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COLLEGE OF HUMANITIES

STRATEGIC MANAGEMENT ACCOUNTING PRACTICES AND FIRM PERFORMANCE: THE MODERATING ROLE OF ENVIRONMENTAL UNCERTAINTY AND ECONOMIC CRISIS

BY

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(10875783)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF A MASTER OF PHILOSOPHY (MPHIL) IN ACCOUNTING DEGREE

JUNE, 2023

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DECLARATION

I, Stephen Kweku Ackon, do hereby declare that this research study is my work undertaken at the University of Ghana, specifically; the University of Ghana Business School. Also, the study has not been published by anyone else before, and neither has it been approved for a degree at this university or any other university. Nonetheless, all prior research studies and references used in my work were duly acknowledged. I, therefore, declare that I am solely responsible and accountable for any material or marginal shortcomings of this study.

25th October, 2023

……. ……...

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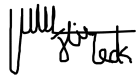
CERTIFICATION

I hereby certify that the preparation and presentation of this research work were supervised in conformance with the guidelines stipulated by the University of Ghana.



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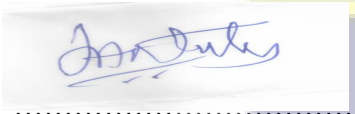

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DEDICATION

I am humbled and privileged to dedicate this work to the Almighty God and my supportive family in appreciation of their assistance toward the successful completion of my program. Again, to my parents for shaping me to believe that there is nothing great that can be accomplished without perseverance, sacrifice, and hard work; yet with humility and favour coupled with God's grace and mercies, I can accomplish my goals and aspirations.

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A renowned scholar Alfred North Whitehead in a quote stated, "*No one who achieves success does so without acknowledging the help of others, the wise and confident acknowledge this help with gratitude*". Likewise, I say:

To God be the Glory, for great and mighty things the Lord has done and continues to do, however, my words cannot express how grateful I am to the Almighty God for His guidance and protection throughout my program of study. I would like to also express my heartfelt gratitude to my supervisors, Dr. Teddy Ossei Kwakye and Dr. Edward Nartey, for their time and assistance in diverse capacities, which yielded insightful contributions from the beginning of the project to its successful completion. The study has benefited greatly from their significant contributions, and without their support, the completion of this thesis would not have been possible. In addition, I would like to express my utmost gratitude to all the lecturers, staff, and other stakeholders of the Accounting Department of the University of Ghana Business School for their advice, criticisms, and constructive comments on the study.

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LIST OF ABBREVIATIONS

AGI	Association of Ghana Industries
AICPA	American Institute of Certified Public Accountants
AVE	Average Variance Extracted
CB-SEM	Covariance Based – Structural Equation Modelling
CGMA	Chartered Global Management Accountant
CIMA	Chartered Institute of Management Accountants
GDP	Gross Domestic Product
GEA	Ghana Enterprise Agency
GMAP	Global Management Accounting Principles
GSS	Ghana Statistical Service
HTMT	Heterotrait- Monotrait
MA	Management Accounting
MAI	Management Accounting Innovations
MAP	Management Accounting Practices
MAS	Management Accounting System
MCS	Management Control System
MO	Market Orientation
MSMEs	Micro, Small and Medium Sized Enterprises
OECD	Organisation for Economic Co-operation and Development
PEC	Perceived Economic Crisis
PEU	Perceived Environmental Uncertainty
PLS-SEM	Partial Least Square Structural Equation Modelling
SCM	Strategic Cost Management
SD	Standard Deviation

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SEM	Structural Equation Modelling
SMA	Strategic Management Accounting
SMEs	Small and Medium-sized Enterprises
TMAP	Traditional Management Accounting Practices
TMT	Top Management Team
UGBS	University of Ghana Business School
UNIDO	United Nations Industrial Development Organization
VIF	Variance Inflation Factors
WHO	World Health Organization

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ABSTRACT

Technological advancement, coupled with uncertainties such as COVID-19, has caused immense changes in the business environment. This has compelled organisations to adapt their operations to meet current demands. Consequently, it has become necessary to implement contemporary accounting practices referred to as Strategic Management Accounting (SMA). This study aims to examine the impact of SMA practices on firm performance among Small and Medium-sized Enterprises (SMEs) in Ghana; and to investigate the effect of contextual factors (perceived environmental uncertainty and perceived economic crisis) on the relationship between SMA and firm performance. A cross-sectional survey design was used to gather data from 228 SME owners and managers drawn from the databases of the Ghana Enterprise Agency and the Association of Ghana Industries. The Partial Least Square Structural Equation Modelling (PLS-SEM) approach was used in analysing the data. Findings reveal that SMA Usage has a positive significant influence on firm performance. Moreover, perceived environmental uncertainty and perceived economic crisis significantly moderate the relationship between SMA Usage and firm performance. Findings suggest that the application of SMA techniques enhances firm performance; however, this depends on the alignment of the firm's structure with its context. The findings will help policymakers, professional bodies, and SME owners and managers to come up with strategies to help businesses decrease and mitigate the impact of uncertainties. This study is among the few that considered economic crisis in the management accounting literature, hence provides insightful avenues for further research.

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CHAPTER ONE

INTRODUCTION

1.1 Overview of Chapter

This section captures the initial chapter of the study. It provides a general overview of the current study; and gives a background for the study, which serves as a building block for identifying the research problem and how the remaining portions of the thesis is organised.

1.2 Background of the Study

Over a few decades, transformations in the business models used by entities due to the dynamic business environment and technological advancement have challenged the relevance of conventional management accounting tools within management and accounting literature (Nik Abdullah et al., 2022; Ma et al., 2022; Chenhall & Moers, 2015; Pasch, 2019; Rashid et al., 2021; Zawawi & Hoque, 2010). In response to these changes, management innovations such as Strategic Management Accounting (SMA) were introduced in the 1980s. These innovations aimed to overcome the limitations of traditional management accounting, which was criticised for being internally focused. SMA is externally oriented, long-term, and places emphasis on financial and non-financial aspects in making decisions (Cadez & Guilding, 2008; Rashid, Ali & Hossain, 2020). Simmonds (1981, p. 26) conceived the term SMA as "the provision and analysis of management accounting data about a business and its competitors, for use in developing and monitoring business strategy".

Broadly, SMA places emphasis on the application of management accounting information that concerns a firm and its competitors in an attempt to aid, monitor, and unearth strategy (Kalkhouran et al., 2017). Despite the growing interest in SMA literature, there is no agreement to date on the definition of SMA since it is open to several interpretations (Cadez & Guilding, 2008; Ma et al., 2022; Nik Abdullah et al., 2022; Ojra et al., 2021; Oyewo, 2021). Nonetheless,

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these modern innovative management accounting tools such as SMA have attracted the attention of researchers and businesses owing to their crucial role in assisting managers to achieve their goals (Cadez & Guilding, 2008; Alamri, 2019; Doktoralina & Apollo, 2019; Oyewo, 2022). The competitiveness and survival of firms rely on the creation and implementation of resilient strategies (Bromwich, 1990), which are informed by managers' perceptions, context, and information gathered. As such, SMA holds the ability to provide managers with information to support their decisions, considering how external and future-oriented these techniques are (Hadid & Al-Sayed, 2021).

The growing concern for external, social, and environmental issues surrounding an entity's operations, such as corporate social responsibility (CSR), biodiversity, and climate change, among others, has affected how firms compete in the business environment (Yuan et al., 2020). As a result, corporate institutions have recognised the need for broad-based information that considers financial and non-financial, as well as internal and external concerns, to ease managerial decision-making (Abdullah et al., 2020; Rathwatta & Gooneratne, 2021). Globally, managers recognise the importance of embracing and implementing accounting practices that align with the firm's structure and strategy to meet stakeholder expectations (Cadez & Guilding, 2008; Chenhall & Langfield-Smith, 1998). According to Abernethy and Bouwens (2005), changes in accounting systems have the potential to provide both managers and subordinates with precise and relevant information about asset utilisation; and managers often rely on information from the accounting systems to evaluate and reward the performance of their employees.

Previous studies have highlighted that the usage of Strategic Management Accounting (SMA) creates value (Abdullah et al., 2020; Abdullah & Said, 2015), promotes sustainability (Nartey & van der Poll, 2021), and improves an entity's performance (Alamri, 2019; Hadid & Al-Sayed, 2021; Nuhu et al., 2017; Oboh & Ajibolade, 2017; Pavlatos, 2015; Petera et al., 2020;

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Thapayom, 2019). In addition, Doktoralina and Apollo (2019) revealed that the usage of SMA positively influenced supply chain outcomes, which improved the performance of logistics firms. Similarly, countries around the globe have advocated for innovations, as evidenced by the introduction of New Public Management (NPM) reforms within the public sector to promote effectiveness and efficiency (Nuhu et al., 2017). NPN reforms have placed a high value on getting the best possible return on the taxpayer's money and promotes transparency and accountability for outcomes. The reforms have raised expectations for public agencies to report, communicate and conduct their activities to promote accountability (Höglund et al., 2021; Nuhu et al., 2017). This denotes that the concept of SMA is crucial for all businesses, regardless of size and what it deals in.

According to Pavlatos (2015), the information provided by SMA has the potential to help managers cope with complexities in the environment. Pavlatos and Kostakis (2018a) argued that environmental uncertainty presents severe issues such as political turmoil, cashflow problems and a reduction in demand and available resources. Hoque (2004) added that during periods of high uncertainty, managers should employ more non-financial measures since they can satisfy the demands of management on how to assess uncertainty in diverse areas, including market demand, employee and customer satisfaction, supplies, and innovation, among others. However, the current economic environment, surrounded by uncertainties and other factors in the business environment, often shapes a firm's operations. A firm's ability to survive and prosper depends on the firm's ability to understand its business environment (Agyapong et al., 2020; Duncan, 1972). Studies suggest that the emergence of COVID-19 was not anticipated and led to a crisis that affected the global scene (Bedford et al., 2022; Hoque et al., 2022; Uzir et al., 2022). For instance, a report by the United Nations (UN) in 2021 showed that the global output decreased by 4.3% in 2020, which constitutes over three times what transpired during the global financial crisis in 2009 (Bedford et al., 2022).

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Owing to this, the contingency approach invokes managers to continually adapt their processes and structures to the environment in which they are situated in order to stay relevant (Afifa & Saleh, 2021; Cadez & Guilding, 2008). Notably, entities (whether small or large) that fail to adopt new mechanisms (such as innovative management accounting techniques) stand the chance of having an unsustainable competitive advantage (Nartey & van der Poll, 2021; Ojra et al., 2021). Pavlatos and Kostakis (2018a) argued that firms need to adopt and implement management innovations such as SMA to legitimise their firm's survival.

Prior literature suggests that, unlike Traditional Management Accounting Practices (TMAP), the use of management innovations like SMA techniques assists firms in strategic pricing, competitor performance appraisal, customer-oriented initiatives, and competitive position monitoring (Rashid et al., 2021; Roslender & Hart, 2003). Baines and Langfield-Smith (2003) highlighted that TMAP were unable to supply management with vital information to meet the demands of the changing business environment that heavily relies on innovative technologies. In addition, the conventional practices are internally oriented, fail to adjust performance indicators to changing trends, lack goal congruence, and use general procedures for situations that require custom-designed techniques (Oyewo, 2021). For this reason, managers, have directed attention towards adopting and implementing SMA in an attempt to create value and sustain their competitive edge (Ma et al., 2022).

The use of SMA techniques may be affected by various internal (e.g., organisational structure, firm size, strategy, market orientation) and external (e.g., market competition, market turbulence) contextual factors despite its advantages over TMAP (Oyewo, 2022; Rashid et al., 2021). Although it has been shown that several contextual factors influence SMA adoption and implementation, empirical findings have been inconsistent (e.g., Al-Mawali, 2015; Cadez & Guilding, 2008; Nuhu et al., 2017; Pavlatos & Kostakis, 2018b; Turner et al., 2017). For instance, while Cadez and Guilding (2008) find no association between market orientation and

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SMA Usage, Turner et al. (2017) report a positive association between hotel market orientation strategy and SMA Usage. Al-Mawali (2015) and Abdel-Kader and Luther (2008) demonstrate a positive relationship between PEU and SMA Usage, which contradicts the negative association found by Williams and Seaman (2002). Furthermore, the findings by Cadez and Guilding (2008) showed a positive correlation between strategy and SMA Usage; and Cescon et al. (2019) found that differentiation strategy is positively associated with brand valuation. On the contrary, Abdel-Kader and Luther (2008), find no relationship between competitive strategy and the level of sophistication of an entity's management accounting system. Arguably, environmental factors are crucial in MA studies however only a few studies have looked at environmental uncertainty as a factor influencing the design of management innovation (such as SMA) (e.g., Al-Mawali, 2015; Cescon et al., 2019; Agbejule, 2005). Nonetheless, the results on the impact of environmental uncertainty on the design and usage of SMA techniques have been mixed.

The usage of SMA in the context of SMEs is unique and worthy of research attention (Kalkhouran et al., 2017; Ma et al., 2022). SMEs play a unique role in the provision of employment, entrepreneurship, innovations, poverty alleviation, and economic growth entirely (Oduro, 2020; Amidu et al., 2011; Abor & Quartey, 2010). For instance, the Organization for Economic Co-operation and Development (OECD) reported that, on average, about 99% of firms are SMEs, contributing about two-thirds of the world's GDP (OECD, 2017). A similar perspective is held about SMEs situated in Ghana (SME Competitiveness Report, 2016). Based on the contributions SMEs offer, it may be argued that an emerging economy like Ghana would possess a vibrant SME sector, but the reality is that most SMEs are having issues with long-term survival (Abor & Quartey, 2010). Notably, access to credit facilities, inappropriate accounting practices, scarce resource allocation, globalization, and technology have been cited as major challenges facing SMEs (Abor & Quartey, 2010). Moreover, according to the World

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Bank in 2023, about 600 million jobs will be needed by 2030 to meet global growing demands, which makes the development and survival of SMEs a priority for nations around the globe. Consequently, SMEs need to pay attention to management accounting practices and there have been calls from prior studies to examine the usage of SMA techniques among SMEs (Ma et al., 2022; Petera & Šoljaková, 2020; Kalkhouran et al., 2017).

1.3 Problem Statement

The dynamic nature of the business environment has significantly affected managerial decision-making in pursuit of competitiveness within the current global economy (Oboh & Ajibolade, 2017; Oyewo, 2022). For instance, the fourth industrial revolution, the COVID-19 pandemic, changes in client demands, and climate change have imposed substantial challenges in addressing the information needs of various stakeholders (Rashid et al., 2021). As a result, executives are unable to critically evaluate and understand their environment, hence hindering firms from achieving their goals and ultimately surviving (Hoque, 2004; Sniazhko, 2019).

As stressed by Sniazhko (2019), the difficulty in dealing with these uncertainties restricts effective decision-making and necessitates the adoption of strategies that either decrease or manage uncertainty. Notwithstanding, there is a controversy over the best management accounting practice (conventional or modern) that will help firms manage these complexities (Jaradat et al., 2021). While Jaradat et al. (2021) suggest complementing modern approaches with traditional management practices, Ojra, Opute and Alsolmi (2021) assert that achieving optimal output involves relying on proactive and sophisticated management accounting techniques (e.g., SMA techniques) for effective decisions. Nevertheless, it is still unclear whether the usage of SMA will enhance the performance of SMEs since the existing literature on SMA remains both disparate and disjointed (Ma et al., 2022; Jaradat et al., 2021; Rashid et al., 2021).

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Moreover, despite the growing importance of SMA in a variety of markets around the world, the focus of prior literature has been predominantly on large enterprises (Rashid et al., 2021; Ojra et al., 2021). However, SMEs possess distinct attributes compared to larger firms, which have been acknowledged in existing literature (Ma et al., 2022; Jaradat et al., 2021; Kalkhouran et al., 2017). SMA practices have the potential to significantly benefit SMEs in terms of their expansion, survival, and growth. For instance, SMEs are often entangled with resource constraints, and greater reliance on SMA can lead to optimal resource allocation, cost reduction and value creation (Abdullah et al., 2020). Given that previous studies have established the need for SMEs to have access to current and pertinent information for competitiveness within a dynamic business environment and to counter knowledge leakage (Ma et al., 2022; Kalkhouran et al., 2017), more research is required to address the issue of whether SMEs use SMA in practise (Kalkhouran et al., 2017; Ma et al., 2022) and further elucidate the role of SMA in enhancing SMEs' performance.

A review of the Management Accounting (MA) literature revealed that there is a paucity of empirical evidence on the association between management accounting systems and economic crisis, highlighting an issue worth focusing on (Becker et al., 2016; Pavlatos & Kostakis, 2015; 2018a). Pavlatos and Kostakis (2018a) and Hopwood (2009) contend that the intensity of an economic crisis influences the level of uncertainty in a firm and often poses a threat to managers involved in decision- making; hence, making management control extensively difficult. Additionally, Pavlatos and Kostakis (2015) argue that an economic crisis presents severe issues such as political turmoil, cashflow problems and a reduction in demand and available resources. The economy is a crucial aspect of the macro business environment and as such any form of crisis emerging from it has the potential to affect all aspects of a firm's operations and beyond. Nik Abdullah et al. (2022) argued that the surfacing of COVID-19 (global pandemic) presented a predicament that affected many businesses around the globe in distinct ways resulting in a

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crisis. According to Bedford et al. (2022 p. 2), "the global pandemic (COVID-19) was not considered only as a global health crisis, but also an economic crisis which affected stakeholders and various entity's performance". Empirical evidence produced by Uzir et al. (2022) showed that the outbreak of COVID-19 increased the psychological distress of SME owners which was attributable to the fear of business loss, depression, anxiety and stress. Bedford et al. (2022) added that firms used budgeting to reduce managers' role ambiguity and emotional exhaustion caused by COVID-19. Further, Hoque et al. (2022) showed that in an urgent crisis like COVID-19, higher educational institutions identified accounting tools and practices (such as budgeting) as a rescue plan to support their strategic decisions. Based on this notion, it can be argued that an economic crisis is likely to influence the design of accounting systems. However, to be best of the researcher's knowledge, there is no single study that examines this association; hence, this study seeks to fill the gap in prior literature by examining the impact of economic crisis (emanating from COVID-19) on the design of SMA (Nik Abdullah et al., 2022).

Nonetheless, studies that have been conducted in the MA literature have mostly used PEU to measure changes in the external business environment (for example, the construct model changes in price and market volatility, economic crisis, market competition, and political instability, among others, as one). However, recent studies have shown that PEU may lack the potential role of capturing all forms of changes and volatilities. They added that economic crisis and PEU are distinct from each other and must be studied separately (Becker et al., 2016; Pavlatos & Kostakis, 2018b). For instance, an empirical study by Pavlatos and Kostakis (2018a), demonstrated that there is no statistically significant relationship between perceived environmental uncertainty (PEU) and perceived economic crisis. Depicting that PEU and perceived economic crisis are distinct from each other and should be examined separately. These findings were in line with that of Becker et al. (2016) as well as that of Janke et al.

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(2014). This may imply that relying on PEU to assess all kinds of uncertainty might potentially fail to capture the perceived economic crisis impact accurately and may likely present misleading results (Pavlatos & Kostakis, 2018a). Additionally, this finding could emanate from the diverse conceptualisation given to PEU (Sniazhko, 2019). Moreover, the 2008 global financial crisis and a recent surge in the COVID-19 pandemic that led to an economic crisis have heightened the interest in examining the issue of economic crisis (Hazaa et al., 2021).

