The Effect of Working Capital Management on Corporate Profitability: Case of Selected Supermarkets in Ndola, Zambia

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ABSTRACT

The aim of the study was to investigate the effects of working capital management on corporate profitability in selected supermarkets in Ndola, Zambia. The main purpose of this study was to review research on working capital management (WCM) and to identify gaps in the current body of knowledge, which justify future research directions. WCM has attracted serious research attention in the recent past, especially after the financial crisis of 2008. Design/methodology/approach. This was motivated by the fact that supermarkets have been having challenges in raising the working capital to run their businesses. Most supermarkets give less attention to efficient working capital as a viable means of raising capital. They seem not to appreciate the feasibility of raising capital through efficient working capital management. To achieve this, a survey instrument was administered to 60 top management Officers of supermarkets in Ndola with a response rate of 80%. The data collected was processed by the use of Statistical Package for Social Sciences (SPSS) and Microsoft Excel. The results showed that the supermarkets face liquidity challenges, low profitability, worse management practices; receivables management practices, payables management practices and Inventory management practices. Most Zambian businesses have been relying on the Banks, the Stock market and Equity capital for their working capital. They give less attention to efficient working capital as a viable means of raising capital. They seem not to appreciate the feasibility of raising capital through efficient Working Capital Management.

Nonetheless, efficient working capital management is one of the main sources of raising capital Nyamao et al. (2012). Secondly, in a study by Nyamao et al. (2012), it has been acknowledged that at least sixty percent of businesses fail by year four. They attribute Working Capital Management as one of the causes of these failures. So by keeping in view the study is conducted to find out the relationship between working capital management and profitability of the supermarkets in Ndola, and will also try to meet the gap between existing literatures.

Today, as part of credit risk management strategy by the banks, collateral in the form of real estate is required before credit is granted. This makes it more difficult to secure the requisite loan. It follows that unlocking of capital for strategic investments and permanent reduction in funds tied up in working capital through excellent Working Capital Management practices cannot be underestimated.

Key words: Working Capital Management; Corporate Profitability; Statistical Package for Social Sciences; Supermarkets; Businesses.

1. Introduction

Over the past few years, there has been unprecedented growth and expansion of the supermarkets in Ndola, Zambia. One of the major functions of finance is to raise capital. Traditionally, Finance Managers have faced serious challenges in managing the working capital, this is due to failure by managers to manage the working capital policy, cash management practices, receivables management practices, payables management practices and Inventory management practices. Most Zambian businesses have been relying on the Banks, the Stock market and Equity capital for their working capital. They give less attention to efficient working capital as a viable means of raising capital. They seem not to appreciate the feasibility of raising capital through efficient Working Capital Management.

Nonetheless, efficient working capital management is one of the main sources of raising capital Nyamao et al. (2012). Secondly, in a study by Nyamao et al. (2012), it has been acknowledged that at least sixty percent of businesses fail by year four. They attribute Working Capital Management as one of the causes of these failures. So by keeping in view the study is conducted to find out the relationship between working capital management and profitability of the supermarkets in Ndola, and will also try to meet the gap between existing literatures.

Today, as part of credit risk management strategy by the banks, collateral in the form of real estate is required before credit is granted. This makes it more difficult to secure the requisite loan. It follows that unlocking of capital for strategic investments and permanent reduction in funds tied up in working capital through excellent Working Capital Management practices cannot be underestimated.
The journal sought to determine the generality and applicability of the effects of working capital management on profitability among supermarkets in Ndola and was guided by the following research objectives:

- To assess the working capital management practices that supermarkets in Ndola employ to manage the various components of working capital.
- To examine the factors that influence the choice of working capital management practice by supermarkets in Ndola, Copperbelt Province.
- To establish the effectiveness of the working capital management practice employed by the supermarkets in Ndola.

**Working Capital Management Practices**

The study found that overall, the supermarkets studied operated a formal working capital policy and that working capital formulation is largely a responsibility of the Boards of Directors. WCM for the surveyed also changes over time to address risks.

**Factors that influence choice of Working Capital Management Practices**

The study found that in a situation where the supermarkets have surplus cash and want to invest this cash in short-term instruments, or the supermarkets want to convert their short-term instruments to cash, slightly over two-thirds (71.8%) stated that they use cost-balancing models as criteria to transfer between cash and short term investments.

