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Working Capital Management and the Performance of SMEs in Delta North

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Abstract: This study sought to investigate the relationship between working capital management practices and the operational performance of small and medium enterprises (SMEs)

situated in the Delta North region. The specific objectives of the study were to examine the effects of debtor's collection period, creditors' payment period and cash conversion cycle on the performance of SMEs. The research implemented a multistage sampling technique to select a total of 281 registered SMEs. Data were collected via questionnaires and analyzed using a regression model. The results showed that a one-unit increase in the debtors collection period was associated with an increase in the performance of SMEs ($\beta = 0.584$; $p\text{-value} < 0.01$), a one-unit increase in the creditors payment period was associated with an increase in the performance of SMEs ($\beta = 0.295$; $p\text{-value} < 0.01$), and that a one-unit increase in cash conversion cycle was associated with an increase in the performance of SMEs ($\beta = 0.112$; $p\text{-value} = 0.01$). The findings showed that debtor's collection period, creditors' payment period, and cash conversion cycle had significant effects on the performance of SMEs in the Delta North region, suggesting that better management of working capital can boost the performance of SMEs in the region. The study concluded that debtor's collection period, creditor's payment period, and cash conversion cycle are effective working capital management metrics that can significantly affect the performance of SMEs. The study recommended that firms should put adequate measures in place in order to reduce their debtor's collecting period and creditor's payment period so as to increase their corporate performance.

Keywords: Working Capital Management, Debtor's Collection Period, Performance, Creditors' Payment Period, Cash Conversion Cycle.

Introduction

Small and Medium Scale Enterprises (SMEs) play a crucial role in the economy (Rinaldi et al., 2022), encompassing a diverse array of businesses ranging from village handicraft makers to computer software firms. These enterprises operate in various sectors, with some focusing on growth and innovation while others remain content with their small size. The definition of SMEs differs by country, often determined by the number of employees or total asset value, with upper thresholds typically ranging from 100 to 250 employees (Kalemli-Özcan et al., 2024; Rao et al., 2023). The productivity and success of SMEs hinge on effective working capital management, which involves optimising the utilisation of current assets such as cash, marketable securities, debtors, and inventories, as well as managing current liabilities (Alagoa, 2021; Aransiola, 2021; Olambu, 2019). Traditionally overseen by accounting and finance departments, the changing economic landscape necessitates broader involvement in working capital management to mitigate risks and maintain liquidity amidst fluctuating business conditions.

However, challenges persist in the realm of working capital management for SMEs (Boțoc & Anton, 2017; Fernández-López et al., 2020). Some managers employ ineffective methods, leading to under/over capitalisation or even liquidation of their organisations. Earlier studies have produced varying conclusions regarding the influence of working capital management on the performance of SMEs. Research conducted in Nigeria has highlighted a negative impact on profitability, attributed to challenges such as prolonged debtor collection periods, delayed payments to creditors, and

ineffective cash conversion cycles (Abimbola & Kolawole, 2017; Alagoa, 2021; Anton & Afloarei Nucu, 2020; Ibrahim et al., 2021; Oladimeji & Aladejebi, 2020).

The core issue revolves around how working capital management practices affect the profitability of small and medium-sized enterprises (SMEs). Many SMEs struggle to strike a balance between surplus and shortage of working capital, resulting in slow growth, difficulties in meeting creditor obligations, and challenges in managing debtor collections (Aransiola, 2021). As highlighted by previous studies, inefficient working capital management significantly hampers SME performance, emphasising the urgent need for these firms to adopt more effective practices to enhance their financial health and sustainability. Thus, the broad objective of this study was to examine the effects of working capital management on the performance of SMEs in Delta North. The specific objectives were:

- i. To ascertain the effect of debtor's collection period on the performance of SMEs in Delta North.
- ii. To establish the effect of creditors' payment period on the performance of SMEs in Delta North.
- iii. To investigate the effect of cash conversion cycle on the performance of SMEs in Delta North.

Research Focus

The focus of this study was to examine the effect of financial metrics, specifically the debtor's collection period, creditor's payment period, and cash conversion cycle, on the performance of SMEs. The paper emphasises the importance of these metrics in managing working capital and their potential impact on the performance of SMEs.

