

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI,
GHANA**

**EFFECTS OF WORKING CAPITAL MANAGEMENT PRACTICE ON
PERFORMANCE OF MANUFACTURING SMES IN GHANA**

BY

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**A THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE,
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DECLARATION

I, **ASANTE EMMANUEL**, do hereby declare that this thesis is my own work towards the award of a Master of Business Administration, Finance Option and contains no materials previously published by another person or documented for presentation in this or any other University, except where due acknowledgement has been made in the text.

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DEDICATION

I dedicate this thesis to my boss Mr Paul Agyei Mensah for his love.

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ACKNOWLEDGEMENT

I express my first and foremost thanks to my dear wonderful creator, the God Almighty for given me the strength, knowledge and wisdom to come out with this piece. I am very grateful for such recognition from God.

Secondly, I thank my supervisor Dr. Kwadjo Apeigyei, my lovely wife, Mrs Cecilia Teinaky and my brother, Paul Agyei Mensah and my precious daughter Nana Abena Adom Asante for the support, encouragement and moral given to me in coming out with this thesis. I deeply love you so much.



ABSTRACT

This study was conducted to examine the effect of working capital management practices on the performance of manufacturing SMEs in Ghana. This study employed quantitative cross-sectional descriptive research. Convenient and purposive sampling was used to select 154 participants. To gather information, mostly a pre-made questionnaire was employed. The statistical analysis was performed using both SPSS v26 and SmartPls v4. The result reveals that the cash conversion cycle had an insignificant direct influence on financial performance. The result reveals that inventory management had a significant direct influence on financial performance. Finally, the result concludes that account receivable management has a direct effect on financial performance. This study contributes valuable knowledge to the realm of business and finance, offering a well-rounded understanding of the dynamics that shape financial performance. The findings serve as guiding beacons for businesses seeking to optimize their operations and strategies, ultimately contributing to sustainable financial success in today's dynamic business environment.

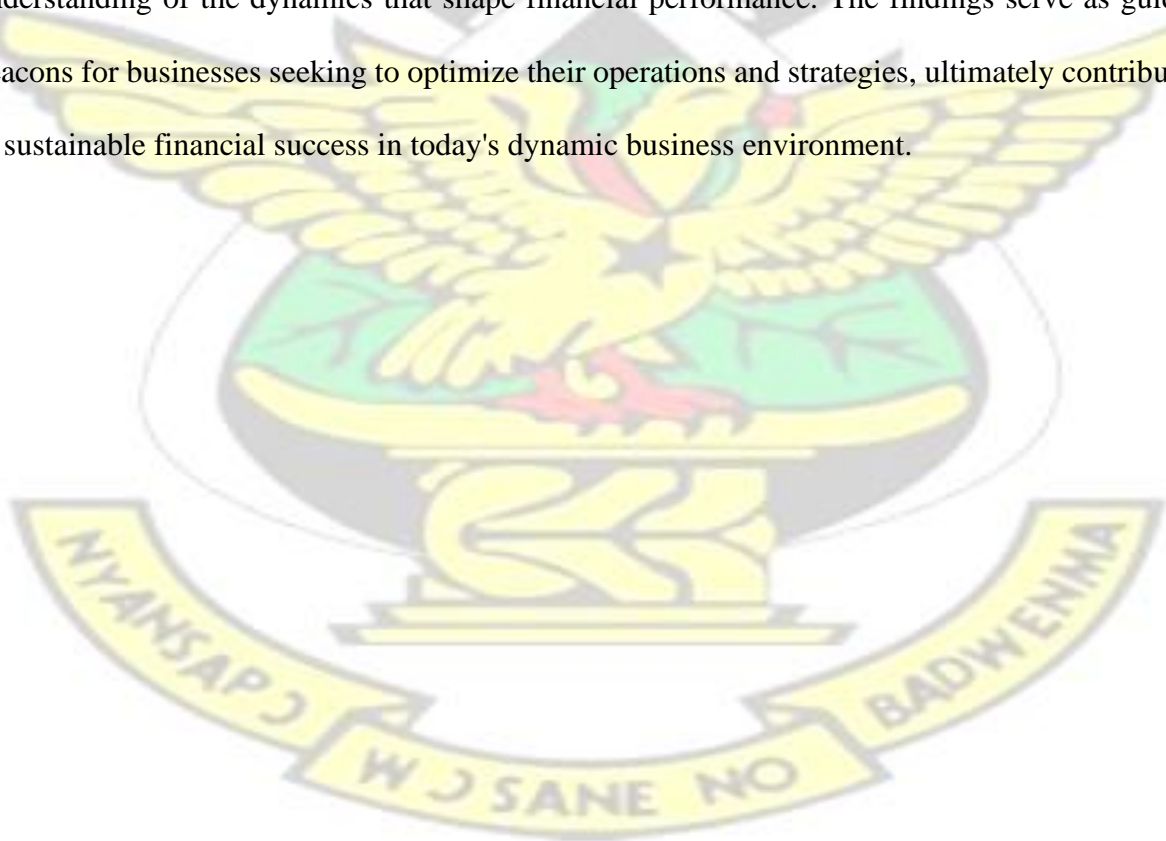
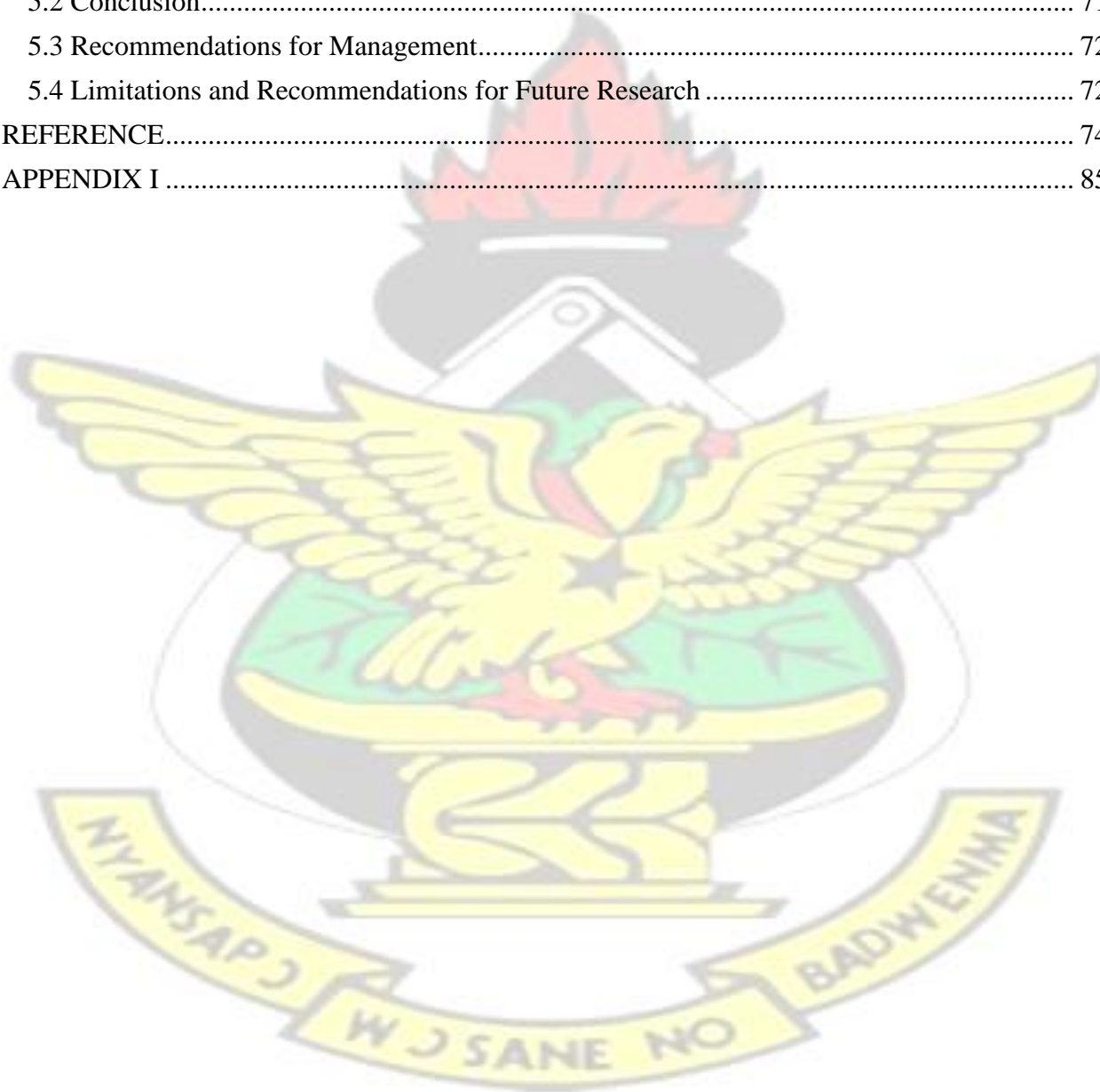


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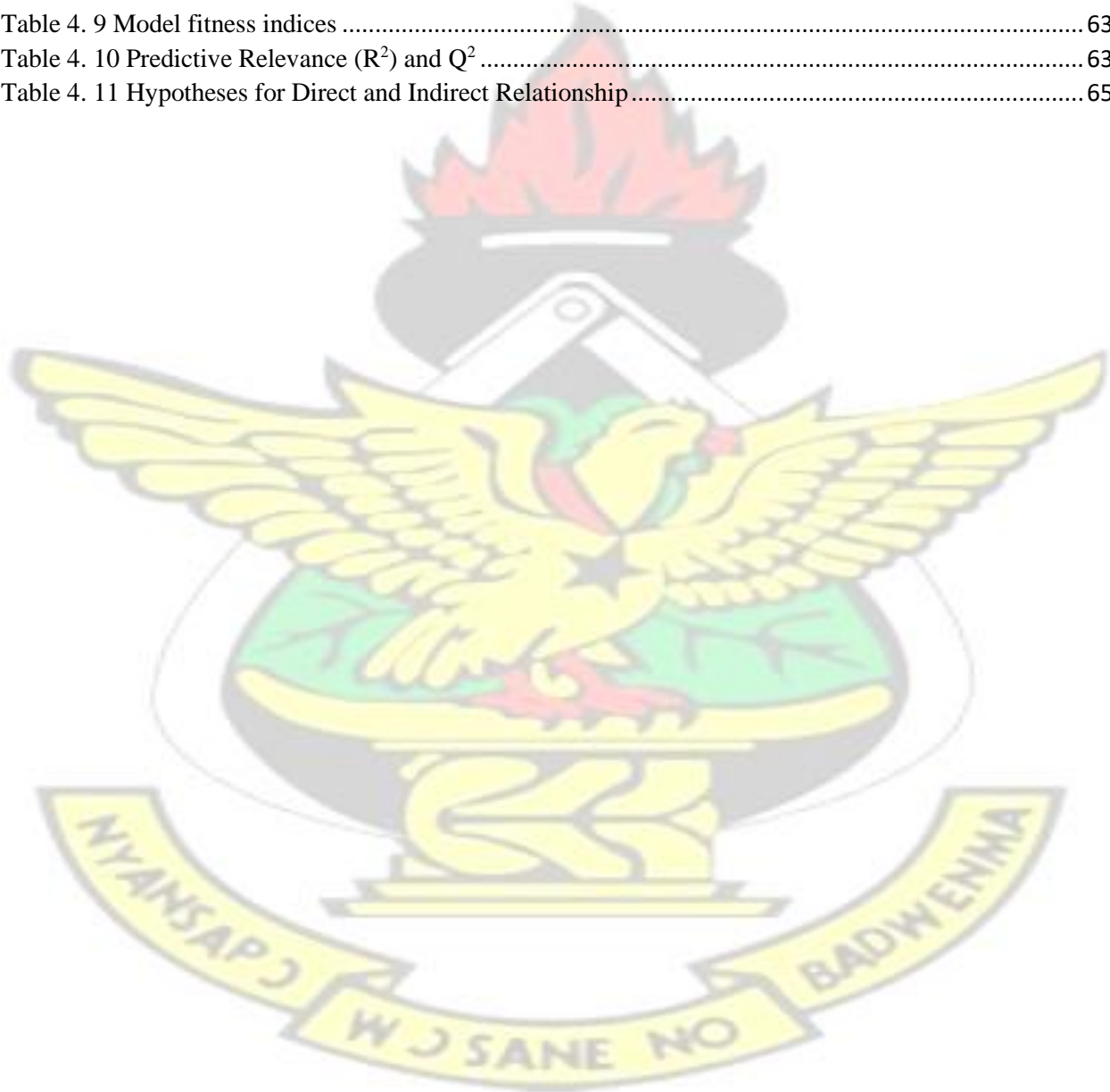
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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globally, the SME population is continuing to grow in importance (Ndiaye et al., 2018). Research shows that SMEs' contribution to gross domestic product (GDP) is over 55%, accounting for about 65% of employment in high-income nations and is a significant component of emerging market economic growth (Zafar and Mustafa, 2017). According to Yamoah and Arthur (2014) and Houghton (2017), many countries see small and medium-sized enterprises with 250 or fewer employees as economic diversifiers. With over 60% of total employment by SMEs in manufacturing in most developing countries (Ndiaye et al., 2018; OECD, 2004; Yao Wang, 2016; ITC, 2016; Yeboah, 2021), individually, these enterprises make a significant contribution to employment, gross domestic product, and sales, which makes them the backbone for growth and development in most economies. Despite the pragmatic efforts put in place for the advancement of the performance of SMEs in the Ghanaian economy, past statistics indicate that very few are managing to survive for more than five years of operation (Yamoah, 2016; Yamoah and Arthur, 2014). Nonetheless, in keeping up with the commendable initiatives by the government of Ghana, statutory bodies such as the National Board for Small Scale Industries (NBSSI) have been set up in support of SMEs to enhance their performance in the country. But Amoah and Kwabena (2018) and Osei (2017) show that a lot needs to be done to improve the performance of manufacturing SMEs in Ghana.

With the expanding number of SMEs and their economic importance, their performance has become a concern in developing nations (Amoah and Kwabena, 2018; Oduro and Nyarku, 2018; Hooi and Ngui, 2016). They use numerous tactics to increase their performance (Anning-Dorson,

2017; Tuan et al., 2016; Kiziloglu, 2015; Maroofi, 2018; Yu-lin Wang and Wang, 2016; Xie, Wang, and Zeng, 2018). Most developing economies have more than 70% SMEs, yet more than half die within a few years (Anning-Dorson, 2018a; Haider, 2018). Focusing on a company's ability to create new items that satisfy client expectations is a guaranteed method to sustain growth and improve performance (Fong, Lo, and Ramayah, 2014; Osei et al., 2016; Wadho and Chaudhry, 2018). Working capital management improves corporate profitability.