The study found that the premium factors (through ranking of mean scores) that the supermarkets consider when choosing investment methods for cash surpluses are: “the size of the surplus” and “ease with which an investment is expected to mature.” The least of the factors they consider are: “the risk and the yield of the investment” and “any penalty, which may be incurred for early termination”.

This position is supported by (Peel, et al, 2000; Ooghe, 1998, Boisjoly & Izzo, 2009; Deloof, 2003) who also look at these determinants in the context of external and internal macro factors, whereas this study found the determinants of working capital to be Legislation. Credit policy, management method and customer needs/requirements Pieterson (2012), is of a different opinion and he argues that the choice of management practices in the management of the working capital of firms is dependable on the operational cycles of the firm’s daily activity.

**Effectiveness of Working Capital Management Practices**

The study established that despite facing challenges, supermarkets identified a number of benefits of WCM such as improved competitive position and improved profitability. According to Panwala (2009), liquidity and profitability are the two very important aspects of corporate business existence. Therefore, Liquidity measures the capacity of a Company to meet all its growing obligations. The efficient management of working capital is the most crucial factor in ensuring the survival, liquidity, solvency and profitability of a business organization Samuelle (2011). As mentioned earlier, liquidity is troubled with the capability of a Company to make happy its financial obligations on a day-to-day basis, Moyer et al (2009). Moreover, two differing notions are recognized within this period, believed
to contribute to effective WCM; that is financial viewpoint and organizational context. More emphatically efficient working capital management involves preparation and scheming current assets and current liabilities to put off the hazard of a company’s incapability to meet due short-period obligations on the one hand, and to keep away from unnecessary venture in these assets on the other hand Eljelly (2004).

Working resources is personally connected with the day-to-day operations of a business. Thus, the managing of working capital becomes compulsory Virendra (2007). In widespread practice, it refers to the surplus of current assets over current liabilities. Working capital management, consequently, deals with the tribulations, that happen to administer the current assets, current liabilities and the inter-relationship exists sandwiched between them. The consequence of working capital to the achievement of any business cannot be overemphasized. One of the serious predicaments faced by the majority monetary Managers is how to effectively and efficiently manage working capital to the advantage of their organization.

2. Data Analysis and Presentation of Study Results

2.1. Outline

This journal presents the findings of the study which followed the analysis of the data collected from the field. From a total of 60 questionnaires administered 40 were received and fully completed with vital information required for the research. The findings were presented using simple concepts to enhance understanding of complex and technical concepts by readers.

Frequency distributions (i.e. numbers and percentages) as well as descriptive statistics such as the mean and standard deviation were used to put the findings in context. Analytic tables and charts have been used to present the data collected and out of that, trends have been established, patterns have been discovered and meanings have been given to the data collected. This has made it possible for the research questions of the study to be answered.

In addition, the findings are organized in several sub-headings such as background characteristics of respondents, working capital management practices of supermarkets, factors influencing the choice of working capital management practices and the effectiveness of the identified working capital management practices. This organisation of findings is meant to highlight the research objectives which were envisaged as follows;

- To assess the working capital management practices that supermarkets in Ndola employ to manage the various components of working capital.
- To examine the factors that influence the choice of Working Capital Management practice by supermarkets in Ndola, Copperbelt Province.
- To establish the effectiveness of the Working Capital Management practice employed by the supermarkets in Ndola.

2.2. Background characteristics of Respondents

Table 1 below shows the background characteristics of the study respondents such as their gender, age group, educational attainment and years of work experience.
Table 1. Background characteristics of respondents

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variable</th>
<th>Options</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td>Male</td>
<td>35</td>
<td>87.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Age range</td>
<td>18-30 years</td>
<td>4</td>
<td>10.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31-40 years</td>
<td>26</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41-50 years</td>
<td>7</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51-60 years</td>
<td>2</td>
<td>5.1</td>
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<td></td>
<td></td>
<td>Total</td>
<td>39</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Education attainment</td>
<td>Senior high school</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>College degree</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Polytechnic degree</td>
<td>24</td>
<td>60.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master’s degree</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctorate degree</td>
<td>10</td>
<td>25.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
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<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Years of work experience</td>
<td>1-5 years</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-10 years</td>
<td>15</td>
<td>37.5</td>
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<tr>
<td></td>
<td></td>
<td>11-15 years</td>
<td>6</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16-20 years</td>
<td>1</td>
<td>2.5.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21-25 years</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Gender and Gender of Respondents

