

# Extent of Application of the Manufacturing Firms' Working Capital Management Practices

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*Abstract: We believe small is beautiful. When small businesses can grow faster and grow healthier, it will benefit the whole society. Despite the immense contribution and great potential in the SMEs to the economy, various research indicate that they suffer from various areas such as the lack of proper knowledge on working capital management Practices which in turn poses a threat on the survival of Small and Medium Enterprise. A good number of firms have put sufficient cash in working capital. Working capital management (WCM) is an important factor of financial management (FM). Debtor, creditor and inventory are the major components of working capital (WC). This research was targeting the manufacturing firms in Kigali city, Rwanda. This is because manufacturing as the growing sector is heavily contributing to the growth of Rwanda's Economy and EAC region. The data were collected through paper and pen questionnaires as well as electronic questionnaires on 180 respondents from manufacturing firms at Kigali City during the year 2022 covering the year 2021. It was analyzed using the statistical software Statistical Package for the Social Sciences (SPSS) using descriptive statistics and Pearson's correlation coefficient.*

*Keywords: Working capital management practices, Rwandan Manufacturing firms, Cash management, Account Receivable Management, inventory Management, Account Payable Management.*

## 1. Introduction

Working capital is needed for day-to-day operations of a firm, working capital management is considered to be a vital issue in financial management decision and it has its effect on profitability of the firm. Moreover, an optimal working capital management positively contributes in creating firm value net working capital results from the deduction of current liabilities from current assets; Working Capital Management consists of determining the volume and composition of sources and uses of working capital in such a way that would increase the wealth of stockholders. Working capital management is the management of current assets and current liabilities that would result in the most desirable level of working capital and maximum company profitability. Working capital management is one of the most important areas in the financial management of a firm. Managers spend much time on day-to-day problems that involve

working capital decisions. Management of working capital generally means managing current assets and current liabilities (Garcia-Teruel PJ, Martinez-Solano PM, 2017). Inadequate working capital leads the company to bankruptcy. On the other hand, too much working capital results in wasting cash and ultimately a decrease in profitability (Chakraborty, 2016). It is important. For manufacturing firms because the current assets of these manufacturing firms account for almost half of the total assets. Efficient working capital management involves planning and controlling current assets and current liabilities in such a way that eliminates the risk of inability to meet short-term obligations on the one hand and avoids too much investment in these assets on the other hand. A good number of firms have put sufficient cash in working capital. Rwanda's manufacturing industry is still small but growing as it contributed about 17% to the country's GDP in 2019, the sector is characterized by gradual diversification from basic manufacturing to more value-adding activities in other sub-sectors that include: Fast moving consumer goods, Construction materials, Furniture Laboratory Equipment and Electronic and Automotive manufactured goods. While literature exists on the problems that contribute to the high failure rate of small businesses (Agwu & Emeti, 2014; Anderson & Ullah, 2017), little of it relates to comprehensive practices that small business administrators could use to curtail the problem.

## 2. Methodology

This research adopted a descriptive correlational design. Descriptive correlational design is used in research studies that aim to provide static pictures of situations as well as establish the relationship between different variables (McBurney & White, 2019). Descriptive statistics refers to information that has been analyzed in order to reveal the basic features of data collected or used in a study (Fowler, 2016). In correlational research, two variables such as the height and weight of individuals are studied to establish their relationship. The research design was appropriate for this study because it allowed data collection from the sample and demonstrated the working Capital Management Practices and financial performance of Manufacturing firms in Rwanda.

The internal reliability of the questionnaire was determined using Cronbach's alpha value in SPSS statistics. An internal validity/variable is directly related to the independent variable, not to some other (uncontrolled) variable (Frankael, 2019). Cronbach's coefficient alpha internal consistency reliability attempts to measure with accuracy how well a set of items (variables) measure the construct being studied. No absolute rules exist for internal consistencies, however, most agree on a minimum internal consistency coefficient of .70 (Whitley, 2020, Robinson, 2019). To measure the reliability of the adapted questionnaire, the researchers will use Cronbach's coefficient alpha. Validity can be understood as a measure of how much an instrument gives the outcome that it is required to give (Phelan, 2005). Criterion validity was to ensure that the measurement is what is intended to measure and no other variables. Managers, employees and, owners of food and beverage firms in Kigali city, Rwanda and were supposed to review the items on the questionnaire and provide expert guidance against the set objectives. Pre-