Working capital management and control are financial health indicators. Studies link poor financial management to small business failure (Matoha, 2007). Working capital metrics help SMEs decide if they need extra financing (Zimon and Tarighi, 2021). Effective working capital management helps prevent financial difficulties. Poor working capital management may increase the chance of bankruptcy.

The high amount of working capital in a company and its special attributes make managing it tough. According to Nicolas (2022), the management of working capital encompasses several components like as accounts receivable, inventories, accounts payable, cash, and other assets. Working capital management is the control of a company's current assets, which are often converted to cash within a year, and current obligations, which are usually reimbursed within a year (Zimon and Tarighi, 2021). Current assets can boost or hurt a company's bottom line. Too few can cause cash flow problems and inventory shortages, while too many can reduce profits (Van Horne and Wachowicz, 2004). Working capital is the difference between assets and liabilities. Working capital management involves keeping an eye on a company's current assets and obligations to maximize earnings. Corporate success depends on both liquidity and profitability (Maru et al., 2021). Poorly handled finances, especially working capital, can hurt a company's bottom line (Mamo, 2022). Working capital management is crucial to creating value

for stockholders (Khalaf and Al-Tarawneh, 2019). Effective working capital management helps companies satisfy short-term financial needs and increase operating performance (Thagunna, 2021). Companies attempt to maintain optimal working capital (Gonçalves et al., 2018). Working capital management affects profitability and liquidity (Yakubu et al., 2020). Working capital management aims to balance its components (Kajola et al., 2019). Large inventories and good trade credit programs can boost sales. Too much reduces the likelihood of running out. Trade credit can boost sales since it allows clients to evaluate things before buying (ur Rahman et al., 2019). Payables are also working capital. Ur, Rahman et al. (2019) say enterprises can get a low-cost and adaptable source of financing by delaying supplier payments without impacting product quality. Delaying payables could be costly if the company gets a discount for paying early. Similarly, unpaid accounts receivable might affect cash flow. The cash conversion cycle evaluates how soon money is spent on raw materials and received from finished goods sales. Longer cash conversion cycles may boost profitability due to increased sales, but they require more working capital. The cash conversion cycle may impair firm profitability if working capital costs rise faster than the benefits of retaining more inventory or granting customers greater trade credit. Lack of working cash, poor working capital management, and underutilisation of capacity are the top reasons organizations fail, according to the study (Akey, 2019). In today's cash-strapped and unpredictable environment, it is crucial to understand the effects of working capital management on firms' success. This study aimed to learn about SME working capital management and financial results in Ghana.

1.2 Problem Statement

Every manufacturing firm's working capital is likened to the blood flowing through a company's veins (Maru et al., 2021). It is argued that working capital management represents the very heart of the corporate entity, driving its ability to continue operating. Mismanagement of working capital has been identified as a major contributor to financial instability and company failure (Akey, 2019). In today's cash-strapped and uncertain economy, working capital management refers to the question of whether or not a company can meet its day-to-day operational needs. Knowing and understanding the effects of working capital management and how it affects the success of businesses is so crucial. In addition, whereas the effect of working capital management on company performance has been the subject of several studies, the effect of working capital management on the performance of manufacturing enterprises in developing economies like Ghana has received less attention. Working capital management is so important to the success of a business, but there isn't much evidence of its effects in Ghana (Alvarez et al., 2021; Zimon and Tarighi, 2021; Sensini and Vazquez, 2021; Lefebvre, 2022; Zheng et al., 2022; Naz et al., 2022). This means that these factors need to be studied more.

Given these conditions, it is clear that WCM is a key factor in the success of small and medium-sized enterprises (SMEs), particularly in situations when access to financing is limited. Accordingly, there has been a proliferation of writing about the profitability of WCM in recent decades (Sara Fernández-López et al., 2020). There are several gaps in the existing research. First, they frequently utilise a sample of listed corporations although WCM is more applicable to SMEs, which are typically unlisted businesses (Sara Fernández-López et al., 2020; Luca et al., 2021). Second, most consider how WCM affects the bottom line, rather than how it might change how the business operates. Third, except for a few scattered studies, the literature focuses on businesses

across multiple industries, even though industries have vastly varied working capital investment and financing regulations. Indeed, to date, there has been scant research evaluating the link between WCM and profitability in the manufacturing SMEs of Sub-Saharan Africa (SSA).

The outcome of this study makes multiple contributions to theory and practice. The study of the manufacturing SME space in the emerging economy makes a unique contribution as this relationship has not yet been tested. This study is therefore among the very first attempts to unravel how WCM drives the profitability of manufacturing SMEs in developing economies, especially in SSA.

1.3 Objectives of the study

Based on the gaps identified, this study was conducted to examine the effect of working capital management practices on the performance of manufacturing SMEs in Ghana. The researcher aims to tackle the following particular objectives to fulfil the study's primary goal;

1. To examine the effect of cash management on the performance of manufacturing SMEs in Ghana.
2. To explore the influence of inventory management on manufacturing SMEs' performance.
3. To evaluate the effect of account receivable management on the performance of manufacturing SMEs in Ghana.

1.4 Research Questions

1. What is the effect of cash management on the performance of manufacturing SMEs in Ghana?
2. What is the influence of inventory management on manufacturing SMEs' performance?

3. What is the effect of account receivable management on the performance of manufacturing SMEs in Ghana?

1.5 Significance of the Study

This study attempted to understudy WCM and the inconclusive relationship with SME performance in a developing country such as Ghana. The study presents theoretical, practical, and policy significance with relevance to individual manufacturing SME firms and government agencies. One of the many contributions of this study has been to extend the literature on WCM and firm performance of manufacturing SMEs in Ghana based on the knowledge-based view theory (Oliveira et al., 2020; Gligah et al., 2020). The findings of the study expand perspectives on the variables used in the study. Thus, exhibiting the result of the set of intangible assets allows firms to use their intangible assets to achieve their current management activities and innovative objectives and aspirations. As much as these variables have received much attention in research, they have been researched separately and in different contexts. A combination of these factors in a single study, therefore, presents a unique contribution to the study. Therefore, this study may provide a better understanding to both practitioners and regulatory institutions regarding WCM and its outcome in the Ghanaian manufacturing SMEs' context. In furtherance to that, the study will serve and act as a reference for future related research studies, especially within manufacturing SMEs. This research would be one of the kinds of work that would focus specifically on WCM and from the perspective of the manufacturing SMEs, in the Ghanaian indigenous SMEs, hence addressing the scarcity of research on stakeholders' perspectives within SMEs in the developing world, such as Sub-Saharan Africa (Panda et al., 2021; Ali and Isak, 2019; Centre, 2016; Damoah and Pephrah, 2021). Furthermore, the study will be beneficial to other researchers who intend to undertake further related studies in the topic area among SMEs. In terms of practical significance,

the study will make specific managerial contributions to industrial and the management of manufacturing SMEs. By establishing the influence of WCM on firm performance, managers of manufacturing SMEs will be able to identify the strongest predictor of WCM on performance amongst the constructs. The findings obtained will provide more insight into the underlying pathways among manufacturing SMEs to improve performance. The outcome of this study will also make an important contribution to policy by highlighting the gaps regarding working capital among SMEs. This would help policy makers to formulate policies to aid the management of working capital among SMEs.

1.6 Scope of the Study

This study focuses on the effect of working capital management practices on the performance of manufacturing SMEs in Ghana. This study will be conducted in Ghana. It particularly focuses on the manufacturing sector of Ghana. SMEs are noted to face multiple constraints, including financial constraints (Clegg, 2018; Kou et al., 2021). which directly or indirectly affects business performance. Since this study was limited to the SME sector, results cannot be generalised across the different sectors.

1.7 Research Methodology

This research used a cross-sectional descriptive research design, which used quantitative research techniques. The survey method will be used for the study. Usage of the survey method is considered to be efficient and economical, with its associated advantages to the researcher and appropriateness to the study. For instance, the cost implications compared to interviewing allow for anonymity, which may lead to more honest responses and has the possibility of eliminating bias due to varied ways of phrasing questions with various answers (Kothari, 2012; Durepos and Wiebe, 2019). The use of purposive and convenient sampling techniques will be employed in the

study. A sample of 150 SME firms will be taken as the unit of analysis. Primary data will be collected utilising both online and face-to-face administration of questionnaires. A Smart PLS and CFA will be conducted to ascertain the reliability and validity of constructs in the model. Structural model evaluation will be done using the Hayes Process to test the hypotheses proposed in the model. The result will be presented using appropriate tables and figures, interpreted, and discussed with related literature.

1.8 Limitations of the Study

As with any research, the present study is not without limitations. Firstly, this will be conducted only among manufacturing SMEs in Ghana, so the results of this study do not necessarily reflect opinions in other countries. Again, it is not clear whether the outcome will have the same effect on the effect of working capital management practises on the performance of manufacturing SMEs in Ghana since it may be possible that the needs and perception of agribusiness in other countries may differ due to different levels of knowledge and experience related to agribusiness WCM and performance context. Furthermore, the factors that are measured as having a positive significant influence on performance may prove otherwise in other countries.

The study's findings are cross-sectional and focus on the operators' perspectives at a particular time. The study's capacity to analyse the impact of working capital management methods on the performance of manufacturing SMEs in Ghana over time is constrained by the use of a cross-sectional approach. However, a longitudinal approach that will transcend into studying operations over some time concerning the subject matter could be used to offer much more insight into examining the effect of working capital management practises on the performance of manufacturing SMEs in Ghana.

This research made use of quantitative techniques in data collection and analysis. The use of a questionnaire offered very valuable information on the subject matter. However, using qualitative data such as interviews could also offer more detailed information on the topic. The research collected data from operators through quantitative means alone, which gave very important information to the study. However, collecting data from agribusiness operators through purely qualitative means will also be necessary to unravel much broader views on the topic.

Finally, the conclusions and recommendations in this study are directly proportional to the data that will be available to the author which is in line with answering the research questions. Despite these challenges, however, the researcher hopes to give off the best to ensure that this research work is standard and meets the requirements of writing set by the university.

1.9 Organisation of the Study

This first chapter also named the introduction, has expanded the background of the study, the statement of the problem, the study objectives, and their corresponding research questions. The significance of the study and the scope of the study also explained the terms used in this study. The chapter ends with the structure of the thesis proposal. Chapter two reviews the relevant literature on knowledge acquisition, product innovation, firm age, and government support from previous research. The chapter discusses the theoretical review upon which the study is based, in line with the concept used in the study. The section also expounds on the key concepts and reviews empirical research related to them. Finally, the chapter ends with a summary highlighting identified gaps in the literature. In a nutshell, this chapter will explain the theoretical concept of the study as well as the development of the model based on previous studies. Chapter three describes the methodology to be used for this research, including research design, population, sampling design, and the development of survey instruments to measure the constructs in the

research model. The chapter also presents tools to be used in analysing the data and ends with ethical considerations germane to the study. Chapter four presents and discusses the results and analyses of the data gathered. It covers the response rate, preliminary data analysis, respondents' demographic characteristics, descriptive analysis of variables, inferential analysis, and exploratory factor analysis (EFA). The chapter also presents the evaluation of SEM results, structural model analysis, and hypotheses testing. The final chapter five discusses the research outcome, the contribution of the study, the limitations of the study, the implications of the study, and the conclusions.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

There are five (5) sections in this chapter. Concepts related to the study are discussed in Section 1 as a conceptual review. The theory employed in the study was briefly explained in Section 2, which is the theoretical review. An empirical review is presented in Section 3. Hypothesis development is presented in Section 4, and the conceptual framework is discussed in Section 5.

2.2 Conceptual Review

A conceptual review of the key concepts employed in this work is presented in this section. These concepts include Working capital management (WCM), components of WCM, and firm profitability. The key concepts are therefore discussed below.

2.2.1 Working Capital Management

Working capital is essentially the value that remains after subtracting short-term obligations from current assets. Working capital is the money needed by a company to sustain its everyday running assets for a firm, according to ICAN (2014). Working capital, according to Uguru, Chukwu, and Elom, (2018), is inventory that may be sold or exchanged for a profit. An organisation must spend money on inventory and sell its goods or services on credit to run a business efficiently. Keeping inventories and doing credit sales both cost money (ICAN, 2014). Working capital is defined by Oladimeji and Aladejebi, (2020) as the share of a firm's current assets that are financed by long-term finances. Pham et al. (2020) define working capital as the difference between the amount invested in the entity's current assets compared to its current obligations as the means of financing the investment. Therefore, managing working capital is the solution by which the company may complete the short-term liabilities that are due for payment and it is a need that must be met for the entity's activities to be continued (Pham et al., 2020). Working capital management, as defined

by Ismail et al. (2015), is the process of effectively using the funds needed for a firm's daily operations to achieve its goals. Working capital management is defined by Peter and Nelson (2020) as the utilisation of an entity's current asset and the cash necessary to enable the short-term asset. Additionally, Abdulnafea et al. (2022) noted that managing working capital involves funding the company's short-term assets and obligations. The two objectives of an organisation, profitability, and liquidity, are intertwined and entail working capital management. Therefore, the main goal of working capital management is to guarantee that the business is capable of maintaining its daily operations and that it has the adequate ability to meet its existing and future short-term costs (Soda et al., 2022:57). As said by Mohammed et al. (2015), working capital management (WCM) is the method of planning for the purchase and use of short-term assets. Additionally, it is the process of deciding the organisational direction for arranging its present asset and liability holdings to finance its daily operations. Working capital management (WCM) is defined in Nyeme (2019) as the management of the components of working capital, such as payables, cash, receivables, inventory, and others. It focuses on the problems that come up while attempting to divide up the short-term assets among them (Wijaya et al., 2020).

According to Kayani, De Silva, and Gan (2019), WCM refers to reversible short-term choices that are typically made for a year. This short-term choice must be effective to maintain the firm's working capital at an ideal level that falls between excess and shortfall. This means that maintaining a sufficient working capital level is crucial and adds value to the business by lowering risks and enhancing performance (Akindele and Odusina, 2015). Working capital management is divided into four groups according to previous research (Louw et al., 2022; Ahangar, 2021; Oladipo et al., 2020; Uguru et al., 2018; NG et al., 2017): Cash Conversion Cycle (CCC), Accounts

receivable, Account payable, and Inventories. As a result, the current study divides working capital management into four categories, which are further explained in the next section.