There were 87.5% males and 12.5% females who participated in the study, reflecting a skewed gender distribution of employees at management level in supermarkets. In terms of age group, the study found that the highest number of respondents were in the 31-40 years age group (66.7%), followed by those aged 41-50 years (17.9%) and 18-30 years (10.3%). Those aged over 51-60 years accounted for only 5.1% of respondents. Given that the majority of respondents were aged between 31 and 40 years as shown in Table 1 above, the age distribution reflects a generally youthful age profile of management level employees in supermarkets in Ndola.

Education attainment of Respondents

The study found that close to two-thirds of respondents (60.0%) had completed “polytechnic degree” level education, followed by 25.0% who had completed “doctoral degree” level education and another 10.0% who completed “Master’s degree” level education. Those with “senior high school” and “college degree” levels of education accounted for 2.5% respectively as shown in Table 1 above.

Work experience of Respondents

The respondents reported that they have been employed in supermarkets for various durations, with the longest being 6-10 years (37.5%) which was followed by 1-5 years (35.0%). Respondents who have served 11-15 years accounted for 15.0% while those who have served 21-25 years represented 10.0% of those surveyed. This means that all the respondents who participated in the study have adequate knowledge and experience of the working capital management practices of the supermarkets in Ndola.

Table 2. Profile of supermarkets

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variable</th>
<th>Options</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Range of company's annual sales for the past three years</td>
<td>ZMK 0.5million - ZMK 2million</td>
<td>22</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZMK 2.1million - ZMK 3.5million</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZMK 3.6million - ZMK 5million</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZMK 5.1million - ZMK 6.5million</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ZMK 8.1million - ZMK 10million</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>39</td>
<td>97.5</td>
</tr>
</tbody>
</table>
2. Total number of employees in your company

<table>
<thead>
<tr>
<th>Employees</th>
<th>10 - 100 employees</th>
<th>101 - 200 employees</th>
<th>201 - 300 employees</th>
<th>301 - 400 employees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of supermarkets</td>
<td>26</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>%</td>
<td>65</td>
<td>17.5</td>
<td>5</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

3. Years company has existed

<table>
<thead>
<tr>
<th>Years</th>
<th>1 - 10 years</th>
<th>11 - 20 years</th>
<th>31 - 40 years</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of supermarkets</td>
<td>24</td>
<td>13</td>
<td>2</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>%</td>
<td>60</td>
<td>32.5</td>
<td>5</td>
<td>2.5</td>
<td>100</td>
</tr>
</tbody>
</table>


Table 2 above shows the profiles of supermarkets that participated in the survey, including their annual sales for the past Three (3) years, number of employees in the company and how long the company has existed.

2.3. Working Capital Policy

The study found that overall, the supermarkets studied operated a formal working capital policy representing 87.2% of the respondents. Only 12.8% of the supermarkets operated informal working capital policies as shown in Figure 1 below.

![Distribution of supermarkets by working capital policy used](image)

**Figure 1.** Working Capital Policies used by Supermarkets

SOURCE: Survey Data (2018)

**Working Capital Policy Formulation**

The majority of supermarkets stated that the responsibility of setting the policy for working capital largely rests with the Board of Directors representing 67.5% while 25.0% reported that working capital policy formulation
rested with the President/CEO/MD. On the other hand, 5.0% of supermarkets stated that working capital policy formulation is done by the Controller. Only 2.5% reported that the Treasurer is responsible for crafting working capital policy as shown in Figure 2 below. It can be drawn from the analysis that working capital formulation is largely a responsibility of the Boards of Directors.

![Working capital policy formulation](image)

**Figure 2.** Responsibility for working capital formulation in Supermarkets

**SOURCE:** Survey Data (2018)

**Nature of Risk Policy**

The study also sought to establish the nature of the working capital policy in terms of risk. The findings indicate that half of the supermarkets surveyed (50.0%) stated that their working capital policies *changes over time* while 22.5% employ *risk avoiding* policies as shown in Figure 3 below. For 17.5% of supermarkets, the working capital management policy is *situational* while another 10% stated that it is *risk accepting*.

