debt collection by the firm. It is calculated as accounts receivables multiplied by 365 and divided by credit sales. The measurement of ACP has been employed in various studies examining its impact on firm performance (Mathuva, 2015; and 2014; Tadesse, 2016).

3.5 Working Capital Investment Policy

Working Capital Investment Policy (WCIP), given in equation (1), expresses the ratio of current assets held in the firm to the total asset. It is the policy regarding the volume of investment invested on current assets. The higher ratio indicates a conservative working capital investment policy, while a lower ratio suggests the aggressive working capital investment policy (Puraghajan et al., 2014). In this study, I operationalized the construct of working capital investment policy to measure the ratio of current asset to total asset. It is calculated as observed in equation one. The measurement of CATA has been employed in various studies examining its impact on firm performance (Mathuva, 2015; and 2014; Tadesse, 2016).

$$\text{Working Capital Investment Policy} = \text{Total Current Assets} / \text{Total Assets} \quad (1)$$

3.6 Performance Measure

The study measured the performance of the firm through profitability and solvency. Profitability expresses the firm's ability to generate profit while liquidity reveals the strength of the firm in settling its maturity obligations (Smith 1995). Therefore, the study has used Return on Total Asset (ROTA) and Current ratio (CR) as the dependent variables.

3.6.1 Return on Total Assets

In this study, Return on Total Assets (ROTA) was used as given in equation (2), as the measurement of the firm's performance, whereby it is expressing the ability of the company to generate earning using the resources entrusted. The following authors had defined the profitability measures in terms of EBIT (Rizwan & Shah, 2015; Javid, 2014 and Afeef, 2011). The higher the ratio indicates the excellent performance of the firm, while the lower the rate suggests the poor performance of the firm.

$$\text{Return on Total Assets (ROTA)} = \text{Earnings before Tax and Interest} / \text{Total Assets} \quad (2)$$

3.6.2 Current Ratio

In this study, current ratio was used as given in equation (3), as the measurement of the firm's performance, whereby it is expressing the ability of the company to settle its obligation on right time. The higher the ratio indicates good performance, while the lower the ratio indicates poor performance, it is measured by the Current Ratio (CR) (Javid, 2014).

$$\text{Current Ratio (CR)} = \text{Current Assets} / \text{Current Liability} \quad (3)$$

3.7 Control Variables

Also, for drawing a reliable conclusion from the model, the study used the size of the firm, the growth of the firm, and debts ratio as control variables. The presence or exclusions of control variables affect the reliability and validity of the study being studied (Deloof, 2003; Javid, 2014; Kasozi, 2017; Mathuva, 2015; Padachi, 2006; Tadesse, 2016). In this study I used debts ratio, growth of the firm, and size of the firm as the control variables.

3.8 Empirical Models

The study used the following models to examine the effect of working capital management and policy on firm's performance.

3.9 Model 1: Relationship between Average Collection Period and Firm Performance

This model was used to test the first hypothesis that there is no relationship between average collection period and firm performance. Dependent variables are profitability denoted by Returns on Total Assets (ROTA) and liquidity denoted by a current ratio (CR). Three control variables were included in the model and these include debts ratio (DR), size of the firm (SF) and growth of the firm (GF). The model with profitability as the dependent variable is specified as:

$$\ln \text{ROTA}_{jt} = \beta_0 + \beta_1 \ln \text{ACP}_{jt} + \beta_2 \ln \text{DR}_{jt} + \beta_3 \ln \text{SF}_{jt} + \beta_4 \ln \text{GF}_{jt} + U_{jt}$$

Where ROTA_{jt} = return on total assets in firmj in year t

ACP_{jt} = average collection period in firm j in year t

DR_{jt} = debts ratio in firmj in year t

SF_{jt} = size of the firm of firmj in year t

GF_{jt} = growth of the firm in firmj in year t

U_{jt} = disturbance term for profitability in firmj in year t

$\beta_0 - \beta_4$ are parameters of estimation

Equation (4) was further used to establish the interaction between ACP with firm profitability separately for both the 14 listed and 16 non-listed firms in Tanzania. The model was also used to establish the interaction between ACP with firm profitability on the basis of the three sectors so as to compare the performance sector-wise, that is, 10 service firms, 10 agricultural firms and 10 industrial sector firms.