2.2.2 Components of Working Capital Management

The current study employed four dimensions of working capital management and briefly explain in this section.

2.2.2.1 Account Receivable

Working capital and current assets are both heavily reliant on trade receivables. It also contains the sum owed for the outstanding bills of exchange. These represent the percentage that customers who own the company. A sound receivables management strategy goes a long way toward assuring timely collection and, if necessary, the minimisation of accounts receivable for the company. Financial institutions must be careful to maintain their accounts receivable cycle following the industry since there is a specified trade cycle for each industry (Eton et al., 2020). A longer accounts receivables period may cause cash collections to be put off, which will affect the firm's cycle of accounts receivables. The significance of accounts receivable is recognised by most analysts who, when assessing a business, look at the turnover margin of accounts receivable to determine how effectively the company manages its working capital in terms of collecting payments for credit sales it has made as well as to determine the number of bad debts the company has incurred (Mabandla and Makoni, 2019).

2.2.2.2 Inventory

Inventory is another delicate component of current assets, as seen by Mabandla and Makoni (2019), and it unquestionably plays a crucial role in working capital management. Since it is responsible for maintaining effective management of inventory from the stage of raw materials to the stage of completed items, competent inventory management is crucial. Inventory management starts with inventory control, which entails timely purchases, adequate storage, and effective use

to ensure an equal and orderly flow of completed goods to fulfil timely commitments by the firm. At the same time, avoid retaining excessive working capital in inventory since it would prolong the cash conversion cycle, raise the risk of obsolescence, and increase the need for working capital, all of which have a negative influence on the ability to make a profit (Mabandla, 2018).

2.2.2.3 Cash Conversion Cycle

A key element of current assets is cash, which includes any other liquid securities that are easily convertible into cash. The working capital cycle may be kept under control with the use of adequate cash management, which also helps the company control its operational cycle. Business efficiency is also based on the firm's ability to earn cash on a free-flowing basis. Additionally, the wise use of such funds assures that a company will be able to obtain trade discounts and increase the cash conversion cycle, which is a crucial term to define the working capital cycle of any company (Altaf and Shah, 2017).

2.2.3 Concept of Profitability

The capacity to turn a profit in all of an organisation's or company's business endeavours is known as profitability. It displays the efficiency with which management uses the assets at its disposal to generate and maximise profit to increase productivity. Profitability, as said by Padachi (2016), is the capacity of any given investment to generate a profit from its utilisation. Profitability, on the other hand, is a necessary efficiency that is seen as a management guide to higher output. Even while profitability is a key indicator of an organisation's efficiency, the level of profitability is not a definitive indicator of effectiveness. On the other hand, a healthy firm may not always show profit at a given moment. Sometimes, adequate earnings might represent a casual impression and suggest that the business is running well. Only a suitable balance between the values received and the one supplied is reflected in the net profit statistic. Any organisation's success depends heavily on a variety of factors, with changes in operational efficiency being only one of them. In addition,

several more elements outside efficiency affect profitability (Shrivastava, Kumar and Kumar, 2017).

According to Shrivastava et al. (2017), Return on Assets (ROA) is a profitability statistic that may be seen in financial statements. This ratio is frequently discussed since it shows how successful a firm is at turning a profit. The capacity of the firm to create profits in the past and the present is measured using the ROA index, which will be employed to make projections for the future. Assets are the total properties of the firm that were acquired with the money itself or with foreign direct investment and are utilised to support the business.

Investors are encouraged to purchase shares due to their interest in the company's profitability ratio, or the percentage of overall profitability that will be distributed to shareholders, also known as return on equity (ROE) or return on common stock. As is common knowledge, shareholders are still entitled to earnings made from their shares. Before paying any debt obligations or preference shares out of whatever profits the firm makes, the funds will first be utilised to satisfy debt obligations or debt service (Singhania and Mehta, 2017). The profitability ratio known as return on equity (ROE) assesses a business's capacity to make a profit based on the capital it has invested in shares.

2.3 Theoretical Review

The researcher aimed to explain the theoretical concepts that supported the working capital management study in this part. Here, the Keynesian Liquidity Theory, Agency Theory, and Resource-Based Theory are explored.

2.3.1 Keynesian Liquidity Preference Theory

The Keynesian liquidity preference hypothesis, proposed by economist John Keynes in 1936, is an additional theory that provides support for working capital management. Based on the concept, it is observed that investors exhibit a preference for assets that possess high liquidity as opposed

to those with low liquidity, assuming all other aspects stay the same. Furthermore, there exists a consistent demand for a premium on investments characterised by extended maturity periods. This hypothesis states that people store cash or stock for the following reasons: transaction, speculation, precaution, and remuneration. Working cash is a crucial requirement for maintaining daily business operations. Companies must set aside adequate money for current assets to improve the smooth operation of their commercial operations (Abuzayed, 2016).

For stating that interest is the reward for transferring liquidity, Keynes' theory of liquidity preference has drawn criticism. Accordingly, the rate of interest rises with a larger liquidity preference while falling with a lower liquidity desire. Although the rate of interest is quite low during a downturn, individuals tend to support liquidity highly. Although the rate of interest is quite high during inflation, people's appetite for liquidity is minimal. Given these data, Keynes' hypothesis is false. Due to Keynes' disregard for household income, this result resulted. This phenomenon can be fully explained by the contemporary theory of determinates (Gill et al., 2010). Keynes also makes the assumption that investors would always have to choose between illiquid bonds and liquid cash. Because of this, this hypothesis is "all or nothing." Actual investable assets come in a variety of forms and have different levels of liquidity (Stewart, 2011). This study makes use of the Keynesian liquidity preference theory since it cannot be overstated how important liquidity is to a firm's day-to-day operations. Manufacturing company managers should maintain working capital at levels that support the company's goal, which is to maximise shareholder value. According to Gakure et al. (2012), there is a strong inverse relationship between a firm's liquidity and its financial performance. Companies need to make sure they reduce their overall liquidity and illiquidity costs because the goal of WCM is to increase both liquidity and company value (Pandey, 1997).

2.3.2 Agency Theory

Jensen and Meckling (1976) introduced and advanced agency theory. According to their definition, an agency is a legal arrangement between a principal and an agent who has been assigned to carry out tasks on the principal's behalf. The contractual arrangement is therefore restricted to the current market dynamics, which offer incentives to prevent agency issues. The principle occasionally gives the agent the power to make decisions with the understanding that the agent will act as a good steward. This theory contends that differences in risk preferences, moral risks, information asymmetry, and the separation of ownership from control can all lead to conflict between principals and agents. By proposing that managers may manipulate their working capital as well as reported profitability by only investing in short-term lucrative initiatives that assist them in meeting their performance goals, this theory contributes to the understanding of the link between WCM and profitability. On the other hand, investors like long-term investments that promise a high, sustainable ROI and frequently base their assessment of their investment on publicly available financials. In the long run, WCM and agency issues are further exacerbated by the degree of information asymmetry between managers and investors. The requirement to incur agency expenses, such as monitoring costs, bonding costs, and residual loss, is necessary for principals to handle these disputes. The behavioural agency theory, stewardship theory, stakeholder theory, and shareholders theory were later theories that modified this paradigm. By putting agent performance at the core of the agency model and making the case that agents tend to be loss-averse subject to a certain reference point, the aforementioned adjustments were based on the presumption of goal congruence between agents and principals.

The premise that both the principal and the agent are driven by self-interest has received considerable support from earlier academics who used this theory to explain WCM. According to these researchers (Baos-Caballero et al., 2012; Mathuva, 2014), the theory can explain and control

ongoing operational and financial disputes between managers and shareholders. They contend that managers must invest solely in portfolios that have positive net present values if they want to enhance shareholder wealth. According to Asher et al. (2005), this school of thought is flawed because it focuses too much emphasis on the agent at the cost of institutions and is too pessimistic in its belief that businesses can easily discover all of the agency problem's variables that maximise net present value. Rowe (1982) further criticises this theory on two fronts: it fails to explain how circumstances are assumed to impact the agent's free actions, and it is unable to explain why the agent caused his free undertaking. Despite the critique indicated above, this hypothesis has been generally accepted in the financial community as an anchor theory and continues to be crucial in understanding the connection between WCM and profitability.

2.3.3 Resource-based Theory

The assets of a company include things like machinery, patents, brands, individual employees' skills, funds, and so forth. Fewer resources are independently productive. While competency is seen as the ability or capacity of a team of resources to undertake a certain activity or job, any productive activity requires to need the coordination and collaboration of teams of resources. Inferentially, resources are the means through which a particular business can accomplish the objectives stated by the entity (Grant, 2001). Managers are expected to effectively oversee and allocate resources, both in the short-term and long-term, with the aim of preventing any mishandling, misuse, or misappropriation. The managers are obligated to engage in collaboration with both internal and external stakeholders to ensure the attainment of all organisational objectives within the predefined and mutually agreed-upon timeframe. Resources play a crucial role as valuable assets for a firm since their absence would render the organisation incapable of sustaining operations and meeting financial obligations in the near future. This context elucidates how the resource-based theory (Alvarez and Busenitz, 2011) explains the ability of individual

business managers to effectively manage the firm's short-term assets, including cash, payables, accruals, receivables, and inventory. This implies that managers possess distinct and specialised resources that enable and guarantee the recognition of existing and novel opportunities, appropriate resource acquisition, as well as expedited procedures for remitting payments to creditors and other suppliers and collecting debts from customers who made purchases on credit when the payment or receipt is owed. These measures aim to ensure the effective and efficient management of working capital and, consequently, ensure overall organisational success.

Angelo (2018) performed research on the profitability of enterprises in the food sector, using a resource-based viewpoint. The findings derived from the analysis of the Italian Cheese Industry indicate that the presence of tangible assets, encompassing physical assets and financial resources, has a substantial influence on a firm's return on assets. However, the effect of intangible assets, including capabilities and human resources, is comparatively lower and lacks a definitive pattern. In a study conducted by Kahveci (2019), the topic of investigation was "Firm performance and resource-based theory: An application with Data Envelopment Analysis." The main objective of the research was to assess the influence of a company's capabilities, namely the efficient utilisation of these skills to enhance returns or provide more value to the organisation, on its financial performance. The aforementioned capabilities include personnel, physical assets, materials, and several other resources. It has been determined that none of the 19 textile enterprises listed on the Istanbul Stock Exchange (ISE) demonstrated effectiveness. Consequently, drawing from the underlying assumptions, a key finding of the study was that none of the firms have a distinct competitive advantage in relation to Resource Based Value. The findings also indicated that a majority of organisations have inefficiencies related to size.

In a study conducted by Feng, Pan, Huang, and Chen (2017), it was determined that the performance of enterprises is unaffected by the resources and capabilities of the research and development departments of the companies. The performance of businesses is positively impacted by marketing resources and capabilities, operational resources and capabilities, human resources, and management. The management of physical capital resources and the performance of enterprises are unaffected.

Omar Masood, Bora Aktan, Seref Turen, Kiran Javaria, and Mohamed Sayed Abou ElSeoud (2017) performed research to determine which resources are most important to a company's overall performance. A pilot study of Malaysia's stock exchange. According to the findings of Problems and Perspectives in Management, although certain types of physical resources do not effect a company's performance, intangible resources do. The results also show how vital it is for a company's success to allocate its intangible resources wisely. This theory is important and relevant to the research because it explains how cash, inventories, payables, and receivables should be managed in order to optimise a company's profits. After all, they are fundamental to the smooth functioning of any business. According to Omar (2017), in order for a business to achieve its objectives and stay ahead of its cash flow demands, it must have access to sufficient resources. To meet its obligations when they come due and pay its operating expenses, a firm must have access to sufficient cash on hand. To avoid a bad reputation among customers and the loss of vital, critical customers, it is essential for a business to maintain an adequate inventory of raw materials, work-in-progress, and completed products. Payables are necessary because the company occasionally lacks the finances to purchase goods, forcing them to buy on credit. However, this can only happen if the company has access to suppliers who are willing to sell to them on credit with the understanding that they would be reimbursed later. On the other hand, debtors are equally crucial

since they are the company's clients, and without them, the viability of the company in the near term is in doubt (Kim 2017).

2.4 Related Empirical Review

Altaf and Shah (2017) used samples of 437 non-financial enterprises in India to investigate the link between working capital management, company performance, and financial limitations. To analyse data, a two-step generalised method of moments (GMM) methodology was utilised. The findings demonstrated an inverted U-shape relationship between working capital management and firm success. Furthermore, it was discovered that organisations that are likely to be financially limited had lower ideal working capital levels.

Shrivastava et al. (2017) investigated the influence of working capital on financial performance in Indian corporate enterprises for nine years from 2003 to 2012. To evaluate the data, traditional panel data and Bayesian approaches were used. As per their results, a prolonged cash conversion cycle has a detrimental impact on profitability. It was also stated that financial accuracy measures are important in assessing profitability. According to the Bayesian perspective, larger organisations appear to be more lucrative and significant.

Fasesin, Ayo-Oyebiyi, and Folajin (2017) investigate the impact of working capital management methods on the performance of small-scale businesses (SSEs) in Osun State. A purposive sampling strategy was utilised to choose 100 small companies from Osogbo, Ilesa, Ife, Iwo, and Ede in Osun State. The data was gathered using a structured questionnaire and an oral interview. To evaluate the collected data, descriptive and inferential statistics were used. The findings show that cash management methods and trade credit management procedures have a negligible positive impact on SSE performance, but inventory management practices have a negligible negative effect on SSE performance. As a result, the study suggests that working capital management techniques in Osun State, Nigeria, are poor predictors of SSE success. The research, therefore, suggests that

governments at all levels assist SSE operators by organising comprehensive training in working capital management methods to improve their performance.

Tabash and Hassan (2017) compared commercial and Islamic banks in the UAE in terms of liquidity, profitability, and solvency. According to the findings, commercial banks in the UAE have excellent profitability and capital adequacy ratios while Islamic banks have maintained good liquidity ratios, indicating a significant liquidity gap between the two types of financial institutions in the UAE. This research also found that although there was minimal difference between the liquidity and solvency of Islamic and commercial banks in the United Arab Emirates, there was a significant disparity in profitability.