![Description of policy in risk terms](image)

**Figure 3.** Type of policy in risk terms

**SOURCE:** Survey Data (2018)
Working Capital Policy Review

The study found that 55.0% of respondents indicated that the working capital policies of the supermarkets were reviewed monthly. In addition, 27.5% of supermarkets stated that the policy review are done quarterly – with 5.0% reporting that the reviews are conducted semi-annually. Only 12.5% of supermarkets undertake the reviews annually as shown in Figure 4 below.

![Distribution of supermarkets by frequency of policy review](image)

**Figure 4.** Distribution of supermarkets by frequency of working capital review

SOURCE: Survey Data (2018)

WCM Practices in the Past

The study also sought to establish the past working capital management practices of the supermarkets and found that 34.2% reported that their current practices are the same as the previous ones. On the other hand, 31.6% of supermarkets reported having practices in the past as compared to the current ones, with another 28.9% stating that the previous practices are poor compared with their current ones. Only 5.3% of the supermarkets stated that they were not conscious of their working capital management practices. From these findings, it is clear that only one-third of supermarkets in Ndola think that their current working capital management practices are better than the previous ones while a negligible proportion are not aware of them despite the practices existing.

![Previous working capital management practices](image)

**Figure 5.** Comparison of previous and current working management practices

SOURCE: Survey Data (2018)
2.4. Cash and Cash Equivalent Management Practices

Criterion for Transfers between Cash and Short-Term Investment Instruments

The study found that in a situation where the supermarkets have surplus cash and want to invest this cash in short-term instruments, or the supermarkets want to convert their short-term instruments to cash, slightly over two-thirds (71.8%) stated that they use cost-balancing models as criteria to transfer between cash and short term investments. Another 20.5% stated that they resort to subjective judgment to do so while only a few (7.7%) of them make use of established guidelines as shown in Figure 6 below.

![Figure 6](source:Survey Data (2018))

Figure 6. Criteria used by supermarkets to transfer between cash and short-term investments

Strategies for Management Short-Term Investment Portfolio

Figure 7 below shows the strategies used by supermarkets to manage their portfolio of marketable securities.

![Figure 7](source:Survey Data (2018))

Figure 7. Strategies for managing portfolio of marketable securities

Source: Survey Data (2018)
The study found that close to two-thirds of supermarkets (68.6%) use portfolio perspective as a strategy for managing their portfolio of marketable securities. Further, 14.3% settle on ad hoc decisions as the overall strategy for managing their portfolio of short-term investments while 11.4% use the buying the instruments and holding them to maturity. Playing the yield curve and portfolio perspective were relatively foreign to the supermarkets as it only accounted for 5.7% of supermarkets surveyed as shown in Figure 7 above.

**Frequency of Cash Budgeting**

The shortest possible of time for which the majority of supermarkets (70.0%) utilise cash budgeting is on a weekly basis. Some of the supermarkets do cash budgeting on daily basis (17.5%) whereas a small segment of the supermarkets do it on quarterly basis (12.5%) as shown in Figure 8 below.

![Figure 8. Interval of internal cash budgeting by supermarkets](image)

**SOURCE:** Survey Data (2018)

### 2.4.1. Management of Surplus Cash: When the Supermarkets Realize Surplus Cash

This study also aimed to understand how supermarkets in Ndola manage their surplus cash. To this effect, it was established that 53.3% of the respondents stated that they use diversification as a strategy to manage surplus cash.

![Figure 9. Management of surplus cash by supermarkets](image)

**SOURCE:** Survey Data (2018)
These represented a significant proportion of the surveyed supermarkets. In addition, 17.9% of respondents reported that their supermarkets invest in short-term marketable securities with 15.4% reporting that they plough surplus cash back to the business. Only 12.8% of respondents indicated that their supermarkets acquire capital assets as a strategy to manage surplus cash. Diversification therefore remained a strategy of choice in the management of surplus cash by supermarkets in Ndola.

