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# Comprehensive Explanation of the Correlation between the Average Payment Period, the Working Capital Financing Policy, and a Firm's Profitability

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**Abstract**
The success of a business is closely tied to its performance, which is influenced by corporate strategy and goal achievement. Effective management of Average Payment Period and effective implementation of working capital financing policy is a critical factor in this success, as it directly affects the company's profitability. Previous research has predominantly focused on the relationship between accounts payable and firm profitability in developed economies, overlooking the dynamics of developing economies. To address this gap, the study examines the impact of accounts payable and working capital financing policy on the profitability of 40 Tanzanian firms from 2012 to 2023, specifically focusing on Return on Total Assets (ROTA). The researchers employed random effects regression analysis using STATA statistical packages and conducted panel data analysis. The analysis considered various variables, including Average Payment Period, Working Capital Financing Policy, firm size, debt ratio and business growth.The findings revealed a significant negative relationship between Average Payment Period and firm's profitability, as well as an insignificant positive relationship between Working Capital Financing Policy and firm's profitability. Additionally, the study observes a significant relationship between control variables, such as firm size and business growth, and firm profitability. However, the study results exhibit conflicting outcomes among individual sectors, with some sectors showing positive correlations, others showing negative correlations, and some demonstrating insignificant relationships among the variables. Therefore, financial managers should consider industry-specific dynamics when making decisions regarding accounts payable management and working capital financing policy to achieve optimal outcomes.
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## 1. Background of the study

### 1.1 Introduction

The economic sustainability of a nation hinges on the successful operations of its businesses. Although firms significantly contribute to a country's GDP worldwide, research conducted across multiple countries highlights that many businesses have encountered financial distress due to various factors. These factors encompass inadequate infrastructure, a deficient legal framework, unfavorable tax regulations, insufficient business expertise, and frequently, inadequate management of accounts payable and misapplication of working capital financing policy (Factsheet, 2015 and Kaka, 1965).

Deloof, (2003) established that to achieve business goals, a firm should maintain the optimal level of accounting payable, because management of accounts payable and working capital financing policy is the primary source of success or failure of any business regardless of its size, nature, or forms of ownership (Aminu & Zainudin, 2015; Shivakumar & Thimmaiah, 2016).

Numerous research studies focusing on accounts payable have revealed that a considerable portion of companies face failure as a result of poor management of their accounts payable and ineffective utilization of working capital financing policies. This indicates that businesses frequently encounter challenges or difficulties due to ineffectively managing and overseeing their debts and improper implementation of working capital financing policy (Smith, 2009). The significance of accounts payable and working capital financing policy cannot be underestimated, as they have a direct impact on the dual objectives of a firm. These aspects require significant attention from financial managers and constitute a substantial portion of the working capital (Knauer & Wöhrmann, 2013 and Boopathi & Leeson, 2016).

Various research studies have revealed positive effects of accounts payable on firm performance, as demonstrated by Mathuva, (2015). Conversely (Ponsian, 2014) found a negative relationship between the Average Payment Period (APP) and firm profitability. On the other hand, (Lyimo, 2015) discovered an insignificant relationship between APP and the profitability of the firm.

Regarding the relationship between firm's profit and working capital financing 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 profitability of the firm (Tahir & Anuar, 2016).

### 1.2 Statement of the Problem

The significance of accounts payable and working capital financing policy in securing a firm's survival and achieving its goals is widely acknowledged. While a firm can continue to operate without making a profit, its viability is reliant on proper management of component of working capital. As mismanaging of accounts payable, such as under- or over-financing them can hinder a business's ability to thrive.

Despite the potential benefits of accounts payable and working capital financing policy for overall firm performance, previous research in corporate finance has primarily focused on long-term financing, paying little attention to the effects of accounts payable and working capital financing policy. Furthermore, the limited studies conducted on these topics have produced conflicting findings, often conducted in different locations, industries, and with varied sample sizes.

This lack of consistency makes it challenging to generalize the results to firms in Tanzania or other countries. Given these factors, the absence of empirical studies on the impact of Average Payment Period (APP) and Working Capital Financing Policy (WCFP) on firm profitability in Tanzania, along with the contradictory findings from previous research, serves as the primary motivation for conducting this study. Therefore, this study aimed to examine the influence of accounts payable and working capital financing policy on firm profitability.

### 1.3 General Objective

The primary purpose of this study is to determine the impact of accounts payable and working capital financing policy on the firm's profit.