Equation (4) was modified appropriately so as to examine the effect of the ACP on the liquidity of the firm. This was done by substituting the independent variable ROTA with CR as follows:

$$\ln \text{CR}_{jt} = \beta_0 + \beta_1 \ln \text{ACP}_{jt} + \beta_2 \ln \text{DR}_{jt} + \beta_3 \ln \text{SF}_{jt} + \beta_4 \ln \text{GF}_{jt} + U_{jt}$$

Where CR_{jt} = current ratio in firm j in year t. The independent variables remain the same as in equation (4).

Equation (5) was further used to establish the interaction between ACP with firm liquidity separately for both the 14 listed and 16 non-listed firms in Tanzania. The model was also used to establish the interaction between ACP with firm liquidity on the basis of the three sectors so as to compare the performance sector-wise, that is, 10 service firms, 10 agricultural firms and 10 industrial sector firms.

3.10 Model 2: Relationship between Working Capital Investment Policy and Firm Performance

This model was used to test the hypothesis that there is no relationship between working capital investment

policy and firm performance. Dependent variables are profitability of the firm denoted by returns on total assets (ROTA) and liquidity of the firm denoted by a current ratio (CR). The three control variables used in model 1 were also included in the model and these include debts ratio (DR), size of the firm (SF) and growth of the firm (GF). The model with profitability as the dependent variable is specified as:

$$\ln ROTA_{jt} = \beta_0 + \beta_1 \ln CATA_{jt} + \beta_2 \ln DR_{jt} + \beta_3 \ln SF_{jt} + \beta_4 \ln GF_{jt} + U_{jt}$$

Where $ROTA_{jt}$ = return on total assets in firm j in year t
 $CATA_{jt}$ = average currents assets to total assets in firm j in year t
 DR_{jt} = debts ratio in firm j in year t
 SF_{jt} = size of the firm of firm j in year t
 GF_{jt} = growth of the firm in firm j in year t
 U_{jt} = disturbance term for profitability in firm j in year t
 β_0 – β_4 are parameters of estimation

Equation (6) was further used to establish the interaction between working capital investment policy with firm profitability separately for both the 14 listed and 16 non-listed firms in Tanzania. The model was also used to establish the interaction between working capital investment policy with firm profitability on the basis of the three sectors so as to compare the performance sector-wise, that is, 10 service firms, 10 agricultural firms and 10 industrial sector firms.

Equation (6) was modified appropriately so as to examine the effect of the measure of working capital investment policy on the liquidity of the firm. This was done by substituting the independent variable ROTA with CR as follows:

$$\ln CR_{jt} = \beta_0 + \beta_1 \ln CATA_{jt} + \beta_2 \ln DR_{jt} + \beta_3 \ln SF_{jt} + \beta_4 \ln GF_{jt} + U_{jt}$$

Where, CR_{jt} = current ratio in firm j in year t . The independent variables remain the same as in equation (6). Equation (7) was further used to establish the interaction between working capital investment policy with firm liquidity separately for both the 14 listed and 16 non-listed firms in Tanzania. The model was also used to establish the interaction between working capital investment policy with firm liquidity on the basis of the three sectors so as to compare the performance sector-wise, that is, 10 service firms, 10 agriculture firms and 10 industrial sector firms.

3.11 Estimation Methods

Panel data were used in the investigation of the relationship between account receivable working capital investment policy and firm's performance in Tanzania. The regression models were estimated by using panel data methodology. Panel data allow for the control of unobservable and individual heterogeneity (Hsiao, 2003).

This study employed STATA software in its analysis. The coefficients as presented in the three models were readied unit form for all the variables in respective models. The signs and significance of the coefficients in all the models indicated the direction of the impact by the independent variables on the dependent variable.

3.12 Hausman Test

To determine the appropriate model between fixed effect and random effect, it needed some diagnostic tests. Hausman test is the proper technique for identifying the appropriate estimators (C. Hsiao & Yanan, 2006; K. H. Hsiao et al., 2014; Javid, 2014; Kasozi, 2017). The results of Hausman test yield a null hypothesis suggesting the use of random effect.

3.13 Robustness Test

Prior to conducting the regression analysis, certain assumptions were considered, including the selection of the appropriate estimation model (fixed effects or random effects), addressing heteroskedasticity, examining cross-sectional dependence, and checking for autocorrelation. The Hausman test was utilized to determine the choice between fixed effects and random effects, as discussed earlier.

4. Results and Discussion

4.1 Descriptive Statistics of the Key Variables Involved in the Study

According to the summary in Table 2, the Average Collection Period (ACP) for Tanzanian firms has an average value of 81.88 days, ranging from 5.16 to 1203.122 days. The manner in which accounts receivable are managed varies from one sector to another. A comparative analysis reveals that Tanzanian firms have a longer Accounts Collection Period (ACP) than firms in other countries. This suggests that debt collection procedures in Tanzania are less stringent, and accounts receivable management is not as effective as it should be. However, a shorter ACP is indicative of a better debt collection process and a higher level of competence in collecting debts.