Theoretically, an entity's advantage depends on the "fit" and proper alignment between the organisational structure and the operational environment (Chenhall, 2003). Accordingly, the current study argues that SMEs can enhance their performance and sustainability by designing SMA practices that align organisational structure with an entity's context (Chenhall, 2003; Lapsley & Wright, 2004). Although several factors have been studied, Cadez and Guilding (2008) emphasize the need for further research to identify additional determinants and contingent variables to better understand the contexts in which SMA practices can be most effectively implemented. Despite growing interest, several studies in MA literature have significantly examined the role of perceived environmental uncertainty (Afifa & Saleh, 2021, 2022; Agbejule, 2005; Hoque, 2004; Pavlatos, 2015), however, that of perceived economic crisis is yet to receive attention. As a result, this study seeks to examine whether the perception held by owners and managers about the level of environmental uncertainty and the intensity of an economic crisis plays a role in explaining the association between SMA and performance.

Again, most of the studies that have examined SMA and organisational performance have focused on large firms mostly in developed countries such as USA, UK, Australia, Italy, and New Zeeland, among others (Cescon et al., 2019; Cinquini & Tenucci, 2010; Nuhu et al., 2017; Rashid et al., 2021; Sumkaew & Intanon, 2020; Turner et al., 2017). Moreover, due to the differences in institutional, cultural and legal factors among nations around the globe, scholars have suggested that there is a need to examine this association in a developing country like

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Ghana (Rashid et al., 2020; 2021). They added that firms in developed nations operate within strong institutional and legal frameworks where prospect opportunities to conceal revenue, avoid tax, and engage in earnings management are rare since they are subject to severe penalties. As a result, firms are continuously interested in formulating strategies to optimally allocate scarce resources and control costs (Rashid et al., 2021). Against the aforementioned, this study seeks to examine the relationship between SMA Usage and performance, and further evaluate whether perceived environmental uncertainty and perceived economic crisis play a role in the design of SMA among SMEs in Ghana.

1.4 Research Objectives

1. To determine the association between SMA Usage and firm performance of SMEs in Ghana.
2. To examine the moderating effect of perceived environmental uncertainty on the relationship between SMA Usage and firm performance of SMEs in Ghana.
3. To investigate the performance implication of the moderating effect of perceived economic crisis on the relationship between SMA Usage and firm performance of SMEs in Ghana.

1.5 Significance of the Study

This study makes significant contributions to literature, policy and practice. To literature, this study adds to the literature on how the perceived economic crisis and perceived environmental uncertainty may influence owners' and managers' decisions to use SMA techniques that will affect firm performance. In addition, the current study contributes to the paucity of studies on the concept of economic crisis (more of a finance-related concept) in the domains of the accounting and management accounting literature. This is in response to the calls for studies to assess the function and role of accounting during a crisis (e.g., the global financial crisis, global pandemic) (Afifa & Saleh, 2021; Hopwood, 2009; Nik Abdullah et al., 2022; Stede, 2011;

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Waymire & Basu, 2011; Zawawi & Hoque, 2010). Further, the emergence of COVID-19 presented a predicament on the global scene, which resulted in a health crisis and further led to an economic crisis (Bedford et al., 2022). This has necessitated calls to understand the impact of this menace; hence, this study adds to the literature on COVID-19. Surprisingly, examining this issue in the context of SMEs also contributes to the literature as most studies have focused on larger firms. In addition, considering the numerous studies in developed nations, examining the association between SMA and firm performance in Ghana provides evidence to validate findings from developed contexts in response to calls from Ojra et al. (2021), Ma et al. (2022) and Rashid et al. (2021).

To practice, the findings from the current study would provide further insights for managers and businesses to help promote the effectiveness and efficiency of SMEs. Also, it would serve as a guideline to promote firms' survival and sustained competitive edge by helping to understand their operational environment and implementing requisite practices such as SMA techniques. For instance, several other businesses, not only SMEs in Ghana (e.g., non-governmental organisations, and public agencies), would benefit from the study's findings because executives and management will be able to grasp the techniques and resources at their disposal for operational efficiency and cost control.

Moreover, to policy, the results of the study can be relied on as an instructive guide for policymakers, regulators and professional groups (such as the Chartered Institute of Management Accountants (CIMA)) hoping to improve management accounting change among companies situated in Ghana. The results of this study will also sensitize development agencies such as Ghana Enterprise Agency (GEA) and the Association of Ghana Industries (AGI), among others to the relevance of SMA techniques if they are used by companies and how they will impact their performance. More precisely, the government will be more knowledgeable about how to direct government intervention programmes meant to increase SMEs' survival to

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yield desired outcomes. In addition, it will serve as a foundation for professional bodies in setting up training courses, seminars, and workshops for managers and prospective employees on the efficient implementation of new management accounting procedures (e.g., SMA) that will benefit not only SMEs but also both private sector and public sector entities.

1.6 Organisation of the Study

The current study is categorised under five broad constituents regarded as chapters. The initial category, thus Chapter one provides the introduction of the study, which comprises the study background, the study's objectives, the problem statement, underlying research questions and hypothesis and the significance of the study. Chapter two captures the literature review of the study, which critically presents the theoretical and empirical review of prior studies relevant to the objectives of the study. The third chapter entails the methodology and research approaches employed to gather and analyse data to accomplish study goals; and Chapter four highlights the results and findings of the study as well as providing a discussion of the findings attained from the analyses of data gathered. In addition, Chapter five provides a summary of the findings, conclusions, limitations and recommendations of the study.

1.7 Chapter Summary

This chapter captures the introduction of the study, which consists of a general brief overview of the study, a background of the study, and a problem statement, as well as provides the aims and objectives of the study. The section concludes with a discussion of the study's significance and how the research work was structured.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a comprehensive review of the theoretical and empirical literature that relates to this study. The chapter starts with an overview of the concept of Strategic Management Accounting (SMA), and then provides an assessment of the kinds of techniques that fall under the category of SMA and their relevance to various stakeholders and firms. It also reviews prior research studies on the associations between SMA Usage and its antecedent factors as well as firm outcomes. The chapter concludes with a discussion of the conceptual framework and the development of the study's hypothesis based on the review conducted.

2.2 The Concept of Strategic Management Accounting

Management Accounting (MA) has garnered increased attention over recent years due to its crucial role in decreasing the level of stakeholder pressures and uncertainties that may likely surface (Ismail et al., 2018). MA encompasses the provision of relevant information for various stakeholders to make well-informed decisions as and when required (Al-Khasawneh et al., 2020). Shahzadi et al. (2018) highlighted the fact that accessibility to information within an entity and among the various stakeholders promotes goal achievement. According to Sniazhko (2019) and Shahzadi et al. (2018), managers who rely on MA practices to gather relevant information tend to influence the entire business system and processes regardless of the complexity of their systems and market.

MA is fundamental in delivering information for diverse management functions, be it planning, controlling, evaluating or decision-making (Shahzadi et al., 2018). According to Ojra et al. (2021), MA surrounds the “generation, creation, communication, and the application of financial and non-financial information for managerial decision-making and control

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processes". Broadly, the management accounting (MA) function embodies the provision of information for decision-making, which leads to improved operational activities (Hadid & Al-Sayed, 2021; Maelah et al., 2021; Nuhu et al., 2017; Shahzadi et al., 2018).

However, recent modification in the business environment has emphasised the need to review Management Accounting Systems (MAS) used by entities (Azudin & Mansor, 2018; Chenhall & Moers, 2015; Ojra et al., 2021; Rashid et al., 2021; Rikhardsson et al., 2021; Yazdifar et al., 2019; Zawawi & Hoque, 2010). The growing demands from stakeholders, increased competition, and advancement in technology, among others, have affected how an entity designs and implements its business models. As a result, the information needs of managers have advanced and become more complicated; hence, the need to provide managers with systems that can continuously adapt their practices to evolving trends to complement the needs of decision-makers (Chenhall & Moers, 2015; Sniazhko, 2019).

The volatility in the business environment has become best suited for organisations ready to compete aggressively in relation to quality, price and delivery of service (Oyewo, 2022). In that regard, managers will likely request more information (as shown in Figure 2.1) to supplement what they already possess. This is because, the information used by the cost structure of a firm allows it to sustain its market strategy despite competition from potential entry (Bromwich, 1990; Oboh & Ajibolade, 2017). For instance, to create value that exceeds and meets customer demands, managers will request information on efficiency, quality, as well as financial information, which the modern and innovative MA techniques regarded as SMA tend to provide.

The term Strategic Management Accounting (SMA) attracted the attention of stakeholders since it was first discovered in the literature by Simmonds (1981). Also, several criticisms held up against Traditional Management Accounting (TMA) have strengthened this interest

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(Kalkhouran et al., 2017). For example, critics of MA note that initially accountants were primarily engrossed with internal operational activities whereas little attention was given to strategic issues such as planning and control (Bromwich, 2000: Johnson & Kaplan, 1987). TMA systems were also criticised for their lack of goal congruence and inability to adjust performance indicators to the dynamic environment. However, promoting sustained competitive advantage requires firms to modify their conventional practices in the current business environment. According to Lasyoud et al. (2018), maximising customer satisfaction at the same time as managing marketing costs is achievable through strategic planning, changes to management practices and quality management systems. Moreover, continuous shifts in stakeholder demands often challenge firms to modernize their processes (Roslender & Hart, 2003).

In 1981, Simmonds introduced the term "SMA" in the UK (Simmonds, 1981) and it was later conceived as Strategic Cost Management (SCM) in the USA by Shank (1989). They both stressed the need for strategy in their engagements to attain improved outcomes and sustained competitive advantage (Rashid et al., 2021). However, despite growing interest, there seems to be no universally accepted definition ascribed to the concept of SMA signifying a pervasive argument among academics and practitioners about the best accounting practices to counter any impediments to effective decision-making. Ma and Tayles (2009), Cadez and Guilding (2008) and Nik Abdullah et al. (2022) have argued that it is challenging to define the term SMA. They emphasize that there is comparatively no broadly accepted definition of SMA. As such, the term has been understood and defined in many ways by scholars in MA literature from diverse perspectives.

According to Simmonds (1981), the term SMA is "the provision and analysis of management accounting data about a business and its competitors for use in developing and monitoring business strategy" (p. 26). However, Govindarajan and Shank (1992) and Johnson and Kaplan

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(1987) added that emphasis on costing information and value chains should take a long-term and external orientation. Lord (1996) asserts that SMA "emphasizes an extension of traditional management accounting focus to include external information about competitors". According to Bromwich (1990, p. 28), SMA constitutes "the provision and analysis of financial information on the firm's product markets and competitors' costs and cost structures and the monitoring of the enterprise's strategies and those of its competitors in these markets over several periods."

Conversely, Roslender, (1995) observed the concept as an amalgamation of diverse functions in gaining a strategic position in the market. Likewise, Ma and Tayles (2009) conceived SMA as a concept that viewed accounting experts from a distinct perspective, suggesting a wider contribution of accountants towards the formulation and execution of strategies. According to Roslender and Hart (2003), SMA is "identified as a generic approach to accounting for strategic positioning, by urging attempts to integrate insights from management accounting and marketing management within a strategic framework". However, Tillmann and Goddard (2008) and Langfield-Smith (2008) added that SMA is "a management accounting system that supports strategic decisions". According to Hoque (2004), SMA is examined as "a process of identifying, gathering, choosing and analysing accounting data for helping the management team to make strategic decisions and assess organisational effectiveness". Likewise, Ma and Tayles (2009) conceived the term as "the body of management accounting concerned with strategically orientated information for decision making and control". Additionally, the Chartered Institute of Management Accountants (CIMA) in 2005 defined the concept as "a form of management accounting in which emphasis is placed on information which relates to factors external to the entity, as well as non-financial information and internally generated information" (CIMA, 2005). Similarly, Guilding, Cravens and Tayles (2000), Cravens and Guilding (2001), and Cinquini and Tennuci (2010) agreed that SMA can be examined "as a set

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of practices, techniques or tools of management accounting with a strategic orientation, which supports the strategic management process"; and Cadez and Guilding (2008) established that "SMA can be considered as a set of strategically oriented accounting techniques as well as the involvement of management accountants in the strategic decision-making process".

Similarly, this study follows the rendition of prior research studies. Accordingly, this study views SMA as encompassing strategically-oriented accounting techniques and practices (Cadez & Guilding, 2008; Kalkhouran et al., 2017). SMA techniques are innovative techniques that are made up of external and strategically oriented techniques to aid the gathering of relevant information for management inferences (Al-Mawali, 2015; Oyewo, 2021; 2022). For instance, a recent study by Oyewo (2022) understood SMA to be a unit of innovative MA techniques possessing an external focus on competitors, and both potential and existing customers alongside any other strategic concerns.

2.2.1 Dimensions of SMA

Cadez and Guilding (2008) suggested two key dimensions of SMA: management accountants' involvement in strategic decision-making; and the use of SMA as techniques to assist a firm's operational activities. The empirical literature has revealed that SMA techniques can be categorised under five key headings including costing, planning, control and performance measurements, strategic decision-making, competitor accounting and customer accounting (Cadez & Guilding, 2008; Ojra et al., 2021; Langfield-Smith, 2008; Rashid et al., 2021).

In contrast, Nixon and Burns (2012) argued that limiting the concept of SMA as a collection of practices and techniques may hinder stakeholders from understanding how SMA affects the strategic management process. Accordingly, a study conducted by Alamri (2019) developed distinct facets of SMA from a review of the literature and demonstrated their association with organisational performance. The study identified "SMA – information facet", "SMA -

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organisational structure facet", "SMA - resource facet" and "SMA- organisational climate facet" as facets of SMA (Alamri, 2019). The study claimed that due to the diverse conceptualization ascribed to the concept of SMA, relying on just these two delineations in literature does not capture the SMA concept in its entirety (Nixon & Burns, 2012; Alamri, 2019). In addition, Langfield-Smith (2008) argued that bridging the gap between strategy literature and management accounting literature into a single strategic perspective will be key to understanding how SMA is conceptualized within the organisational setting. For instance, Alamri (2019) suggested that prior perspectives used in theorizing the concept have not been able to identify the better fit between SMA and the entity's context within the strategic management process; thus making it difficult to express the nature of SMA as a multifaceted and dynamic concept.

Notwithstanding, several studies conducted in the literature on SMA have significantly viewed this concept from the perspectives of Guilding et al. (2000) as well as Cadez and Guilding (2008). Accordingly, SMA has been conceptualised as the involvement of accountants in long-term decisions and the use of strategically oriented MAP, which aids in acquiring relevant and reliable information for making well-informed decisions (Petera et al., 2020; Cescon et al., 2019; Pavlatos & Kostakis, 2018b).

2.2.1.1 Management accountants' participation in strategic decision making

According to Erokhin et al. (2019), the growing demands from the environment have contributed to the changes in MAP. Likewise, the MA profession has been altered as a result of the evolving nature of management accounting (Chenhall & Moers, 2015; Kalifa et al., 2020). By extension, Cadez and Guilding (2008) and Hadid and Al-Sayed (2021) have envisioned management accountants playing a significant role in delivering strategic information. For this reason, stakeholders in academia and practice continue to dedicate efforts

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to scrutinize and understand the new roles of accountants (Hadid & Al-Sayed, 2021; Kalifa et al., 2020; Lasyoud et al., 2018; Odia, 2019).

According to Rajeevan (2019), MA was initially viewed as a tool to deliver information that creates value within a short period. However, changes in the late twentieth century have shown that firms consider not only the internal setting but also include external and long-term concerns (Nguyen, 2018). In that regard, management accountants have visualized themselves as business advisors who support both short and long-term issues (Hadid & Al-Sayed, 2021). Cadez and Guilding (2008) also claimed that accountants have extended their role by taking a credential role in the strategic management process. Similarly, professional accountants' have directed efforts to organise and support firms to use sustainable practices, such as integrated reporting and stakeholder management practices (Rajeevan, 2019).

Notably, accountants in this era are not merely involved in gathering information but also participate in the strategic decision-making process (Hoang et al., 2020). Furthermore, prior literature highlights the new role of a management accountant as "business advisor" (Rajeevan, 2019), "business partner" and "business partnership" (Loo et al., 2011; Rashid et al., 2021), "accountants as assistants for strategic decision making" (Burns & Baldvinsdottir, 2005), "horizontal accounting" (Chenhall, 2008), "internal advisor" (Hoang et al., 2020), "interfunctional co-operation" (Roslender & Hart, 2003), "strategic accountant" (Cadez & Guilding, 2008), "hybrid accountants" (Burns & Baldvinsdottir, 2005; Karlsson et al., 2019), and "teamwork" (Bromwich, 2000).

According to Chenhall (2008), the concept of 'horizontal organisation' reflects how a firm integrates its organisational structures into its value chain processes to promote the satisfaction of customers. Likewise, Hoang et al. (2020) and Fuadah et al. (2020) revealed that experts in the accounting field have pushed for a transformation in the role of management accountants

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from the conventional "control" configuration to a more "strategic" role otherwise termed as a "business partner role". They further emphasised that in the quest to achieve an optimal outcome, the accounting information provided to users strengthens the association between management accountants and other functional managers (Roslender & Hart, 2003; Nguyen, 2018). As such, firms have directed efforts to include management accountants in their engagement to help reduce their information needs thereby decreasing complexities present within the business environment (Cadez & Guilding, 2008). Rajeevan (2019) acknowledge that customer orientation and digitalisation have proven that modern MAP is a requisite innovation to condition firms to survive in the competitive business environment. Moreover, the adoption and usage of SMA techniques in the decision-making process are seen as extended initiatives of management accountants (Hadid & Al-Sayed, 2021).

Similarly, the SMA discourse has conceived that management accountants can play a role in the strategic management framework (Cadez & Guilding, 2008; Hadid & Al-Sayed, 2021). This denotes that management accountants have assumed a new role that coordinates information from various stakeholders and other functions such as customers, competitors and HR (Hadid & Al-Sayed, 2021; Lasyoud et al., 2018; Vu et al., 2022). Relatively, Roslender and Hart (2003) assert that modern MAP (SMA) unveils marketing management and accounting relations. Hence, complementing various functions within the entity will produce significant outcomes by assisting firms to remain relevant, competitive and survive in these modern business environments (Arunruangsirilert & Chonglerttham, 2017; Hadid & Al-Sayed, 2021; Lapsley & Rekers, 2017; Rajeevan, 2019). Similarly, CIMA (2014) advanced that modern accountants possess unique abilities and skill sets to aid an organisation in sustaining a competitive edge through value creation as depicted in Figure 2.2. Accordingly, the flow of information in Figure 2.2 supports management accountants' new role in terms of gathering, summarizing, evaluating, classifying and analysing relevant data as well as developing

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alternative outcomes that may prove beneficial to the entity goals including, social and environmental concerns (CIMA, 2014; Nartey & van der Poll, 2021).