testing of questionnaires in the field was used to improve the quality of questions before the main study (Cooper and Schindler, 2018). Questionnaires were standardized to ensure validity and reliability. Suggestions and comments that were received from the questionnaire were amended. The researcher administered questionnaires to the owners, managers, and employees for targeted manufacturing firms which contained the cover letter which was duly signed by the researcher and Advisor. The researcher's information, the Design the questionnaire and instructions Determine order of presentation Write accompanying letter/request letter Test questionnaire with a small sample Choose method for distribution and return Plan strategy for dealing with non-responses Conduct tests for validity and reliability purpose of the research, and the data that were needed by the researchers were fully explained in the cover letter. The respondents who agreed and consented to participate in the study were given the questionnaires. Follow-ups were to a cross-section of respondents in order to help them with the filling of the questionnaire. Finally, the researchers ensured the respondents that their confidentiality and anonymity are assured and it has to be used solely for academic purposes. Export Strategy, SMEs strategy, the National Export Strategy and Cross Border trade strategy. Rwanda's manufacturing sector is still small and undiversified (AfDB, 2016), accounting for around 6 per cent of the country's total value added with a slightly negative trend. Until recently, the manufacturing sector played a marginal role in Rwanda's development strategy (Behuria, 2019). According to Behuria (2019), officials from the Ministry of Trade and Industry and the Ministry of Finance and Economic Planning were pessimistic about the manufacturing sector's growth potential, as high transportation costs impede Rwanda from developing competitive manufacturing industries. Therefore, the National Industrial Policy launched in 2011 (Ministry of Trade and Industry, 2016), Four factors harm the capacity utilization of food and beverage manufacturing firms in Rwanda, namely oversize in terms of fixed assets, lack of effective working capital management practices, standards and insufficient demand. Financial management for business entities and that working capital management is a critical part of it. (Mohamad et al.2017).An efficient working capital management is a vital component of the success and survival of a business in terms of both profitability and liquidity. Working capital is usually defined as the funds invested in current assets. Current assets are the assets the firm expected to be able to convert to cash in the normal course of business within the next 12 months. Thus, current assets comprise cash, debtors, or accounts receivable and stock or inventory. Liquidity is a measure of the ease of conversion of an asset into cash, (Beal & Michelle, 2005). Management must also decide how to manage the firm's current assets, such as cash, inventory, and account receivables, and its current liabilities. The mismanagement of working capital can cause a firm to default on its debts and go into bankruptcy, even though, over the long term, the firm may be profitable, (Parrino, et al., 2015). (Wembe, 2015), Suggested that firm performance gets affected by working capital management. (Semasinghe, et al., 2017), found that there is a strong significant relationship between working capital management practices and profitability, liquidity, solvency, and financial health. Further, concluded that working capital management practices have an influence on the financial performance of manufacturing firms under SMEs. Therefore, there is a need for SMEs owners/managers to embrace efficient working capital management practices as a strategy to improve their performance in order to survive in the turbulent business environment. (Padachi,

2016), found that working capital has a positive impact on its performance. (Kosgey & Njiru, 2016), found that there is a positive significant relationship between cash management and financial performance of SMEs. Stated that Poor Working Capital Management (WCM) has been cited as the major cause of SME business failures and startups in the sector's long-lived shelf life. (Fasesin, et al., 2017), revealed that cash management practices and trade credit management practices have an insignificant positive influence on Small Scale Enterprises' performance, while inventory management practices have an insignificant influence on Small Scale Enterprises' performance to (Forghani, et al., 2015), showed that there is a positive and significant relation between capital management and return on equity, working capital management and return on assets, between working capital management and ratio of market value to book value of the company. (Azam & Haider, 2015), showed significant impact on firms' performance and it is concluded that managers can increase performance by reducing their inventory size, cash conversion cycle, and net trading cycle. (Nastiti, et al., 2019), tested the effect of working capital management on firms' performance and the effect of this relationship on sustainable growth. The results demonstrated that working capital significantly affects firms' performance. And suggested that firms need to manage their working capital to increase their profits and eventually achieve sustainable growth. Based on above literature first hypothesis was developed. This study is established upon the theory of Pieterse (2015) explaining that the current major problems of SMEs are: inadequate cash reserves, poor inventory management, failure to adequately anticipate cash flow, absence of proper accounting records, and lack of financial management skills.