**Factors considered when investing surplus cash**

The researcher asked respondents to indicate the factors they consider when investing surplus cash and to rank the identified factors using a 5-point Likert scale where 1 stood for “Very Important” and 5 for “Not important at all” as outlined in Table 3 below.

The study found that the premium factors (through ranking of mean scores) that the supermarkets consider when choosing investment methods for cash surpluses are: “the size of the surplus” and “ease with which an investment is expected to mature.” The least of the factors they consider are: “the risk and the yield of the investment” and “any penalty, which may be incurred for early termination”. Table 3 below shows the details.

**Table 3. Ranking of factors when selecting an appropriate investment method for short-term cash surplus**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Rank Description</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very important</td>
<td>The size of the surplus</td>
<td>1.75</td>
<td>0.543</td>
</tr>
<tr>
<td>2</td>
<td>Fairly important</td>
<td>The ease with which an investment is expected to mature</td>
<td>1.8</td>
<td>0.791</td>
</tr>
<tr>
<td>3</td>
<td>Important</td>
<td>The expected investment maturity period</td>
<td>2.18</td>
<td>0.636</td>
</tr>
<tr>
<td>4</td>
<td>Slightly important</td>
<td>The risk and yield of the investment</td>
<td>2.24</td>
<td>0.796</td>
</tr>
<tr>
<td>5</td>
<td>Not important at all</td>
<td>Penalties which may be incurred for early liquidation</td>
<td>2.38</td>
<td>1.299</td>
</tr>
</tbody>
</table>


**2.5. Account Receivable Management Practices**

**Procedure for Granting Credit**

The study further sought to understand the practices used by supermarkets to manage accounts receivables as part of their overall working capital management practices. It was established that the Five Cs of credit was the principal technique used by the supermarkets when granting credit – as represented by 69.2% of respondents. Credit scoring was reported to be used by 23.1% of the supermarkets while sequential credit analysis was used by 7.7% of the surveyed supermarkets as shown in Figure 10 below.
Figure 10. Credit granting techniques used by supermarkets

SOURCE: Survey Data (2018)

Measures to Monitor Credit Customers’ Payment Behaviour

To further understand the working capital management practices used by supermarkets in Ndola, the researcher wanted to gain insights into the measures used to monitor the credit customers’ behaviour. As shown in Figure 11 below, the study found that close to two-thirds of respondents (66.7%) stated that their supermarkets use collection period as a measure to monitor credit customers’ payment behaviour. Figure 11 also shows that 23.1% of respondents reported that their supermarkets use account receivables turnover as a measure while 10.3% use an aging schedule. This means that a significant proportion of supermarkets in Ndola use collection period as a measure to monitor credit customers’ payment behavior.

Figure 11. Measures used to monitor credit customer payment behaviour by supermarkets

SOURCE: Survey Data (2018)
Evaluating Credit Term Changes

Figure 12. Criteria used by supermarkets to evaluate changes to credit terms

The major criteria that the supermarkets utilize in evaluating proposed changes in their credit terms is effect on firm sales (43.2%), followed by the effect on level of firm profits (35.1%). Effect of the credit on the level of accounts receivable accounted for 18.9% of respondents while effect on return on profits was represented by only 2.7% of supermarkets as shown in Figure 12 above.

2.6. Inventory Management Practices

Replenishing Inventory

With respect to managing inventory, how the supermarkets decide on the appropriate amount to replenish their warehouses and other inventory storage points were by means of computerized inventory control system for the majority of supermarkets (62.5%). This was followed by 25.0% who reported that they use cost-balancing models while another 7.5% stated that they depend on ad hoc decisions. Industry guidelines, as shown in Figure 13 below, was the least popular technique among them, representing a paltry 5.0% of the supermarkets.

Figure 13. Techniques used by techniques for replenishing inventory

SOURCE: Survey Data (2018)
Parameters for Purchasing Inventory

In deciding on replenishment quantities for inventory purchased by the supermarkets, they highly consider availability of parts and materials while the least important parameter was inflationary effects as shown in Table 4 below. These results were obtained by ranking the means scores of each of the parameters on a 5-point Likert scale where 1 stood for “Very important” and 5 stood for “Not important at all.” Therefore, availability of parts and materials was the most important parameter used by supermarkets in Ndola for determining the purchase of inventory.