Research Aim and Questions

The research aimed to unveil the best practices for financial management in SMEs and strategies to enhance their financial health and sustainability. Thus, the research questions were:

- i. To what extent does debtor's collection period affect the performance of SMEs in Delta North?
- ii. What effect does creditors' payment period has on the performance of SMEs in Delta North?
- iii. How does cash conversion cycle affect the performance of SMEs in Delta North?

Literature Review

This section aims to provide conceptual clarification on two main variables (working capital management and performance). Literature is reviewed to provide a better lens for the interconnectedness between the two variables.

Working capital is a critical component of financial management for any organization, requiring careful consideration (Oladimeji & Aladejebi, 2020). It encompasses the funds necessary to sustain business operations over a one-year period (Oladimeji & Aladejebi, 2020). Working capital refers to the short-term financial obligations of an organization that frequently change in form, and it plays a crucial role in managing current assets and liabilities (Ismail, 2017). This fluid nature of working capital makes it a strategic advantage for organisations, impacting liquidity, profitability, and solvency (Adekola et al., 2017).

For small and medium enterprises (SMEs), efficient management of working capital is especially important, as a large proportion of their assets comprise current assets (Gorondutse et al., 2017). However, determining the optimal level of working capital poses a challenge for many organisations. Working capital management involves the strategic management of current assets and liabilities and the interplay between them (Moldovan et al., 2017; Prasad et al., 2018). Various authors have defined working capital management with a focus on risk mitigation, asset optimisation, and efficiency. Akbar et al. (2021) underscores the importance of managing working capital to meet short-term obligations and avoid excessive asset investments. Continuous management of working capital, as noted by Bireda (2010), helps firms strike a balance between risk and efficiency.

Akbar et al. (2021) emphasises that working capital management involves funding short-term assets and liabilities while planning and controlling current assets and liabilities to ensure financial stability. Amponsah-Kwatiah and Asiamah (2021) stress the strategic application of policies to maintain an optimal level of working capital that enhances profitability and shareholder value. The goal of working capital management, as emphasised by Makori and Jagongo (2013), is to achieve liquidity, profitability, and shareholder value by effectively controlling current assets and liabilities. Overall, working capital management aims to optimise the cash conversion efficiency, operating cycle, and working capital days to enhance efficiency and financial performance. Rehn (2012) highlights the importance of net working capital, focusing on minimising receivables collection time, delaying payables, and managing inventory effectively. Additionally, the cash management is a key component of working capital management, ensuring idle cash is invested without compromising liquidity.

Performance in a business enterprise encompasses the culmination of efforts through various activities, including strategic and operational endeavours, as well as the management of all facets of the enterprise such as human resources, finance, production, and marketing (Kang'ethe, 2018). It represents the enterprise's exertion to achieve its stated objectives, which may include employee satisfaction, customer satisfaction, societal impact, as well as survival, and sales growth, return on investment, employment, and ultimately profitability. The performance is characterised by the actual output in comparison to the expected output (Anwar & Abdullah, 2021). Additionally, organisational performance is gauged by how effectively the enterprise is managed in terms of the value perceived by customers and other stakeholders (Anwar & Abdullah, 2021). Performance is also reflected in the attainment of objectives within the enterprise, particularly through financial indicators like earnings per share, sales growth, profitability metrics, and returns on equity, investment, and assets. Akpa et

al. (2021) states that performance entails achieving set targets within the enterprise and effectively communicating these targets to all internal stakeholders in alignment with the organisation's vision.