**Table 1: Profile of the Respondents**

Stratum/Industry	Frequency	Percentage
Manufacturing /Food and beverage	83	46.2%
Other in Retail	76	42.2%
Other in Wholesale	21	11.6%
<b>Total</b>	<b>180</b>	<b>100%</b>

The number of respondents for this study were 180 from manufacturing firms within the city of Kigali are commonly on the food and beverage, and which all are under manufacturing industry having. Lastly, the majority of the respondents are employees of the food and beverage firms in Kigali city having a frequency of 83 and a percentage of 46.2%. According to (Banerjee & Chaudhury, 2017) demographic characteristics offer data regarding examination of participants under various demographic variables and is necessary for the determination of whether the individuals in a particular study are illustrative sample of the target population for generalization assurances.



**Table 2: Statistical Limits for the extent of working capital management**

Range	Four-point Likert-scale	Response	Interpretation
1.00 - 1.74	1	Strongly disagree	Up to little or no extent
1.75 - 2.49	2	Dis agree	Slightly Extensive
2.50 - 3.25	3	Agree	Moderately Extensive
3.26 - 4.00	4	Strongly Agree	Extensive

**Table 3: statistical limits for the level of financial performance**

Range	Four point Like rt-Scale	Response	Interpretation
1.00 - 1.74	1	Fair	Insufficient and does not achieve financial performance goals
1.75 - 2.49	2	Good	Inconsistently achieves financial performance goals, consistent Incons revenue growth, Frequently achieves financial performance
2.50 - 3.25	3	Very Good	goals, importance of profitability is taken into consideration
3.26 - 4.00	4	Superior	Consistent growth of revenue, achieves financial performance goals,

Source: Akogulu, 2018

Multivariate statistical analysis tests hypotheses and models involving multiple (three or more) variables or sets of variables (Zikmund, 2013). This type of analysis is employed because the profitability of manufacturing firms is simultaneously affected by many variables. Neglecting important explanatory factors can seriously bias the estimates of the effects of the independent variables therefore, independently measuring the influence of each working capital management practices variable on profitability of manufacturing firms which can give an inaccurate result. The multivariate analysis helped study, the behavior of several variables all at the same time. To do this, the effect of working capital management practices on the financial performance of manufacturing firms is tested by panel data analysis. The term “panel data”, also known as longitudinal data, or combined time-series/cross-section data, refers to the pooling of observed variables on a cross-section over several time periods (Routledge, 2019). According to Routledge

(2019), panel data provides important information, which is hidden or cannot be identified by using only cross-sectional time-series data. Pure time-series data contain no information about unobserved variables (individual differences), and pure cross-section data contain no information about period unobserved variables (specific differences). However, panel data, on the other hand, do not have these limitations, not least because such data admit many useful transformations (Routledge 2019 and Biorn, 2017).

### 3. Presentation, Analysis and Interpretation of Data

The succeeding discussions present the data, their analyses and interpretation. The discussions that follow present an analysis of the extent of application of working capital management practices towards the financial performance of manufacturing firms in Kigali City, Rwanda.

**Table 4: Correlation between working capital management practices and financial performance of the manufacturing firms**

Financial Performance Variables	Type of industry	Overall	F&BI	RI
Cash	<i>r</i>	.908**	.863**	.730**
Pearson Correlation	Sig. (2-tailed)	.000	.000	.000
Accounts Receivable	<i>r</i>	.780**	.646**	.665**
Pearson Correlation	Sig. (2-tailed)	.000	.000	.000
inventory	<i>r</i>	.697**	.876**	.956**
Pearson Correlation	Sig. (2-tailed)	.000	.000	.000
Accounts Payable	<i>r</i>	.133	.092	.080
Pearson Correlation	Sig. (2-tailed)	.092	.236	.393
Working Capital	<i>r</i>	.158	.199*	.154
Management Pearson Correlation	Sig. (2-tailed)	.062	.023	.069

F&B=Food and Beverage Industry  
 RI = Retail Industry

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed)