Table 4. Ranking of parameters for purchasing inventory used by supermarkets

<table>
<thead>
<tr>
<th>Rank</th>
<th>Rank Description</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very important</td>
<td>Availability of parts and materials</td>
<td>1.06</td>
<td>0.243</td>
</tr>
<tr>
<td>2</td>
<td>Fairly important</td>
<td>Credit terms offered by suppliers</td>
<td>1.92</td>
<td>0.277</td>
</tr>
<tr>
<td>3</td>
<td>Important</td>
<td>Storage costs</td>
<td>3.25</td>
<td>0.707</td>
</tr>
<tr>
<td>4</td>
<td>Slightly important</td>
<td>Inflationary effects</td>
<td>3.67</td>
<td>0.577</td>
</tr>
<tr>
<td>5</td>
<td>Not important at all</td>
<td>Other factors</td>
<td>4.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>


2.7. Account and Note Payable Practices

Suppliers Discount

Concerning the policy/practice of the supermarkets regarding cash discounts offered by their supplier, 44.1% of them pay later than the discount date while 23.5% always take the discount by paying on the discount date. Further, 20.6% of respondents stated their supermarkets never take the discount while 11.8% sometimes take the discount by paying on the discount date. These findings are presented in Figure 14 below.

Figure 14. Supermarket practices in dealing with cash discounts offered by suppliers

Source: Survey Data (2018)
Collateral and Bank Borrowings

The study decided to establish the extent to which supermarkets impose collateral on short-term loans. It was discovered from 71.9% of the respondents that their loans always require collateral. Only 3.1% of the respondents stated that short-term loans never require collateral while 25.0% thought that short-term loans occasionally require collateral.

![Collateral on short term loans offered by supermarkets](image)

**Figure 15.** Collateral and short-term loans offered by supermarkets

**SOURCE:** Survey Data (2018)

2.8. Determinants of W.C.M. Choices

Macro-Factors that are External

The premium factors that the supermarkets considered when choosing working capital management practices were the business/economic environment (with a mean score of 1.37) and politics (with a mean score of 1.92). The least of the factors they consider are legislation and industry effect as shown in Table 5 below.

**Table 5.** Ranking of macro external factors that influence working capital management practices by supermarkets

<table>
<thead>
<tr>
<th>Rank</th>
<th>Rank Description</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Most influential</td>
<td>The business environment</td>
<td>1.37</td>
<td>0.589</td>
</tr>
<tr>
<td>2</td>
<td>Influential</td>
<td>Politics</td>
<td>1.92</td>
<td>0.888</td>
</tr>
<tr>
<td>3</td>
<td>Slightly influential</td>
<td>Legislation</td>
<td>1.97</td>
<td>0.873</td>
</tr>
<tr>
<td>4</td>
<td>Least influential</td>
<td>Industries</td>
<td>2.23</td>
<td>0.872</td>
</tr>
</tbody>
</table>

**SOURCE:** Survey Data (2018).
Micro-Factors that are External

The important factors that are the supermarkets consider when choosing working capital management practices were finance requirements (mean score of 1.47) while the least of the factors they considered were competitor effect and shareholder effect as shown in Table 6 below.

**Table 6.** Ranking of external micro factors that influence working capital management practices by supermarkets

<table>
<thead>
<tr>
<th>Rank</th>
<th>Rank Description</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Most influential</td>
<td>Finance requirements</td>
<td>1.47</td>
<td>0.762</td>
</tr>
<tr>
<td>2</td>
<td>Influential</td>
<td>Customer needs</td>
<td>1.83</td>
<td>0.675</td>
</tr>
<tr>
<td>3</td>
<td>Slightly influential</td>
<td>Supplier influence</td>
<td>2.28</td>
<td>1.025</td>
</tr>
<tr>
<td>3</td>
<td>Least influential</td>
<td>Technology</td>
<td>2.42</td>
<td>0.826</td>
</tr>
<tr>
<td>4</td>
<td>Least influential</td>
<td>Competitors effect</td>
<td>2.63</td>
<td>1.261</td>
</tr>
<tr>
<td>4</td>
<td>Least influential</td>
<td>shareholders</td>
<td>2.67</td>
<td>1.284</td>
</tr>
</tbody>
</table>


Macro-Factors that are Internal

The study also found that the most important factors that the supermarkets consider when choosing working capital management practices were management systems/methods/practice and operation management/supply chain management. The least of the factors they considered were upstream collaboration and management financial capability/knowledge.