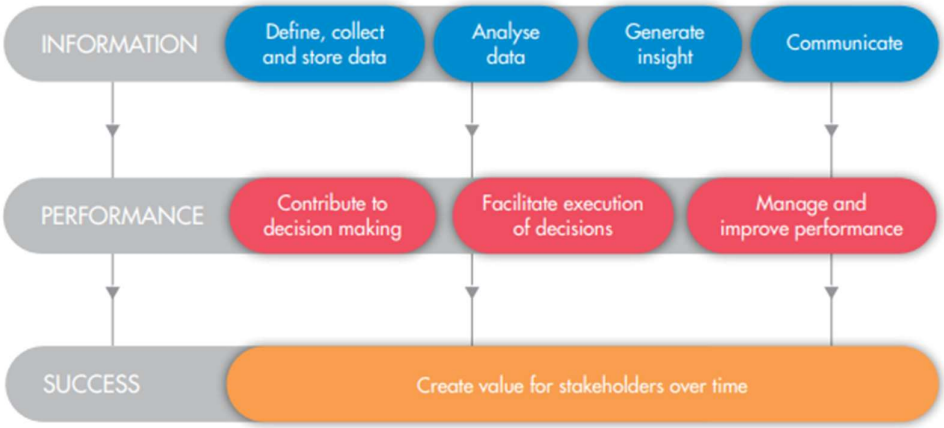

Figure 2.2: The flow of Management Accounting Information

(Source: CIMA, 2014)

In addition, professional entities have promoted accountants to take on new roles that will help businesses, investors and other stakeholders to achieve their goals. For instance, the Chartered Institute of Management Accountants (CIMA) and the American Institute of Certified Public Accountants (AICPA), jointly coined the Chartered Global Management Accountant (CGMA) designation in 2012, employs a unique framework (Global Management Accounting Principles [GMAP]) that supports good managerial practices to guide management to improve performance. These principles provide effective management approaches to enhance firm performance by way of creating value for stakeholders through partnerships and cost management. Nartey and van der Poll (2021) mentioned that management accountants have managed to gain specialised expertise through training which distinctively positions them to make a huge contribution to the firm's sustainability and survival.

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2.2.1.2 Strategic management accounting techniques

Even though there is controversy on the concept of SMA, MA scholars have provided some unique features that can be followed to distinguish SMA from Traditional Management Accounting (TMA) techniques. An initial attempt by Guilding et al. (2000) has been adopted extensively in the literature (see Al-Mawali, 2015; Cadez & Guilding, 2008; Kalkhouran et al., 2017; Oboh & Ajibolade, 2017; Ojra et al., 2021; Oyewo, 2022; Pavlatos, 2015; Turner et al., 2017), upholding that TMA possessed an inward focus (internally oriented). They further added that for a technique to qualify as strategic, it needs to exhibit orientations such as being outward-looking (externally oriented) and forward-looking (long-term oriented) (Cadez & Guilding, 2008). Additionally, some have relied on the criticisms directed at TMA to help shape and identify modern MAP. Proponents suggest that SMA techniques should emphasise both 'financial and non-financial', (as shown in Figure 2.1) and should have a 'long-term perspective' that considers several years as well as being market-oriented (Oyewo, 2021). Likewise, CIMA (2005) complemented that SMA isolates itself from TMA by having an external orientation that considers an entity's external environment (which includes concerns for stakeholders – customers, competitors, etc.), goal congruence, and future-oriented. Consequently, this study relies on this yardstick to carefully distinguish SMA techniques for the current study.

Costing

As seen in previous studies (Cadez & Guilding, 2008; Cescon et al., 2019; Ojra et al., 2021), companies that capitalize on cost data by aligning marketing and strategic information will be able to create resilient strategies. These strategies provide efficient mechanisms to drive towards achieving a sustained competitive edge over its rivals. Therefore, firms must acknowledge the significance of formulating and integrating well-defined cost strategies based

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on costing information, and carry out several cost assessments from a strategic point of view (Oboh & Ajibolade, 2017; Ojra et al., 2021).

Attribute costing

Attribute costing is regarded as one of the most significant additions to the SMA discourse. This approach involves accumulating the cost data that stakeholders derive from a firm's products (Roslender & Hart, 2003). Within the framework for strategic management, this approach emphasizes costing the benefits clients derive from an entity's products and their characteristics which demands complementing contributions from the field of management accounting and that of the marketing management discipline (Ojra et al., 2021; Roslender & Hart, 2003). Typically, the product attributes that may appeal to clients may include dependability, warranty policies, level of finish and trim, operating performance variables, supply assurance, and after-sales support (Nik Abdullah et al., 2022; Cadez & Guilding, 2008). Predictably, the market share can be determined since the identified factors can be matched with the taste and preferences of clients with the product attributes.

Life cycle costing

This accounting technique includes the evaluation of expenses or costs associated with a good or service throughout its lifetime, otherwise known as its stages in the product life cycle (Pasch, 2019). The phases of a product's life cycle include: "design, introduction, growth, maturity, decline, and abandonment (Guilding et al., 2000; Nik Abdullah et al., 2022). Ojra et al. (2021) and Cadez and Guilding (2008) mentioned that in line with the strategic implications, this approach advances in evaluating expenses along the product life cycle as opposed to an annual basis.

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Target costing

This technique was initially introduced in Japan, but recent developments have shown that it has gained prominence already around the globe. It annotates that the desired total product cost, which can be determined from estimations of external market price, sales volume, and target profit, is known as the target cost. Target costing, according to Cadez and Guilding (2008), is a technique used during the initial stages of product design that dwells on cost estimation. Cost estimation is computed by subtracting an expected profit margin from an estimated market-valued price to arrive at a desired production and marketing cost among others (Nik Abdullah et al., 2022; Guilding, Craven & Tayles., 2000). The target cost, also known as the cost estimate, is then taken into consideration when designing and developing the good or service (Guilding et al., 2000).

Value chain costing

Value chain costing is an approach for analysing all performed activities from the design stage throughout all the various stages to the distribution stage of a product or service (Cadez & Guilding, 2008). Because it views the entity as a set of links in the chain of all value-creating activities associated with the service or products produced, it can include both external or internal factors related to the firm (Guilding et al., 2000; Nik Abdullah et al., 2022). Notably, the perspective of costing during value chain analysis may not be identified as an SMA tool only for value creation but may also help firms gain a holistic perspective of supply chain initiatives employed for firm success (Guilding et al., 2000).

Quality costing

This technique has become relevant considering efforts by firms to mitigate waste and improve quality management systems that promote quality and efficiency. Quality costing in the scope of MA has become an effective management technique for collecting and measuring the costs

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(this includes, value-adding, cost of conformance, and non-value-added costs) involved in managing and enhancing quality within the production processes (Dmitrović-Šaponja & Suljović, 2017), that help in delivering quality goods and services to customers.

Activity-Based Costing/ Management

This approach allows management to assign cost incurred in acquiring resources to cost objects (e.g., products, services or clients based on activities performed for the cost objects). This approach perceives that the outcome of activities a firm undertakes yields its products and services, and activities consume resources which incur costs (Dmitrović-Šaponja & Suljović, 2017). This technique possesses a strategic focus that allows the management to structure its activities in such a way that makes it possible to define actions, resources, and activities aimed at achieving sustained competitive advantage (Dmitrović-Šaponja & Suljović, 2017; Oyewo, 2022).

Planning, control and performance measurements

The planning, control, and performance assessment aspects of SMA have been highlighted in the literature as being essential for organisations to survive competition in the long run within the industry (Ojra et al., 2021; Langfield-Smith, 2008).

Benchmarking

This method focuses on finding the best practices either internal to the organisation or externally (Cadez & Guilding, 2008). Benchmarking entails a continual comparison of a firm's processes or activities that reveals the efficiency of an organisation. This includes all performance-related areas of an entity including strategic areas, customer satisfaction, and operational activities and processes (Bromwich, 1990; Guilding et al., 2000). The best practice is typically a standard offered by sources outside the firm or a high-performing unit inside an entity. Benchmarking is seen as the practice of routinely evaluating internal operations against

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a desirable level of outcomes (Cadez & Guilding, 2008; Oboh & Ajibolade, 2017). The primary goal of benchmarking is to increase performance; however, doing so can be time-consuming and challenging to carry out since its associated costs are expensive. As a result, the business must weigh the costs and benefits of doing so.

Integrated Performance Measurement (Balance scorecard)

Integrated performance measurement systems offer performance measures that transcend a variety of organisational viewpoints, which are both financial and non-financial. Interestingly, Cadez and Guilding (2008) claimed that the most widely accepted balance scorecard (Kaplan, 1996) can indeed be considered as being closely connected and identical to this SMA technique. In addition, this technique's key characteristic is that it focuses on gathering performance-based data on client needs and may incorporate non-financial measures. Fundamentally, a balanced scorecard provides data from diverse perspectives including financial, non-financial, customer and learning and growth perspectives (Kaplan & Norton, 1996). Departments are required to monitor those elements as part of this approach to ensure customer satisfaction (Roslender & Hart, 2003; Cadez & Guilding, 2008). In contrast to reality, it can be challenging to obtain information about non-financial aspects, and the veracity of non-financial information is sometimes controversial (Guilding et al., 2000).

Environmental management accounting

This SMA technique relies on a combined approach that transitions information from cost accounting, financial accounting and mass balances which promotes material efficiency and reduces the cost of environmental protection and environmental impact and risk (Dmitrović-Šaponja & Suljović, 2017) by identifying and allocating environmental-related costs. Environmental management accounting (EMA) involves the generation, assessment and

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analysis of non-financial and financial data in efforts to support environmental management mechanisms (Dmitrović-Šaponja & Suljović, 2017).

Strategic decision making

As a category of SMA techniques, strategic decision-making is an essential way to facilitate strategic choices. The main SMA techniques under this category are strategic costing, strategic pricing, and brand valuation (Shank, 1996; Cadez & Guilding, 2008).

Strategic costing (Strategic Cost Management)

This practice relies on using cost data to develop an improved strategy for gaining sustained competitive advantage: this technique aims at evaluating the financial effects that emanate from managerial strategic decisions (Shank, 1996). This strategy prioritises external and upcoming issues by viewing strategic management ideas (value chain) and marketing concepts (product positioning) as the most pertinent in strategic decision-making (Cadez & Guilding, 2008).

Strategic pricing

Recognising strategic pricing as a part of SMA is crucial (Simmonds, 1981; Cadez & Guilding, 2008). According to Simmonds (1981), any competitively oriented analysis used in strategic pricing will result in more effective pricing decisions. Economies of scale, experience, predicted market expansion, competition price reaction, and pricing elasticity competence in the pricing decision-making process are key elements that could be evaluated in such an analysis (Ojra et al., 2021; Cadez & Guilding, 2008; Nik Abdullah et al., 2022).

Brand valuation

Brand valuation seems to be under controversy in the accounting literature as to whether it is a method that is related to accounting (Cadez & Guilding, 2008). Nonetheless, the SMA discourse encapsulates ideas from strategic management, marketing management, and

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accounting. In addition, trying to understand brand valuation from the accounting or MA perspective inculcates providing a yardstick to assess the marketing success of a firm that holds a strong unique brand (Guilding et al., 2000). According to Cadez and Guilding (2008), brand valuation is the appraisal of a brand's financial worth based on criteria such as market leadership, trend, internationality, support, stability, and protection, in addition to brand earnings from the past (Oboh & Ajibolade, 2017). In reality, most businesses attempt to assign value to their brand. But for clients to stick with the business, this must be carefully examined frequently.

Competitor accounting

This category entails creating and engaging with the right tools and techniques to help a business analyse and assess its position in a fiercely competitive industry (Ojra et al., 2021). As a result, a company chooses methods that will help outperform its competitors. A company must gather accounting information on competitors to fulfil that efficiently.

Competitor cost assessment

The competitor cost assessment, according to Cadez and Guilding (2008), is regularly disseminating scheduled updated estimates of a competitor's unit cost. Companies must identify their rivals and evaluate their cost positions relevant to the market. Competitor cost analysis focuses mostly on the cost structures of the entity (Simmonds, 1981). Numerous sources exist for competition cost data that can be relied upon for cost assessment including physical observations, shared vendors, clients, as well as teammates (Cinquini & Tenucci, 2010).

Competition position monitoring

This approach entails the disclosure of competitor information, which the business may use to determine where it stands relative to its leading rivals and, further, help to control or develop

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its strategy (Oboh & Ajibolade, 2017; Cadez & Guilding, 2008). However, this SMA technique conceives competitive advantage as an intangible resource having a constrained earning potential (Oboh & Ajibolade, 2017). Notably, any business wanting to preserve its market position will find it helpful to know its competitors' strengths and shortcomings.

Competitor performance appraisal

According to Oboh and Ajibolade (2017), it is possible to evaluate the strategic performance of rivals and discover their primary sources of competitive advantage by conducting a pertinent and in-depth review of their public financial accounts. Additionally, as noted by Cadez and Guilding (2008), one should analyse a competitor's financial accounts to determine what distinguishes them from their rivals. Conversely, analysing competitors from the financial aspects alone will not be enough to retain competitiveness; non-financial data will also be needed.

Customer accounting

The last category is customer accounting, which situates attention on critical stakeholders in the industry who are regarded as customers. This technique includes procedures used to estimate earnings, sales, or expenses associated with individual customers or groups of customers (Cadez & Guilding, 2008).

Customer profitability analysis

Under this approach, specific customers or a group of customers are investigated, along with their associated customer-specific costs and sales to the customer accounts (Oboh & Ajibolade, 2017; Dmitrović-Šaponja & Suljović, 2017) are tracked under that analysis. Here, the profit from a certain individual consumer is calculated. The computations cover all the standard procedures for estimating profit, sales, and costs resulting from customers or specific customer segments.

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Lifetime customer profitability analysis

This method entails evaluating and analysing client profitability over a long period, taking into account future years, and as a result places crucial emphasis on all anticipated future earning potential and anticipated future expenditures associated with providing services to a particular client (Cadez & Guilding, 2008). This method forecasts all future projected earnings that will originate from a future trade relationship or contract with a certain client, rather than just the annual profits that can be expected from that client (Nik Abdullah et al., 2022). The consumer, who might not be around in the long run, will inhibit the reliability of this SMA tool. It is challenging to foresee how long a consumer would stick with the business.

Valuation of customers as assets

The value assessment of customers to the business is covered by this approach. This might be accomplished by estimating the present value of all future revenue streams attributed to a specific client (Cadez & Guilding, 2008; Nik Abdullah et al., 2022). Because it is a common practice in marketing to view clients as assets, businesses frequently place a value on their customers. Nevertheless, since they will not have a permanent relationship with the business and future customer profits are equivocal, it has become challenging to put value on consumers in practice.

2.2.2 Adoption and Benefits derived from using SMA

The current demands of the environment have motivated firms to engage in activities that promote their growth and survival. Besides, the increasing levels of uncertainty have made it crucial to adapt MA activities to changing trends in management needs. Oboh and Ajibolade (2017) argued that the survival of an entity demands the introduction and use of relevant practices to continually stay relevant and competitive. For this reason, firms have attached great

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importance to adopting and implementing modern innovative management accounting practices such as SMA (Oboh & Ajibolade, 2017; Ojra et al., 2021).

Although there has been growing concern for SMA, studies have highlighted that the adoption and implementation of SMA are moderate to low (Rashid et al., 2021; Oboh & Ajibolade, 2017). This suggests that firms seem to ignore the potential benefits of SMA techniques. For instance, according to Sartorius et al. (2007), barely 12% (thus only 21 out of 181 enterprises) of the quoted South African companies surveyed had implemented Activity Based Costing (ABC) in their operations. Moreover, based on a survey involving 127 public sector entities conducted by Nuhu et al. (2017) in Australia revealed that the use of ABC, target costing and benchmarking among the 8 SMA techniques were the most frequently used. Similarly, a study by Cinquini and Tenucci (2010) found that customer accounting, competitive position monitoring and competitor performance appraisals were more commonly used by their sampled 92 large Italian firms operating in the manufacturing industry. Cescon et al. (2019) demonstrated that within 55 Italian manufacturing enterprises, the application of SMA practices predominately emphasised competitor position monitoring; highlighting the importance of customer accounting and competitor accounting as integral SMA techniques.

Nonetheless, prior literature suggests that there are several benefits attached to adopting and implementing SMA techniques. Firstly, the use of SMA techniques promotes decision-making. Tillmann and Goddard (2008) characterised SMA as being concerned with the application of MA to assist in strategic decisions. Likewise, Ojra et al. (2021) suggest that SMA helps promote effective decisions and thus gains a competitive advantage. This indicates that the provision of relevant information by SMA helps support management activities towards improving performance as a result of enhancement in decision-making systems as evidenced by Figure 2.1, on how information flows towards creating value (Nik Abdallah et al., 2022; Nartey & van der Poll, 2021).

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In addition, Oboh and Ajibolade (2017) mentioned that SMA plays a role in a company's ability to survive in a highly competitive global market by helping appraise strategic issues. Langfield-Smith (2008) holds the view that "to survive, an entity must continue to offer the cheapest way for consumers to obtain the desired bundle of attributes". According to Zhang et al. (2019), managers need to attach relevance to management innovation to promote sustainability and long-term survival.

Another stream of research suggests that the adoption and usage of SMA techniques promote sustainability among firms (Azudin & Mansor, 2018; Erokhin et al., 2019; Harris et al., 2019; Nartey & van der Poll, 2021; Oboh & Ajibolade, 2017; Thapayom, 2019; Zhang et al., 2019). According to Zhang, Khan, Lee and Salik (2019), the existence of an entity is primarily anchored on generating higher earnings, retaining competitiveness and the ability to promote firm growth in the long run. As such, firms implement diverse kinds of approaches and practices to realise higher outcomes (Nartey & van der Poll, 2021). For instance, Zhang et al. (2019) showed that management innovation and technological innovation promote organisational performance and sustainability.

Acknowledging sustainability in light of its probable impact on firm performance, the concept concerns issues (economic, environmental, social) that are associated with diverse stakeholders (Nartey & van der Poll, 2021; Zhang et al., 2019; Thapayom, 2019). Likewise, SMA concentrates on internal as well as external factors relating to the entity, that benefits both the entity's internal and external stakeholders as well (Alamri, 2019). Consequently, relying on and using information external to the firm positions the entity for sustained success. Arguably, Šiška (2017) suggests that only implementing innovations like SMA without also enhancing organisational capabilities is likely to be insufficient to guarantee improved returns. Moreover, Nartey and van der Poll (2021) note that the adoption and implementation of innovative and modern MAP complement management activities within and outside the entity. They further

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stressed that SMA techniques assist management accountants in gathering and analysing issues in the social and environmental context that are appealing and beneficial to the entity (Nartey & Van der Poll, 2021).

Further, the increased competition, globalization and innovations have changed the business models of most firms; hence, managers have directed attention to engaging in activities that will create value for various stakeholders (Abdullah et al., 2020; Phornlaphatrachakorn, 2019). Prior studies suggest that the adoption and implementation of SMA provide opportunities for entities to create value (Alamri, 2019; Abdullah et al., 2020). According to Abdullah et al. (2020), the effective application of SMA would also enhance the company's operational processes and decision-making processes, contributing to the development of value and wealth creation. In that regard, effective use of SMA techniques would lead to prolonged value creation and operational excellence (Abdullah et al., 2020; Alamri, 2019; Phornlaphatrachakorn & Na-Kalasindhu, 2020).