In essence, accounts receivable management is a critical aspect of any business, and it is crucial to ensure that it is done well. Companies with a more extended ACP tend to face cash flow problems as they have to wait longer to receive payments from their customers. This can lead to a shortage of funds that could be used to invest in other areas of the business. On the other hand, firms with a shorter ACP can operate more efficiently and are better positioned to take advantage of opportunities as they arise.

In terms of working capital investment policy (CATA) has an average value of 0.380643 across Tanzanian firms, ranging from 0.027804 to 0.988907. This suggests variations in working capital investment policy among sectors, with the manufacturing sector being the most aggressive.

Regarding firm performance, the Return on Total Assets (ROTA) has an average value of 0.10816, indicating that most Tanzanian firms are operating profitably. However, there are some extreme cases within each sector, with a few firms incurring losses. The agricultural sector has the highest ROTA.

The Current Ratio (CR), which measures a firm's ability to meet short-term obligations, has an average value of 4.032048, indicating high liquidity among Tanzanian firms. The mean value suggests that most firms in Tanzania are capable of meeting their short-term obligations four times over, indicating high liquidity.

Table 1: Descriptive summary of the key variables

S/N	Sector	Obs	Mean	Std Dev.	Min	Max
ACP	All firms	408	81.88226	105.1379	5.164116	1203.122
	Agriculture	120	113.0334	144.3692	10.89947	1203.122
	Listed	144	50.05765	35.03437	5.164116	181.3145
	Manufacturing	144	61.16999	83.74031	5.164116	727.2248
	Non listed	264	99.24114	124.8276	6.839046	1203.122
	Services	144	76.63527	76.35694	6.839046	892.9244
CLTA	All firms	408	0.18051	0.128178	0.001929	0.8614
	Agriculture	120	0.133003	0.116749	0.0242	0.8614
	Listed	144	0.20442	0.125196	0.018132	0.665862
	Manufacturing	144	0.158946	0.079728	0.001929	0.422068
	Non listed	264	0.167468	0.128137	0.001929	0.8614
	Services	144	0.241663	0.151439	0.017588	0.825257
ROTA	All firms	408	0.10816	0.203526	-1.49601	0.78635
	Agriculture	120	0.074599	0.151571	-0.39976	0.78635
	Listed	144	0.171429	0.237415	-0.49744	0.694987
	Manufacturing	144	0.157898	0.196313	-0.41066	0.554879
	Non listed	264	0.073649	0.173402	-1.49601	0.78635
	Services	144	0.086389	0.237329	-1.49601	0.694987
CR	All firms	408	4.032048	3.470984	0.14419	18.54136
	Agriculture	120	4.032048	3.470984	0.14419	18.54136
	Listed	144	2.082213	1.380238	0.208682	10.93376
	Manufacturing	144	3.354161	6.252195	0.38129	72.08997
	Non listed	264	4.230995	5.56915	0.14419	72.08997
	Services	144	3.124835	3.527283	0.208682	24.88378

4.2 Relationship between the ACP on Firm's Performance

In Table 2, Model 1 examines the relationship between ACP and firm profitability. The results show a significant negative correlation, with a coefficient of -0.0320. This indicates that higher ACP is associated with lower firm profitability. The elasticity of -0.0320, significant at a 5% level, means that a 1% increase in ACP results in a 0.0320 decrease in ROTA. The findings suggest that Tanzanian firms can increase their profits by reducing ACP. This is because reducing ACP can reduce bad debt and free up cash tied in accounts receivable. This reduction in locked-up funds in accounts receivable can provide additional cash for various cash-related purposes. The study results are consistent with the findings of (Abosedo & Luqman, 2014; G. A. Afrifa, 2013; Siraj et al., 2019; TAHIR, 2016; Tahir & Anuar, 2016; Ukaegbu, 2014; Wasiuzzaman, 2015)

The sector-specific findings in this study are inconsistent, which aligns with previous literature suggesting that each sector has its unique factors influencing the impact of ACP and WCIP on firm performance. Some sectors show significant positive relationships, supporting prior research (Setianto & Pratiwi, (2019) suggesting that some firms can improve profitability by extending their ACP, as it reduces carrying costs, promotes higher sales volumes, and allows credit customers time to evaluate product quality. While the negative relationship confirm with the results of (Muhammad et al., 2015 and Uchenna et al., n.d.; Yahaya, 2016). Additionally, the insignificant positive/negative relationships support the findings of (ARizwan & Shah, 2015 and Wanguu et al., 2015).