The Mann-Whitney u-test was employed by Azhar (2017) to compare the working capital management, solvency, and profitability of publicly-owned and privately-owned electricity distributors. Mean, standard deviation and Mann-Whitney are used to describe profitability via return on capital, whereas liquidity, management efficiency, and solvency are used to explain working capital management. Except for the absolute cash ratio and the debt-equity ratio of private and state-owned power distribution, all other measures of liquidity, management effectiveness, debtors-to-creditors and collection efficiency, solvency (interest coverage ratio), and profitability (return on capital employed) were found to be unaffected.

Sunnykumar and Prasadand (2017) investigated working capital management, which is concerned with the difficulties encountered when attempting to manage current assets and current liabilities. The study's goal is to determine how working capital management affects the corporate profitability and liquidity of Indian manufacturing companies from 2009–10 to 2014–15. Its goal is to examine how working capital management affects liquidity and profitability in Indian manufacturing companies. The manufacturing companies mentioned in the database of the Centre

for Monitoring the Indian Economy are used to identify the factors impacting the firm's liquidity and profitability (CMIE). 1654 businesses in total are chosen for study. The study made use of secondary data from the CMIE-listed manufacturing companies' annual audit financial situation. For a certain significance level, descriptive analysis, correlation analysis, and regression analysis are performed. A model is created based on the findings of the analysis. The mean, standard deviation, maximum, and minimum values for each of the variables are displayed in descriptive analysis. The SPSS software is used to examine the data. Regression research reveals that for all industries, Size, Cash to Current Asset Ratio, Creditors to Debtors Ratio, Inventory to Debtors Ratio, and Asset to Asset Ratio are significant.

From 2005 to 2016, Evci and Ak (2018) analysed annual data from 41 companies included in the Borsa Istanbul Industry Index. The working capital subsystems and the firm's profitability trade-off were studied using a fixed effects panel regression model. Evidence suggests a negative correlation between effective management of working capital and bottom-line results. The payables deferral period, cash conversion cycle, the ratio of short-term financial debts to short-term debts, and the ratio of fixed assets to total assets all negatively correlate with ROA, while the inventory conversion period and sales growth positively correlate with ROA.

Using data from all 15 publicly listed FMCG businesses between 2013 and 2017, Jana (2018) studied the correlation between working capital management and profitability. Using panel data analysis, the authors find strong negative and positive correlations between profits and working capital management. Using dynamic panel regression analysis on a sample of 443 Croatian firms in Group 62 from 2008 to 2013, Korent and Orsag (2018) found a statistically significant concave quadratic connection between networking capital and company profitability. According to Olaoye et al. (2019), the rate of return on assets in companies traded on the Nigerian Stock Exchange is

negatively affected by cash receipts and expenditures but positively affected by the current ratio of payments and the inventory period. Therefore, they recommend that firms be proactive in controlling the principle while yet maintaining a faster collection time so that creditors may obtain a monetary discount (if applicable), and materials in order to avoid throwing away money-losing resources.

Khalid, Saif, Gondal, and Sarfraz (2018) set out to research the link between proper working capital management and financial success. Six years' worth of information from a subset of electrical equipment companies registered on the Karachi Stock Exchange was gathered and analysed. The data was analysed using a regression model. We also utilised the normality and linearity tests. Return on Assets (ROA) served as the study's dependent variable, with the Current Ratio, the Debt to Equity Ratio, the Operating Profit to Debt Ratio, and the Inventory Turnover Ratio serving as independent factors. After validating the premise, the study showed that proper management of a company's working capital has a major impact on its bottom line.

In their study of working capital management and efficiency in addition to the regulatory role of macroeconomic variables (inflation and GDP) in Iran's listed manufacturing enterprises, Soukhakian and Khodakarami (2019) found that the cash conversion cycle is inversely associated with an asset's rate of return (ROA). Working capital management has little bearing on a company's profitability, despite the fact that macroeconomic conditions have a large and positive effect on ROA.

Phuong and Hung (2019) investigated the impact of working capital management on the profitability of Vietnamese enterprises. The data were acquired between 2009 and 2018 and included a sample of 5,295 companies listed on the Vietnam stock market. It was done using the Generalised Least Squares (GLS) regression technique. Inventory Turnover, Average Receivables,

Average Payment, Cash Conversion Cycle, and Return on Assets were utilised in the study to measure the independent variables and the dependent variable, respectively. The study found that the profitability of enterprises was negatively influenced by inventory turnover, average receivables, average payment, and cash conversion cycle. To boost businesses' profitability and prevent a detrimental effect on their performance, working capital should be optimised.

Olaniyan, Olufemi Dominic and Samuel Adegboyo (2020) investigated the effects of working capital management on profitability in Nigerian manufacturing enterprises between 1988 and 2019. According to the evaluated theories, the study segmented capital management into trade receivables, inventories, cash and bank balances, and trade payables. The study used the autoregressive distributed lag (ARDL) approach to evaluate the secondary-sourced data since the unit root test had shown that the variables' degree of stationarity had been overlooked. The bound test showed that there was co-integration (a long-term link) between all of the explanatory factors and the dependent variable. The ARDL-ECM was calculated by the study. The results also show that working capital management has a significantly positive influence on corporate profitability in Nigeria, both in the short term and the long term, through the cash and bank balances (CBB), trade payables (TAP), and trade receivables (TAR) variables. The study's conclusions are consistent with the Keynesian Liquidity Preference Theory. The study suggests that financial managers raise their working capital and guarantee that it is appropriately handled to improve sales revenue, improving business profitability.

Working capital management's impact on a company's bottom line was studied by AnhHuu, HuongThanh, and Hang (2020). A total of 119 non-financial companies that have been traded on the Vietnam Stock Exchange between 2010 and 2018 make up the study's sample. Two common statistical methods for tackling econometric difficulties and improving the accuracy of regression

findings are ordinary least squares (OLS) and the fixed effects model (FEM). Both return on assets (ROA) and Tobin's Q are negatively impacted by poor working capital management, as shown by the empirical evidence.

The cash conversion cycle (CCC) is a metric for evaluating the efficacy of a company's working capital management strategy; it is comprised of three submetrics: ARD, INVD, and APD. Maintaining the CCC-recommended working capital management optimisation, which includes reducing payment terms to creditors and speeding up the flow of products, may increase a company's earnings. Profitability is also affected by the company's revenue growth rate, size, leverage, and age. Therefore, the paper provides managers with a new viewpoint on how to increase the firm's profitability via working capital management.

Kwadwo and Amankona (2020) investigate the relationship between working capital management and business profitability in emerging countries. The period from 2011 to 2017 was covered by a balanced panel of eleven (11) manufacturing companies listed on the Ghana stock exchange. Dynamic panel regression (Arellano-Bond Estimation) was used to investigate the relationship between working capital management and profitability. A significant positive linear relationship between working capital management and firm profitability was found in the research. The findings also demonstrate a concave quadratic relationship between the effective management of working capital and the bottom line. Managers are tasked with ensuring optimal performance by implementing a working capital management strategy that is both effective and efficient. Businesses are most profitable when they use working capital management at their most efficient level. The research shows that increasing profits via aggressive working capital management is possible.

Goa (2020) investigated the causal relationship between working capital management and profitability in milk processing businesses. Microdata from the Emerging Information Service (EMIS) database for Polish dairy enterprises from 2008 to 2017 were used in this study. It made use of regression analysis. Days Sales of Inventory (DSI), Days Sales Outstanding (DSO), Days Payable Outstanding (DPO), Cash Conversion Cycle (CCC), and Return on Assets (ROA) were the independent and dependent variables, respectively, in the study. The results showed that when expanded, DSI and CCC harmed ROA. We concluded that working capital management had a major influence on profitability since DSO and DPO had a favourable and large impact on ROA when they were prolonged.

Oladimeji and Aladejebi (2020) investigated the link between SME profitability and working capital management in Nigeria. Secondary data was collected from the annual reports of the selected SMEs during a five-year period (2014-2018). The method of regression analysis was used. The ratio of Return on Assets was utilised as the dependent variable, while the ratios of Debt to Assets, Current Ratio to Assets, and Quick Ratio to Assets were employed as the independent variables. The study found no correlation between the management of working capital and the success of small and medium-sized businesses. It also recommended that small and medium-sized enterprise (SME) growth be prioritised in government initiatives.

2.5 Hypothesis Development

Regardless of the size and nature of the firm, working capital is essential for its successful operation. The dynamic nature of working capital means that its components are always changing, making it difficult for managers to maintain the ideal amount of working capital (Altaf and Shah, 2018a, 2018b). A company's worth would be impacted if it couldn't maintain the appropriate level of working capital, which would also have an impact on profitability (Boisjoly et al., 2020; Sawarni

et al., 2020). Therefore, it is crucial to investigate the connection between WCM and company profitability.

2.5.1 Accounts Receivable and Firm Profitability

Result of the delay between the sale and the actual receipt of cash, accounts receivable are formed (Altaf and Shah, 2018a; Kazimoto, 2016). As a result, accounts receivable can be thought of as trade credit given by the company to its clients (Afrifa and Padachi, 2016). The research on the connection between ARP and corporate profitability is ambiguous. For instance, lowering ARP will boost the firm's cash flows, which may be utilised as a safety net in case of uncertainty (Kazimoto, 2016). In addition, decreasing ARP tends to decrease bad debts (Altaf and Ahmad, 2019). Consequently, there may be a negative correlation between ARP and corporate profitability (Mathuva, 2015; Moussa, 2018; Alsulayhim, 2019). Conversely, there are opposing viewpoints as well. For instance, some academics contend that adopting a longer ARP may increase corporate profitability. They give a variety of justifications, such as how a longer ARP gives them more time to check the product's quality (Alsulayhim, 2019). A further benefit of granting an extended trade credit is that it acts as a tool for sales promotion, boosting revenue and profitability (Altaf and Shah, 2017; Afrifa and Padachi, 2016). This viewpoint, therefore, affirms the beneficial correlation between ARP and corporate profitability (Abuzayed, 2016; Prsa, 2020). There are a priori reasons to think that the link between ARP and business profitability is non-linear given these opposing viewpoints. Afrifa and Tingbani (2018) also discovered this tendency for SMEs listed on the AIM exchange. In light of this, we propose that there is a non-linear relationship between ARP and SME company profitability. Consequently, it is suggested that:

Hypothesis 1a: The number of days' account receivables outstanding significantly affects the firm profitability positively.

Hypothesis 1b: The number of days' account receivables outstanding significantly affects the firm profitability negatively.

2.5.2 Inventory and Firm Profitability

The inventory conversion period (ICP) is the time it takes for a company to change its stock of goods into cash. According to research by Zheng, Zhou, and Iqbal (2022), a manufacturer's greatest outlay of cash is on stock. Some say that a company's bottom line might be affected by the approach it takes to managing its inventory. For instance, keeping fewer items in stock might help a business save money on obsolescence and storage fees, but it can also hurt sales (Tingbani, 2015). In contrast, a company may retain larger levels of inventory investment, which will enable it to fulfil all market demand, but this strategy exposes the company to obsolescence costs, holding costs, and storage expenses (Qurashi and Zahoor, 2017). These considerations make it clear that a company must choose between the advantages and disadvantages of maintaining inventory. As a result, there can be a nonlinear connection between ICP and corporate profitability. It is important to highlight that Afrifa and Tingbani (2018) found evidence of this association for SMEs listed on the AIM exchange. In light of this, we propose that there is a non-linear relationship between ICP and SME company profitability. Consequently, it is proposed that:

Hypothesis 2a: A positive relationship between the number of days inventory is held significantly affects the firm profitability.

Hypothesis 2b: A negative relationship between the number of days inventory is held significantly affects the firm profitability.

2.5.3 Cash conversion cycle (CCC) and Firm Profitability

Prior empirical research (Altaf and Ahmad, 2019; Moussa, 2018; Chauhan and Banerjee, 2017; Singhanian and Mehta, 2017) have used CCC as a measure of working capital efficiency. The CCC calculates the lag between the cost of purchasing raw materials and the revenue received from

sales of completed items (Altaf and Shah, 2018a). According to earlier studies, a longer CCC may increase sales since it gives consumers more time to pay, which increases business profitability (Alsulayhim, 2019). Furthermore, it might provide clients with more opportunities to distinguish between different organisations' product offers (Qurashi and Zahoor, 2017). As a result, it might lessen the knowledge gap between the buyer and seller (Tingbani, 2015). Thus, CCC and business profitability may have a positive association (Altaf and Shah, 2017; Afrifa and Padachi, 2016). However, the opposite views are also true; for instance, a shorter CCC demonstrates how effectively a corporation manages its working capital (Azhar, 2017). Additionally, lowering CCC to the absolute minimum frees up cash flows and lessens the firm's reliance on outside financing (Olaoye et al., 2019). This might further lower the company's borrowing costs, which would increase profitability (Soukhakian and Khodakarami, 2019). These justifications suggest that there may also be a negative correlation between CCC and company performance, as shown by (Bhatia and Srivastava, 2016; Moussa, 2018; Alsulayhim, 2019). Even while the positive and negative impacts of WCM on company profitability indicate that a trade-off may exist, the aforementioned research has not taken that possibility into account. Chalmers et al. (2020) observed a non-linear association between WCM and business profitability for Spanish SMEs. Therefore, we propose that CCC and SME company profitability have a non-linear relationship. In light of the aforementioned considerations, the following hypothesis is proposed:

Hypothesis 3a: A positive relationship between the Cash Conversion Cycle (CCC) and the firm profitability is significantly influenced.

Hypothesis 3b: A negative relationship between the Cash Conversion Cycle (CCC) and the profitability of the firm is expected.

2.6 Conceptual Framework

Independent Variable

Working Capital Management

- Accounts receivable
- Inventory
- Cash conversion cycle

Dependent Variable

Firm Profitability



Figure 2.1: Conceptual Framework

2.7 Summary of Chapter

This chapter has five (5) sections that were further addressed. In Section 1 conceptual review, study-related concepts are covered. Section 2, which is the theoretical review, contains a brief explanation of the study's underlying theory. Section 3 presents the empirical review related to the study. Section 4 presents the development of hypotheses, while Section 5 discusses the conceptual framework. The research methodology used in the study is covered in the next chapter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents an outline of the various methods and strategies employed by the researcher to collect data, clean the data, and analyse the data using the appropriate analytical tools. It looks at the research design, the population of the study, sampling technique and sampling size, data collection, data analysis, validity and reliability, and chapter summary.