Notwithstanding the considered relevance of SMA, its usage has been witnessed in diverse sectors and industries such as the public sector (Alamri, 2019; Höglund et al., 2021; Nuhu et al., 2017), service (Odia, 2019; Oboh & Ajibolade, 2017; Kalkhouran et al., 2017; Waweru et al., 2004), educational institutions (Hutaibat, 2011; Hutaibat & Alhatabat, 2020), hospitality (Campos et al., 2022; Pavlatos, 2015; Turner et al., 2017), supply chain and logistics (Doktoralina & Apollo, 2019), and manufacturing (Bromwich, 1990; Cescon et al., 2019; Henri et al., 2014), among others. This suggests that the usage of SMA is multi-disciplinary and can enhance the performance of entities cutting across diverse sectors. This corroborates the assertion made by Roslender and Hart (2003) that the use of SMA takes a holistic approach by integrating marketing and accounting functions to attain a strategic position.

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Despite the growing relevance and interest in the concept of SMA in literature (Alamri, 2019; Cadez & Guilding, 2008; Cescon et al., 2019; Dmitrović-Šaponja & Suljović, 2017; Hadid & Al-Sayed, 2021; Lapsley & Rekers, 2017; Ma et al., 2022; Oboh & Ajibolade, 2017; Ojra et al., 2021; Oyewo, 2021; 2022; Pavlatos & Kostakis, 2015; Pedroso & Gomes, 2020; Petera et al., 2020; Petera & Šoljaková, 2020; Phornlaphatrachakorn & Na-Kalasindhu, 2020; Rashid et al., 2020; 2021; Thapayom, 2019), it is scarcely consistent with what exists on the ground/ physical or in practice. For instance, Nuhu et al. (2017) and Cescon et al. (2019) demonstrated that benchmarking, activity-based costing and target costing are greatly used among firms. On the other hand, Khan et al. (2011) showed that the level of usage of SMA (balance scorecard) is low among firms situated in Bangladesh. This reveals a disparate conclusion on the usage of SMA among scholars around the globe with higher usage in developed contexts than other contexts (Rashid et al., 2021).

Rashid et al. (2021) also argued that the differences among nations influence how things are done. For instance, while some nations take advantage of their systems to engage in earnings management and illegal activities, others channel those resources to formulate approaches and methods to control costs, which include, investing in the adoption of innovative MA tools to strategize and control cost. As a result, Rashid et al. (2021) and Ojra et al. (2021) advance that more attention should be focused on the extent of adoption and usage of SMA in developing countries. Similarly, most of the studies conducted on SMA have concentrated on large firms in developed nations with less emphasis on developing countries (Alamri, 2019; Cadez & Guilding, 2008; Cescon et al., 2019; Nuhu et al., 2017; Turner et al., 2017). Although Ma et al. (2022) responded to the call and studied SMEs situated in China, the study used a qualitative approach. However, this study adopts a quantitative approach to examine the factors that influence the design and usage of SMA among SMEs in a developing nation like Ghana.

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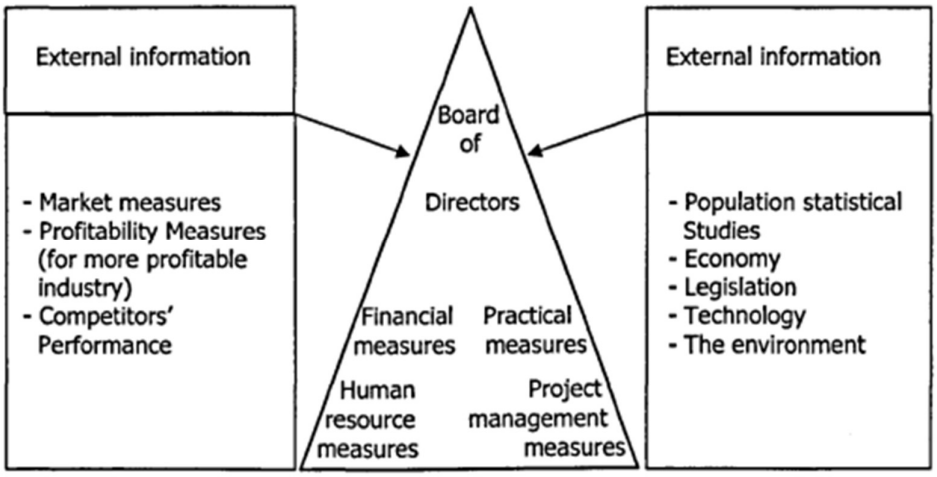

Figure 2.1: The information needs of strategic management

Source: Abuo-Alfutouh (2004)

2.3 Firm performance

The management literature underscores the crucial role of a performance assessment system in an organisations's operation, strategy formulation, and strategy implemention (López & Hiebl, 2015; Ojra et al., 2021). Similarly, previous studies have also emphasised the significance of the concept of firm performance on an organisation, as it strongly influences the success or failure of any brand (Pucci et al., 2017; López & Hiebl, 2015). However, several researchers have conceptualised firm performance in various ways. For instance, Pucci et al. (2017) defined firm performance as an organisation's efficacy as manifested through financial and operational results. Ordinarily, performance is perceived as "a measure of how successful an entity/system/process accomplishes its purpose" (Garengo et al., 2005; López & Hiebl, 2015). In another instance, Neely et al. (2002) argued that performance systems include the use of integrated adaptive systems to collect, store, and analyse data to assist in decision-making. Underlining this proposition necessitates studying the concept of SMA since its goal includes making relevant decisions that will secure strategic positioning.

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According to Simpson, Padmore and Newman (2012), the degree to how effectively and efficiently a firm operates in achieving its predetermined objectives is regarded as performance. The performance of a firm reveals how managers uphold its administrative roles; thus how efficiency, economy and effectiveness are simultaneously combined to optimize a firm's outcomes (Pucci, Nosi & Zanni, 2017). Efficiency captures the expedient use of business tools and strategies to attain performance expectations. On the other hand, effectiveness measures how well a firm satisfies stakeholder demands; while economy encompasses attaining firm outcomes by taking advantage of minimal cost. In that regard, firms that can operate efficiently and effectively stand the chance to outpace their rivals, hence, sustained firm performance (Ates et al., 2013; Neely, 2005; Pucci et al., 2017; Simpson et al., 2012). A study conducted by Ates, Garengo, Cocca and Bititci (2013) implored that entities need to pay sufficient attention to sustain performance since survival depends on it. In addition, to remain competitive, organisations must constantly improve their performance by reducing costs, enhancing quality, and distinguishing their products or services from competitors (Oyewo, 2022).

Further, the contingency-based studies have highlighted that "organisations are likely to perform better if they adopt and implement MAS (e.g., SMA) that suit their organisational and environmental factors or the circumstances they are faced with" (Ojra et al., 2021; Oyewo, 2022; Cadez & Guilding, 2008; Chenhall, 2003). The theory stresses that improving firm outcomes is dependent on the appropriate fit between MAS and the entity's context factors (Otley, 2016). Consequently, firm performance used in this study can be explained as the degree to which firms realise their expected goals and create value by adopting and implementing relevant accounting practices to assist firms in understanding their environment that enables them (internal and external), to reduce costs, enhance quality, distinguish its products or services from their rivals to produce optimal outcomes (Cadez & Guilding, 2008; Oyewo, 2022).

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2.3.1 Measures of Firm performance

Previous research has shown that improving performance is the fundamental goal of any organisation because it can lead to profitable outcomes and long-term survival (Kaplan & Norton, 1996). Primarily, businesses use a variety of performance measurement practices to assess and monitor their operational effectiveness and strategic choices (López & Hiebl, 2015). Although objective-subjective and quantitative-qualitative approaches are typically employed separately, some studies by practitioners and experts combine the two (Garengo et al., 2005; Ates et al., 2013). As a result, this has presented several conceptualisations and measurements used by researchers in prior literature. For instance, according to Garengo et al. (2005), financial outcomes can be evaluated using profit margins and annual revenues, but operational performance can be monitored using various work practises such as staff productivity, cost savings, quality control, and product/service differentiation.

The performance measurement systems used are affected by continuous changes in the environment making it difficult to accurately measure firm effectiveness. This necessitates identifying mechanisms to understand and mitigate volatility in the environment to promote performance evaluation (Kaplan & Norton, 1996). As such, Anderson et al. (2015) and Langfield-Smith (2008) advance on using both financial and non-financial measures as opposed to traditional approaches that rely solely on monetary aspects. Similarly, the strategy and contingency literature supports this comprehensive approach to measuring organisational performance due to its potential impact on strategic decision-making (Chenhall, 2003).

In addition, the performance of a business should not solely rely on its ability to access and analyse financial information but also consider a multitude of other indicators or factors (Neely et al., 2002). These indicators may encompass a company's image and reputation, brand recognition, effectiveness, reliability, operational efficiency, innovativeness, creativity, and commitment to corporate social responsibility (Ates et al., 2013; Neely, 2005). Interestingly,

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various stakeholders such as shareholders, customers, employees, and the general public evaluate a company's performance using on these indicators. As a result, it is advised that business performance is evaluated not only using financial measures but also using intangible factors. Prior studies have highlighted that a company's intangible assets significantly contribute to achieving efficient outcomes (Dzenopoljac et al., 2017; López & Hiebl, 2015; Tayles, 2002). Consequently, if a company's intangible assets affect its performance, it is justifiable to measure using the intangible criteria. Accordingly, this approach allows managers and employees to gain insights into the company's performance by comparing a company's financial and intangible aspects with those of its competitors (Dzenopoljac et al., 2017; López & Hiebl, 2015).

Notwithstanding, studies have revealed the difficulty and complexities of measuring the performance among small businesses (e.g., SMEs) as compared to their counterpart (large entities) (Garengo et al., 2005; Pucci et al., 2017). According to Wu (2009), the challenges surrounding the operations of small businesses have hindered the definition and measurement of performance. For instance, Pucci et al. (2017) highlighted that inconsistent record keeping, inadequate and unreliable past performance and over-emphasis on day-to-day activities, among others, are issues of SMEs. For this reason, it has become difficult to rely on objective measures; hence, this study employs subjective measures due to the nature of SMEs. Studies (Pucci et al., 2017; López & Hiebl, 2015; Tayles, 2002) have argued that a key drawback of the objective measures is that many firms are hesitant to give financial and operational data, therefore most studies rely on the subjective approach. Furthermore, Pucci et al. (2017) showed that subjective measures are positively associated with objective measures and it is best suited for instances where there is no data or it becomes challenging to measure a construct. Moreover, studies done on SMEs (Jaradat et al., 2021; Ahmad, 2017; Kalkhouran et al., 2017) have used similar measures.

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2.3.2 Determinants of Firm performance

Previous studies on the factors that influence firm performance in the management literature show that the management accounting systems, control systems, organisational contextual factors (including business strategy, market orientation and accountants' participation in strategic decisions, among others) and other firm-specific factors, are generally identified as crucial factors. The research on the determinants of firm performance is dominated by the implications of firms' internal and external contingent factors (Cadez & Guilding, 2008; Ojra et al., 2021; Rashid et al., 2021). Extant literature suggests that firm performance depends on the fit between organisational structure and context (Oyewo, 2022; Chenhall, 2003).

Management accounting systems

Studies suggest that organisations can effectively compete and survive when they adopt and use management accounting systems that address their environmental situation (Ghasemi et al., 2019; Hoque, 2004; Maina Waweru et al., 2004; Pedroso & Gomes, 2020; Turner et al., 2017). In this regard, accounting information provided by MAS assist organisations thrive in a competitive climate by providing useful information for planning, controlling, and decision-making. Similarly, accounting systems that are strategically-oriented and externally-oriented, more precisely SMA equips managers with information to learn about problems, outcomes, and opportunities, resulting in accurate and suitable decision-making response, and consequently, improved performance (Alamri, 2019; Ojra et al., 2021). Several empirical evidence provide support for the positive association between MAS and firm performance (Cadez &Guilding, 2008; Afifa & Saleh, 2021; Pedroso & Gomes, 2020; Oyewo, 2022).

Strategy

A business strategy ordinarily justifies how an organisation intends to run its operations under certain mechanisms and procedures, often relating to customers, employees, markets, and

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competitors (Visedsun & Terdpaopong, 2021). In other words, the likelihood that an organisation will be able to regulate and advance its plans towards its effective execution is highly dependent on how clearly and deliberately the entity drives its strategy (Odia, 2019). A company's strategy also describes its competitiveness in a market segment (Bortolozi et al., 2020). Regarding business strategy, the findings have been inconclusive because such studies have used diverse measurements and conceptualisation to examine firm outcomes (Agyapong et al., 2020; Cescon et al., 2019; Chong & Chong, 1997; Odia, 2019; Oyewo, 2022; Pavlatos, 2015; Turner et al., 2017). Similarly, what constitutes an appropriate strategic orientation or choice remains an empirical question. As a result, existing literature provides inconclusive results. Cescon et al. (2019) and Cinquini and Tenucci (2010) mentioned that strategic choices influences the strategic decisions made by firms. Rudiawarni et al. (2022) found that as compared to defenders, prospectors are committed to innovation to improve firm performance during periods of high levls of competition. Contrarily, defenders are found to be more profitable than prospectors (Cinquini & Tenucci, 2010; Hambrick, 1983). Turner et al. (2017) documented that hotel business strategy is associated with financial performance.

Market orientation

The term “market orientation” (MO) is an essential principle in modern strategic business decisions which stems from the concept of a market (Dreher, 1994; Hinson et al., 2017; Mahmoud & Hinson, 2012) that is frequently explored. Market orientation is a culture or an orientation of an entity (be it customer orientation, competitor orientation, or inter-functional coordination) with the object of providing superior value to its customers and clients (Narver & Slater, 1990; Nguyen, 2018). Proponents of MO on firm performance base their argument on the tailoring activities and processes for creating, communicating, pricing, promotion, delivering and exchanging offerings that have value for customers, clients, partners and the society at large (Ringold & Weitz, 2007; Turner et al., 2017). Although it is widely found that

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MO is crucial in statisfying client demands to sustain competition, empirical evidence have been inconclusive (Hinson et al., 2017). Although Cadez and Guilding (2008) found no association between MO and firm performance. Other studies have provided support that MO is associated with firm outcomes (Bamfo & Kraa, 2019; Narver & Slater, 1990; Nguyen, 2018; Özer et al., 2006; Turner et al., 2017; Oyewo, 2022).

Accountants' participation

An accountant's involvement in strategic decision-making is typically assessed by their active participation in strategy formulation and implementation (Nguyen, 2018; Wooldridge & Floyd, 1990). It is asserted that companies that empower accountants in strategic decision-making tend to be more analytical, inclined to explore new products and markets opportunities, and more focused on the domestic market (Nguyen, 2018; Cadez & Guilding, 2008). According to Nguyen (2018), when organisations involve accountants in strategic decision-making, they can leverage market-oriented information to improve firm performance. Cadez and Guilding (2008) examined the effect of accountants' participation on SMA and firm performance, they showed that accountants' participation has a positive indirect effect on firm performance. A study by Hadid and Al-Sayed (2021) noted that management accounting who engage or interact through networking with other decision-makers may find it easier to propose and adopt SMA practises in organisations with high-quality integrated IS in outcome-driven firms.

2.4 Environmental uncertainty

The organisational environment comprises of both physical and social factors external to the organisation, which influence their internal aspects; and are thus taken into account during decision-making process (Otley, 2016; Sniazhko, 2019; Pires & Alves, 2022). Given its impact on organisational structure and processes, decisions taken by managers often take into consideration several factors from the environment. These factors include globalisation of

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operations, technological advancements, increased competition, climate change, biodiversity, the pursuit of continuous improvement, and evolving expectations regarding social and environmental responsibility; have induced rapid changes, resulting to increased environmental uncertainty (Lueg & Borisov, 2014; Pires & Alves, 2022; Afifa & Saleh, 2021).

Notably, prior studies in the MA literature have highlighted environmental uncertainty as a pivotal contextual factor that has received substantial attention in contingent studies (Chenhall, 2003; Otley, 2016). According to Sniazhko (2019), uncertainty is a crucial factor that has the potential to affect the decisions made by multinational entities taking into consideration the firm, industry and environment it operates in. Environmental uncertainty refers to a manager's inability to assess and forecast any changes to elements outside the context of his or her organisation, such as clients, vendors, and legal requirements (Abdel-Kader & Luther, 2008).

Ojra et al. (2021) mentioned that "the environment could be viewed as certain or uncertain only to the extent that the decision-makers perceive it to be". Milliken (1978) argues that there are three kinds of uncertainty that individuals and firms are likely to face, namely state, effect and response uncertainty. However, Ashill and Jobber (2010) proposed that PEU can be categorised into two distinct aspects: micro factors (suppliers, consumers, competitors) and macro factors (social, legal, economic, technology). The variability and complexity that exist in the environment should be regarded as state uncertainty when studying PEU (Ashill & Jobber, 2010). Milliken (1978) and Lueg and Borisov (2014) added that conceptually the state of the environment a firm operates in can be ascribed to state uncertainty, which is approximate to environmental uncertainty that corresponds to the 'perceptual experience and not the objective or actual state of firms operating environment' (Ashill & Jobber, 2010). Additionally, Ojra et al. (2021) remarked that the exploitations done by senior managers involved in decisions frequently place more emphasis on PEU and subjective information in comparison to objective data generated.

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Notably, the concepts of risk and uncertainty are frequently used synonymously in the literature. However, it is important to make the distinction between the two. According to Ashill and Jobber (2010), uncertainty can be attributed to "the unpredictability of environmental or organisational variables that affect corporate performance" or "the inadequacy of information about these variables," whereas risk refers "exclusively to unpredictability in corporate outcome variables." Therefore, uncertainty makes business performance less predictable, which raises the degree of risk (Ashill & Jobber, 2010; Becker et al., 2016).

In other words, uncertainty can take different forms and emanate from diverse sources, considering several meanings given to the concept (Sniazhko, 2019). Oyewo (2022) mentioned that the unpredictability of the operational environment has been examined from several perspectives including hostility, turbulence, complexity, diversity and restrictiveness, dynamism and complexity, uncertainty and controllability; however, uncertainty seem to be the the widely used concept in management accounting research. Besides, due to its complexity and inability to fully capture the concept, some studies have attained inconclusive findings by employing PEU in their study model. Notably, Ashill and Jobber (2010) advanced that the inconsistency in the findings concerning uncertainty could emanate from improper categorization into micro and macro environmental factors. In addition, they argued that research results may differ because most studies only focused on a few of the elements at once (Chong & Chong, 1997; Ashill & Jobber, 2010). Furthermore, Lueg and Borisov (2014) argued that diverse measures put forward by scholars to capture the concept of uncertainty could be a source of misleading results. In summary, environmental uncertainty imposes a huge challenge to entities operating in today's rapidly evolving business environment. This challenge is often tied to a dearth of information and the speed at which information becomes available, both of which restrict operational activities (Sniazhko, 2019; Pires & Alves, 2022).

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2.5 Economic crisis

Recently, there has been a renewed interest from researchers, economists, politicians, philosophers and historians in examining the concept of crisis (Hazaa et al., 2021; Hoque, Mai & Odzil, 2022; Passetti et al., 2021). This interest was significantly aroused by the emergence of the Global financial crisis in 2008, SARS crisis, Ebola pandemic, and further evoked by the recent global pandemic adjudged COVID-19 (Coronavirus) (Bedford et al., 2022). The surfacing of the COVID-19 pandemic led to a crisis in many countries, a global economic downturn; placing restrictions on people's freedom of movement and travel, and higher levels of deprivation (Aduhene & Osei-Assibey, 2021). As a result, COVID-19 pandemic has been described as the most serious pandemic ever, according to the United Nations Framework Report (2020).