Working capital management is crucial for the performance and sustainability of SMEs. For this study, three components of working capital management which are the debtor's collection period are considered, the creditors' payment period, and the cash conversion cycle. Each of these factors plays a crucial role in the financial health of SMEs and can directly influence their performance. The debtor's collection period, also known as accounts receivable days, is the average number of days it takes for an enterprise to collect payments from its customers after a sale has been made (Wafula et al., 2019). For SMEs, which often operate with limited cash reserves, a shorter debtor's collection period is essential for maintaining smooth operations (Yeboah, 2018). Delays in collecting receivables can strain the business's cash flow, hinder its ability to pay suppliers, and potentially disrupt production or service delivery. The creditors' payment period, or accounts payable days, is the average number of days an enterprise takes to pay its suppliers after receiving goods or services. SMEs need to carefully manage their creditors' payment period to avoid penalties or strained relationships with suppliers. Prolonged delays in payments can damage relationships with suppliers, potentially leading to stricter credit terms or supply interruptions, which can adversely affect business operations. The cash conversion cycle is a metric that measures the time it takes for an enterprise to convert its investments in inventory and other resources into cash flows from sales. For SMEs, an optimised cash conversion cycle means better liquidity management, lower reliance on external financing, and increased financial stability. SMEs with a shorter cash conversion cycle can reinvest cash into the business more rapidly, facilitating growth and competitive advantage.

However, despite the importance of the working capital management metrics discussed in the study, there are still scientific gaps in research on this topic. Some studies focused more on individual financial metrics in isolation, without taken into consideration the interconnected nature of these metrics in working capital management (Lyngstadaas, 2020; Wetzel & Hofmann, 2019). Furthermore, there is a lack of comprehensive research that examines the collective effect of the debtor's collection period, creditor's payment period, and cash conversion cycle on SMEs' performance. Moreover, there is a scarcity of research on the best practices that SMEs can adopt to effectively manage these financial metrics and enhance their performance. It is important to address these gaps in research. This can provide a more holistic understanding of the relationship between the metrics and SME performance.

Research Methodology

Research Design

In this study, the research method adopted was quantitative, involving the collection and analysis of numerical data to derive statistical insights. The study employed a survey research design, which typically entailed gathering data from a sample population through the use of questionnaires. The researchers used a questionnaire to collect quantitative data on different aspects of working capital management and performance. The focus was on analysing the effect of working capital management practices on the performance of SMEs in Delta North. This study is a case study, as it

involved a detailed analysis of a case of SMEs - in this case, the impact of working capital management on performance.

Population of the Study

The population of a research study is the complete collection of all items or entities that exhibit the specific characteristics or possess the knowledge related to the phenomenon under investigation. In this study, the total population consisted of 950 registered Small and Medium Enterprises (SMEs) located in various areas within Delta North, including Aniocha North (121), Aniocha South (132), Ika North (115), Ika South (82), Nndokwa East (101), Nndokwa West (102), Ukwauani (93), Oshimili South (135), and Oshimili North (69) as reported by SMEDAN in 2024.

Sample Size and Sampling Technique

When determining the sample size, a larger number of elements will enhance the adequacy, quantitative reliability, and precision of the results. For the purpose of this study, Taro Yamani formula was used.

$$n = \frac{N}{1 + N(e)^2}, \quad 1)$$

Where: n = Sample Size; N = Population Size; e = Margin of errors (0.05)

$$n = \frac{950}{1 + 950(0.0025)} = 281$$

The study applied multistage sampling technique to select 281 respondents.

Methods of Data Analysis

The study used percentage and regression model for data analyses. The dependent variable was Performance (PRF), while the independent variables were Debtors Collection Period (DCP), Creditors Payment Period (CPP) and Cash Conversion Cycle (CCC). To achieve all the objectives, ordinary least square regression was used. The model is presented thus:

$$PRF = f(DCP, CPP \text{ and } CCC)$$

$$PRF = \beta_0 + \beta_1 DCP + \beta_2 CPP + \beta_3 CCC + \mu_i$$

Where:

PRF = an indicator representing Performance (Dependent Variable);

β_0 = a constant and β_{1-3} = coefficients of independent variables;

DCP = a predictor representing Independent Variable (Debtors Collection Period);

CPP = a predictor representing Independent Variable (Creditors Payment Period);

CCC = a predictor representing Independent Variable (Cash Conversion Cycle);

μ = Stochastic error term;

i = Cross sectional; and

f = Functional relationship.

Results

This section deals with the presentation and analysis of data collected in response to the administered questionnaire. Two hundred and eighty-one (281) copies of the questionnaire were administered to the small and medium enterprises in Delta North for the purpose of this study, but two hundred and fifty (250) were correctly completed and returned. Analyses were based on the two hundred and fifty (250) copies of the questionnaire that were returned.