3.2 Research Approach

This study will adopt a quantitative method which will guide the sampling techniques, designing of research instruments, and eventually analysis. As defined by Ragab and Arisha (2018), a quantitative study is a research methodology that explains a phenomenon through the collection of numerical data that is then evaluated using statistical methods. When a researcher uses methods of inquiry such as experiments and surveys, the researcher gathers data on predefined instruments that produce statistical data, which is referred to as a quantitative approach (Anderson et al., 2018; Ragab and Arisha, 2018). The quantitative research approach was chosen on the basis that it produces accurate and measurable data that can be generalised to a broader population (Goertzen, 2017). Aside from that, it is ideal for evaluating and verifying already known concepts about how and why events occur by testing hypotheses developed before data collection. In general, quantitative research is regarded as a deductive approach to the investigation (Ragab and Arisha, 2018).

The positivist research philosophy which is the underpinning philosophy for quantitative research can be considered to fit well with the objectives of the research study based on the above approaches. Subsequently, the study employed quantitative methods of data collection in a single

study according to the nature of the study. This study uses the existing working capital practices (cash management, inventory management, and liquidity management) as underpinning practices in the hypotheses development. Its purpose is to assess formulated hypotheses regarding the impacts of working capital management practices on the performance of manufacturing SMEs, as well as to use reliability and validity to appraise the results and generalise them. Proceeding with this, the investigator will optimize the principles of positivism philosophy from the epistemological standpoint.

3.3 Research design

Kazdin (2021) defines a research design as a road plan for carrying out research where a researcher describes the methods and approaches for developing and gathering the data essential to solve the research subject and achieve the study objectives. This study employed descriptive and ex post facto design. According to Wong, Wong and Boon-itt (2020) and Shamsuddin, Jafar, Shawai, Yusuf, Lateefah and Aminu (2017), an ex post facto study aims to establish feasible linkages by evaluating a present condition or state of affairs and then going back in time for plausible contributory factors. The ex post facto design is determined to be acceptable for this study since it is non-experimental and will analyse causal relationships between the dependent variable and independent variable (Egbunike and Okerekeoti, 2018). This design intends to demonstrate the link between variables, i.e., how one variable impacts another (Shamsuddin et al., 2017).

The method is employed for the quantitative study because it examines a sample of the population to produce a quantitative or numeric depiction of attitudes, practices, and opinions. Through face-to-face questionnaire administration, primary data was acquired in the quantitative research design. Usage of the survey method was considered to be efficient and economical; it brings many advantages to the researcher; For instance, it is economical compared to interviewing, authorizes

secrecy, and could produce additional truthful answers, besides it has the possibility of eliminating prejudice owing to wording questions differently with diverse respondents (Sibanda et al., 2018). Subsequently, the use of the quantitative technique was employed to help in understanding the underlying reasons of respondents to issues of how working capital management practices affect the performance of manufacturing SMEs in Ghana.

3.4 Population of the Study

Tiberious et al. (2016) also defined population as the whole group of individuals or objects having common observable features. Egbunike and Okerekeoti (2018) defined it as a group of individuals with the same characteristics that can be involved in research. The population of every study is about persons, objects, and institutions in the specific area or organisation or country of the study. The population represents the entire group that the study seeks to conclude about. (Shamsuddin, 2017). In this study, the study population consists of manufacturing SMEs in Ghana. According to Bhat and Darzi (2016), the unit of analysis is the phase that includes: an individual, organization, or group which will be used by the researcher to answer research questions and as well gather data. Since the study variables are organisational level, the study targets owners and top managers of manufacturing SMEs in Ghana.

3.5 Unit of Analysis

A unit of analysis, according to Tiberious et al. (2016), is the stages, such as an organization, or group that the researcher would utilize to answer research questions and collect data. As a unit of analysis, the research addressed all manufacturing SMEs operating in the eastern area of Ghana. Specifically, owner-managers and workers occupying management roles of chosen manufacturing SMEs were targeted as the primary responders for the companies. In this study, SME firms served as the unit of analysis, with the owners and top managers in Ghana serving as the respondents. The

selection of the SME owner-managers and or Managers was based on the premise that they are the primary decision-makers for their businesses and are privy to information regarding the study. Therefore, they are judged as the proper respondents to assist in evaluating the study's constructs, namely working capital management practices, and company performance.

Again, the nature of the study necessitates the use of SME owners and managers who are considered to be the key individuals for obtaining an objective response to the questionnaire items. These participants were believed to be in a position to provide accurate information regarding the practices, transactions, and success or failure of their firms. The survey reveals that SME business owner-managers and those at the management level are in a better position to provide firm performance statistics (Keh, Nguyen and Ng, 2007; Knight, Megicks, Agarwal, and Leenders, 2019; Sibanda, Hove-Sibanda, and Shava, 2018). As representatives of the unit of analysis, they were expected to fill the questionnaires professionally and truthfully; however, they might delegate the responsibility to an authorized employee. Multiple occurrences of the organizational unit of analysis have been documented (Keh, Nguyen and Ng, 2007; Hair et al., 2011). Again, the majority of research on the success of SME product innovation has utilised company operators as their unit of study (Anderson and Jiang, 2018; Connelly, 2008). Since the overall purpose of this study is to evaluate the firm performance of manufacturing Small and Medium Scale Enterprises (SMEs) and the information necessary for this investigation, the researcher thinks it appropriate to conduct the research at the company level.

3.6 Sample Size and Sampling Technique

The number of people or items to be included in the study is referred to as the sample size (Shamsuddin, 2017). Several factors go into determining the sample size for a certain study, whether a researcher uses a qualitative or quantitative technique. Malhotra and Birks (2007). Even

though the sample size is a critical decision for any research, there is no single method for selecting it (Bhat and Darzi, 2016). One hundred and fifty (150) respondents were employed in this study. Prior studies (Hair et al., 2011; Shamsuddin, 2017) require a sample size of at least ten (10) times the number of hypotheses or relationships with the endogenous variable. The study, therefore, identified the sample size to be 108 using Krejcie and Morgan's (1970) formula of sample size determination.

From Krejcie and Morgan's (1970) formula for sample size determination:

$$S = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)} \quad (3.1)$$

Where s = required sample size

X^2 = the table value of chi-square for one degree of freedom at the desired confidence level of 0.05

N = the population size

P = the population proportion (assumed to be .05 since this would provide the maximum sample size)

d = the degree of accuracy expressed as a proportion (.05)

In quantitative methods of inquiry, larger sample sizes are often recommended by researchers (eg. Hair et al. 2018, 2011; Malhotra and Birks, 2007) to reduce sampling error. Sekaran and Bougie (2019) argued that taking a larger sample size from a population increases the chances of sample means approaching normal distribution. Hair et al. (2018) also suggested that the minimum sample size required for Structural Equation Modelling (SEM) technique is 100 or more and must represent the study population.

These scholars argue that employing larger sample sizes increases the chances of mean, standard deviation, percentages, and other statistics reflected in the actual estimates of the population. Based on the arguments from these scholars, the researcher decided to increase the sample size by 50%

for the survey (Kajola et al., 2019) to make room for anticipated low response rates. Therefore, to achieve a high accuracy rate, the current study employed a larger sample size by collecting data from a total of 154 respondents in the study. This number is presumed to be a suitable sample size based on the explanations as well as cues from previous studies (Hair et al. 2018; Sekaran and Bougie, 2019; Malhotra and Birks, 2007).

The researcher must now determine the sampling technique for the study after determining the sample size. Every researcher's dream would have been to collect data from every single person in a population. This scenario is only achievable when the researcher is working with small groups of people. However, when the population of interest is big this census approach is not always viable. Accessing potential participants is also costly, time-consuming, and complicated. As a result of these issues, studies that use huge populations, such as this one, have depended on sampling procedures to pick a representative sample from the population of interest (Kayani et al., 2019). The process of picking a sufficient number of components from a larger population or constituents to use the data acquired from these sampled parts to make correct judgments and inferences about the overall population is known as sampling (Hair et al., 2009).

In the literature, there are two types of sampling procedures: probability and non-probability sampling. In the case of study research, non-probability sampling is regularly used. While probability sampling is routinely employed in surveys and experiments, case study research frequently uses non-probability sampling. Despite this, when the sample population is exceedingly big, some researchers continue to utilise non-probability sampling in quantitative studies (Kayani et al., 2019).

Each element in the sample frame has an equal chance of being chosen in probability sampling, whereas in non-probability sampling, the opposite is true (Sekaran, 2003). As a result, valid

inferences about the target population are difficult to make when nonprobability sampling is used. Even though non-probability sampling frequently relies on personal judgments and samples obtained using this technique may not always be a true reflection of the population, generalisations about the population can still be made (Malhotra, 2010). Non-probability sampling procedures include quota, purposive, snowball, and convenience sampling. Purposive sampling is the process of selecting participants based on the researcher's judgment of who has the relevant information. Therefore, purposive sampling techniques were used for the administering of the questionnaire.

3.7 Sources of Data

Two main sources of data exist in any research, this includes primary data and secondary data. While primary data refers to first-hand information gathered by the research for the research, secondary data deals with already existing data gathered for a different purpose. The choice of the data source in any research is dependent on the nature of the objective of the study. Considering the nature of this study, primary data is more suitable to be able to test the hypotheses proposed in Chapter Two (2). The choice of primary data is justified by the quest to gather first-hand information on the views of top managers of the manufacturing SMEs in Ghana, i.e., to investigate capital management practices on the performance of the SMEs. Data used in this study was therefore gathered using a well-structured questionnaire.

3.8 Method of Data Collection

According to Sekaran (2003), data may be gathered in many ways and under varied conditions. Among these are interviews (electronic, telephone, and face-to-face), surveys (directly or electronically administered), observations (videos and audio recordings), and motivational techniques (p. 221). Although all of these data-collecting techniques are relevant, the survey questionnaire method was selected for this study's data collection owing to its purpose and

objective, which was to assess the interrelationships between variables using a quantitative approach.

The survey method is a technique for acquiring information on the views, opinions, and characteristics of a large group of individuals (Malhotra and Birks, 2007). According to positivist philosophy, the primary objective of surveys is to produce systematic observation via the use of planned research questions that provide uniformity and standardization (Bryman and Bell, 2015). A survey is typically the best way for researchers to collect primary data from a group that is too large to examine or observe directly.

According to Babbie (2004), a survey approach requires the researcher to select a representative sample whose characteristics mirror those of the larger population, as well as to use standardized questionnaires to ensure that all respondents respond in the same way. According to Malhotra and Birks (2007) and Saunders et al. (2009), the strength of the survey method lies in its uniform metrics. The data is often quantitative and may be compared and evaluated with relative ease using several statistical methods (Wimmer and Dominick, 2011). Using a questionnaire for data collection again makes tabulation and data analysis easier and more straightforward, while also providing a degree of reliability (Wimmer and Dominick, 2011).

While the survey method is typically employed when a study attempts to answer "what" questions (Yin, 2009), it also allows the researcher to assess multiple variables and analyse the results using a variety of statistical techniques (Wimmer and Dominick, 2011). According to Sekaran (2003), the survey questionnaire data collection method is more effective when the researcher can correctly identify the constructions involved in the study and take precise measurements of the investigated variables. Following Sekaran's (2003) beliefs, this study employed a survey-based approach to data collection to elicit direct responses from managers regarding their perceptions of the research

model's variables. While the survey approach is often used when a study attempts to answer "what" questions (Yin, 2009), it also enables the researcher to evaluate several variables and analyse the data using a range of statistical techniques (Wimmer and Dominick, 2011). According to Sekaran (2003), the survey questionnaire data collection method is more effective when the researcher can correctly identify the constructions engaged in the study and take precise measurements of the investigated variables.

To assess the study's assumptions, the researcher creates a survey measuring all study variables using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Adoption of the study's measurement items and analysis of the results are supported by both a theoretical framework and several scholarly articles (Kajola, Sanyaolu, Onifade, and Adewumi, 2019; Kayani, De Silva, and Gan, 2019; Kazimoto, 2016; Khalaf, and Al-Tarawneh, 2019; Kinasih Yekti Nastiti, Atahau, and Supramono, 2019). This research adapts questions from previous relevant studies (Kazimoto, 2016; Khalaf, and Al-Tarawneh, 2019; Kinasih Yekti Nastiti, Atahau, and Supramono, 2019) that have been validated and verified for dependability such that they apply to Ghana. Because Likert scale questions are straightforward for respondents to answer, as well as convenient for the researcher during data processing, and because they provide dependable and quantitative findings, they were used for all of this study's measurements.

3.8.1 Piloting of Questionnaire

According to Saunders et al. (2016), a pilot test of research involves evaluating a questionnaire with a subset of the target population to limit the likelihood of respondents having difficulty answering the questions and to check the validity and reliability of the data. After completing a test of reliability and validity, the researcher randomly picked 15 companies from the sample frame. Before doing the actual fieldwork, it was crucial to identify and address any deficiencies in the questionnaire. Some writers have divergent opinions about the selection of samples. According

to Hill (1998), ten to thirty respondents are optimal for the assignment, however, Connelly (2008) suggests that ten percent of the sample respondents will be enough for pilot testing. According to Kazimoto (2016), an appropriate sample size for pilot research is between 25 and 100 respondents. As suggested by Graue (2015), the pilot test in the present investigation was conducted using a sample of 15 respondents judged suitable. Few discovered concerns will be utilized to modify the questionnaire for the primary data collection.

3.9 Method of Data Analysis

The method of data analysis is a crucial component of any research, and the method selected has a significant impact on the quality of the findings, conclusions, and recommendations derived from the data. As a quantitative study, different quantitative techniques were utilised to analyze the data to achieve the objective specified in chapter one. After data was collected, it was compiled in Excel for examination. A few incomplete questionnaires were discarded as a result of the examination. Both Statistical Packages for the Social Sciences (SPSS) version 26.0 and Smart PLS 3 were utilized in the analysis. SPSS was utilised for analyses involving frequencies, means, standard deviations, correlation, and exploratory factor analysis. In this work, Smart PLS-SEM was utilized for Confirmatory Factor analysis, Structural Model evaluation, and other model fit indices.

3.10 Validity of the Construct

A vital feature of the research is verifying that the instrument designed to evaluate particular concepts accurately measures those concepts. According to Goertzen (2017), validity refers to the degree to which an instrument evaluates its intended emphasis. Face, content, convergent, and discriminant validity will be used to evaluate the validity of the study instrument (Henseler, Ringle, and Sarstedt, 2015). Henseler et al. (2015) assert that the approach employed to design the questionnaire is the most crucial aspect of content validity. The content validity of researched

constructs was determined by a comprehensive evaluation of prior empirical and theoretical work. The face validity of the questionnaire was determined through a pretest administered to a subset of Ghanaian manufacturing SME managers of the questionnaire's relevance and suitability for achieving the study's objectives.