#### 1.3.1 Specific Objectives

The specific objectives of the study included:

i. To determine the effect of the accounts payable on the profitability of companies in Tanzania.
ii. To establish the relationship between working capital financing policy and Firm's profit
iii. To establish the relationship between debts, ratio, size of the firm, business growth and firm's profit

### 1.4 Research Questions

The study attempted to answer the following research questions:

i. What is the effect of the accounts payable on the profitability of companies in Tanzania?
ii. What is the effect of working capital financing on the Tanzanian firm's profit?
iii. What is the effect of debts ratio, size of the firm and business growth on the Tanzanian firm's profit?

### 1.5 Research Hypothesis

The study formulated the hypothesis that reducing the Average Payment Period (APP) and working capital financing policy lead to an improvement in the firm's profitability.

H0: Accounts payable has no effect on the profit of companies in Tanzania.
H1: Accounts payable affects the profit of companies in Tanzania.
H0: Working capital financing policy has no effect on the profit of companies in Tanzania
H1: Working capital financing policy affects the profit of companies in Tanzania.
H0: Debts ratio, size of the firm and business growth have no effect on the profit of companies in Tanzania
H1: Debts ratio, size of the firm and business growth affects the profit of companies in Tanzania.

## 2. Literature Review

### 2.1 Management of Accounts Payable

Account payable is the amount owed to suppliers, which occurs when the firm buys goods on credit from suppliers (Siegel, 1998). Accounts payable represents a cost-free financing option as there are no fees associated with purchasing goods on credit. However, it is worth noting that some sellers may impose higher prices for credit transactions. The concept of a cost-free financing option arises when there is no price discrimination between cash and credit transactions, and when sellers do not offer cash discounts or vice versa (Brigham & Houston, 2007).

Accounts payable is administered by the Average Payment Period (APP) (Brigham & Houston, 2007). The APP is the time required to settle debts, and it indicates the duration of time the company takes to pay its debts owed by its credit suppliers since goods were purchased from credit suppliers.

### 2.2 Working Capital Financing Policy

Working Capital Policy is expressed by current liabilities to total assets, close to hundred refer to aggressiveness working capital financing policy while close to zero refer to conservativeness working capital financing policy

 

(Dinku, 2013, Bandara, 2015 and Ville Virkkala, 2015).

### 2.3 Relationship of Average Payments Period and Working Capital Financing Policy on Profitability of the Firm

Tahir & Anuar (2016) investigated the factors influencing working capital and firm performance in Pakistan, analyzing data from 127 textile firms over a two-year period. The findings indicate that Average Collection Period (ACP), Cash Ratio (CR), and CALT are negatively related to firm profitability. Additionally, Average Payment Period (APP), Accounts Inventory Period (AIP), Cash Conversion Cycle (CCC), and CATA have a negative impact on return on assets. Regarding control variables such as sales growth and firm size, a positive correlation with firm profitability was observed, while debts ratio, inflation, and GDP showed negative relationships..

Prudence & Zita (2014) examined how working capital policy affects the profitability of cement firms in Pakistan. The sample consisted of 20 firms over a five-year period from 2006 to 2011. Ordinary Least Squares analysis was used to analyze the impact of working capital policy on firm profitability. The independent variables included working capital policy (CATA and CLTA), firm growth, firm size, and leverage, while the dependent variables were ROE, ROA, NOP, and Tobin's Q. The results indicated a positive relationship between investment policy and firm profitability (ROE, ROA, NOP, and Tobin's Q). However, the study revealed a negative relationship between financing policy and firm profitability (ROE, ROA, NOP).

Bandara (2015) in his studies on the impact of WCMP in Sri Lanka on 74 companies for five years using panel data regression realized that both WCIP and WCFP have a negative relationship on a firm’s profitability.

Rizwan & Shah (2015) analyzed the influence of working capital management on firm performance using a sample of 10 textile spinning companies listed on the Karachi Stock Exchange. The study covered a period of 7 years from 2008 to 2014. The dependent variables used were ROE and ROA, while the independent variables included ACP, AIP, and APP. Spearman's correlation and linear regression analysis were employed to assess the relationship between working capital management and firm performance. The findings indicated that ACP, AIP, and APP had an insignificant negative correlation with both ROE and ROA.