Primarily, the emergence of crisis breeds uncertainty and unpredictability in the environment be it internal or external and is worth examining (Lin et al., 2006). A crisis is defined as any unstable predicament resulting from changes that are considered inevitable and sudden with a distinct possibility of leading to highly unfavourable outcomes (Janke et al., 2014). Crisis is emphasised, "as an undesirable outcome, highlighting a period of 'tremendous difficulty' 'danger' or 'uncertainty', especially in politics or economics" (Longman, 2009). Hazaa, Almaqtari and Al-Swidi (2021) described crisis as any abnormal circumstance that a person (individual or organisation) faces or goes through, which poses significant threats to its growth and viability.

According to Hazaa et al. (2021), crisis emanates from different sources, including human-related elements (miscalculation, wrong interpretation and misunderstanding), administrative (mismanagement, weak controls, ignoring warning signals, resources – both human and physical) as well as matters beyond the control of firms (such as copyright infringement, flood, natural disasters, terrorist attacks, and conflict of interests, among others) that exert threats and

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consequences of different kinds. For instance, one crisis that remains evident in the literature over decades is the Global financial crisis in 2008, which occurred in the USA and pervaded the entire globe (Hazaa et al., 2021; Pavlatos & Kostakis, 2018a). The predicaments from this crisis affected several countries and regions from its inception in 2007 until it reached its peak in 2008. The global markets of countries, including the financial and capital markets were affected by the crisis because of disparities in institutional and economic frameworks as well as governmental interventions; and Ghana was not an exception. The ripple effect of the crisis due to inflation rate volatility, changes in terms of trade (exports and imports) and not forgetting the declining condition of its reserves signalled the nation's incapacity to depend upon its country's reserves to protect the economy from external uncertainties such as the recent global financial crisis.

Economic crisis introduces issues of reduction in the availability of resources, cash flows, political instability, fluctuations and demand (Pavlatos & Kostakis, 2018b). Economic crisis tends to pose a huge threat to an organisation's survival and growth where cash flow fluctuations decrease the profits and revenues of entities (Pavlatos, 2021; Pavlatos & Kostakis, 2018b). For instance, some few months following the SARS pandemic, Hong Kong restaurants suffered losses of up to $3 billion due to SARS crisis (Pavlatos et al., 2021). Janke et al. (2014) noted that managers involved in decision-making are always in a dilemma in times of increased uncertainty which makes decision-making quite difficult and cumbersome.

Moreover, in the last few years, there has been a persistent upset in the Ghanaian economy that has affected how businesses operate within the business environment. This was a result of the banking crisis and was further exacerbated by COVID-19 in 2020. The emergence of a crisis in the financial sector (Ghanaian banking crisis) was a result of an action undertaken by the Bank of Ghana (BoG) to restructure the banking sector, which affected the operating license of some defunct and distressed banks in the country. Prior to this action, the BoG undertook

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some investigations revealing that some banks (such as UT Bank Ltd., Capital Bank Ltd., UniBank Ltd., The Beige Bank Ltd., Royal bank Ltd., Sovereign Bank Ltd., Construction Bank Ltd., Premium Bank Ltd., Heritage Bank, and GN Bank Ltd.) had issues of related party transactions, poor corporate governance, insider dealings and improper financial reporting practices as noted by Aboagye (2020). Due to the closure, entities and individual that held their deposits and savings with those banks could not assess their funds as and when needed causing unfavourable conditions such as a lack of sufficient resources, and cash flow to productively commute their activities. Moreover, employees associated with these banks were significantly affected. While some lost their positions or jobs, others lost their bonuses, and allowances accrued to them, among others. These happenings resulted in a crisis attributed to the increase in the rate of unemployment and the pressure on the financial sector. These pressures stemmed from the need to transition customers of the defunct banks to be migrated to other banks.

The COVID-19 uncertainty, also regarded as a global pandemic, is a historic one of its kind. The global pandemic was identified as the most historic and severe pandemic to affect the globe, with increased levels of unemployment and constraints on free movement (Aduhene & Osei-Assibey, 2021). The COVID-19 pandemic was first recognised in Wuhan city of China in December 2020 by the World Health Organization (WHO) (Hoque et al., 2022). The pandemic was caused by a coronavirus that spread beyond territories hence affecting several nations around the globe. In Ghana, the outbreak of COVID-19 was first recognised in March 2020 (Uzir et al., 2022). Moreover, the 2020 reports of Worldometer showed that globally over 790,000 people died from contracting the virus and over 22 million people were affected by coronavirus as of November 2020 (Aduhene & Osei-Assibey, 2021).

Recent evidence of the economic crisis emanating from COVID-19 had a severe impact on the global space and in Ghana (see Figure 2.3) in diverse ways (Bedford et al., 2022). Studies have noted that the COVID-19 pandemic was a global health crisis that affected the external

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environment resulting in an economic crisis (Bedford et al., 2022; Hoque et al., 2022). A study by Bedford et al. (2022) reported a decline in the global output, estimated as three times the impact of the 2008 global financial crisis. A similar opinion emerged from the Ghanaian context that due to the COVID-19 pandemic, the prices of commodities increased the level of complexity in the environment considering Ghana is among the top exporter of cocoa in Africa. Although, before COVID-19, there have been efforts to reduce debts of the government, which, in turn led to a decrease in firms' ability to access credit facilities. Despite these challenges, the government spelt out measures to curb and reduce the impact of COVID-19, which led to a ban on social gatherings and lockdowns within the 16 regions of the country. These instituted measures (lockdown) resulted in a standstill of various activities in the business environment forcing economic activities such as buying and selling, travel, exports and imports, among others. This hindered normal human activities resulting in a crisis.

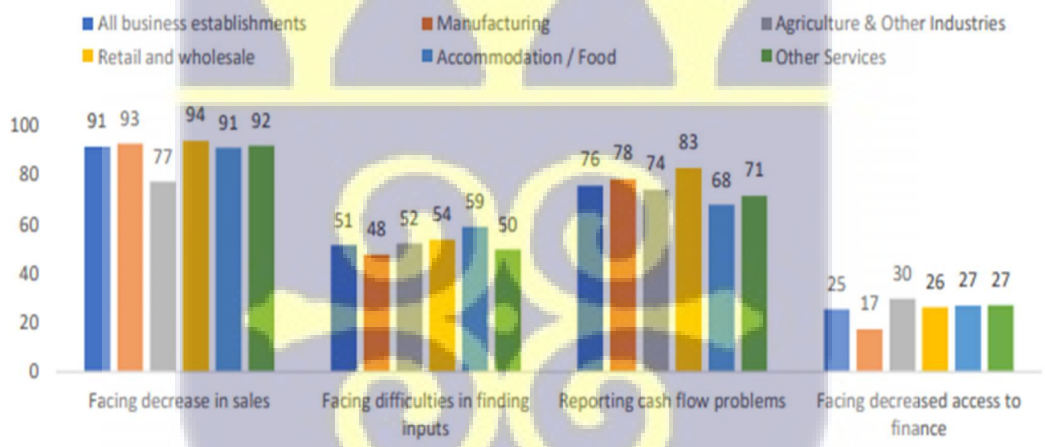

Figure 2.3: The impact of COVID-19 on the operation of firms

Source Ghana Statistical Service (2020)

Nevertheless, SMEs were not left out of the economic downturn caused by the pandemic. Owing to the COVID-19 outbreak, there was a disruption in the business environment, where many SMEs were either going out of business or struggling to manage their resources

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and cash flow in order to survive. For instance, a survey conducted by the International Trade Centre (ITC) in 2020 among 132 nations found that one-fifth of SMEs revealed that they are at risk of going out of business entirely, while two-thirds of SMEs reported that the crisis has exerted a substantial impact on their business processes (Aduhene & Osei-Assibey, 2021).

Further, the current study conceptualised economic crisis from the perspective of the outbreak of COVID-19, where the global pandemic (health crisis) resulted in an economic crisis that has affected the entire globe. This is because, among the crises that have emerged, this crisis stands out as it has affected the nations in unique ways. Additionally, reports on the impact of this crisis produced a significant impact and attention among scholars and practice (Bedford et al., 2022; Hoque et al., 2022; Li et al., 2021; Uzir et al., 2021). For instance, the UN provided that the global output decreased by 4.3% in 2020, which constitutes over three times what transpired during the global financial crisis in 2009 (Bedford et al., 2022).

2.6 Small and Medium-sized Enterprises (SMEs)

There is a growing body of literature that recognises the importance of Small and Medium-Sized Enterprises (SMEs) in countries considering their crucial role (Amoako, 2013; Boadi et al., 2017; Jaradat et al., 2021; Ma et al., 2022; Oduro, 2020; Pucci et al., 2017).

Globally, it is well-established that SMEs play a critical role in the success of a nation. According to the 2019 OECD report (OECD SME and Entrepreneurship Outlook 2019), SMEs represent approximately 99% of businesses and employ about 60% of the working population worldwide both in developing and developed countries (Ma, Chen, Zhou & Aldieri, 2022). This global perspective highlights the significant contributions of SMEs towards the growth of nations in which they operate. More precisely, in Malaysia, 97.3% of firms registered in the country are SMEs contributing a significant proportion of 36% of the country's Gross Domestic Product (GDP) (Azudin & Mansor, 2018). Similarly, in Vietnam, SMEs constitute roughly

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98% of the firms in the country, which aids in contributing about 40% of GDP as well as 50% of employment (Le, Nguyen & Hoang, 2020) with a 31% contribution to the state's budget revenue. A similar perspective was found in Ghana, evidence from the SMEs Competitiveness Report (2016) revealed that, on average, 80% of businesses registered in Ghana constitute SMEs, who play a part in the Gross Domestic Product (GDP) of the country by contributing 70% and providing about 75% of job opportunities, thus aiding to decrease and alleviate the unemployment bracket. Despite the substantial role SMEs play, there seems to be no recognised definition of the concept.

According to Abor and Quartey (2010), SMEs exhibit significant variations based on their country and the sector in which they operate. Typically, SMEs are composed of privately owned businesses with a small workforce, low sales volume, and sometimes a few fixed assets (Abor, 2007). The lack of clarity on what constitutes SMEs has impacted survival, particularly in assessing and securing crucial services such as accounting, financial management and access to credit facilities, as illustrated by Schmitz, (1995). These challenges may be attributable to the varied definitions and perspectives held by financial institutions.

Furthermore, the varied definitions of SMEs may stem from disparities in political, social, cultural, and structural factors among countries. In some instances, the loopholes and inconsistencies in definitions arise due to gaps in the formal structure. For instance, South Africa has an accepted National Small Business Act, which provides a framework ensuring consistency in the definitions used by various official agencies (Abor & Quartey, 2010). In contrast, Ghana has no well-accepted framework for describing SMEs. As a result, a multitude of categorizations based on factors have been taken into account while defining SMEs (Abor & Biekpe, 2007; Oduro, 2020; Li et al., 2021), these factors include size, production methods, legal status, skills and capabilities of labour, capital assets and turnover levels (Abor & Quartey, 2010).

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The Bolton Committee (1971) provided an initial contribution by way of proposing a distinctive approach to separate small firms from large ones; hence, providing an "economic" alongside a "statistical" definition of the concept based on a justifiable stance (Abor, 2007). The statistical definition expounds on the contribution they project to GDP whereas the economic definition stresses how independent the entities are, in terms of the entity's organisational structure and relative market size (Abor, 2007; Li et al., 2021).

On the other hand, Micro, Small, and Medium-Sized Enterprises (MSMEs) are defined by the World Bank (2013) based on the number of employees and annual sales turnover. Within their scope of classifications, micro-businesses can employ up to 10 people and generate up to US $10,000 in revenue. Small businesses employ up to 50 people and have annual revenues of US $3 million. Medium-sized businesses employ up to 300 people and generate up to US $15 million annually as revenue from their operations. Identically, the definition postulated by the European Union classifies businesses following their labour force and sales turnover (Abor & Quartey, 2010). Microbusinesses are those with fewer than ten employees and annual sales of less than €2 million; small businesses are those with fewer than fifty employees and annual sales of less than €10 million; and medium-sized businesses are those with fewer than 250 employees and annual sales of less than €50 million (OECD, 2016).

The United Nations Industrial Development Organization (UNIDO) defined the concept by categorizing SMEs according to how many employees the entity has. They clarified that micro-enterprises have an employee force of less than 5, small enterprises have 5 -19 employees, medium enterprises have 20 – 99 employees, and large firms have more than 100 employees (Abor & Quartey, 2010). However, in Africa, the definition of SMEs, as stipulated in South Africa, is based on the number of employees, gross assets excluding fixed assets and annual sales generated. It can be noted from the National Small Business Act of South Africa that depending on the kind of industry they operate, medium enterprises possess fewer than 100 –

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200 employees, less than R4 million - R50 million of annual sales and less than R2 million – R18 million assets whereas for small enterprises have employees beneath the number of 50, less than R2 m – R25 m annual sales and lower than R2 million – R4.5 million assets dependent on the kind of industry the entity operates in (Abor & Quartey, 2010). Likewise, businesses with less than ten employees are categorized as small-scale organisations, and those with ten or more employees are categorized as medium-sized and large-scale enterprises by the Ghana Statistical Service (GSS). The aforementioned reinforces the present discourse and status that exist, which suggests that there is no universally accepted definition of SMEs and emphasizes the country differences (Abor & Biekpe, 2007).

Nevertheless, the definition spelt out by the Ghana Statistical Service (2003), indicates that small businesses are institutions with five to 29 employees and annual sales of less than $100,000, while medium-sized businesses are businesses with sales of less than $1 million and employees ranging from 30-99. Interestingly, the institutional body responsible for promoting the development of SMEs in Ghana, namely the Ghana Enterprise Agency (GEA), employs both the "fixed asset value" and "the number of employees" criteria (Abor & Quartey, 2010; Li et al., 2021). Accordingly, the current study relied on the "number of employees" in conceptualizing the concept of SMEs, since it is the most preferred and provides an easier way to categorize firms with this approach. In addition, most SMEs feel very reluctant to report on their turnover, as such, making it very challenging when using the 'turnover approach'. Furthermore, this criterion was chosen because most of the studies conducted on SMEs in the context of Ghana have used this conceptualisation (Amanamah et al., 2016; Amidu et al., 2011; Bamfo & Kraa, 2019; Oduro, 2020).

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2.6 Theoretical review

2.6.1 Contingency theory

This study is underpinned by the contingency theory. Primarily, the introduction of contingency theory has sustained several developments and assertions in the management literature. The theory strives to shift away from the universal approach to management to the contingent approach, which complements the use of the universal approach to control and a situation-specific approach (Donaldson, 2001; Hammad et al., 2010). It demonstrates how different components of an organisation depend on the overall organisation's circumstances or how one situation depends on another.

The contingency theory postulates that no universally appropriate management control system fits all firms (Chenhall & Moers, 2015; Otley, 1980). The theory is of the view that optimal organisational performance arises from the fit between organisational structure and context (Cadez & Guilding, 2008). According to Otley (2016), the circumstances within which firms find themselves affect the suitability of the accounting system. It indicates that an organisational structure (MAS design) needs to adapt itself when the unique patterns of a company change especially if it seeks to be prominent and productive.

Accordingly, relating these trends to accounting literature, the theory presupposes that the existence of contingency variables has made it clear why different situations require different accounting methods and systems. Predictably, one can envisage that the success of an organization will rise in tandem with the degree of compatibility and configuration between the accounting system (MAS), organisational structure, as well as other associated contingent factors. Consequently, the impact of these factors (contextual variables) on the system should be considered by management, accountants or MAS design professionals among others within the organisation. Similarly, Otley (2016) asserts that there is interdependency between the design of a management control system and the organisational structure. The theory suggests

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that management control system design is affected by diverse environmental factors (Chenhall, 2003). Contingency theory could perhaps select or provide recommendations regarding a particular type of accounting system that displays an appropriate fit and suits the external situations; however, the universal approach is unable to do that. As a result, many MA scholars have embraced the contingency paradigm, according to Otley (2016) and Chenhall (2003), to better understand the findings from empirical studies (Abdel-Kader & Luther, 2008; Afifa & Saleh, 2021; Al-Mawali, 2015; Appiah et al., 2020; Cadez & Guilding, 2008; Nartey, 2018; Oyewo, 2022; Pavlatos, 2012).

The concept of fit is embedded in the contingency theory, which connotes that an appropriate fit between organisational structure and contextual factors will improve firm performance (Moron & Hu, 2008; Cinquini & Tenucci, 2007). Chenhall (2003) noted that a good fit depicts an improvement in performance whereas a bad fit suggests abysmal performance. From the theoretical standpoint, there are several forms of fit (Gerdin & Greve, 2004; Chenhall, 2015; Burkert et al., 2014) in management and accounting literature; however, the most prevalent ones are the selection fit, interaction, and system form of fit.

Selection fit employed in studies investigates the relationships between environmental (contingent) variables and MAS components without attempting to determine whether this association is related to performance (Burket et al., 2014; Chenhall, 2003). While interaction fit demonstrates how context affects the association between MAS and performance (Gerdin & Greve, 2004; Hartmann & Moers, 2003), Burkert et al. (2014) argue that another form of fit under this category is the mediation form of fit, which captures the simultaneous effect of the MAS and contingent variable on performance. Thus, how the contingent variable affects firm outcomes through the MAS variable is not supported under the contingency theory (Burkert et al., 2014). Lastly, systems studies look at how different MAS concepts and contextual factor variables interact to improve performance in a variety of ways (Hammad et al., 2010; Gerdin

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& Greve, 2004; Burkert et al., 2014); thus, the system form fit captures multiple MAS variables as well as several context factors (Cadez & Guilding, 2008).

This current study relies on the tenet of contingency theory, which suggests that organisational performance is an outcome of the fit between the management accounting system (SMA) and context factors. Based on that notion, studies have shown that contingent factors are important factors that exert influence on organisational processes (such as structure and systems) (Langfield-Smith, 2008; Hoque, 2004). Studies have shown that the association between MAS and firm performance is not constant, but it varies in response to diverse situational and contingency factors (Hoque, 2004; Abdel-Kader & Luther, 2008; Cadez & Guilding, 2008; Petera & Šoljaková, 2020). Notwithstanding, studies that employed the contingency approach suggest that no single study can examine all contingencies (Cadez & Guilding, 2008; Chenhall, 2003; Pavlatos & Kostakis, 2018b) hence the need to examine other contextual factors. For this reason, the current study limits its scope to economic crisis and environmental uncertainty but includes market orientation, accountants' participation and strategy as control variables despite several potential factors.

2.6.2 Factors that influence the design of SMA

Prior studies have highlighted diverse factors that influence the adoption and usage of management innovations and MAS (Abernethy & Bouwens, 2005; Lapsley & Wright, 2004; Oyewo, 2021; Petera & Šoljaková, 2020; Zawawi & Hoque, 2010). like SMA. While some antecedents positively associate with SMA in the MA literature, others demonstrate no impact on the usage of SMA. Broadly, individual factors and firm factors (more precisely, internal and external factors) are antecedents of SMA Usage in prior research studies (Rashid et al., 2021; Nik Abdullah et al., 2022; Ojra et al., 2021).