Both convergent and discriminant validity was established to verify the constructs which were distinct from one another and would capture some phenomena (Egbunike and Okerekeoti, 2018; Fang et al., 2019). When two or more items measure the same construct and are highly correlated, they are said to have convergent validity. According to Hair et al. (2011, 2014), to establish the convergent validity of the reflective measurement model while employing PLS-SEM, a researcher must analyze the average variance extracted (AVE) and ensure that its value is at least 0.50. The study will analyze two measures of the Fornell-Larcker Criterion and cross-loading to determine the discriminant validity, which is the degree to which the measures of one construct are distinct from those of another construct (Henseler et al., 2015). The Fornell-Lacker Criterion asserts that "the latent concept has more variance with its assigned indicators than other latent variables in the structural model." In statistical terms, it can also be said that each latent construct should have a greater average variance extracted (AVE) than the shared variance (squared correlation) of any other latent construct for discriminant validity, which is to have the cross-loading value in which the indicator loading of the associated latent construct should be greater than its loading with other constructs remaining constant (Hair et al., 2011).

3.12 Reliability

Reliability refers to the consistency that is consistently reached and reached repeatedly, which is evidence of the instrument's stability and predictability in measuring the idea (Mohajan, 2017). This could also be considered the ability to duplicate a study or its findings. According to Khalid et al. (2012), dependability measurement is the extent to which a measurement is free of random

error by consistently delivering the same result. To determine the reliability of the instruments, Hair et al. (2012) offer two tests, namely Cronbach's alpha and Cronbach's kappa. The internal consistency and dependability indication will be utilised. The composite Reliability test was used instead of Cronbach Alpha to rank the variables according to their reliability during model estimation (does not imply that all variables are equally trustworthy), making it more suitable for PLS-SEM. Composite Dependability values between 0.7 and 0.9 show adequate reliability of the measures.

3.13 Ethical Consideration

Detailed instruction was given to the participants on how to answer the questionnaire and returned it. Also, the research essence was elucidated to individuals, and privacy was assured. The researcher gave considerable effort to obtain the data from a representative sample.

3.14 Chapter Summary

This chapter of the study was dedicated to the methodology section of the entire study. It depicts the research design for the study, as well as outlines the individuals and figures that will constitute the study. The method to adopt in sampling the population, as well as the measurement of the research instrument, is also mentioned and finally how to ensure some ethical standards are adhered to is enumerated to close the chapter on this section.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.0 Introduction

The fourth chapter analyses the data presented in the third chapter. This chapter is broken up into four pieces. The first chapter contains the findings of the exploratory data analysis, while the following part contains the profile of the respondents. Both descriptive and correlational aspects of the study were taken into consideration. The third component contains both the Confirmatory Factor Analysis as well as the Model Fit Index. The hypotheses of the investigation are tested using a regression model. The discussion will conclude with the key outcomes.

4.1 Exploratory Data Analysis

The nature of the first investigation of the data was exploratory. An exploratory factor analysis was performed at the beginning to evaluate the quality of the data. The most important tool was SPSS. Response rate, non-response bias, and typical method bias or variance are the subheadings that are included in this part. Detailed explanations of the early data quality assessment tests and interpretation may be found in the following sections.

4.1.1 Response Rate

Response rates to surveys are often provided in the form of a percentage. To arrive at this figure, just divide the total number of questionnaires that were sent in by the final count of respondents who filled them out. Response rates in surveys that are higher than 50 per cent are unusual. The dates were from October 5th to December 22nd, 2022 for the data collection. The research needed 154 participants. After determining whether or not each questionnaire is valid, an appropriate response rate for analysis is determined to be 100.0 per cent, as indicated in Table 4.1 below. This results in 154 questions that may be used.

Table 4. 1 Data Response Rate

Distributed	Collected	Percentage of Usable
Response	154	100.0
Non-Response	0	0.0
Total	154	100.0

Source: Field Survey (2023)

4.1.2 Test for Common Method Bias and Sampling Adequacy

Due to the high degree of dependency on a single respondent, Common Method Bias (CMB) problems may skew the connection between predictors and the dependent variable, making testing for them essential in survey research (Podsakoff and Organ, 1986; Bahrami et al., 2022). This leads to making poor decisions. Podsakoff et al. (2003) state that CMB originated from a need to be consistent or well-liked by society. Many methods exist for reducing the potential effects of CMB on data collection and analysis. It was determined using Exploratory Factor analysis that Harman's proposed one-factor solution is correct; no one factor accounted for more than half of the total variation. The principal component analysis found that the variables accounted for 45.8% of the total variance.

Table 4. 2 Common Method Bias

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.051	45.839	45.839	9.051	45.839	45.839
2	2.718	19.546	65.385	2.718	19.546	65.385
3	1.469	8.161	73.546	1.469	8.161	73.546
4	0.616	3.421	76.967			
5	0.525	2.919	79.887			
6	0.433	2.405	82.291			
7	0.408	2.268	84.559			
8	0.369	2.052	86.611			
9	0.354	1.965	88.577			
10	0.295	1.637	90.214			
11	0.289	1.608	91.822			
12	0.264	1.464	93.286			
13	0.252	1.401	94.686			
14	0.217	1.205	95.891			
15	0.208	1.155	97.046			

16	0.195	1.082	98.128
17	0.173	0.959	99.087
18	0.164	0.913	100

Extraction Method: Principal Component Analysis.

The accuracy of the samples was further evaluated using the Bartlett sphericity test and the Kaiser-Meyer-Olkin (KMO) test. On the basis of the data in Table 4.3, the Kaiser-Meyer-Olkin Sampling Adequacy score was 92.7%, and Bartlett's test demonstrated statistical significance ($\chi^2=5692.901$, df: 153, $p = 0.000$). This provides proof that the sampling was done correctly.

Table 4. 3 Bartlett's Test of Sphericity and KMO Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.949
Bartlett's Test of Sphericity	Approx. Chi-Square	5692.901
	df	153
	Sig.	0.000

Source: Field Survey (2023)

4.1.3 Non-Response Bias

The study looked at the possibility of non-response bias. A non-response bias happens when there are fewer respondents to a survey than there are people in the population. A small survey response rate results in non-response bias, which has the potential to compromise the reliability of the sample and the generalisability of the research. To lessen the impact of non-response bias in this research, a comparison was made between early and late respondents. According to Oppenheim (2001), "early responders" and "late respondents" shouldn't vary in any of the model's input variables. This indicates that there is no need to worry about non-response bias and that the samples correctly reflect the population as a whole. The early replies totalled 147, but the late ones only tallied 146. The possibility of non-response bias was investigated using T-tests. The results of the t-test indicated that there was no significant difference (see Table 4.4). The research demonstrates that the build data for the first month and the last month are the same.

Table 4. 4 Results of Independent-Samples t-Test for Non-Response Bias

	Group	Mean	Levene's Test for Equality of Variances		
			F	Sig.	t
Inventory Management	1	14.45	0.9	0.344	-1.885
	2	15.35			
Cash Conversion Cycle	1	10.71	1.131	0.289	-1.889
	2	11.48			
Account Receivable Management	1	11.09	0.14	0.709	-1.674
	2	11.68			
Financial Performance	1	26.64	1.157	0.284	-0.517
	2	26.99			

Source: Field Survey (2023)

4.2 Profile of Respondents

The study gathered background information about respondents and small and medium-sized firms (SMEs). The information is gender, age, and education. The study project delivered at least 50% more questionnaires than the minimal sample size to account for non-responses, non-retrieval, and missing data. Table 4.5 includes the above information and the responder's background.

Table 4. 5 Profile of Respondents

Variables	Categories	Frequency	Per cent
Gender	Female	72	46.8
	Male	82	53.2
Age	18 - 30 Years	37	24.0
	31 - 40 Years	66	42.9
	41 - 50 Years	39	25.3
	Above 50 Years	12	7.8
	Total	154	100.0
Level of Education	Bachelor Degree	67	43.5
	Diploma	34	22.1
	Graduate Studies (Master / PhD)	53	34.4

Source: Field Survey (2023)

The 154 valid replies were 46.8% female and 53.2% male. Males outnumbered females in the research, according to these statistics. 24.0% of the 154 respondents were 18–30, 42.9% were 31–40, 25.3% were 41–50, and 7.8% were above 50. The majority of respondents were 31–40 years old, according to the data. 43.5% had a bachelor's degree, 22.1% had a diploma, and 34.4% had

graduate studies (Master's or PhD). The statistics suggest that the majority of respondents have a bachelor's degree.

4.3 Correlation Analysis

The data shown in Table 4.6 reveals that there are very significant correlations between the four variables of account receivable management, cash conversion cycle, financial performance, inventory management ($r = 0.833, P < 0.05$; $r = 0.708, P < 0.05$; $r = 0.570, P < 0.05$, $r = 0.636, P < 0.05$; $r = 0.611, P < 0.05$; and $r = 0.624, P < 0.05$ respectively). For instance, a correlation value of 0.0 indicates that there is no link, 0.30 indicates that there is just a moderate correlation, and 0.70-0.90 indicates that there is a considerable association. There is a considerable relationship between all of the different factors.

Table 4. 6 Descriptive and Correlation Analysis

Construct	1	2	3	4
Account Receivable Management	1.000			
Cash Conversion Cycle	0.833	1.000		
Financial Performance	0.708	0.636	1.000	
Inventory Management	0.570	0.611	0.624	1.000

Source: Field Data, 2023

4.4 Confirmatory Factor Analysis

The validity assessment of research models is crucial. The study's authors utilised Cronbach's alpha and the Composite reliability test to evaluate the model's consistency. To test the reliability of the model, we employed AVE and indication loadings. Cronbach's alpha was calculated to be 0.7, and a composite reliability score was utilised to examine the degree to which the various constructs in this research were consistent with one another. Table 4.7 shows that both Cronbach's alpha and the composite reliability index are higher than 0.80 (Hair et al., 2016). The properties of the measurement model are supported by these results. There was no sign of loading below 0.7. Convergent validity may be established. For AVE values over 0.5, convergent validity was established. (Take a look at Table 4.7.) Table 4.7 shows that the t-test found all of the variables to

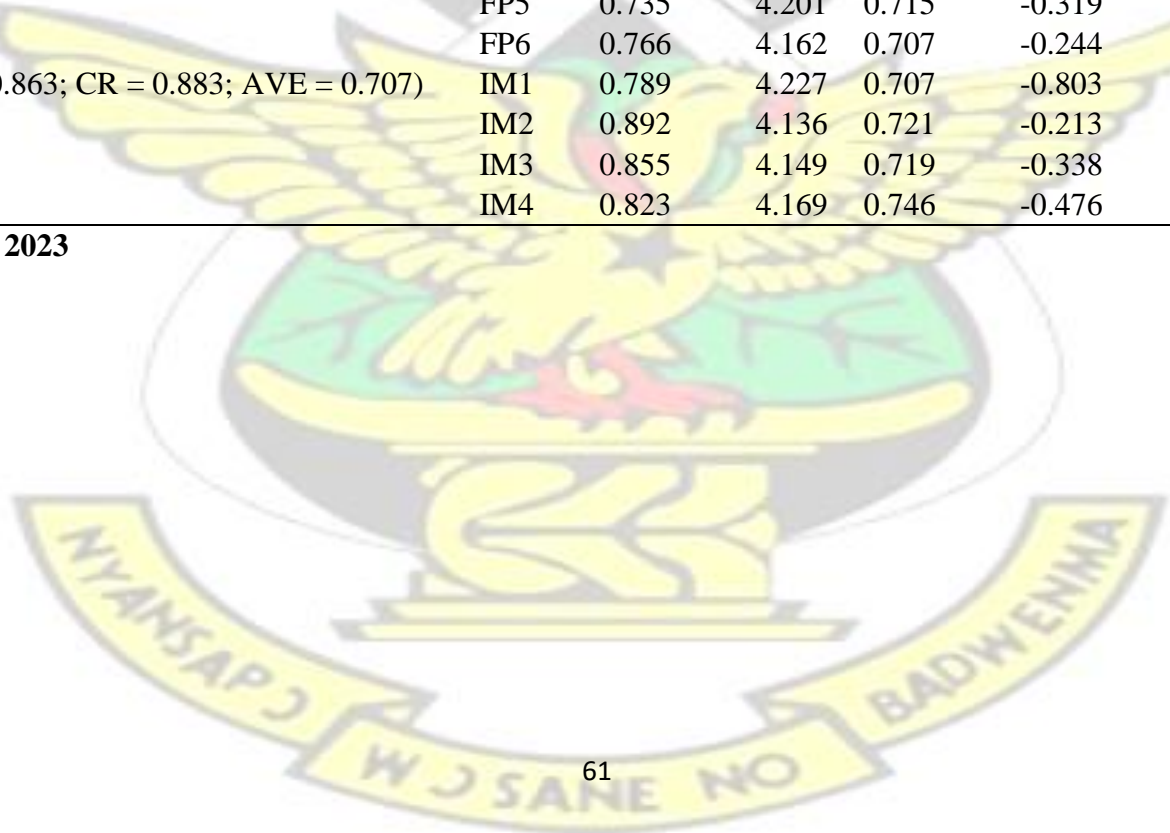
be statistically significant at the 1.96-percentile level and Sig. < 0.05. Check out Table 4.7 for more descriptive statistics. Calculated as: (Mean and Standard Deviation). The average in the table ranges from 3.942 to 4.286. The range of standard deviations was 0.668-0.899. Before the hypotheses testing, multicollinearity was evaluated using VIF, the result demonstrated that VIF values recorded in this study were below the 3.3 thresholds recommended by (Kock, 2015) (see Table 4.10).