In case of ACP and CR the study revealed a statistically significant positive relationship between ACP and

CR (liquidity) for Tanzanian firms and most sectors, except agriculture. This suggests that firms can improve their liquidity by extending the ACP. A longer ACP means a higher volume of accounts receivable, which contributes to increased firm liquidity as accounts receivable are part of the liquidity assets (CR). The study finds that a percentage increase in ACP corresponds to a 0.227% increase in CR. These findings align with the results reported in the study by (Danga et al., 2019).

Table 2: Model 1: Summary of the relationship between ACP and firm's performance

Variables	Firms	(1)	(2)
		RE	RE
		ROTA	lnCR
lnACP	All firms	-0.0320** (0.0156)	0.227*** (0.0357)
	Agricultural	-0.0426* (0.0246)	0.0917*** (0.0880)
	Listed	0.0174 (0.0200)	0.0901** (0.0351)
	Manufacturing	-0.0249 (0.0169)	0.142*** (0.0296)
	Non-Listed	-0.0209 (0.0192)	0.321*** (0.0538)
	Services	-0.0101 (0.0407)	0.466*** (0.0573)

Note: Standard errors in parentheses;***, ** and * represent $p < 0.01$, $p < 0.05$ and $p < 0.1$ respectively.

4.3 Relationship between Working Capital Investment Policy (WCIP) and Firm's Performance

In Table 3, Model 2, there is a significant positive relationship between WCIP (working capital investment policy) and firm profitability for Tanzanian firms. This implies that increasing current assets is linked to a corresponding increase in profitability. According to the results, Tanzanian companies can increase their profits by implementing a conservative investment strategy rather than an aggressive one. This positive relationship is due to the fact that most Tanzanian companies are overtrading, which means that their current assets are below the optimal point. These findings align with (Tadesse, 2016; TAHIR, 2016; Tahir & Anuar, 2016; Tufail & Sidra, 2013) but inconsistent with the findings of (Bandara, 2015; Puraghajan et al., 2014).

Relationship between working capital investment policy (WCIP) and firm liquidity is summarized. The study finds a significant positive relationship between WCIP and CR (liquidity). This means that increasing WCIP leads to increased firm liquidity. The results suggest that a more aggressive WCIP is associated with lower liquidity, while a more conservative WCIP is linked to higher liquidity. Across different sectors, Tanzanian firms can improve their liquidity by adopting a conservative WCIP, as higher WCIP ratios indicate a larger investment in working capital.

Table 3: Model 2: Summary of the relationship between accounts receivable, working investment policy and firm's profitability.

Variables	Firms	(1)	(2)
		RE	RE
		ROTA	lnCR
CATA	All firms	0.116*** (0.0200)	0.667*** (0.0581)
	Agricultural	0.110*** (0.0244)	0.868*** (0.0974)
	Listed	0.123*** (0.0334)	0.641*** (0.0904)
	Manufacturing	0.155*** (0.0295)	0.327*** (0.0948)
	Non-Listed	0.0835*** (0.0208)	0.638*** (0.0758)
	Services	0.0300 (0.0415)	0.784*** (0.0894)

Note: Standard errors in parentheses; ***, ** and * represent $p < 0.01$, $p < 0.05$ and $p < 0.1$, respectively

4.4 Relationship between the Control Variables on Firm's Performance

According to the findings in Table 4, there is a significant negative correlation between the debts ratio (DR) and firm profitability. The coefficient of -0.112 indicates that a higher debts ratio is linked to lower profitability. This relationship holds true for both individual sectors and all firms in Tanzania. The results suggest that Tanzanian firms, regardless of their nature and the specific approaches used in examining the DR-profitability relationship, can increase their profitability by reducing their debt levels. These findings are consistent with (Evcı & Şak, 2018; Gama & Pais, 2015; Javid, 2014; Magwiro, 2014; Raheman & Nasr, 2007; Tahir & Anuar, 2016) but contrasts with the results of the following studies (Huynh Phuong Dong & Su, 2010; Iqbal & Zhuquan, 2014; Mahato et al., 2016; Tahir, 2016).

Based on the findings in Table 4, there is a significant positive relationship between the size of the firm (SF) and firm profitability in most sectors, except for the services sector where the relationship is positive but not statistically significant. This suggests that there is no statistical association between firm size and profitability in the services sector.