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Individual factors

From the individual perspective, top-level managers are conceived as key actors involved in decision-making among firms. Studies have observed that executives are seen as drivers who influence the adoption and implementation of innovations, practices and systems to suit firms' processes (Kalkhouran et al., 2017; Pavlatos & Kostakis, 2018b). For instance, Pavlatos and Kostakis (2018b) showed that the adoption of modern tools depends on top managers. Because of this, Zhang et al. (2019) have raised concerns for CEOs and top managers to enhance sustainability and firm survival by considering technological and management innovations.

According to the Upper Echelon theory, Top Management Team (TMT) characteristics influence the strategic choices and outcomes of firms (Hiebl, 2014; Oppong, 2014). Similarly, SME owners' and managers' characteristics are instrumental factors in Management Accounting Systems (MAS) design research (Kalkhouran et al., 2017; Ahmad & Zabri, 2015; Abdel-Kader & Luther, 2008). Ahmad and Zabri (2015) and Soa et al. (2022) mentioned that the implementation of MAP among SMEs is likely to be influenced by the abilities and competencies of the entity's human capital. For instance, studies on SMEs have demonstrated that a qualified accounting employee, as well as the owner/CEO/ manager's prevailing attributes, is linked with the usage of MAP (Ahmad & Zabri, 2015; Pedroso & Gomes, 2020; Soa et al., 2022). A study by, Ahmad and Zabri (2015) observed that the commitment of owners/managers is a new critical factor that affects the extent of SMA application. Moreover, Pavlatos and Kostakis (2018a) adopting the tenet of the role theory demonstrated that TMT creativity affects the usage of SMA techniques among firms.

One crucial figure in every entity is the CEO who can actively explore existing and new trends. They are often handed the mandate to direct the affairs of the entity's operations (Pedroso & Gomes, 2020), and inhabit control over the entity's strategies and the firm's structures

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(Oppong, 2014). According to Oppong (2014), CEOs often aim to pursue relevant and strategic choices that may affect the outcomes of the entity. Moreover, Kalkhouran et al. (2017) assert that the quality and effectiveness of top managers are the primary determinants of an entity's survival and success. Similarly, Amoako (2013) identified that CEOs in SMEs are often the owner-manager kind and thus the implementation and usage of practices are likely to be influenced by their experience, skills, and education. Relatively, Musso and Francioni (2012) argued that the adoption of practices, such the accounting practices, is largely influenced by the characteristics of decision-makers associated with SMEs. This suggests that CEOs/ owners and managers of SMEs have a credential role in making choices that drive the entity towards managing its operational cost and efficiency (Nartey & van der Poll, 2021; Rajeevan, 2019)

Furthermore, a study by Kalkhouran et al. (2017) found that CEO education and involvement in SMEs' networks are associated with the usage of Strategic Management Accounting (SMA). Pavlatos and Kostakis (2018b) examined the impact of Total Management Team (TMT) characteristics and a firm's historical performance on SMA usage. They found that institutions with historical performance extensively implemented SMA techniques to enhance their performance. Non-Thai firms ascribed more relevance to SMA information than Thai CEOs, suggesting that the nationality of directors affects intentions to support long-term decisions with SMA (Sumkaew & Intanon, 2020). Arunruangsirilert and Chonglerttham (2017) found a significant association between corporate governance characteristics and SMA usage, as well as the participation of an accountant. Thus, complementing contingency theory and upper echelons theory suggests that organisational outcomes and firms' structure can be influenced by the characteristics of top managers, with strategic choices driven by their experience, engagement, capabilities, and personality.

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Firm factors

From the firm's perspective, internal and external contextual factors have been identified to influence the adoption and implementation of SMA (Rashid et al., 2021; Ojra et al., 2021). The business strategy an entity employs is seen as the most influential antecedent that sways firms towards using SMA (Rashid et al., 2020; 2021). This evidence became relevant considering the efforts projected by scholars in the SMA literature (Bromwich, 2000; Cinquini & Tenucci, 2010; Guilding et al., 2000; Ma & Tayles, 2009; Roslender & Hart, 2003). For instance, the study by Shank (1996) heavily relied on Porter's competitive strategies to elucidate the concept of SMA, likewise Simmonds (1981).

Furthermore, business strategy informed the conception of the term "accounting for strategic management", which dwelt on the tenet of aligning strategy and accounting (Roslender & Hart, 2003). A recent empirical study conducted by Cescon et al. (2019) demonstrated that differentiation strategy influences firms to use SMA techniques. In that same year, Haseeb et al. (2019) revealed that cost leadership strategy and differentiation strategy aid SMEs in Malaysia to promote their sustainability, essentially among firms who procure reliable management control systems (MCSs).

Apart from strategy, prior studies in the MA literature have indicated that several other factors can influence the usage of SMA (Rashid et al., 2021; Nik Abdullah et al., 2022). An initial controversial contribution that explored the determinants of SMA (Cadez & Guilding, 2008) applied a contingency approach and Structural Equation Modelling (SEM), they concluded that market orientation, firm size, business strategy and deliberate strategy were identified factors influencing the SMA system. On the contrary, their findings were not in agreement with Cinquini and Tenucci (2010), who revealed that usage of SMA is not affected by the firm size, industry and the type of strategy adopted.

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Pavlatos (2015) argued that the usage of SMA is evident among large entities that are conceived to be overwhelmed by governance issues but have a strong economic potential. However, Ojra et al. (2021) contend that most entities around the globe both small and large operate within the same operating settings and context under similar conditions. Hence, a need for MA practices to support their operations. Kalkhouran et al. (2017) showed that meeting the entity's information needs regularly requires the use of an innovative and technological system that aids various units to promote the processing of cost data such as SMA; and Jaradat et al. (2021) advanced that manufacturing entities belonging to the SMEs category essentially need to implement MAP that will position them to deliver authentic and timely information. Consequently, there is a need to extend attention towards examining the factors that influence the design and utilization of SMA among SMEs.

According to Turner et al. (2017), employing SMA techniques could further improve the performance and innovativeness of hotel properties by effectively enhancing firms' controls and procedures. As a result, the stability of the hotel's business strategy, shifting competitive demands, and profitability have thereby reflected the adoption of SMA techniques. Meanwhile, Nuhu et al., (2017) analysed the use of innovative management accounting tools among entities operating in the public sector of Australia. They demonstrated that activity-based costing, benchmarking and target costing were associated with the diagnostic and interactive use of control systems. The use of SMA is increased by PEU and demonstrates that market-oriented businesses are likely to utilise SMA more frequently (Al-Mawali, 2015; Ax & Greve, 2017). In the same vein, Cescon et al. (2019) argued that the usage of SMA is associated with external factors such as competitive pressures and environmental uncertainty, and it is not contingent or dependent on strategy type or significantly influenced by geographical configuration.

The utilization of strategic-oriented techniques, such as strategic costing, benchmarking and target costing, is significantly influenced by management style and organisational culture (Al-

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Mawali, 2015; Ojra et al., 2021; Rashid et al., 2020; 2021). A study on SMA by Al-Mawali (2015), found that the level of environmental uncertainty and market-oriented culture among entities situated in Jordan; is associated with the adoption of SMA techniques. However, Pasch (2019) demonstrated that the stages in the product life cycle that an entity goes through are associated with the use of SMA techniques.

Notwithstanding the plethora of studies conducted on SMA, most studies have focussed on essentially large firms with less emphasis on SMEs. Considering the significant contribution of SMEs to the entire global output and individual countries' growth (Pedroso & Gomes, 2020, Abor et al., 2011). Again, due to differences in legal systems and structures among study contexts as emphasised in a study by Rashid et al. (2021), the findings from developed countries may be irrelevant to other contexts. Hence it is imperative to examine whether the outcomes of SMEs depend on context factors (perceived economic crisis and perceived environmental uncertainty) from a developing country perspective. Thus, whether the design of SMA among SMEs in Ghana is context dependent.

2.7 Empirical review

2.7.1 SMA and Firm performance

Previous studies establish that relevant accounting practices and control systems provide vital information to support value chains, which further influences firm performance (Abdullah et al., 2020; Cinquini & Tenucci, 2010; Lord, 1996). The adoption of SMA is asserted to encompass the provision of information for strategy formulation and planning, monitoring market conditions, monitoring competitors' cost structures, and monitoring competitors' pricing decisions (Lord, 1996; Cadez & Guilding, 2008). Therefore, companies can successfully thrive by using SMA to reduce costs, carry out planning and control, make strategic decisions, assess competitors, analyse customer profitability, and produce additional value (Oboh & Ajibolade, 2017; Oyewo, 2022). Moreover, due to most firms' strategy to remain competitive and survive

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in the long term, the presence of SMA will assist the organisation in achieving a competitive advantage by improving decision-making processes and achieving desirable outcomes. Several studies have investigated the effect of SMA usage on firm performance (Alamri, 2019; Cadez & Guilding, 2008; Cescon et al., 2019; Cinquini & Tenucci, 2010; Doktoralina & Apollo, 2019; Kalkhouran et al., 2017; Oyewo, 2022; Turner et al., 2017). Nevertheless, the study on the effects of SMA usage on the firm performance of SMEs in developing economies is limited (Rashid et al., 2021; Ma et al., 2022).

Doktoralina and Apollo (2019) examine the contribution of SMA to supply chain outcomes and logistic firm profitability and find that SMA practices enhance logistic firms' profitability. This suggests that the use of SMA aids logistic firms understanding their competitors and identifying cost structures, which in turn improves pricing strategies and ultimately improves cost efficiency, leading to higher profitability. Cadez and Guilding (2008), in a study, investigated the effect of using SMA and an accountant's participation in the strategic decision-making process on a firm's performance. They demonstrated that SMA usage improves firm performance. In a similar international study on 95 hotel properties situated in the USA, Turner et al. (2017) demonstrate that SMA usage enhances hotel property financial performance.

2.7.2 SMA, Environmental uncertainty, and Firm performance

According to Chenhall (2003), the design and usage of management control systems (MCS) are affected by diverse contingent factors, with environmental uncertainty being a significant factor. Environmental uncertainty not only complicates managers decision-making needs but also leads to the misalignment of organisational systems with firms' strategies and objectives, which in turn affects firm performance. From an accounting perspective, organisations are more likely to accept or rely on a wealth of financial and non-financial information when the level of environmental uncertainty is high due to a dynamic and hostile operating environment (Chong & Chong, 1997). Also, similar studies in prior literature have provided support for this

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observation (Cescon et al., 2019; Al-Mawali, 2015; Hoque, 2004; Oyewo, 2022; Pavlatos, 2015; Pedroso & Gomes, 2020). Contrarily, when environmental uncertainty is low, it reduces the need for external and more information, allowing managers make relatively precise and reliable predictions about the environment (Agbejule, 2005). Regarding the results related to PEU, they remain inconclusive, primarily because various studies have measured and conceptualised PEU differently (Duncan, 1972; Lueg & Borisov, 2014; Sniazhko, 2019).

Likewise, prior research suggests that PEU has the potential to affect the activities of various stakeholders and the organisation entirely (Afifa & Saleh, 2022; Jaradat et al., 2021; Sniazhko, 2019). Notably, owners and managers of SMEs, who are often key decision-makers, are susceptible to the influence of multiple factors, including personality, environmental factors, perceptions, actions, and intended decisions, among others. These factors, in turn, have a substantial effect on their decision-making processes (Jaradat et al., 2021; Petera & Šoljaková, 2020). This suggests that individuals directly involved in decisions are greatly affected by the uncertainties emanating from the environment (Agbejule, 2005; Cescon et al., 2019; Petera & Šoljaková, 2020; Pires & Alves, 2022; Sniazhko, 2019).

Moreover, the changing environmental conditions and their unanticipated trends have increased the level of ambiguity among managers. As such, the planning and coordination of activities have become difficult due to the uncertainty in the corporate environment; and a manager's inability to predict or forecast circumstances or events in the future may lead to erroneous choices (Sniazhko, 2019). Based on this notion, an entity's ability to improve performance can be curtailed due to PEU. Therefore, stakeholders involved in decision-making must contend with the complexities of the diverse activities the firm engages in; hence, executives must ensure that their accounting systems align with the prevailing business environment to enhance firm performance (Cescon et al., 2019). This implies the need to design SMA techniques that adapt to the changing business environment.

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In the business environment, companies may encounter uncertainties arising from potential dangers, opportunities, new prospects, and threats, among others, particularly when there are changes in the industry or marketing environment (Petera & Soljakova, 2020; Cescon et al., 2019). In that regard, entities will need to be continually updated, aware of any environmental changes and act appropriately (Pavlatos, 2015). Sniazhko (2019) argued that managers will require more information to decrease the complexities in the environment. This suggests that the usage of SMA techniques will become relevant since managers and owners will demand more information to satisfy their information needs that were caused by uncertainty (Al-Mawali, 2015). For instance, Hoque (2004) mentioned that managers have control over their actions; however, they have no control over the environmental factors that interact with their actions to achieve results. This suggests that for managers to promote a firm's effectiveness, there is a need to adopt strategies to control and manage environmental factors.

Additionally, researchers have stated that MAPs are essential for helping businesses thrive in fiercely competitive markets surrounded by uncertainties (Jaradat et al., 2021; Ojra et al., 2021). As a result, firms will aim to align their corporate goals and strategy with the environment; hence, they will be persuaded to adopt and implement SMA techniques (Ojra et al., 2021; Rashid et al., 2021). As such, managers have been implored to embrace non-financial measures during periods of high uncertainty since they have the potential to provide managers with a wide range of information (Hoque, 2004; Sniazhko, 2019). In light of this, managers need to adopt and implement SMA techniques that extend towards providing firms with both financial and non-financial information to improve the performance of firms, including SMEs (Hadid & Al-Sayed, 2021; Afifa & Saleh, 2022).

2.7.3 SMA, Economic crisis, and Firm performance

Generally, the effect of crisis imposes pressure on stakeholders to reduce the complexities faced by a firm. Pavlatos et al. (2021) argued that economic downturns have led to financial

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losses in the hospitality sector, compelling hotel and restaurant managers to implement downsizing strategies, thereby resulting in unemployment, - a significant societal challenge. Cognisant of the impact of crises, scholars have advanced the notion that increased levels of crisis management strategies can help alleviate the social and environmental problems that often arise due to economic crises (Hazaa et al., 2021; Pavlatos et al., 2021).

In addition, it is suggested that as the severity of an economic crisis intensifies, managers endure an increased responsibility for allocating scarce resources and monitoring and controlling costs to enhance firm performance (Pavlatos et al., 2021). Accordingly, effective crisis management strategies, such as implementing SMA as a technique for strategic planning and control, can help firms establish clearly defined objectives, monitor effective strategies, and track progress towards recovery goals during a crisis. Although numerous studies in the finance and economic literature have studied the concept of economic crisis, only a few studies in the accounting discourse (Hopwood, 2009) have examined its effect on the design of accounting practices (Becker et al., 2016; Bedford et al., 2022; Beliaeva et al., 2020; Lin et al., 2006; Pavlatos & Kostakis, 2018b; Rikhardsson et al., 2021). Nevertheless, studies on the role of economic crisis on the design of SMA in the MA literature is limited (Hopwood, 2009; Zawawi & Hoque, 2010; Pavlatos & Kostakis, 2018b).

The effect of economic crises on accounting and control systems appears to vary by context and is inconclusive. Arwidi and Samuelson (1993) noted that the unpredictability of an economic crisis (the Swedish economic crisis) can render traditional budgets ineffective, hindering organisational responsiveness since budgeted estimates are fixed. Contrarily, Becker et al. (2016) demonstrated that firms located in Austria, Germany, and Switzerland increased their reliance on budgeting during the 2008 economic crisis. Pavlatos (2021) examined whether economic crisis influenced the cost structure configurations of Greek manufacturing firms. The findings showed that firms engaged in cost configurations to reduce the impact of the economic

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crisis on firm profitability. Similarly, Zawawi and Hoque, (2010) identified the increased use of Management Accounting Innovations (MAI) such as activity-based costing (ABC), activity-based management (ABM), and target costing during the period of severe economic crises from 2000-2008. Janke et al. (2014) concluded that the top managers' perception of negative external crises influences the usage of an interactive management control system. As such, management accounting innovations could favourably assist firms in mitigating and reducing the impact of crisis (Pavlatos & Kostakis (2018a).

Furthermore, some studies have noted that accounting tools and practices assist firms in crisis management. Passetti et al. (2021) highlighted the adoption of organic and mechanistic management controls during the COVID-19 crisis, while Hoque et al. (2022) emphasised the role of budgets in managing operational and strategic choices during periods of crisis. Bedford et al. (2022) showed that budgeting helped managers control their increased role ambiguity and emotional exhaustion brought about by COVID-19. They stressed that entities can reduce the unfavourable response from increased role ambiguity by using budgets to assist managers in effectively understanding their roles and responsibilities. This helps them react to a negative shock and the ensuing tightening of budget controls (S. D. Becker et al., 2016).

Despite these findings, limited research has investigated how economic crisis, specifically the COVID-19-induced crisis, affects the design and implementation of SMA techniques. Nik Abdullah et al. (2022) emphasised the need for empirical evidence in this area, which could significantly contribute to accounting and management knowledge. Similarly, Pavlatos and Kostakis (2018b) implored further studies to explore the association between economic crisis and SMA techniques. While the role of PEU on MAS design is well documented (Abdel-Kader & Luther, 2008; Afifa & Saleh, 2021; Agbejule, 2005; Hoque, 2004; Pavlatos, 2015), the effect economic crisis on the relationship between SMA and firm performance remains largely

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unexplored. For this reason, this study seeks to bridge this gap by examining the effect of the economic crisis (COVID-19) on the relationship between SMA Usage and firm performance.

2.8 Conceptual Framework and Hypothesis Development

2.8.1 Conceptual framework

The conceptual framework provides a practical demonstration of the association between study variables pictorially. As illustrated in Figure 2.4, the conceptual framework for this study assumes that contextual factors and organisational structure are crucial constructs that interact to promote firm performance. In other words, the alignment between contingent factors and SMA plays a role in improving firm performance. It assumes that the contextual factors (environmental uncertainty and economic crisis) are related to SME owners' and managers' decisions to adopt and implement strategic-oriented techniques to enhance firm performance. Moreover, the current study is situated within the contingency theory approach that relies on the assertions of Hartmann and Moers, (1999; 2003). It is assumed that the context factors moderate the relationship between SMA Usage and the firm performance. Furthermore, a review of related literature within the scope of this study has highlighted that there is an association between SMA usage and firm performance (Ojra et al., 2021; Cadez & Guilding, 2008; Nik Abdullah et al., 2022; Rashid et al., 2020). Further, the framework assumes that SMA Usage is related to SME performance based on the tenet of contingency theory.