Table 4. 7 Confirmatory Factor Analysis

Scales	Codes	Outer Loadings	Mean	Std. Dev.	Skewness	T statistics (O/STDEV)	P values	VIF
Account Receivable Management (CA = 0.798; CR = 0.825; AVE = 0.831)	ARM1	0.891	4.195	0.703	-0.408	42.856	0.000	1.790
	ARM2	0.931	4.286	0.771	-0.802	88.297	0.000	1.790
Cash Conversion Cycle (CA = 0.810; CR = 0.887; AVE = 0.718)	CCC1	0.726	3.942	0.899	-0.913	8.896	0.000	1.670
	CCC2	0.878	4.156	0.774	-0.533	38.915	0.000	1.854
	CCC3	0.925	4.208	0.718	-0.441	90.092	0.000	2.460
Financial Performance (CA = 0.854; CR = 0.858; AVE = 0.578)	FP1	0.704	4.117	0.772	-0.718	10.063	0.000	2.676
	FP2	0.785	4.058	0.749	-0.751	14.349	0.000	3.059
	FP3	0.795	4.182	0.76	-0.679	20.357	0.000	2.238
	FP4	0.772	4.201	0.668	-0.391	24.422	0.000	2.059
	FP5	0.735	4.201	0.715	-0.319	18.221	0.000	2.012
	FP6	0.766	4.162	0.707	-0.244	19.682	0.000	1.993
Inventory Management (CA = 0.863; CR = 0.883; AVE = 0.707)	IM1	0.789	4.227	0.707	-0.803	15.206	0.000	1.918
	IM2	0.892	4.136	0.721	-0.213	57.263	0.000	2.625
	IM3	0.855	4.149	0.719	-0.338	37.486	0.000	2.170
	IM4	0.823	4.169	0.746	-0.476	26.081	0.000	2.121

Source: Field Data, 2023



4.3.1 Discriminant Validity

The study also examined the differences between constructs (Hair et al., 2010; Henseler et al., 2016b). When assessing discriminant validity, each latent variable's square root of the AVE (diagonal value) must be bigger than the construct's maximum correlation. Table 4.8 shows discriminant validity. Again, multicollinearity is not present (Byrne, 2013). Table 4.8 reveals that ARM is 0.911 with itself, 0.833 with CCC, 0.708 with FP, and 0.570 with IM. CCC was 0.847 with itself, 0.636 with FP, and 0.611 with IM. FP was 0.760 with itself and 0.624 with IM. IM correlated 0.841.

Table 4. 8 Fornell-Larcker criterion

Construct	1	2	3	4
Account Receivable Management	0.911			
Cash Conversion Cycle	0.833	0.847		
Financial Performance	0.708	0.636	0.760	
Inventory Management	0.570	0.611	0.624	0.841

Source: Field Data, 2023

4.3.2 Model fitness indices

The values for the Extracted-Index Fitness, SRMR, Root Mean Square of Approximation, and Chi-Square are all appropriate (Table 4.9). Both the rare and extracted indices are much lower than 0.9, the threshold for acceptability. Considering that the square of the residual is not close to zero, the root demonstrates that the residual is unsatisfactory. The Root Mean Square Approximation and the Total Residual Value are both unacceptable. These numbers are much larger than 0.1 and 3. This suggests that all relevant factors need to be taken into account in future research. An SRMR of 0.089 was found in Table 4.9, which is within the range of values considered acceptable in this research. Chi-square = 458.622, and the normed fit index was 0.710.

Table 4. 9 Model fitness indices

Model fitness indices	Estimated model
SRMR	0.089
d_ ULS	0.950
d_ G	0.526
Chi-square	458.622
NFI	0.710

Source: Field Data, 2023**4.3.3 Predictive Relevance (R² and Q²)**

Hair et al. (2018) consider R² values of 0.75, 0.50, and 0.25 high, moderate, and weak. However, Chin et al. (2020) suggest interpreting the R² in the context of the connected field. Table 4.10 and Figure 4.1 show moderate model prediction accuracy (R²) for innovation direction and quality orientation, respectively. ARM, CCC, and IM may explain 57.3% of financial performance variation. Since its predictive power is average, the model is suitable for prediction.

Q-square is also a PLS model accuracy check (Geisser, 1974; Stone, 1974). This metric involves blindly picking one data point from a matrix, establishing the abstract point, and estimating the model phase (Rigdon, 2014b; Sarstedt et al., 2014). Thus, Q² is not a prediction approach but a strategy that combines sample prediction with descriptive power (Shmueli et al., 2019; Sarstedt et al., 2017a). This blindfold estimate predicts the leaked data. Since the predicted value is close to the baseline, a greater Q² score implies better accuracy. The structural model can forecast an endogenous with a Q² greater than zero. Q-square PLS-path model predictive significance improves from 0 to 0.25 to 0.50. The data show Q² values of 0.553 for financial performance (see Table 4.10). The model predicted somewhat. Since all Q-square values are over the threshold, the values have been reconstructed and the model is predictive.

Table 4. 10 Predictive Relevance (R²) and Q²

Construct	R-square	Q ² predict
Financial Performance	0.573	0.553

Source: Field Data, 2023

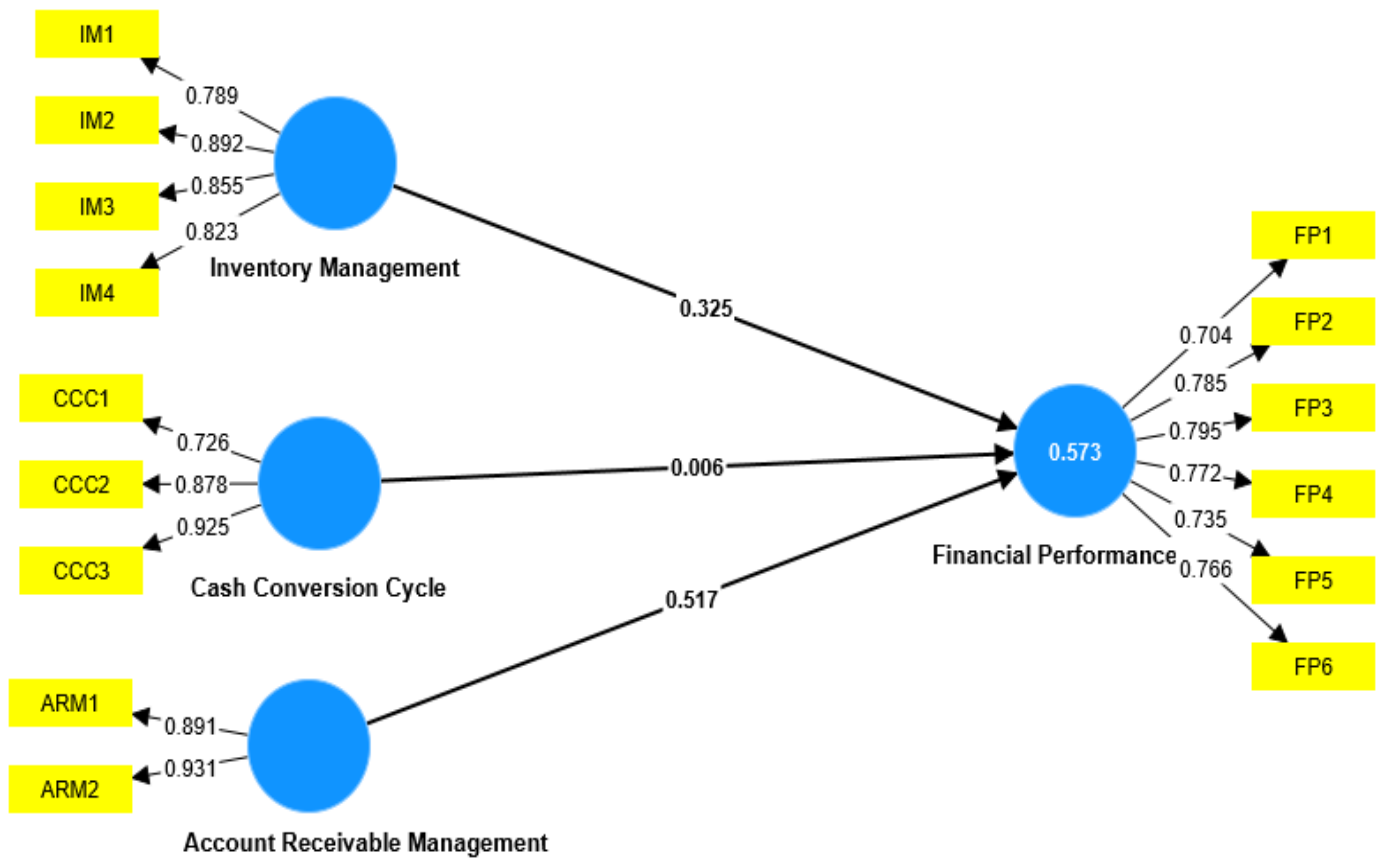


Figure 4. 1 Measurement Model Assessment

4.5 Hypotheses for Direct and Indirect Relationship

Figure 4.2 depicts the structural model evaluation portion of the second phase of the analysis. Table 4.11 and Figure 4.2 display the evaluation of the structural model's findings. The significance of the four (4) paths in the model was evaluated using the PLS bootstrapping technique with 5,000 samples. The purpose of this study was to examine the effect of working capital management practices on the performance of manufacturing SMEs in Ghana. The analyses of the direct and indirect relationships as depicted in Table 4.11 and Figure 4.2 are discussed in this section.

Table 4. 11 Hypotheses for Direct and Indirect Relationship

Path	Path Coefficient	T statistics (O/STDEV)	P values	Hypothesis Validation
Account Receivable Management -> Financial Performance	0.517	6.735	0.000	Accepted
Cash Conversion Cycle -> Financial Performance	0.006	0.083	0.934	Rejected
Inventory Management -> Financial Performance	0.325	5.331	0.000	Accepted

Source: Field Data, 2023

Table 4.11 shows that the relationship between ARM and financial performance is significant ($B = 0.517$, $t = 6.735$, $P = 0.000$, and $\text{Sig} < 0.05$). Given that the p-value for H1 was less than 0.05 and the path coefficient was positive, it can be concluded that ARM has a direct effect on financial performance. ARM enhances financial performance. Financial performance is predicted to improve by 0.517% when ARM goes up by one unit.

The coefficient of CCC in the regression model is 0.006, implying that a one-unit change in CCC is associated with a very small change in financial performance. The t-value of 0.083 indicates that this coefficient estimate is not significantly different from zero, which is further supported by the high p-value of 0.934. As the p-value is greater than the common threshold of 0.05, there is insufficient evidence to suggest that CCC has a direct effect on financial performance. Therefore, based on this analysis, it can be concluded that CCC does not have a statistically significant relationship with financial performance.

The coefficient of 'IM' in the regression model is 0.325, suggesting that a one-unit change in 'IM' is associated with a substantial change of 0.325 units in the dependent variable, 'financial performance.' The t-value of 5.331 indicates that this coefficient estimate is significantly different from zero, suggesting a strong relationship between 'IM' and 'financial performance.' The p-value of 0.000 provides strong evidence against the null hypothesis, indicating that 'IM' has a statistically

significant influence on 'financial performance.' Thus, based on this analysis, it can be concluded that 'IM' directly and significantly influences financial performance.

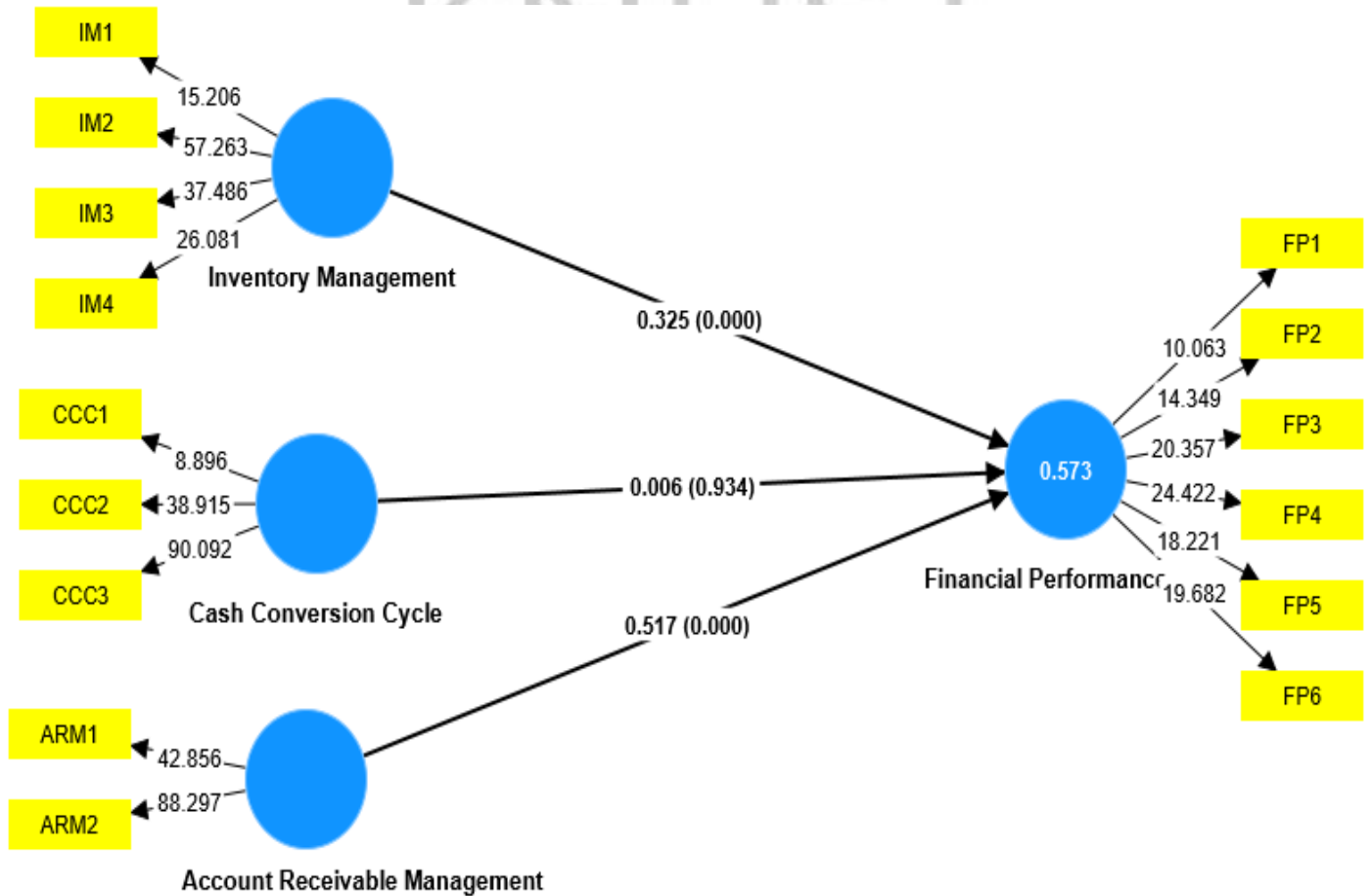


Figure 4. 2 Structure Model Evaluation

4.6 Discussion of Key Findings

The purpose of this study was to examine the effect of working capital management practices on the performance of manufacturing SMEs in Ghana. This section has presented a discussion of the key findings in line with existing theories and studies.