However, the overall positive and significant relationship between SF and ROTA indicates that Tanzanian firms can increase their profits by expanding their size. Regardless of their nature, Tanzanian firms can improve profitability by growing in size. This positive relationship can be attributed to factors such as the firms' ability to exploit investment opportunities, utilize advanced equipment, employ experienced staff, and benefit from economies of scale.

In conclusion, larger firms tend to have higher profits due to their ability to achieve economies of scale. This positive relationship between firm size and profitability is in line with the pecking order theory and is supported by prior studies of (Chatterjee, 2012; Elbadry, 2018; Evcı & Şak, 2018; Javid, 2014; TAHIR, 2016; Tahir & Anuar, 2016; Tufail & Sidra, 2013; Ukaegbu, 2014; Wanguu et al., 2015; Wasiuzzaman, 2015) but inconsistent with the study results of (Gama & Pais, 2015).

According to Table 4, there is a significant positive relationship between business growth (SG) and firm profitability in most sectors, except for the manufacturing sector and non-listed companies where the relationship is positive but not statistically significant. This implies that there is no statistical association between business growth and profitability in the manufacturing sector and non-listed companies. However, the overall positive and significant relationship between SG and ROTA confirms that Tanzanian firms can increase their profits by expanding their business. The study concludes that regardless of their nature, firms in Tanzania can improve profitability through business expansion (Siraj et al., 2019). The study results are harmony with findings of (Elbadry, 2018; Gama & Pais, 2015; Javid, 2014; Magwiro, 2014; Siraj et al., 2019; Tahir & Anuar, 2016; Uchenna et al., n.d.; Zariyawati et al., 2009).

Table 4: Summary of the relationship between control variables and firm's performance

Variables	Firms	(1)	(2)
		RE	RE
		ROTA	lnCR
lnDR	All firms	-0.112*** (0.0199)	-0.188*** (0.0519)
	Agricultural	-0.0555** (0.0232)	-0.0683 (0.105)
	Listed	-0.157*** (0.0360)	-0.585*** (0.0808)
	Manufacturing	-0.102*** (0.0291)	-0.278*** (0.0923)
	Non-Listed	-0.0915*** (0.0220)	-0.0526 (0.0640)
	Services	-0.160*** (0.0410)	-0.156** (0.0794)
	lnSF	All firms	0.0759*** (0.0129)
Agricultural		0.0449*** (0.0171)	0.0332 (0.0528)
Listed		0.133*** (0.0317)	-0.00322 (0.0205)
Manufacturing		0.151*** (0.0191)	-0.00498 (0.0240)

Variables	Firms	(1)	(2)
		RE	RE
		ROTA	lnCR
	Non-Listed	0.0443*** (0.0132)	0.0130 (0.0157)
	Services	0.0155 (0.0341)	0.00862 (0.0136)
SG	All firms	0.0135** (0.00675)	0.0275* (0.0160)
	Agricultural	0.118*** (0.0373)	-0.113 (0.111)
	Listed	0.219*** (0.0368)	0.110 (0.0827)
	Manufacturing	0.00718 (0.00873)	0.0301 (0.0274)
	Non-Listed	0.0157 (0.0129)	0.0154 (0.0304)
	Services	0.214*** (0.0475)	0.189** (0.0827)

Note: Standard errors in parentheses;***, ** and * represent $p < 0.01$, $p < 0.05$ and $p < 0.1$, respectively

Table 4 presents the relationship between control variables (DR, SF and SG) and firm liquidity. The study findings reveal both significant and insignificant negative relationships between the debts ratio (DR) and firm liquidity for all firms and individual sectors. However, the insignificant negative relationship suggests that the debts ratio does not significantly affect firm liquidity. Reducing the debts ratio may improve Tanzanian firms' liquidity.

In terms of the relationship between firm size (SF) and firm liquidity, the study results show an insignificant negative/positive relationship for all firms and individual sectors. This indicates that firm size does not have a significant impact on firm liquidity.

Regarding the relationship between business growth (SG) and firm liquidity, the study findings are inconsistent. There are significant positive and insignificant positive relationships between business growth and liquidity for all firms and individual sectors. However, the insignificant negative/positive relationship implies that business growth does not significantly influence firm liquidity. The significant positive relationship observed in all firms and the services sector suggests that Tanzanian firms could enhance their liquidity by increasing their sales.