Javid (2014) investigated the impact of working capital management on firm performance using a sample of 54 SMEs listed on the Karachi Stock Exchange. The study spanned five years, from 2006 to 2010. A random-effects regression model on panel data was employed to analyze the relationship between working capital and firm performance. The findings indicated that Accounts Inventory Period (AIP), Average Collection Period (ACP), and Average Payment Period (APP) had a negative correlation with both firm profitability and firm value. The study suggests that by reducing AIP, ACP, and APP, firms can enhance their profitability and overall value.

Tahir & Anuar (2016) examined the determinant of working capital and performance of the firm in Pakistan using a sample size of 127 textile firms for two years. The study revealed that APP, AIP, CCC, and CATA have negative impact on the return on assets. While regarding the control variable (sales growth and firm seize), the study found a positive correlation between them and the profitability of the firm, but for the case of debts ratio, inflation, and GDP, have observed negative relationships.

Muhammad et al. (2015) examined the impact of working capital management on corporate profitability on seven firms listed on the Nigerian stock exchange for a period of five years starting from 2008 to 2012. They used GLS regression, and they found that ACP, CR, and size of the firm have a positive relationship with the profitability of the firm while AIP and APP have a negative relationship with the profitability of the firm

Yahaya (2016) examined the effect of working capital management on the financial performances using the sample size of 6 pharmaceutical firms listed in the Nigeria Stock Exchange for a period of 8 years starting from 2006 to 2013. The study results revealed that AIP and ACP both have a statistically significant positive relationship with the firm’s financial performance, while APP has shown a negative relationship with the ROA, but CCC found to be an insignificant statistical relationship with the dependent variable.

Lastly, Mathuva, (2015) examined the influence of working capital management on the profitability of the firm using the sample size of 30 firms listed on the Nairobi Stock Exchange covering the period of 16 years starting from 1993 to 2008. The study results revealed the significant positive relationship between the AIP, APP and the profitability of the firm.

Therefore, the studies examined above provide insights into the relationship between accounts payable, working capital financing policy, and firm profitability. They suggest that effectively managing working capital, including accounts payable, and implementing an appropriate working capital financing policy can have an impact on a firm's profitability

## 3. Research Methodology and Data

### 3.1 Data Used in the Study

The research utilized financial data from Tanzanian companies to assess the impact of accounts payable management and working capital financing policy on firm profit. The use of audited financial statements, known

 

for their reliability, stability, and comprehensive data, is widespread among stakeholders for decision-making purposes (Tadesse, 2016).

The research conducted between 2012 and 2023 primarily focused on data availability. It included an analysis of 40 companies across the agriculture, industry, and services sectors, with varying levels of representation from each sector. Among the companies studied, 14 were listed on the Dares Salaam Stock Exchange, while the remaining 26 were not listed.

### 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 payable, working capital financing policy, and firm's profit. The variables were categorized into Average Payment Period, Working capital Financing Policy, ROTA, and control variables.

### 3.4 Average Payment Period

In line with definitions provided by different authors, the concept of accounts payable was operationalized by utilizing the Average Payment Period (APP). This metric reflects the firm's ability to effectively manage supplier payments and is calculated as the product of accounting payables multiplied by 365, divided by credit purchases as used by (Mathuva, 2015).

### 3.5 Working Capital Financing Policy

Based on prior definitions by various authors regarding the constructs of working capital financing policy, the constructs of working capital financing policy (WCFP) was operationalized for expressing the ratio of current liability to a total asset as applied by (Tadesse, 2016).

*Working Capital Financing Policy = Current Liability/Total Assets* *(1)*

### 3.6. 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 profit, 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.

*Return on Total Assets (ROTA) = Earnings before tax and interest (EBIT)/Total Assets* *(2)*

### 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 Average Payment Period and Working Capital Financing Policy on firm's profit.

### 3.9 Model 1: Relationship between Average Payment Period and Firm's Profit

This model was used to test the first hypothesis that there is no relationship between average payment period and firm's profit. Dependent variables are profitability denoted by Returns on Total Assets (ROTA). 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:

$$lnROTA_{jt} = \beta_0 + \beta_1 lnAPP_{jt} + \beta_2 lnDR_{jt} + \beta_3 lnSF_{jt} + \beta_4 lnGF_{jt} + U_{jt} \quad (3)$$

Where ROTAjt = return on total assets in firmj in year t

APPjt= average collection period in firm j in year t

 

DRjt = debts ratio in firmj in year t
SFjt = size of the firm of firmj in year t
GFjt = growth of the firm in firmj in year t
Ujt = disturbance term for profitability in firmj in year t
β0 – β4 are parameters of estimation
Equation (3) was further used to establish the interaction between working capital management with firm profitability separately for both the 14 listed and 26 non-listed firms in Tanzania. The model was also used to establish the interaction between working capital management with firm profitability on the basis of the three sectors so as to compare the performance sector-wise, that is, 20 service firms, 10 agricultural firms and 10 industrial sector firms.