#### 4. Discussion

Table 3 shows a weak and positive insignificant correlation between the working capital management practices  $t$  and the financial performance of manufacturing firms in overall ( $p = 0.158$ ), in type of industry. This indicates that although the firms implement a well balance practice of each component of the working capital management such as cash management, accounts receivable management, inventory management and accounts payable management, it has insignificant correlation to the overall financial performance of the firms. The results contradict Jana (2018) that efficient management of working capital not only has a positive relationship with profitability but has a significant relationship with firm's profitability. Simply, there exists a significantly positive and negative relationship between profitability and working capital management. In addition, the findings of this study are not in line to the result of the study of Sensini (2020) that suggested that the working capital cycle, used as a proxy for working capital management, is statistically significant but negatively associated with firm profitability. Moreover, the analysis shows that the inventory turnover period, account receivables collection period, and account payables payment period negatively correlate with profitability. The results corroborate with the study of Chalmers et al. (2020) highlighted a negative and significant relationship between Net Working Capital (NWC), Accounts Receivables (AR), and profitability. Conversely, Accounts Payables (AP), and Inventory (INV) are positively correlated with profitability. On another perspective, one of the respondents who is manager, coordinators of the food and beverage producing companies in Kigali City under the manufacturing industry, stated that the suggested working capital management practices are considered to be only a basic part of running a business, a day-to-day activity to maintain a business per quarter. Simply, it is intended to be practiced for a business to remain on the market, yet it does not necessarily serve as basis to improve a companies' financial performance. To provide a clear understanding between the relationship of the working capital management practices as to financial performance, such practices are implemented by the manufacturing firms in conducting the following:

First, all working capital management practices are moderately extensive implemented which means that such practices are often observed and conducted by the manufacturing firms for all management practices. Further revealing that all practices were being observed by the respondents.

Secondly, as to the profitability ratios of the manufacturing firms, specifically; return on Assets (ROA,) Return on Equity (ROE) and Return on Sales (ROS) indicates a very good level of performance. Which further leads to a good overall performance as to the financial performance of manufacturing firms in Kigali city.

According to Ajanthan A (2013) stated that a correlation exists between the working capital management practices and the financial performance of SMEs operating under manufacturing sector because the items of working capital are normally connected to the operating cycle or the operations of an SME. Better handling of such items would lead to a better performance. However, according to him, the insignificant correlation of the variables stems from the number

of respondents who were surveyed, further noting that more small food and beverage firms were surveyed as compared to Medium-sized business. Generally, these types of firms do not employ much working capital management practices basically because they have a small business and/or they have little no knowledge or idea about these. At most, they only apply basic working capital management policies like maintaining inventories or managing their cash to stay liquid but not too extensive applications.

Lastly but not the least, there is significant correlation between the extent of implementation of the working capital management practices and the financial performance of the manufacturing firms in Kigali city which further indicates that even though manufacturing firms' puts much effort to implement working capital management practices on a daily basis, such effort by the manufacturing firms shows a substantial relationship on their profitability. Businesses that do not generate a positive cash flow will not stay in business and will not survive in today's business environment (Mugo, 2013). Hamza, (2015), in his study revealed that SME financial performance is positively related to efficiency of cash management. The study concluded that cash management practices have influence on the financial performance of SMEs, hence there is need for managers to embrace efficient cash management practices as a strategy to improve their financial performance and survive in the uncertain business environment. This is also supported by Hurdon (2001) quoted by Danjuma et.al, (2015) who concluded that, cash management involves proper management of cash flows, proper cash amount is kept for transactional motive. The researcher assessed whether this is true for aviation parastatal company. According to Deloof (2003) majority of the firms invested significant amount of cash in working capital and using trade payable as a key source of financing. So the way it is handled can have significant impact on the profitability of the firm. Lazaridis and Tryfonidis (2006) indicated that operating profitability will indicate how the management will respond in terms of managing the working capital components. This is because they identified a negative relationship between the Working capital components and the profitability. Ganeshan (2007) further argues that profitability of the firms can be increased through efficient management of working capital. Vishnani (2017) further stressed that each and every company has to be careful when investing huge amount of funds in working capital, this is because it can reduce the profitability of the company significantly.

## 5. Conclusion

From the findings of the study, the researcher concludes that the implementation of the working capital management practices, cash, and accounts receivable, inventory and accounts payable management of the manufacturing firms in Kigali City. Thus, the study concludes that there is a direct relationship between the two but pose each variable with very minimal to no relation when changes occur.



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