Table 1

Demographic Characteristics of the Respondents

Category	Frequency (250)	Percentage (100)
Sex		
Male	138	55.2
Female	112	44.8
Age of the Respondents		
18-25	69	27.6
26-30	113	45.2
35-Above	68	27.2
Marital Status		
Single	89	35.6
Married	140	56
Divorced	21	8.4
Educational Qualifications		
SSCE	95	38
OND	23	9.2
HND/B.Sc.	54	21.6
Others	78	31.2
Work Experience		
0-2 Years	59	23.6
3-5 Years	91	36.4
5 Years and above	100	40

Source: Field survey (2024).

Table 1 above shows that 55.2% of the respondents identified as male, while 44.8% identified as female, indicating a male majority among the participants. Additionally, the data reveals that 27.6% of respondents were aged 18-25, 45.2% were within the 26-30 age groups, and 27.2% were 35 and older, suggesting that the largest proportion of respondents fell within the 26-30 age bracket. In terms of educational qualifications, 38% held SSCE, 9.2% had OND, 21.6% possessed a

B.Sc./HND, and 31.2% had other qualifications, highlighting that the majority of respondents were SSCE holders.

Table 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892 ^a	.778	.751	.43724
a. Predictors: (Constant), DCP, CPP, CCC				

Table 3

ANOVA Result

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2985.404	3	995.135	5205.339	.000 ^b
	Residual	66.720	349	.191		
	Total	3052.125	352			
a. Dependent Variable: PRF						
b. Predictors: (Constant), DCP, CPP, CCC						

Table 4

Coefficients

Model		Unstandardized Coefficients		Standardised Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.502	.106		4.711	.000
	DCP	.584	.031	1.416	18.815	.000
	CPP	.295	.083	.308	3.575	.000
	CCC	.112	.050	.124	2.232	.006
a. Dependent Variable: PRF						

The R-square value of .778 in Table 2 indicates that the components of independent variable have a combined effect of 78% on the dependent variable while the adjusted r square value of .751 also indicates the accurate influence of the combined effect of debtor's collection period, creditors payment period and cash conversion cycle of 75% on performance of small and medium scale enterprises in Delta North. The remaining 15% was not captured by variables in this model.

The F-Statistics value of 5205.339 and the sig. level of .000 signify that the model is fit and significant at 5% level. This means that the result is good and admissible for decision making.

Table 4 shows the results of the regression analysis examining the effects of working capital management on the performance of SMEs. The results shows the constant value ($\beta = 0.502$; $p\text{-value} < 0.01$). This implies that when all other variables (debtors' collection period, creditors' payment period, and cash conversion cycle) are held constant, the performance of SMEs is 0.502. The result shows that the intercept is statistically significant. The coefficient for debtors collection period ($\beta = 0.584$; $p\text{-value} < 0.01$) shows that a one-unit increase in the debtors collection period is associated with an increase of 0.584 in the performance of SMEs, holding other variables constant. The standardised coefficient ($\beta = 1.416$; $p\text{-value} < 0.01$) suggests that this variable has a strong positive effect on performance. The coefficient for creditors payment period ($\beta = 0.295$; $p\text{-value} < 0.01$) shows that a one-unit increase in the creditors payment period is associated with an increase of 0.295 in the performance of SMEs, holding other variables constant. The standardised coefficient ($\beta = 0.308$; $p\text{-value} < 0.01$) indicates a moderate positive effect on performance. The coefficient for cash conversion cycle ($\beta = 0.112$; $p\text{-value} = 0.01$) shows that a one-unit increase in cash conversion cycle is associated with an increase of 0.112 in the performance of SMEs, holding other variables constant. The standardized coefficient ($\beta = 0.124$; $p\text{-value} < 0.01$) indicates a relatively positive effect on performance. All the relationships are statistically significant, given that the $p\text{-values}$ are below the common threshold of 0.05.

Discussion

The findings of this study indicated a statistically significant relationship between the debtor's collection period and the performance metrics of small and medium-sized enterprises (SMEs) in the Delta North region. This suggests that optimising debt collection strategies may contribute to improved operational efficiency and financial performance among SMEs in this area.