### 3.10 Model 2: Relationship between Working Capital Financing Policy and Firm Profit

This model was used to test the first hypothesis that there is no relationship between WCFP and firm's profit. Dependent variables are profitability denoted by Returns on Total Assets (ROTA). 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:

$$lnROTA_{jt} = \beta_0 + \beta_1 lnWCFP_{jt} + \beta_2 lnDR_{jt} + \beta_3 lnSF_{jt} + \beta_4 lnGF_{jt} + U_{jt} \quad (4)$$

Where ROTAjt = return on total assets in firmj in year t
WCFPjt = average currents assets to total assets in firmj in year t
DRrjt = debts ratio in firmj in year t
SFjt = size of the firm of firmj in year t
GFrjt = growth of the firm in firmj in year t
Ujt = disturbance term for profitability in firmj in year t
β0–β4 are parameters of estimation

Equation (4) was further used to establish the interaction between working capital investment policy with firm profitability separately for both the 14 listed and 26 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, 20 service firms, 10 agricultural 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 two 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 (RE).

### 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

From table 1 the descriptive statistics regarding the APP across the firms showed the mean value of 143.6 days with the standard deviation of 212.2244 days ranging from 4.88 to 3083.198 days. Considering the mean value of APP of 143.6 days now it is evident that Tanzanian firms take a long period to pay their credit suppliers compared to the firms of other countries such as India, US, Europe, China and Brazil where their APP are 53, 37,37, 82 and 41 respectively (Ernst & Young, 2018).

A prolonged Average Payment Period (APP) can be more efficient when free trade credit is available, while

 

in the absence of free trade credit, a prolonged APP may not be suitable as it is accompanied with high interest rate. For shortening the APP managers can find alternative funding sources if are less costly. Generally, a longer payment period is favorable for firm profitability but can negatively impact liquidity. This arguments supports previous literature suggesting that delaying payment to suppliers can be beneficial for profitability though may impair company's (good relationship).

When examining the mean APP across different sectors, it was found that the services sector takes the longest time (177.10 days) to settle credit, followed by manufacturing (136 days), and agriculture (111 days). These differences indicate that firms in various sectors have distinct approaches to debt settlement, potentially due to their unique characteristics, nature, and business culture. The inconsistent results among sectors further support the notion that each sector has its own factors influencing the impact of the component of Working Capital Management and Working Capital Policy on firm performance (Mkhululi Ncube, 2011).

According to Table 1, the WCFP (Working Capital Financing Policy) has a mean value of 0.18051 and a standard deviation of 0.128178. The range of values extends from 0.001929 to 0.8614, indicating significant variation among the sectors studied. The mean value of 0.18051 suggests that most Tanzanian firms employ a Conservative Financing Working Capital Policy, as indicated by the sectors reporting mean values close to zero. These findings align with previous literature, which suggests that each sector has its own unique factors influencing the impact of Working Capital Policy on firm performance. These factors may include the nature of the business, cultural traits, and specific characteristics of the firms (Mkhululi Ncube, 2011).

When considering firm profitability, Tanzanian firms have a mean Return on Total Assets (ROTA) of 0.10816. The range of ROTA values spans from -1.49601 to 0.78635, with a standard deviation of 0.203526. The positive mean value indicates that the majority of firms in Tanzania are operating profitably. However, there are outliers within each sector, suggesting that while most firms generate profits, a few experience losses. The agricultural sector exhibits the highest ROTA, followed by the manufacturing and services sectors.