5. Conclusions and Recommendations

Based on the research question 1, there is a significant negative relationship between Average Collection Period (ACP) and the performance of Tanzanian firms, specifically Return on Total Assets (ROTA). The study suggests that managers of Tanzanian firms should strive to reduce their ACP in order to improve profitability. There are several strategies that can be employed to reduce ACP, such as factoring, credit policy restructuring, offering cash discounts, charging overdue interest, maintaining regular communication with vendors, facilitating direct debit and credit card payments, establishing credit committees, requesting upfront payments, hiring skilled staff, and implementing credit rating policies. It is crucial to approach debt collection in a rational manner rather than adopting a harsh strategy, as this helps maintain a positive relationship between the company and its customers. Moreover, Tanzanian firms are encouraging to involve all departments in managing accounts receivable (Setianto & Pratiwi, 2019).

Regarding the relationship between ACP and CR the study findings indicate a positive correlation between Average Collection Period (ACP) and firm liquidity. To strengthen liquidity, firms are recommended to invest more in accounts receivable.

Regarding the correlation between working capital investment policy and firm's performance, the study revealed a positive relationship between Working Capital Investment Policy and firm performance, suggesting that increasing working capital can improve profitability and liquidity. Firms should adopt a Conservative Working Capital Investment Policy to enhance profitability and liquidity.

Concerning the relationship between firm's performance and control variables such as debts ratio, firm size, and firm growth the study observed that; Reducing long-term debt levels can enhance profits and liquidity, increasing firm size contributes to higher profitability, and growing sales may increase profitability and liquidity, so strategies like sales promotions and opening new branches can improve performance.

References

- Abosede, S. A., & Luqman, O. S. (2014). A Comparative Analysis on Working Capital Management of Brewery Companies in Nigeria. *SSRN Electronic Journal*, 1–17. <https://doi.org/10.2139/ssrn.2514668>
- Afeef, M. (2011). Analyzing the Impact of Working Capital Management on the Profitability of SME ' s in Pakistan. 2(22), 173–183.
- Afrifa, G. A. (2013). Working Capital Management and Aim Listed SME Companies Profitability: a Mixed Research Method Approach. PhD Thesis, Centre for Finance and Risk. The Business School, Bournemouth University, March, 1–315. <https://doi.org/10.6007/IJARAFMS/v3-i4/390>
- AKANNI, A. S. (2016). Working Capital Management on the Financial Performance of Listed Food Production Companies in Nigeria.
- Aregbeyen, O. (2013). The effects of working capital management on the profitability of Nigerian manufacturing firms. *Journal of Business Economics and Management*, 14(3), 520–534. <https://doi.org/10.3846/16111699.2011.651626>
- Bandara, R. M. S. (2015). Impact of working capital management policy on market value addition. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics*, 1(2), 354–373.
- Boopathi, C., & Leeson, J. (2016). Concept of Working Capital Management. *International Journal of Commerce, Business and Management*, 5(2), 372–377.
- Brigham, E. F., & Houston, J. F. (2007). Fundamentals of financial management (Dasar-dasar Manajemen Keuangan). In *Engineering and Process Economics* (Vol. 3, Issue 3). <https://doi.org/10.1038/sj.ejhg.5200824>
- Bulin, Bassit, dan H. (2017). Impact of working capital management on firm's profitability. *International Journal of Accounting & Business Management*, 4(November 2016), 227–241. <https://doi.org/10.24924/ijabm/2016.11/v4.iss2/227.241>
- Clos, J. (2015). The Challenge of Local Government Financing in Developing Countries United Nations Human Settlements Programme (UN-Habitat), the City of Barcelona and the Province of Barcelona. In *United Nations Settlement Programme* (Vols. 978-92-1-1, Issue 1). https://sustainabledevelopment.un.org/content/documents/1732The_Challenge_of_Local_Government_Financing_in_Developing_Countries_3.pdf
- Danga, M. M., Kaudunde, I. J., & Kadilikansimba, P. B. (2019). The Effect of Accounts Receivable Management on the Performance of Tanzanian Agricultural Firms. 3(11), 11–18.
- Deloof, M. (2003). Does Working Capital Pdf. 30(November 2001).
- Dinku, T. (2013). Impact of Working Capital Management on Profitability of Micro and Small Enterprises in Ethiopia : The Case of Bahir Dar City Administration. *International Journal of Accounting and Taxation*, 1(1), 15–24. <https://doi.org/10.15640/ijat>
- Djamba, Y. K., & Neuman, W. L. (2002). Social Research Methods: Qualitative and Quantitative Approaches. In *Teaching Sociology* (Vol. 30, Issue 3). <https://doi.org/10.2307/3211488>
- Elbadry, A. (2018). The Determinants of Working Capital Management in the Egyptian SMEs. *Accounting and Finance Research*, 7(2), 155. <https://doi.org/10.5430/afr.v7n2p155>
- Evci, S., & Şak, N. (2018). The Effect of Working Capital Management on Profitability in Emerging Countries: Evidence from Turkey. *Financial Management from an Emerging Market Perspective*. <https://doi.org/10.5772/intechopen.70871>
- Gama, P., & Pais, M. A. (2015). Working capital management and SMEs profitability: Portuguese evidence. *International Journal of Managerial Finance*, 11(3), pp.341-358.
- Gowri, R. (2014). A Study on the Impact of Working Capital Management on Profitability With Reference To Sugar Companies In Tamil Nadu. *IOSR Journal of Humanities and Social Science*, 2(3), 17–22.
- Hsiao, C., & Yanan, W. (2006). Panel Data Analysis – Advantages and Challenges Panel Data Analysis — Advantages and Challenges. 00(0), 1–63.
- Hsiao, K. H., Hsiao, K. H., & Yan, H. Sen. (2014). Introduction. *History of Mechanism and Machine Science*, 23, 1–7. https://doi.org/10.1007/978-3-319-02009-9_1
- Huynh Phuong Dong, & Su, J. (2010). The Relationship between Working Capital Management and Profitability. *The Relationship between Working Capital Management and Profitability*, 3(5), 62–71. <https://doi.org/10.1017/CBO9781107415324.004>
- Iqbal, A., & Zhuquan, W. (2014). “ Working Capital Management and its Impact on Firm ' s Performance ”. 5(12), 123–130.
- Javid, S. (2014). Effect of Working Capital Management on SME's Performance in Paskistan. *European Journal of Business and Management*, 6(12), 206–221.
- Kasozzi, J. (2017). The effect of working capital management on profitability: A case of listed manufacturing firms in South Africa. *Investment Management and Financial Innovations*, 14(2), 336–346. [https://doi.org/10.21511/imfi.14\(2-2\).2017.05](https://doi.org/10.21511/imfi.14(2-2).2017.05)