2.8.3 Hypothesis Development

2.8.3.1 SMA Usage and firm performance

Conforming to the MA contingency approach, it is suggested that firms will likely perform better if they successfully adapt their MAS to their context and environmental situations (Chenhall, 2003). Accordingly, numerous empirical studies have examined the link between the adoption of MAS and organisational outcomes (Jaradat et al., 2021). While several studies have provided support for the notion that higher levels of MAS (broad-scope information)

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adoption is favourably associated with organisational outcomes (Abdel-Kader & Luther, 2006; Adu-Gyamfi, 2020; Jaradat et al., 2021; Shahzadi et al., 2018) others have yielded inconclusive results. For instance, while Cadez and Guilding (2008), examining the association among, SMA, strategic choices, market orientation, firm size and organisational performance, found a positive relationship between SMA Usage and performance among large firms, Agbejule (2005) mentioned that MAS is negatively associated with performance under periods of low PEU. Moreover, only a few studies have provided empirical evidence of the link that exists between performance and SMA Usage as mentioned by Ojra et al. (2021) and Rashid et al. (2021). Consequently, the current study fills this gap by examining the association between SMA Usage and firm performance among SMEs in a developing country context (Ma et al., 2022; Rashid et al., 2021).

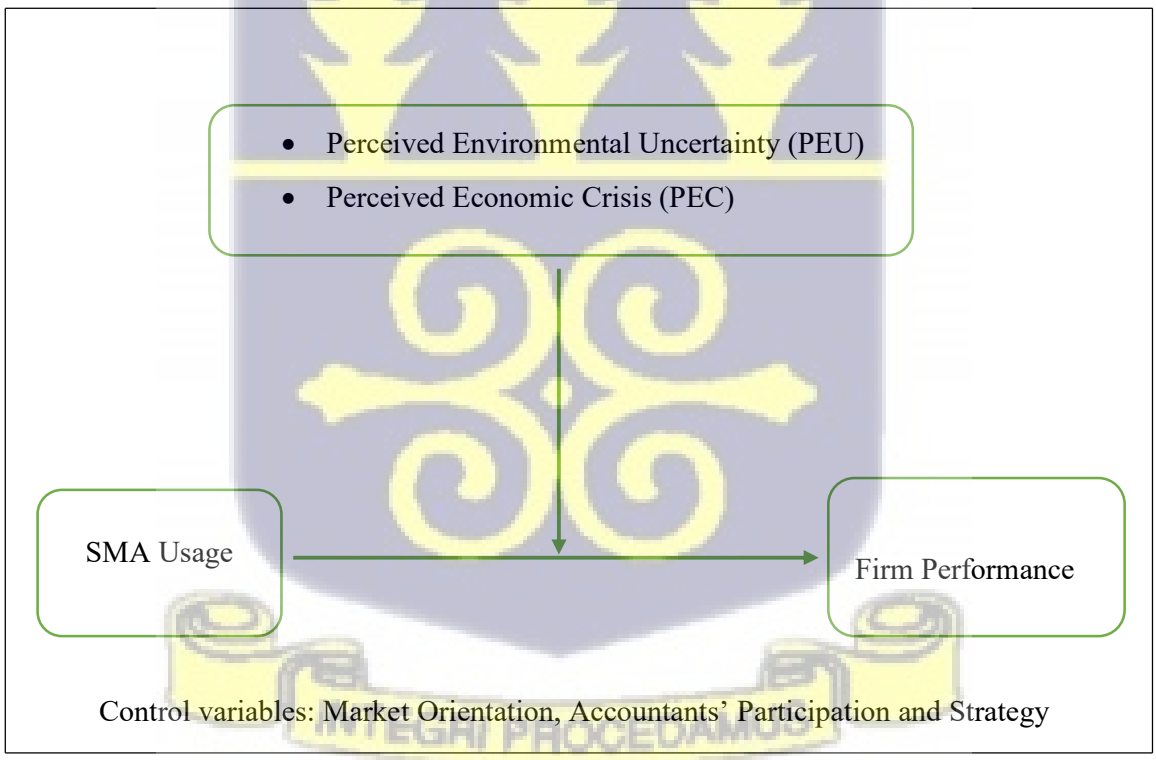

Figure 2.4: Conceptual framework

Source: Author's own construct (2022)

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A crucial role of modern information systems is to serve as a bedrock for top managers' decision-making and control (Cadez & Guilding, 2008). Therefore, entities that make considerate attempts to adopt SMA often create value, which provides a stepping stone to achieving competitive advantage (Nartey & van der Poll, 2021; Msomi et al., 2020; Oyewo, 2022; Zainun et al., 2018). Cadez and Guilding (2008) assert that an entity's needs will be met if it has relevant information processing capacities that support strategic issues.

Acknowledging the notion that SMA constitutes innovative MAC techniques, which are underpinned by an entity's strategy (Oyewo, 2021), its usage will continually propel entities to identify avenues to outsmart their rivals. SMA techniques are notably externally oriented in nature; hence, their implementation will furnish firms with the changing trends in the environment which the entity can leverage to sustainably survive. A recent review done by Nartey and van de Poll (2021) revealed that innovative management accounting practices such as activity-based costing, environmental costing and total quality management, among others, are associated with the sustainability of manufacturing SMEs. They further stressed that operational efficiency can be optimized by integrating these innovative MAPs into the firm's strategic routines to achieve sustainability.

In addition, prior studies have revealed that SMA Usage positively influences firm performance (Alamri, 2019; Cadez & Guilding, 2008; Kalkhouran et al., 2017; Ojra et al., 2021; Nuhu et al., 2017; Turner et al., 2017; Noordin et al., 2015). Hence, we conclude that SMEs that adopt and use SMA techniques will help in analysing their internal and external environment, and assess their competitors to develop strategies (strategic decisions) that will aid SMEs in achieving their goals. It is therefore hypothesised that;

H1: There is a positive relationship between SMA Usage and firm performance.

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2.8.3.2 The moderating role of environmental uncertainty and economic crisis

The interaction of contingent factors with MAS to influence firm performance is upheld under the tenet of contingency theory (Hartmann & Moers, 1999). Burkert et al. (2014) argue that the context within which an entity operates informs its structures and processes (Chenhall, 2003; Otley, 2016). This suggests that entities should consider external issues that relate to the firm since it has the potential to affect the firms' survival and optimal outcomes (Ma & Tayles, 2009). To this effect, SME owners and managers can capitalize on this approach to align their structures (e.g., SMA Usage) with contingent factors to improve firm performance and promote survival.

According to Otley (2016), contingency studies aim to determine the conditions in which particular accounting information and MA techniques may be best suited for organisations in a given situation. Additionally, numerous studies have found that organisational performance is improved by the fit between contingent variables (such as strategy, decentralization, technology, etc.) and organisational structure, MAS and accounting information (Afifa & Saleh, 2021; Al-Mawali, 2015; Baines & Langfield-Smith, 2003; Cadez & Guilding, 2008; Cavalluzzo & Ittner, 2004; Hoque, 2004; Nuhu et al., 2017; Oyewo, 2022; Pires & Alves, 2022; Turner et al., 2017). For example, Oyewo (2022) demonstrates that the fit between PEU, deliberate strategy and organisational structure and SMA information use improves a firm's competitiveness. Consequently, it is assumed that the strength and direction of the relationship between MAS and firm outcomes may be affected by environmental uncertainty and economic crisis.

Notwithstanding, prior studies have identified environmental uncertainty as one of the crucial factors that affect firms' operations (Agbejule, 2005; Hoque, 2004; Sniazhko, 2019). Cescon et al. (2019) argued that a primary source of information for any company's decision-making is affected by environmental circumstances. Uncertainty in the environment usually makes it

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difficult for managers and owners to predict what might happen owing to a lack of information (Cescon et al., 2019). Afifa and Saleh (2021) mentioned that environmental uncertainty is a key factor in developing a strategy since it concerns not only resources available to an entity and the value of its skills and capabilities but also includes competition, information sharing (missing, noisy, unreliable), and the demands and expectations of its customers. Moreover, Hoque (2004) showed that environmental uncertainty influences the design of MAS. This suggests that during periods of high uncertainty managers and owners will require more information (including non-financial information); and as a result firms will use accounting systems (such as SMA) that aligns with the envirnment, doing so will help improve performance (Al-Mawali, 2015).

A review of the literature revealed that SMA Usage has a positive effect on firm outcomes including improved decision-making, creation of value and ensuring quality (Cadez & Guilding, 2008; Rashid et al., 2021). Further, environmental uncertainty has been identified as a crucial contextual factor that may propel managers to ensure the effectiveness and appropriateness of a best practice (Agbejule, 2005; Hoque, 2004). Although a considerable number of research studies (Oyewo, 2022; Afifa & Saleh, 2021; 2022; Al-Mawali, 2015) have argued that environmental uncertainty moderates the relationship between MAS and firm outcomes. Nevertheless, these studies are problematic for a few reasons. To start, they conceptualised environmental uncertainty, MAS, and performance differently. This makes it difficult and potentially impossible to compare or draw conclusions concerning the contingent effects of perceived environmental uncertainty on the association (Sniazhko, 2019). Hence, there is a need to examine the role of perceived environmental uncertainty on the relationship between SMA Usage and firm performance.

In addition, according to Janke et al. (2014), the intensity and severity of an economic crisis faced by a business was found to have an insignificant association with the level of PEU.

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They argued that comparing the time prior to the crisis, the most severely affected firms currently face higher degrees of uncertainty in how to allocate their scarce resources (Pavlatos & Kostakis, 2018b). As a result, it has become impossible to predict with accuracy how customers will choose to spend their limited budget or if suppliers will be able to manage their orders, among others (Pavlatos & Kostakis, 2018a; Janke et al., 2014). For this reason, decision-making has become more complex as managers require more information of higher quality (Becker et al., 2016; Pavlatos & Kostakis, 2018b).

Despite a plethora of studies, there seem to be limited studies examining the role of economic crisis (Hopwood, 2009; Zawawi & Hoque, 2010; Afifa & Saleh, 2022). Although Afifa and Saleh (2021), responded to the call, the study examined the role of diverse aspects of PEU (customer uncertainty, competitor uncertainty and technology uncertainty) but did not consider the economic aspects. Pavlatos and Kostakis (2018b) argued that PEU and economic crisis are distinct variables; hence, the need to examine this role.

Moreover, Chenhall and Moers (2015) assert that managers need to adopt innovations to deal with uncertainties. Likewise, Hopwood (2009) claimed that economic crisis has led to improvements in the design of MAS, resulting in the provision of higher-quality information (including enhanced analytics, frequency and accuracy). This improved information is better suited to address any form of uncertainty emanating from or associated with economic crisis. Becker et al. (2016) demonstrated that budgeting activities became more relevant during periods of economic crisis. Based on this notion, it can be argued that due to the economic crisis managers will require more information to make better decision in turn to reduce the complexity in the environment in effort to improve decision-making. In that regard, managers and owners will fall on SMA techniques to provide them with relevant data to support their decision-making processes in order to help the firm handle the crisis and to survive.

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Consequently, based on the aforementioned and in line with the contingency theory as shown by Burkert et al. (2014), Chenhall, (2003), and Hartmann and Moers (2003), it is therefore hypothesised that;

H2 *For higher (lower) levels of PEU, SMA Usage will negatively (positively) affect firm performance.*

H3 *For higher (lower) levels of Perceived Economic Crisis, SMA Usage will negatively (positively) affect firm performance*.

2.8 Chapter Summary

This section provides a summary and analysis of past studies that were relevant to the current investigation. This section also summarizes the theoretical underpinnings and their potential applications in real-world settings. The review focused on numerous variables that influence a company's decision to adopt and implement SMA techniques in their operational and strategic initiatives and how those variables affect their success when SMA techniques are used. This section of the study concludes by establishing the research framework and hypothesis, which were primarily underpinned by prior literature. However, the methodology and underlying philosophical assumptions of the study are examined in the following chapter.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section of the study elaborates on the procedures and strategies used by the researcher to accomplish study goals and objectives. This chapter further expands on the philosophical underpinnings that informed the research strategy, selection of research questions and methods used to address research questions among others. The concluding sections of this chapter summarize the research approaches chosen. It also justifies the choice of research design, selection of the sample, population, and data analysis procedures.

3.2 Research Design

The research design provides a foundational framework that guides the overall plan and trajectory of your research study (Bell, Bryman & Harley, 2022). Researchers and experts often adopt a research paradigm or philosophy that aligns with their perception of reality in order to select a robust research design (Krauss, 2005; Saunders et al., 2019). A research paradigm is identified as a set of beliefs, concepts and ideas that reveals how a community of researcher perceives the world, informing their thought processes and behaviour patterns during knowledge development (Bell et al., 2022).

For the purpose of this study, which aligns with the positivist paradigm, a quantitative research methodology is adopted primarily through the use of a cross-sectional survey. According to Creswell and Creswell (2018), the positivist paradigm entails hypothesis testing in order to arrive at an "objective" reality, a perspective that resonates with the approach chosen by this current study. Notably, the nature of our research, the questions it seeks to answer, and its ability to forecast future results influenced the choice of this research approach. Moreover, studies by Abdel-Kader and Luther (2006) and Nitzl (2016) have supported the use of surveys

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as the most widely used approach for hypothesis testing in management accounting research. Building upon existing theories, the majority of studies on SMA and firm performance in the MA literature have concluded that, once strategic-oriented techniques are adopted alongside following sound management procedures can enhance firm performance. The positivist paradigm contributes to establishing the validity of this argument in Ghana.

Acknowledging and embracing a quantitative research design provides a holistic approach to test theories by investigating any hypothesized associations between study variables of interest using statistical tools (Creswell, 2014). Accordingly, this study seeks to examine the association between SMA, economic crisis, environmental uncertainty, and firm performance by testing hypotheses and associations. Therefore, this study is underpinned by the positivist paradigm and quantitative approach, since it allows for generalisation of study findings.

3.3 Study Population, Unit of Analysis, Data and Sample Size

3.3.1 Unit of analysis

The unit of analysis in a research study is crucial for drawing inferences and generalisations about the population (Saunders et al., 2019). It provides ideas on who or what will be examined to achieve the study's goals (Creswell & Creswell, 2018). The level of analysis of a study typically includes individual level, firm level and country level representing the micro, meso, and macro levels of analysis (Boateng, 2016; Saunders et al., 2019). Recognising the critical role unit of analysis, experts must reflect on the aims and objectives of the study, as these serve as the best guidance for choosing an appropriate unit of analysis (Yin, 1994). In that regard, the purpose of this study was to assess the relationship between the usage of SMA and the firm performance of SMEs in Ghana, which indicates that this study is on SMEs; hence, the most suitable level of analysis is the firm level. SMEs are defined based on factors such as the total number of employees, annual revenue, and fixed assets (Oduro, 2020; Abor & Quartey, 2010). Some scholars, like Amidu et al. (2011) and Oduro (2020), rely on the number of employees

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as the predominant criterion for SMEs, as most SMEs around the world are reluctant to share information about their annual revenue and financial performance. In this context, the term "SMEs" refers to businesses with less than 100 employees as defined by the Ghana Enterprise Agency (GEA) (Amidu et al., 2011).

3.3.2 Study location

The current study focuses on small businesses in Ghana, specifically, SMEs in the Ashanti, Eastern, Western, Central, and Greater Accra Regions of Ghana. The section below provides justifications that served as a premise for selecting these study areas. While SMEs are dispersed throughout the entire nation, these regions were chosen because such areas have been noted for having a substantial proportion of SMEs in the country. Moreover, these regions are considered key business facilitators or centres in the nations and collectively, they account for roughly 70% of all enterprises in Ghana (Institute of Economic Affairs, 2016). In addition, taking into consideration the introduction and implementation of new inventions and innovations, these regions usually set the pace for others to follow suit. In that regard, firms situated in these regions are likely to embrace management innovations such as SMA techniques. Furthermore, reports by the Ghana Health Service (GHS) as of June 2022 showed that the regions chosen were the ones hugely affected by the COVID-19 pandemic. Hence, managers and owners of firms situated in such domains are better positioned to understand and express a precise perception of the impact of COVID-19 pandemic. Last but not least, these selected regions uphold economic models that contribute significantly to national growth in diverse ways (Oduro, 2020). Thus, SMEs based in these areas are more appropriate for studies on the usage of modern MAP like SMA.

3.3.3 Sampling technique

Sampling provides a reasonable approach to assessing the entire population when evaluating all components is impossible or when time, effort, and cost constraints may hinder the

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realisation of a census (Creswell, 2014; Saunders et al., 2019). It is a process used to draw a subset of target respondents from an entire study population (Creswell, 2014). Typically, sampling techniques are categorised into two broad categories; probability sampling and non-probability sampling approaches (Bell et al., 2022). Reflecting on the research design adopted for this study, the stratified random sampling method was chosen for this study. Similar studies conducted by Abdulai (2018) and Amidu et al. (2011) have employed this sampling approach since the study population had certain heterogeneous characteristics, necessitating the division of the population into homogenous subgroups before sampling. Moreover, this approach ensures a more fair and equitable representation of various groups within the target population (Bell et al., 2022) and allows for drawing conclusions based on a sample with an approximated margin of error (Bell et al., 2022; Udom & Otu, 2014). This approach involved the following:

First and foremost, the study population consisted of registered SMEs (formally registered) in the GEA and AGI databases. They were further apportioned into two categories based on the database within which firms were listed (as shown in Fig. 3.1). As suggested by Hunt and Tyrrell (2001), this was done to justify the selection process and to provide a single objective standard to select from both databases; hence, preventing researcher bias and unbiased data selection. Secondly, SMEs listed in the databases were segmented into strata (i.e., NBSSI and AGI), and further categorised them based on the sector they are affiliated to (as shown in Fig 3.1). The manufacturing and service sectors were selected as the sectoral categories. This was required since research conducted by Amoako (2013) highlighted that the industry a firm operates in may affect their choices regarding the extent of using accounting practices. These chosen sectors together constitute a greater proportion of SMEs in the country. Besides, SMEs operating in the service sector account for about half of Ghana's GDP, whereas manufacturing contributes about 11%, equalling $6.4 billion to GDP (International Trade Centre, 2018). As such, segmenting the population according to sectoral classification will guarantee that both

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sectors have a more equal probability of being chosen throughout the sampling procedure (as shown in Fig 3.1).