**Table 1: Descriptive summary of the key variables**

| S/N | Sector | Obs | Mean | Std Dev. | Min | Max |
|---|---|---|---|---|---|---|
| APP | All firms | 408 | 143.6 | 212.2244 | 4.884758 | 3083.198 |
| | Agriculture | 120 | 111.7095 | 119.0827 | 7.930115 | 772.4985 |
| | Listed | 144 | 154.4863 | 138.0081 | 6.46488 | 708.6486 |
| | Manufacturing | 144 | 136.6722 | 173.737 | 4.884758 | 1869.71 |
| | Non listed | 264 | 137.6621 | 243.3993 | 4.884758 | 3083.198 |
| | Services | 144 | 177.1033 | 290.1227 | 6.46488 | 3083.198 |
| WCFP | 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 |

### 4.2 Relationship between the AIP on Firm's Profit

Based on Table 2: Model 1, the findings indicate a statistically significant negative relationship between Average Payment Period (APP) and firm profitability (ROTA) for all Tanzanian firms. The results suggest that a percentage increase in APP is associated with a decrease in ROTA by 0.0106%. This suggests that most Tanzanian firms could enhance their profitability by reducing the APP. A shorter APP helps eliminate penalties, price discrimination, overdue interest, and encourages cash discounts, unconditional credit, and positive relationships with suppliers. It also enables companies to acquire goods at the right time, price, quantity, and quality. These findings align with previous studies by G. A. Afrifa (2013) and Deloof (2003), which indicate that less profitable firms tend to delay payment of accounts payable compared to highly profitable companies. Conversely, the study results are inconsistent with (Madishetti and Kibona and Ponsian, 2014).

Considering in sector-wise the study revealed both positive and negative insignificant relationship between APP and firm's profitability among the sectors. From the study results, the insignificant positive and negative relationship between the APP and ROTA among the sectors suggests that the APP has no significant influence on firm's profitability (Afeef, 2011; Gill et al., 2010; Napompech, 2012; Nigatu, 2015; Rizwan & Shah, 2015).

The study findings of individual sector support previous literature by demonstrating that different sectors

 

have unique factors that influence the impact of Working Capital Management and Working Capital Policy on firm performance. These factors include the nature of the firm, cultural traits within the business, and specific characteristics of the firm itself. The inconsistent results observed among the sectors further validate this notion (Mkhululi Ncube, 2011).

**Table 2: Model 1: Summary of the relationship between APP and firm's profit**

| Variables | Firms | |
|---|---|---|
| | | RE |
| | | ROTA |
| **lnAPP** | All firms | -0.0106* |
| | | (0.0146) |
| | Agricultural | -0.0364 |
| | | (0.0246) |
| | Listed | 0.0324 |
| | | (0.0305) |
| | Manufacturing | 0.0278 |
| | | (0.0206) |
| | Non-Listed | 0.0198 |
| | | (0.0170) |
| | Services | -0.00718 |
| | | (0.0404) |

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

### 4.3 Relationship between Working Capital Financing Policy and Firm's Profit

Based on Table 3: Model 2, the study findings show a statistically insignificant positive relationship between Working Capital Financing Policy (WCFP) and firm profitability for Tanzanian firms. This suggests that WCFP does not significantly influence the profitability of these firms. These results align with the findings of Niresh (2012). However, when considering different sectors, the study reveals inconsistent findings. Some sectors exhibit significant negative or positive relationships between WCFP and firm profitability, while others show insignificant relationships. These sector-specific results further support the notion that each sector has its own unique factors influencing the impact of Working Capital Management and Working Capital Policy on firm performance. These factors include the nature of the firm, cultural traits within the business, and specific characteristics of the firm itself. (Mkhululi Ncube, 2011).

**Table 3: Model 2: Summary of the relationship between WCFP and firm's profitability.**

| Variables | Firms | (1) |
|---|---|---|
| | | RE |
| | | ROTA |
| WCFP | All firms | 0.0166 |
| | | (0.0173) |
| | Agricultural | -0.0584** |
| | | (0.0261) |
| | Listed | -0.0134 |
| | | (0.0311) |
| | Manufacturing | 0.0864*** |
| | | (0.0219) |
| | Non-Listed | 0.00715 |
| | | (0.0176) |
| | Services | -0.0391 |
| | | (0.0381) |

**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

Based on Table 4, the study findings indicate a significant negative relationship between the debts ratio (DR) and firm profitability. The magnitude of the coefficient is -0.112, suggesting that a higher debts ratio is associated with lower profitability. This holds true for both individual sectors and all firms in Tanzania. The results imply that Tanzanian firms, regardless of their nature and the methods used in the relationship between DR and profitability, can enhance profitability by reducing their debt levels. This is supported by previous research

 

findings ( Evci & 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 Table 4, the study findings indicate 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. The positive but insignificant relationship suggests that there is no statistical association between firm size and profitability in the services sector.