2.9. WCM and Application of Information Technology

Respondents from the study also ranked usefulness of ICT in cash management practices as being essential for efficient working capital management practices as shown in the Table 7 below. The least ranked was usefulness of ICT in account payable practices. Despite ICT being considered generally useful in working capital management, supermarkets consider it as being extremely useful in cash management.

**Table 7.** Usefulness of ICT in working capital management practices of supermarkets

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Usefulness of ICT in cash management practices</td>
<td>1.7</td>
<td>0.758</td>
</tr>
<tr>
<td>2</td>
<td>Usefulness of ICT useful in account receivable practices</td>
<td>2.15</td>
<td>0.736</td>
</tr>
<tr>
<td>3</td>
<td>Usefulness of ICT in inventory management practices</td>
<td>2.33</td>
<td>1.264</td>
</tr>
<tr>
<td>4</td>
<td>Usefulness of ICT in account payable practices</td>
<td>2.4</td>
<td>0.841</td>
</tr>
</tbody>
</table>

2.10. Effectiveness of the W.C.M. Practices of Supermarkets

In an attempt to assess the effectiveness of the working capital management practices of the supermarkets, the study in the subsequent paragraph examines the challenges and benefits of working capital management practices. So, if the Supermarkets are benefiting from the working capital management practices, then, it means that they are effective in their WCM practices. Conversely, if they are facing challenges, then, it connotes that they are not being effective in the management of their working capital.

Challenges that Supermarkets face in their Working Capital Management

From the analysis below, the respondents agreed that the major challenges that the supermarkets face in their Working Capital Management practices were pressure on margins; weak competitive position and low profitability. The least ranked challenges included poor cash flow and excessive debt as shown in Table 8 below.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pressure on margins</td>
<td>2.03</td>
<td>0.698</td>
</tr>
<tr>
<td>2</td>
<td>Weak competitive position</td>
<td>2.37</td>
<td>0.77</td>
</tr>
<tr>
<td>3</td>
<td>Low profitability</td>
<td>2.55</td>
<td>1.083</td>
</tr>
<tr>
<td>4</td>
<td>Shortage of capital to finance growth position</td>
<td>2.63</td>
<td>1.076</td>
</tr>
<tr>
<td>5</td>
<td>Poor cash flow</td>
<td>2.69</td>
<td>0.95</td>
</tr>
<tr>
<td>6</td>
<td>Excessive debt</td>
<td>2.9</td>
<td>1.071</td>
</tr>
</tbody>
</table>


Benefits of Working Capital Management Practices that Accrue to the Supermarkets

Concerning the benefits that accrue to the supermarkets as a result of the application of WCM practices, the respondents disagreed that the supermarkets benefit from the application of working capital management practices. By this, the respondents meant that: the supermarkets do not experience improved shareholders’ value and unlocking of capital to finance growth. On the other hand, the identified benefits included improved competitive position and improved profitability as shown in Table 9 below.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improved competitive position</td>
<td>2.08</td>
<td>0.58</td>
</tr>
<tr>
<td>2</td>
<td>Improved profitability</td>
<td>2.15</td>
<td>0.745</td>
</tr>
<tr>
<td>3</td>
<td>Improved liquidity</td>
<td>2.32</td>
<td>0.669</td>
</tr>
<tr>
<td>4</td>
<td>Reduction in funds</td>
<td>2.35</td>
<td>0.884</td>
</tr>
<tr>
<td>5</td>
<td>Improved shareholder value</td>
<td>2.39</td>
<td>1.028</td>
</tr>
<tr>
<td>6</td>
<td>Unlocking of capital to finance growth</td>
<td>2.65</td>
<td>1.111</td>
</tr>
</tbody>
</table>

Declarations

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Competing Interests Statement
The authors declare the total absence of conflicts of interest, both during the conduct of the study and during the written drafting of this work.

Consent for Publication
The authors declare that they consented to the publication of this research work.

Authors’ Contributions
All the authors took part in literature review, analysis, and manuscript writing.

References