4.6.1 Effect of Cash Conversion Cycle on Financial Performance

The first goal of this study examines the effect of cash management on the performance of manufacturing SMEs in Ghana. The result reveals that CCC had an insignificant direct influence on financial performance. This implies that the relationship between CCC and financial performance, as evaluated in the context of the study, is not strong enough to conclude that changes in CCC directly cause substantial changes in financial performance. Previous empirical research (Altaf and Ahmad, 2019; Moussa, 2018; Chauhan and Banerjee, 2017; Singhanian and Mehta, 2017) has employed CCC to evaluate working capital efficiency. The CCC measures the gap between raw material costs and sales income (Altaf and Shah, 2018a). A longer CCC provides customers more time to pay, which enhances corporate profitability, according to previous research (Alsulayhim, 2019). It may also help customers compare products from various companies (Qurashi and Zahoor, 2017). Hence, it may reduce buyer-seller knowledge gaps (Tingbani, 2015). CCC may boost corporate profitability (Altaf and Shah, 2017; Afrifa and Padachi, 2016). Conversely, a shorter CCC shows how well a company manages its working capital (Azhar, 2017). Lowering CCC to the minimum frees up cash flows and reduces the firm's need for outside funding (Olaoye et al., 2019). This might reduce the company's borrowing expenses, boosting profits (Soukhakian and Khodakarami, 2019). As evidenced by these explanations, CCC may also negatively affect corporate performance (Bhatia and Srivastava, 2016; Moussa, 2018; Alsulayhim, 2019). The aforementioned study has not considered a trade-off between WCM's positive and negative effects on corporate profitability. Chalmers et al. (2020) found a non-linear relationship between WCM and Spanish SME profitability.

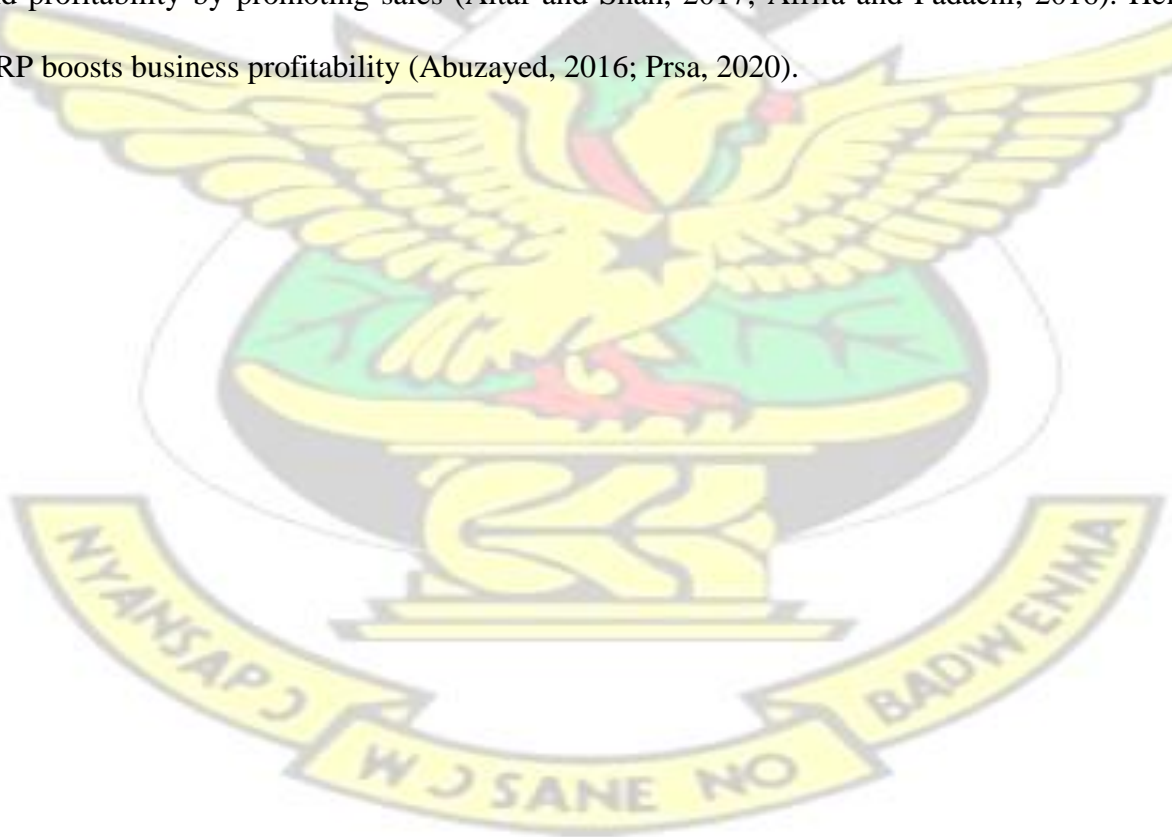
4.6.2 Effect of Inventory Management on Financial Performance

The second objective explores the influence of inventory management on manufacturing SMEs' performance. The result reveals that IM had a significant direct influence on financial performance. The finding implies that there's strong evidence to support the notion that how an organization manages its inventory directly and significantly affects its financial performance. This could involve reducing costs associated with excess inventory, minimizing stockouts, improving cash flow, and potentially increasing profitability. This result concluded that management should stock out expenses of invention and frequency of inventory budgeting to boost net earnings, boost asses return, save electricity, and decrease inventory management expenses. The inventory conversion period (ICP) is the time enterprises take to sell their inventories. Manufacturing companies' largest expenditure is inventory (Zheng, Zhou, and Iqbal, 2022). Company profitability may depend on inventory management strategy. A corporation that invests less in inventory may prevent obsolescence and holding expenses, but it may lose revenue (Tingbani, 2015). A corporation may keep more inventory to meet market demand, but this approach exposes it to obsolescence, holding, and storage costs (Qurashi and Zahoor, 2017). These factors show that companies must weigh the pros and downsides of inventory. Hence, ICP may affect business profitability nonlinearly. Note that Afrifa and Tingbani (2018) discovered this connection for AIM-listed Businesses.

4.6.3 Effect of Account Receivable Management on Financial Performance

The final goal of this study evaluates the effect of liquidity management on the performance of manufacturing SMEs in Ghana. The result concludes that ARM has a direct effect on financial performance. ARM enhances financial performance. This suggests that changes or improvements in account receivable management practices directly impact financial performance. In other words, alterations in how the company manages its outstanding customer payments have a clear and

immediate effect on its financial results. This could involve factors like reducing bad debt, improving cash flow, enhancing liquidity, and contributing to better overall financial health. Accounts receivable result from the delay between sales and cash receiving (Altaf and Shah, 2018a; Kazimoto, 2016). Hence, accounts receivable are the company's trade credit to customers (Afrifa and Padachi, 2016). ARP and company profitability studies are unclear. Lowering ARP increases cash flows, which may be used as a safety net in troubled times (Kazimoto, 2016). ARP reduction also reduces bad debts (Altaf and Ahmad, 2019). Hence, ARP may hurt business profitability (Mathuva, 2015; Moussa, 2018; Alsulayhim, 2019). Opposing views exist also. Some researchers believe a longer ARP may boost business profits. They say a longer ARP allows them more time to examine product quality (Alsulayhim, 2019). Extended trade credit boosts revenue and profitability by promoting sales (Altaf and Shah, 2017; Afrifa and Padachi, 2016). Hence, ARP boosts business profitability (Abuzayed, 2016; Prsa, 2020).



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

This section discusses and interprets the results of this research work and presents the conclusion of the study. It summarizes the findings in connection with the objectives of the study, as per the empirical findings in the previous chapter. The main thrust of this chapter is to present the summary of findings and conclusions concerning the contribution of the study emanating from the research objective which is to examine the effect of working capital management practises on the performance of manufacturing SMEs in Ghana. The chapter further talks about the limitations of the research and also provides suggestions for future research directions.

5.1 Summary of Findings

5.1.1 Effect of Cash Conversion Cycle on Financial Performance

The first goal of this study examines the effect of cash management on the performance of manufacturing SMEs in Ghana. The result reveals that CCC had an insignificant direct influence on financial performance. This implies that the relationship between CCC and financial performance, as evaluated in the context of the study, is not strong enough to conclude that changes in CCC directly cause substantial changes in financial performance.

5.1.2 Effect of Inventory Management on Financial Performance

The second objective explores the influence of inventory management on manufacturing SMEs' performance. The result reveals that IM had a significant direct influence on financial performance. The finding implies that there's strong evidence to support the notion that how an organisation manages its inventory directly and significantly affects its financial performance. This could involve reducing costs associated with excess inventory, minimizing stockouts, improving cash flow, and potentially increasing profitability.

5.1.3 Effect of Account Receivable Management on Financial Performance

The final goal of this study evaluates the effect of liquidity management on the performance of manufacturing SMEs in Ghana. The result concludes that ARM has a direct effect on financial performance. ARM enhances financial performance. This suggests that changes or improvements in account receivable management practices directly impact financial performance. In other words, alterations in how the company manages its outstanding customer payments have a clear and immediate effect on its financial results. This could involve factors like reducing bad debt, improving cash flow, enhancing liquidity, and contributing to better overall financial health.

5.2 Conclusion

This study was conducted to examine the effect of working capital management practices on the performance of manufacturing SMEs in Ghana. This study employed quantitative cross-sectional descriptive research. Convenient and purposive sampling was used to select 154 participants. To gather information, mostly a pre-made questionnaire was employed. The statistical analysis was performed using both SPSS v26 and SmartPls v4. The result reveals that the cash conversion cycle had an insignificant direct influence on financial performance. The result reveals that inventory management had a significant direct influence on financial performance. Finally, the result concludes that account receivable management has a direct effect on financial performance. This study contributes valuable knowledge to the realm of business and finance, offering a well-rounded understanding of the dynamics that shape financial performance. The findings serve as guiding beacons for businesses seeking to optimize their operations and strategies, ultimately contributing to sustainable financial success in today's dynamic business environment.

5.3 Recommendations for Management

These recommendations from stakeholders are informed by the findings of the research. These ideas need to be investigated by both management and academia.

The result reveals that CCC had an insignificant direct influence on financial performance. With CCC, financial performance decrease. The study concluded that management should rewards debt-paying customers and pay creditors early to boost net earnings, boost asses return, saved electricity, and decrease inventory management expenses.

The result reveals that IM had a significant direct influence on financial performance. With IM, financial performance improves. The study concluded that management should stock out expenses of invention and frequency of inventory budgeting to boost net earnings, boost asses return, save electricity, and decrease inventory management expenses.

The result concludes that ARM has a direct effect on financial performance. ARM enhances financial performance. The study concluded that management should reduce bill-paying time and diligent follow-up accounts receivable collection to boost net earnings, boost asses return, save electricity, and decrease inventory management expenses.

5.4 Limitations and Recommendations for Future Research

The scope of further research is constrained by this study. First, a representative sample of firms under review was taken. As a result, the findings of a manufacturing sector study could be more applicable to the population as a whole. It is difficult to demonstrate causation using a cross-sectional design. The possibility exists that further longitudinal and panel investigations will confirm causality. The effect of working capital management practices on the performance of manufacturing SMEs in Ghana was investigated using quantitative methods. Comparative studies need qualitative research. This study demonstrates that alternative methods of statistical analysis

might be helpful for future research. The results of this research might be replicated in other nations.

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APPENDIX I

SURVEY QUESTIONNAIRE

Dear Sir/ Madam,

This survey instrument has been designed to enable me to carry out research on the topic: “the effect of working capital management practises on the performance of manufacturing SMEs in Ghana”. Any information provided will be used for academic purposes ONLY. There are no risks associated with your participation, and your responses will remain confidential and anonymous.

SECTION A: RESPONDENT’S BIOGRAPHY AND COMPANY PROFILE

When completing this questionnaire, please tick [] in the applicable box or provide an answer as applicable.

Please answer the following questions:

1. Gender: Male Female

2. Age

18-30 years 31-40 year’s 41-50 years Above 50 years

3. Level of Education

Junior High School Senior High School Diploma Bachelor Degree

Graduate Studies (Master / Ph.D.) Others For Others, please specify.....

SECTION B: Inventory Management

The following area is geared toward understanding inventory management and the effectiveness of inventory management practices. On a scale of 1-5 (1-Never, 2- Rarely, 3-Sometimes, 4-Often, and 5-Very Often) respond to the following questions appropriately

Inventory Management	1	2	3	4	5
a) Frequency of inventory budgeting					
b) Frequency of review of inventory levels					
c) Frequency of stock monitoring					
d) Frequency of stock-out costs of inventor					

Musau (2015).

SECTION C: Cash Conversion Cycle

The following area is geared toward understanding cash conversion practices. On a scale of 1-5 (1-Never, 2- Rarely, 3-Sometimes, 4-Often, and 5-Very Often) respond to the following questions appropriately

How often	1	2	3	4	5
a) Does your firm do bills for customer					
b) Does the firm make incentive time for customers who pay their debts					
c) Does the period of paying creditors delay in your firm?					

Musau (2015).

SECTION D: Account Receivable Management

This section is geared to understand the techniques this firm uses to manage account receivable time. On a scale of 1-5 (1-Never, 2-Rarely, 3-Sometimes, 4-Often, and 5- Very Often), kindly provide the frequency of usage of such methods.

Account Receivable Management	1	2	3	4	5
a) Reduction of the time frame a customer is given to pay a bill					
b) Diligent follow-up on collections of accounts receivable					
c) Review of credit policies and credit histories of customers such that unprofitable customers are eliminated					

Musau (2015).

SECTION E: Financial Performance

Please use a 5-point scale which measures from “1 = strongly disagree” to “5 = strongly agree” to indicate whether or not you agree with the following statement:

	1	2	3	4	5
My business experience in increased sales growth					
My business experience in increased gross profit margin					

My business experience in increased net profit return					
My business experience in increased return on assets					
My business experienced a reduction in energy consumption cost					
My business experienced reduced inventory management cost					

Agyabeng-Mensah et al. (2020a, Abushaikha (2018) b, c, d), Nawanir et al. (2013),

Thank you for participating in the survey.