The study reveals a significant positive relationship between firm size (SF) and profitability (ROTA) in Tanzanian firms. This suggests that firms in Tanzania can increase their profits by expanding their size, regardless of their nature or industry. The positive relationship is likely due to the larger firms' ability to take advantage of investment opportunities, utilize advanced equipment, employ experienced staff, and benefit from economies of scale. Overall, the findings indicate that larger firms tend to have higher profits due to their ability to achieve economies of scale in production. This positive relationship between firm size and profitability aligns with the pecking order theory and is consistent with previous studies of (Chaterjee, 2012; Elbadry, 2018; Evci & 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, the study reveals a significant positive relationship between business growth (SG) and firm profitability in most sectors. However, the relationship is positive but not statistically significant in the manufacturing sector and non-listed companies. This suggests that there is no significant statistical association between business growth and profitability in those specific sectors. Nevertheless, the overall findings demonstrate a positive and significant relationship between business growth and profitability, indicating that Tanzanian firms can increase their profits by expanding their business. The study concludes that regardless of their nature, firms in Tanzania can enhance 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 profit**

| Variables | Firms | |
|---|---|---|
| | | **RE** |
| | | **ROTA** |
| lnDR | All firms | -0.112*** |
| | | (0.0199) |
| | Agricultural | -0.0555** |
| | | (0.0232) |
| | Listed | -0.157*** |
| | | (0.0360) |
| | Manufacturing | -0.102*** |
| | | (0.0291) |
| | Non-Listed | -0.0915*** |
| | | (0.0220) |
| | Services | -0.160*** |
| | | (0.0410) |
| lnSF | All firms | 0.0759*** |
| | | (0.0129) |
| | Agricultural | 0.0449*** |
| | | (0.0171) |
| | Listed | 0.133*** |
| | | (0.0317) |
| | Manufacturing | 0.151*** |
| | | (0.0191) |
| | Non-Listed | 0.0443*** |
| | | (0.0132) |
| | Services | 0.0155 |
| | | (0.0341) |
| SG | All firms | 0.0135** |
| | | (0.00675) |
| | Agricultural | 0.118*** |

 

| Variables | Firms | |
|---|---|---|
| | | **RE** |
| | | **ROTA** |
| | | (0.0373) |
| | Listed | 0.219*** |
| | | (0.0368) |
| | Manufacturing | 0.00718 |
| | | (0.00873) |
| | Non-Listed | 0.0157 |
| | | (0.0129) |
| | Services | 0.214*** |
| | | (0.0475) |

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

## 5. Conclusions and Recommendations

Regarding the research question on the relationship between Average Payment Period (APP) and firm profitability, the study identifies a significant negative relationship. It is recommended for Tanzanian firms to improve profitability by shortening their APP. The mean value of 143 days for APP is relatively high compared to other countries, indicating slow debt payment practices and the associated overdue interest. Financial managers are advised to reduce APP to avoid overdue interest, benefit from discounts, maintain supplier relationships, and mitigate price discrimination.

Regarding the relationship between Working Capital Financing Policy (WCFP) and firm profitability, the study concludes that the relationship is insignificant overall. However, there are inconsistent findings across sectors, with some sectors showing significant relationships and others showing insignificant relationships. It is recommended to maintain optimal level of current liability in financing business operation. Therefore, when a significant negative relationship is observed, managers should consider using a more aggressive WCFP and vice versa. Tanzanian firms are advised to explore alternative sources of finance, such as ordinary shares if conservative working capital financing is impaired firm's profitability

Regarding the relationship between debt ratio and firm performance, the study finds a significant negative correlation across all firms and sectors. To enhance profits and liquidity, Tanzanian firms are recommended to reduce their long-term debt levels to a certain extent. Long-term debts tend to lower profitability due to high-interest rates. Exploring alternative sources of financing, such as ordinary shares, is encouraged.

Regarding firm size, the study reveals a significant positive relationship with firm profitability. Tanzanian firms are advised to aim for increased firm size through actions like opening branches or scaling up production, as it can contribute to higher profitability.

Regarding firm growth and firm performance, the study identifies a significant positive correlation. To improve profitability, Tanzanian firm managers should prioritize increasing sales and promoting firm growth.

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