- Knauer, T., & Wöhrmann, A. (2013). Working capital management and firm profitability. *Journal of Management Control*, 24(1), 77–87. <https://doi.org/10.1007/s00187-013-0173-3>
- Konak, F., & Güner, E. N. (2016). The Impact of Working Capital Management on Firm Performance: An Empirical Evidence from the BIST SME Industrial Index. *International Journal of Trade, Economics and Finance*, 7(2), 38–43. <https://doi.org/10.18178/ijtef.2016.7.2.496>
- Lyimo, E. W. (2015). The Impact of Working Capital Management on Profitability of Listed Cement Companies in Tanzania: A Comparative Study of Tanga Cement Company Ltd and Tanzania Portland Cement Company Ltd
- Magwiro, A. (2014). How Relevant is the Working Capital Management in Explaining Profitability in the Retail Sector Companies of South Africa? 1–40.
- Mahato, J., Jagannathan, K., & Uday. (2016). Impact of Working Capital Management on Profitability: Indian Telecom Sector. 17–30.
- Masri, H., & Abdulla, Y. (2018). A multiple objective stochastic programming model for working capital management. *Technological Forecasting and Social Change*, 131(January), 141–146. <https://doi.org/10.1016/j.techfore.2017.05.006>
- Mathuva, D. (2015). The Influence of Working Capital Management Components on Corporate Profitability : A Survey on Kenyan Listed Firms. November. <https://doi.org/10.3923/rjbm.2010.1.11>
- Muscettola, M. (2014). Cash Conversion Cycle and Firm's Profitability: An Empirical Analysis on a Sample of 4,226 Manufacturing SMEs of Italy. *International Journal of Business and Management*, 9(5), 25–35. <https://doi.org/10.5539/ijbm.v9n5p25>
- Nzioki, P. M., Kimeli, S. K., Abudho, M. R., & Nthiwa, J. M. (2013). Management of working capital and its effect on profitability of manufacturing companies listed on Nairobi securities exchange (NSE), Kenya. *Internacional Journal of Business and Finance Management Research*, 1, 35–42.
- Padachi, K. (2006). Trends in Working Capital Management and its Impact on Firms's Performance : An Analysis of Mauritian Small Manufacturing Firms. 2, 45–58.
- Panigrahi, A. K. (2014). Impact of Negative Working Capital on Liquidity and Profitability: A Case Study of ACC Limited. *SSRN Electronic Journal*, March. <https://doi.org/10.2139/ssrn.2398413>
- Ponsian, N. (2014). The Effect of Working Capital Management on Profitability. *International Journal of Economics, Finance and Management Sciences*, 2(6), 347. <https://doi.org/10.11648/j.ijefm.20140206.17>
- Puraghajan, A., Ramzani, A. A., & Bin, I. E. (2014). Effects of Aggressive Working Capital on the Performance of Listed Companies in Tehran Stock Exchange. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 3(7), 72–84. <https://doi.org/10.12816/0018273>
- Raheman, A., & Nasr, M. (2007). Microsoft Word - Raheman.doc - Paper 19.pdf. 3(1), 279–300. <http://www.bizresearchpapers.com/Paper 19.pdf>
- Rasyid, R. (2017). Impact of the Aggressive Working Capital Management Policy on Firm ' s Profitability and Value : Study on Non-Financial Listed Firms in Indonesia Stock Exchange. 36(Icbmr), 207–216.
- Rizwan, S., & Shah, F. M. (2015). Impact of Working Capital Management on Firm's Performance: A Case of Textile Spinning Sector in Pakistan. *International Journal of Information, Business & Management*, 7(1), 174.
- Setianto, R. H., & Pratiwi, A. (2019). Working capital management in Indonesia: An analysis on overinvestment and underinvestment firms. *Gadjar Mada International Journal of Business*, 21(1), 1–18. <https://doi.org/10.22146/gamaijb.28354>
- Siegel, S. and. (1998). *Schaum ' s Outline of Theory and Problems of Financial Management*.
- Siraj, M., Campus, K., Mubeen, M., & Sarwat, S. (2019). Working capital management and firm performance : evidence from non-financial firms in Pakistan. 9(2), 27–37. <https://doi.org/10.18488/journal.1007/2019.9.2/1007.2.27.37>
- Smith, A. B. (1995). The Association Between Working Capital Measures Marolee Beaumont Smith submitted in accordance with the requirements for the degree of Doctor of Commerce in the subject Business Management at the University of South Africa Promoter : Joint Promoter : Pro. December.
- Smith, K. V. (2009). State Capital the of Management. *Management*, 2(3), 50–55.
- Tadesse, Z. (2016). Relationship between Working Capital Management, Policies, and Profitability of Small Manufacturing Firms. *Walden University Scholar Works*, 19, 1–154.
- Tahir, M. (2016). The impact of working capital management on firms financial performance: Evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(3), 1097–1105.
- Tahir, M., & Anuar, M. B. A. (2016). The determinants of working capital management and firms performance of textile sector in Pakistan. *Quality and Quantity*, 50(2), 605–618. <https://doi.org/10.1007/s11135-015-0166-4>
- Tufail, S., & Sidra, B. (2013). Impact of Working Capital Management on Profitability of Textile Sector of Pakistan. 14387–14397.