A review of the extant literature underscored the relevance of this relationship, highlighting that working capital management – particularly the management of the debtor's collection period – had garnered considerable attention in recent empirical studies. The body of research consistently supported the notion that effective management of accounts receivable not only enhanced liquidity but also played a critical role in the overall performance and sustainability of SMEs. These insights provided a robust foundation for further exploration of the mechanisms through which debt collection processes can be refined to bolster SME growth and development within the region. AL-Zararee et al. (2021) also found a similar link between the debt collection efficiency and firm performance. This consistency in results across different studies strengthens the validity of the finding in this research. Comparing the results of this study with that of other studies, it is clear that there is a growing body of evidence supporting the importance of efficient debt collection processes in enhancing SME performance (Abimbola & Kolawole, 2017). Recent studies have also highlighted the significance of working capital management practices in improving overall organisational outcomes (Högerle et al., 2020; Jindal et al., 2017; Onyari, 2023). The limitations of the findings are recognised, as they may influence the extent to which these results can be generalised. For instance, the study's concentration on small and medium enterprises (SMEs) in Delta North may restrict the applicability of the findings to other locations or business types. Additionally, the reliance on self-reported data collected via questionnaires could lead to response bias and measurement

inaccuracies. Nonetheless, the study underscores the critical role of effective debt collection processes in enhancing the performance of SMEs. This discussion section provides a comprehensive analysis of the research findings and their implications for working capital management.

The findings of the study demonstrated a strong correlation between the performance of SMEs in Delta North and the creditor's payment period. In particular, the results implied that prompt debt payments can enhance the performance of SMEs by guaranteeing credit purchases. This finding is supported by Okoror et al.'s (2022) research, which is consistent with the study's original hypotheses. It is clear from the review of the scientific literature on working capital management and SME performance that recent research has focused on the effect of creditor payment periods on firm outcomes. In line with the results of this study, Okoror et al. (2022) found a comparable correlation between prompt debt payments and enhanced SME performance. This consistency between studies emphasizes how crucial it is to efficiently manage creditor payment terms in order to improve the performance of SMEs. Comparing the results of this study with recent research (Odey, 2021), there is a clear convergence in findings regarding the significance of creditor payment periods in influencing SME performance. Studies conducted in various contexts have consistently highlighted the importance of timely debt payments in ensuring financial stability and operational efficiency for small and medium enterprises (Al-Sayed, 2020; Kiring'a et al., 2021; Onyari, 2023). It is imperative to recognise the limitations of this discovery, since they may affect the applicability of the findings. A limitation of the research is that it focuses on SMEs in the Delta North region, which can restrict the findings' generalizability to firms in other regions. Furthermore, response bias and measurement mistakes are possible when using a survey research design with self-reported data. Future research could mitigate these limitations by employing diverse data collection methods to enhance robustness and by incorporating a broader range of SMEs from various countries. The results of this study highlighted how crucial it is to efficiently manage creditor payment terms in order to improve SME performance. This section presents a comprehensive analysis of the research findings and their implications for the field of working capital management in small enterprises. It undertakes a critical examination of the extant literature, juxtaposing the current results with those derived from contemporary studies. Furthermore, this section identifies gaps in the existing body of knowledge and highlights areas that require further exploration. Additionally, it addresses the limitations inherent in the study, thereby providing a nuanced understanding of the context and applicability of the findings within the broader framework of working capital management.

Finally, the results showed that the cash conversion cycle significantly affects the performance of SMEs in Delta North, indicating that a longer conversion cycle may increase the amount of liquid cash available to meet working capital needs. This suggests that effectively turning assets into cash gives SMEs a competitive edge and guarantees their financial stability. This finding is in line with Chang's (2022) findings and confirms the study's preliminary expectations. The cash conversion cycle (CCC) serves as a critical metric for assessing the efficiency of a firm's operational liquidity. It quantitatively measures the duration required for a company to convert its investments in short-term assets, such as inventories and accounts receivable, into liquid cash through sales revenue. An extended cash conversion cycle suggests that the business can retain cash before having to make