- Uchenna, W., Mary, I., & Okelue, D. (n.d.). Asian Economic and Financial Review 2(8):966-982 Effects of Working Capital Management On Profitability: Evidence From the Top five Beer Brewery Firms In The World. 2(8), 966–982. <http://www.aessweb.com/pdf-files/966-982.pdf>
- Ukaegbu, B. (2014). The significance of working capital management in determining firm profitability: Evidence from developing economies in Africa. *Research in International Business and Finance*, 31, 1–16. <https://doi.org/10.1016/j.ribaf.2013.11.005>
- Wanguu, K. C., Sitienei, &, & Kipkirui, E. (2015). The Effect of Working Capital Management on Profitability of Cement Manufacturing Companies in Kenya. *IOSR Journal of Economics and Finance Ver. III*, 6(6), 2321–5933. <https://doi.org/10.9790/5933-06635361>
- Wasiuzzaman, S. (2015). Working Capital and Profitability in Manufacturing Firms in Malaysia: An Empirical Study. *Global Business Review*, 16(4), 545–556. <https://doi.org/10.1177/0972150915581098>
- Yahaya, A. (2016). Effects of Working Capital Management on the Financial Performance of the Pharmaceutical Firms in Nigeria. *International Journal of Economics, Commerce and Management*, 4(4), 349–367.
- Zariyawati, M. A., Annuar, M. N., Taufiq, H., & Rahim, A. S. A. (2009). Working capital management and corporate performance: Case of Malaysia. *Journal of Modern Accounting and Auditing*, 5(11), 47–54.