debt payments for a longer period of time. With more time to manage their working capital, SMEs can lower their risk of liquidity shortages and increase their capacity to invest in expansion prospects. SMEs in Delta North confront particular difficulties, including restricted access to outside funding and unstable market circumstances. In this situation, a lengthy currency conversion cycle becomes even more critical. It makes it possible for these businesses to keep up a consistent cash flow, which is necessary for both short-term and long-term viability. SME's can invest in inventory, pay short-term debts, and take advantage of new business prospects with greater liquidity when they are not under constant pressure to meet urgent financial requirements. The findings of the study highlighted the importance of implementing efficient working capital management strategies. SMEs that are adept at streamlining their cash conversion processes would be in a better position to handle the intricacies of their operational settings. This entails efficiently controlling inventory levels, settling on advantageous terms of payment with suppliers, and accelerating receivables collection. These procedures not only improve liquidity but also strengthen overall financial stability, which helps SMEs grow sustainably. Further supporting the necessity for effective financial management techniques is the beneficial effect that a longer cash conversion cycle has on SME performance. To ensure that their working capital components align with their operational and financial goals, SMEs need to regularly evaluate and adjust them. Taking a proactive approach allows them to prevent cash flow problems that could hinder their ability to meet obligations and capitalize on business opportunities.

Conclusions and Implications

Effective working capital management holds particular significance for small and medium-sized enterprises (SMEs) since a substantial portion of their assets are in the form of current assets, and current liabilities serve as a primary source of external financing for them. Effective management of working capital directly impacts the collection period for debtors, the payment period for creditors, and the cash conversion cycle – each of which is essential in influencing a business's overall success or failure.

Effective working capital management metrics such as debtor's collection period, creditor's payment period, and cash conversion cycle can significantly affect the performance of SMEs. These metrics are vital for the financial health and sustainability of SMEs. For SMEs, it is crucial to keep a low debtor's collection period, as this ensures a consistent influx of cash that can be utilized to support operations, make investments, and drive growth initiatives. SMEs can reduce the risk of cash flow shortages and improve their financial performance by effectively managing the debtor's collection period. Similarly, SMEs can effectively delay cash outflows and improve their working capital position by extending the creditors payment period. This strategy gives room for SMEs to optimize their cash flow management and allocate funds more efficiently to support day-to-day operations and strategic initiatives. However, it is necessary for SMEs to strike a balance between extending the creditors payment period and maintaining positive relationships with suppliers to ensure a reliable supply chain and avoid any potential disruptions. A shorter cash conversion cycle can also lead to improved performance. By streamlining processes, optimizing inventory

management, and enhancing sales and collection practices, SMEs can shorten their cash conversion cycle and enhance their corporate performance.

Based on the analysis of the research results, the researcher offers the following recommendations:

- I. Firms should put adequate measures in place in order to reduce their debtor's collecting period in order to increase the performance of the firm.
- II. Firms should by all means reduce their creditors' payment period in order for them to have access to other sources of funds available to the firm.

It is of prime importance to control cash flow to ensure that adequate funds are available where required. In the short - term that is best realised by preparation of proper cash flow forecasting such as weekly and monthly estimations for comparison with actual results.

Suggestions for Future Research

Several avenues for future research are recommended. Firstly, the conduct of longitudinal studies aimed at evaluating the long-term impacts of managing financial metrics such as the debtors collection period, creditors payment period, and cash conversion cycle on the performance of SMEs are of great importance. By monitoring these metrics over an extended timeframe, researchers can gain valuable insights into how working capital management practices influence the sustainability and growth of SMEs over the long term. Secondly, future research should focus on comparative studies across different industries and regions to analyse how variations in business environments and market conditions may influence the relationship between financial metrics and SME performance. This comparative analysis can provide a more detailed understanding of the factors that contribute to the effectiveness of working capital management strategies in different contexts.

Lastly, it is proposed propose that future research explores the use of advanced analytical tools and techniques, such as data analytics and machine learning, to analyse large datasets and uncover patterns and trends related to financial metrics and SMEs' performance. Researchers can gain deeper understanding into the complex dynamics of working capital management and its impact on SMEs by leveraging these technologies.

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Conflict of Interest

The authors have no conflict of interest.

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