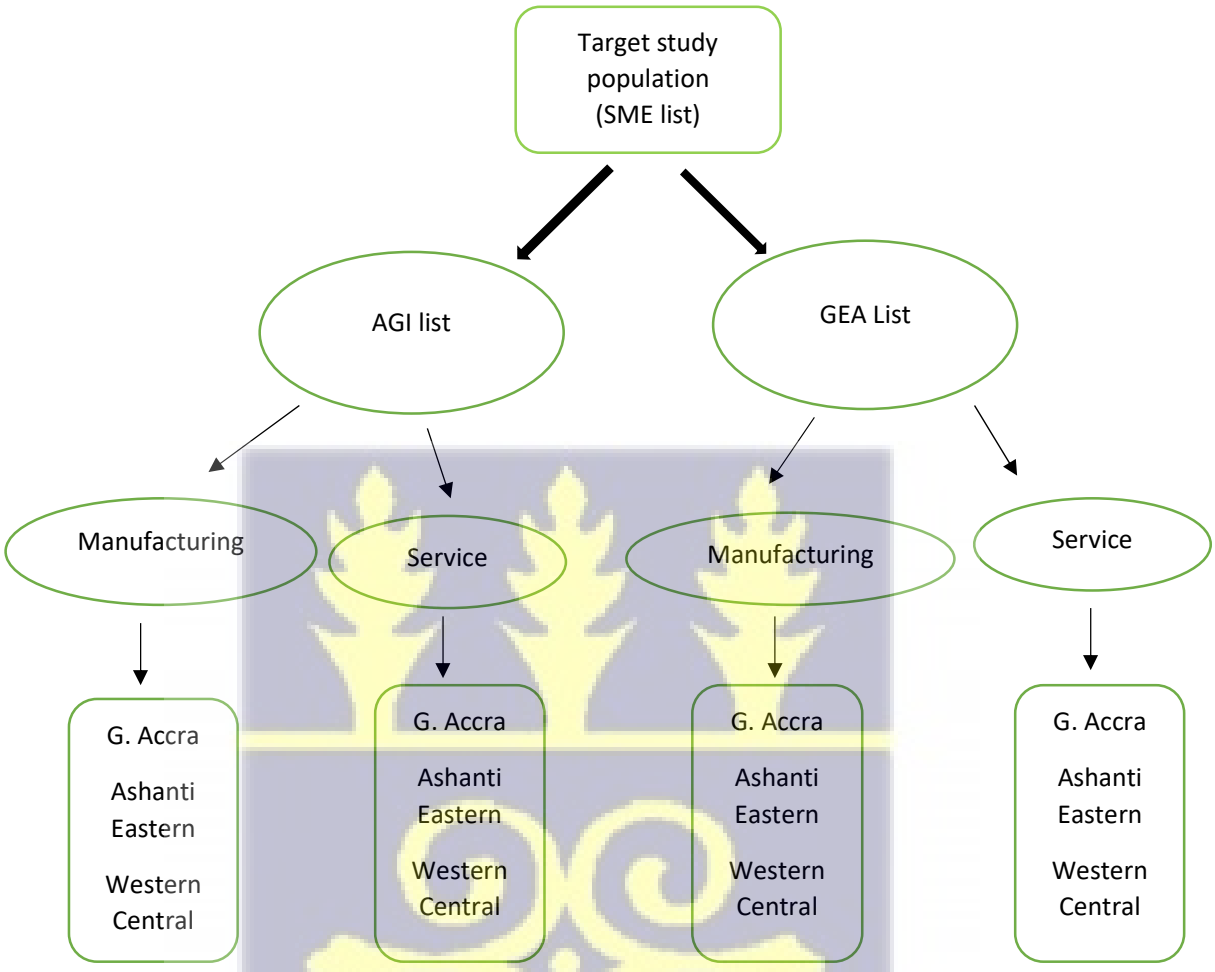

Figure 3.1: Sampling approach

Source: Author's own design (2022)

Thirdly, SMEs were further divided into groups according to the regions within which they operate in accordance with each firm's industry sector (Ashanti, Eastern, Greater Accra, Central, and Western). This was done with the intention of giving each of the research areas (regions in the country) a more equitable representation during the sample selection process.

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Finally, a proportional number of samples were chosen from each location using the straightforward random sampling procedure to represent the study's population. A total of 550 target respondents were chosen at random from the population. Fast forward: the basis upon which the sample size was determined is covered in the next segment of the study.

3.3.4 Sample size

Ideally, in certain scenarios, the population of a research study can be small enough to justify the inclusion of the entire population in the sample, whereas, in others, the population could be quite overwhelming and challenging to investigate thoroughly. In such situations, a representation of the population, often termed the research sample, is used. The research sample represents a small collection of the elements selected through a specific process from an available sample frame (Saunders et al., 2019). This approach is less expensive, more expedient, and often produces higher-quality data compared to studying the whole population. This is essentially done to facilitate the generalisations of the study findings, which is more often associated with most studies employing quantitative research design.

Nevertheless, choosing the right sample size is a significant challenge for most quantitative studies (Hair et al., 2017; Sarstedt et al., 2017), although there are various methods for assessing the appropriate sample size. For example, in PLS investigations, Cohen (1992) asserts that to achieve a statistical power of 80% and be able to explain at least 25% of the variation in our dependent variables at the 5% level of significance with the eight explanatory variables, a minimum of 54 observations is recommended. Barclay, Higgins, and Thompson (1995) recommend using the "10-times rule," where the appropriate sample sizes for PLS analysis should be 10 times the maximum number of arrowheads pointing at a latent variable in the model. Alternatively, Hair et al. (2016) suggested a model containing 5 to 7 constructs should have a sample size within the range of 350 to 500.

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In this study, the minimum sample size considered appropriate is 190, as one construct in the model (SMA) has the highest number of arrowheads pointing towards it, being 19, which implies that the minimum sample size perceived as appropriate is 190. Besides, Jackson (2003) revealed that most studies employing the SEM approach have significantly relied on a rule of thumb in assessing the most suitable sample size for their study. Kline (2011) proposed that "a typical sample size in research investigations where SEM is employed is around 200 cases." Accordingly, to attain this threshold the researcher selected 550 SMEs; based on firms that managed to maintain good operational standing over the past five years were considered for selection after a critical evaluation of various criteria. This criterion was chosen because similar studies (Tetteh et al., 2022) have employed this approach. Furthermore, to reduce and mitigate any form of bias in terms of selecting the appropriate sample size, the researcher also used a statistical power tool, more precisely the G-Power 3.1 tool (Faul et al., 2009; Memon et al., 2020). It was affirmed that the chosen sample size of 550 was deemed appropriate for the current study. Furthermore, to ensure an even distribution of the questionnaires among the regions, a total of 110 survey instruments were distributed among the regions' understudy.

3.3.5 Source of Data

Based on the research approach, the study used structured questionnaires to gather primary data on formal SMEs in Ghana, including those registered by recognised institutions. The data was sourced from the Association of Ghana Industries (AGI) and the Ghana Enterprise Agency (GEA) databases, which provide comprehensive and detailed information on SMEs, their products, services, and contact details. Notably, the GEA was enacted by an Act of Parliament to foster growth among existing and potential SMEs. Placing emphasis on both was crucial since the GEA database provided a summary of small businesses but did not provide details on Medium-sized enterprises. Therefore, the researcher sought consultation from the AGI database.

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According to Li, Anaba, Ma, and Li (2021), estimations show that on average there are over 25,000 registered businesses in Ghana, whereas approximately 80% of them are SMEs. Likewise, data sourced from the databases of GEA and AGI revealed that there are about 21,250 registered firms, which is in line with the assertions made by Li et al. (2021). However, in this current study, not all the firms were considered; hence, the researcher resorted to an inclusion criterion to help capture a fair representation for the study. The inclusion criteria for the study were businesses with a maximum of 100 and more than 6 employees, following the definitions employed in the studies of Amidu et al. (2011) and Oduro (2020). This was done to ensure some level of reliability and consistency. The researcher critically evaluated the lists provided by the databases, excluding companies with more than 100 employees and those who failed to provide the registered or authorised addresses and business names to the directory.

Accordingly, within the GEA database, the researcher identified 1,854 businesses without authorised addresses and business names and details were discarded; about 567 without complete addresses; about 7,954 were micro and large firms were also discarded since their workforce was more than 100 and less than 5 (that is not within the scope of SMEs as employed in this current study). Further, about 605 firms with incorrect or inaccessible contact information were also eliminated. After using the exclusion criteria, the database included an aggregate of around 8770 businesses. In addition, there were about 1,500 firms recognised as registered members in the directory furnished by AGI. Out of this, around 266 companies lacked complete contact information, and approximately 349 companies were discarded, either being inaccessible or not replying to the initial calls made requesting their consent of participation. Additionally, around 163 of these businesses had more than 100 workers. After removing firms that did not meet the inclusion requirement, only around 722 registered businesses were left on the list.

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3.3.6 Study respondents

Respondents, also known as participants, are individuals who participate in a census, surveys, or interview, or who offer information that will be used in any analysis for a particular research investigation (Saunders et al., 2019). The primary participants for this study were the Owners/ Chief Executive Officers (CEOs) or Managers of the SMEs. Studies (Amidu et al., 2011; Oduro, 2020) conducted on SMEs have used similar respondents; and compared to large businesses, smaller entities like SMEs are frequently identified to have the owner-manager or entrepreneurs who substantially handle the strategic management issues and accounting systems on behalf of the firm (Lucas et al., 2013). Moreover, within the context setting of SMEs, owners or managers are perceived as 'key decision-makers' concerning issues of innovation (Thong, 1999). Since SMA techniques are also perceived as innovative MA tools (Oyewo, 2021; Nartey & Van der Poll, 2021; Pavlatos & Kostakis, 2018a; Zawawi & Hoque, 2010) their decision to adopt and implement these tools are likely to be influenced by them, hence their participation in this study as respondents.

3.4 Data Collection Instrument

According to Bell et al. (2022), a set of considerate and thoughtful questions designed to elicit responses from study participants to advance research is regarded as a data collection instrument. A survey questionnaire was the main tool for gathering data, as it offers respondents the freedom to complete convenience. Additionally, it gives participants a great sense of anonymity when asking for truthful and candid answers. When it comes to the economy, using a questionnaire as opposed to an interview to get data from participants is comparatively more affordable. Surveys are believed to be the most effective method for answering study questions and testing research hypotheses. Hence, this current study employs a questionnaire (structured), which is consistent with a volume of prior research findings that studied SMA techniques from a contingency theory perspective (See Appendix). The

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questionnaire was divided into various sections (See Appendix). The initial section presents a preamble to guide the participant in appreciating and answering the instrument; another section for generating responses relating to the demographic characteristics (Section A) of the respondent and the organisation as well; another section determines the variables affecting the utilization and implementation of SMA underpinned by the conceptual framework (Section B to Section F); and finally there was a section for assessing firm performance (Section G) as well as determining the extent of SMA Usage among SMEs (Section H).

3.5 Instrument Measurement Scale

Conventionally established scales from past studies have been adapted to measure the current study variables because developing new measurement scales was not the primary goal of this investigation. A 7-point Likert scale was used to measure all of the study variables to provide participants with the opportunity to describe how accurately a specific statement refers to them or how much they agree or disagree with a given question.

The SMA Usage variable was adapted from Oyewo (2021; 2022) who modified the versions of Cravens and Guilding (2001) and Cadez and Guilding (2008) by including three measures, making a total of 19 techniques. Hence, the current study measured and derived this variable by asking respondents to evaluate the level of SMA usage (the extent of using strategic and market-oriented modern MAP) in their organisations based on a scale of 1 ("not at all") to 7 ("very great extent"). This scale also used a list of 19 SMA techniques that were operationalised under five broad categories (see Appendix). Firm performance was adapted from the study by Cadez and Guilding (2008) as employed by Oyewo (2022), who considered both financial and non-financial metrics based on a scale anchored from 1 ("below average") to 7 ("above average"). The Perceived Environmental Uncertainty (PEU) construct was anchored on a set of six indicators where measures were adapted from Pavlatos and Kostakis (2018a), which was initially adapted from the instrument employed by Gordon and Narayanan (1984). The

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Perceived Economic Crisis (PEC) variable was adapted from Becker et al. (2016), which was initially introduced by Janke et al. (2014) and later employed by Pavlatos and Kostakis (2018a) and Bedford et al. (2022). In recent times, the context of the current study (Ghana) has experienced shocks (crisis) which affected the entire nation; this was introduced by the banking crisis within the financial sector in 2017 and further worsened by COVID-19 (Coronavirus). This affected individuals and business units in diverse ways; hence, this construct assessed the perceptions of managers and owners about the crisis presented by the pandemic. The respondents were tasked to assess their agreement and disagreements with the statements that represented the crisis presented to the firm as well as the uncertainty management was experiencing.

In addition, this study incorporates several contextual factors as control variables, which previous studies have identified to be associated with SMA and firm performance. This inclusion is aimed at avoiding the potential omission of relevant constructs in the study model. Following from prior literature, market orientation, accountants' participation, and strategy are considered to elucidate the relationship between SMA and firm performance (Cadez & Guilding, 2008; Oyewo, 2022; Petera & Šoljaková, 2020).

The accountants' participation in decision-making was conceptualised from prior studies of Wooldridge and Floyd (1990) measures as used by Nguyen (2018). Accountants' participation is expected to be positively associated with firm performance. It is argued that the involvement of accountants in firm operations would enhance firm performance. Typically, accountants ensure firms comply with ethical standards, and their engagement in budgeting, cost analysis, and financial planning can assist in identifying areas of cost reduction and efficiency improvement, which can positively benefit a firm's profitability (Hadid & Al-Sayed, 2021; Nguyen, 2018). Accordingly, assuming a role for accountants in the strategic management process through their involvement in strategic planning and resource allocation can help to

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design and implement effective company plans, potentially leading to enhanced firm performance (Cadez & Guilding, 2008; Nguyen, 2018).

The strategy was operationalised from an instrument used by Bortoluzzi et al. (2020) and initially developed by Seveg (1987), and it is expected that effective strategy development is associated with firm performance. Nonetheless, the strategic orientation chosen by a firm affects an entity's ability to respond quickly to the rapidly changing business environment. It can be argued that firms upholding a prospector strategy or innovative and adaptive strategies are better positioned to respond to any unanticipated uncertainties, opportunities, and challenges, hence, enhancing firm performance (Cadez & Guilding, 2008; Visedsun & Terdpaopong, 2021). On the contrary, defender strategy is unlikely to embrace management innovations to help adapt its processes to the environment (Cescon et al., 2019). On the other hand, Cinquini and Tenucci (2010) mentioned that both defender and prospector strategies are used by firms, to enhance performance.

Market orientation is measured by four items similar to a scale used by Cadez and Guilding (2008), Nguyen (2018), and Al-Mawali (2015). Market orientation is predicted to have a positive association with firm performance. Although the needs of customers keep changing within the dynamic business environment, firms are also continually engaging in diverse initiatives to meet and exceed clients' demands. Nonetheless, the more market-oriented a firm is, the more poised it is to have a good understanding of client demands and preferences, taking into consideration several factors, such as income levels and high-demand products, among others. They are more likely to achieve higher levels of customer satisfaction if they link their products, services, and marketing efforts with customer expectations. Consequently, customers who are satisfied are more likely to remain loyal and refer the company to others, which drives revenue growth and enhances firm performance (Cadez & Guilding, 2008; Narver & Slater, 1990; Oyewo, 2022).

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3.6 Questionnaire Validity/ Pilot Testing

Pilot testing is a unique approach used by scholars to determine the validity and suitability of their survey instruments (Ikart, 2019; Oboh & Ajibolade, 2017). Broadly, pilot testing includes pre-testing the instrument to reveal whether the questions posed were clear, to make sure the instrument items adequately answer the study questions, and to assess the interests of the participants. Likewise, testing aids in determining whether the study participants will be able to give accurate and valid responses; and Ikart (2019) asserts that pre-testing assists the researcher in gathering relevant data to enhance the shape, content, structure, and order of questions. Consequently, the current study employed three successive rounds of testing. An initial test was undertaken by contacting prominent academic researchers who have research interests in the area of study to critically review the study instrument. Afterwards, the researcher conducted a pilot on some owners of SMEs who were personally known to the researcher. Finally, the researcher resorted to testing the instrument on some selected firms listed on the Ghana Business Directory (GhanaYello Database), an online business directory consisting of several businesses. The Ghana Business Directory was chosen because, in addition to providing readily available information on businesses in the nation, it offers a piece of extensive information that enables an investigator to identify entities that form part of a study's target respondents from a population (Tetteh et al., 2022). Consequently, before the final questionnaire instrument was churned out to gather data for the study, the instrument was modified and amended in light of the favourable comments received. For instance, during the pilot testing, some concerns were raised about some concepts used in the study; hence, the researcher resorted to attaching a glossary to the instrument (see Appendix) which contains a collection of definitions of the various SMA techniques to help respondents provide reliable and accurate responses. Hence, this affirms the assertion made by Ikart (2019) on the purpose of validating the instrument with the help of pilot testing.

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3.7 Data Analysis

Data analysis includes strategies, techniques, and procedures used by a researcher to analyse data gathered. Broadly, this includes examining and modelling data in an attempt to produce meaningful insights and conclusions that will inform key decisions (Creswell, 2007). This study employed a quantitative approach to analyse data, focusing on critical evaluation and interpretation of data sets. In that regard, given the nature of this study's objectives, the design and to better understand the data, it employed Statistical Package for the Social Sciences (SPSS) for descriptive analysis and Structural Equation Modelling (SEM), more precisely Partial Least Square- Structural Equation Modelling (PLS-SEM).

3.8 Descriptive Statistics

Descriptive statistics are mainly used to help visualise the participant's demographic attributes. For the study constructs, descriptive statistics provide the average or mean, frequencies and standard deviation. The variables of interest to the study (see Appendix) and the study's participants are briefly described in the statistics presented in the analysis section in Chapter 4.

3.9 Structural Equation Modelling (SEM)

Over the past few decades, the use of SEM by scholars and academics has increased substantially across disciplines (Becker & Ismail, 2016; Hair et al., 2019, Hair et al., 2021; Lee, Peter, Favard & Robinson, 2011; Nitzl, 2016; Sarstedt et al., 2017). The dominance of SEM is driven by its capacity to analyse many complex relationships among numerous constructs, which gives it more freedom to statistically test hypotheses and models (Hair et al., 2021). SEM inhabits unique features of merging various traditional multivariate techniques (such as regression analysis, canonical correlation, factor analysis, and principal component analysis, among others), which provides it with a practical framework to perform its task. Besides, SEM is suitably appropriate for research studies that involve latent or unobserved variables (Hair et al., 2014; Nitzl, 2018). Thus, largely owing to SEM, scholars can successfully analyse

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structural paths as well as measurement models more effectively. Notably, PLS-SEM and CB-SEM are the most commonly used SEM approaches in literature (Hair et al., 2019).

3.9.1 Covariance-Based Structural Equation Modelling (CB-SEM)

Initial contributions from Jöreskog in 1973 developed this CB-SEM method. This method naturally creates a covariance matrix from an identified theory based on a chosen array of structural models. CB-SEM aims to estimate model parameters that minimise discrepancies in any theoretical underpinning and the estimated covariance matrix (Hair et al., 2014). It employs the maximum likelihood function to smooth out the differences between within-sample covariance and those predicted by the theoretical model by replicating the covariance matrix (Lee et al., 2011; Nitzl, 2016). Further, Nitzl and Chin (2017) argued that the CB-SEM approach necessitates defining the conceptual model or background first before examining the data, as it is primarily used to support or refute hypotheses. With CB-SEM, normally distributed data and the minimum sample size thresholds are part of the requirements that need to be satisfied before one can use the maximum likelihood function (Hair et al., 2017).

3.9.2 Partial Least Square- Structural Equation Modelling (PLS-SEM)

Primarily, PLS-SEM was introduced in 1974 by Svante and Herman Wold. Progressively, Hair et al. (2019) highlighted that PLS-SEM technique has steadily gained acceptance as a crucial multivariate tool used in various disciplines such as strategic management, marketing, and accounting, among others. The primary objective of PLS-SEM is to increase the covariance that exists between the manifest variable (dependent latent variable) and the unobserved variable (predictor latent variable) (Becker & Ismail, 2016; Hair et al., 2019; Nitzl, 2018). This approach uses structural paths to determine the relationships between unobserved variables and their indicators in the measurement model (Henseler et al., 2015). Additionally, PLS-SEM is a "non-parametric, multivariate programme that focuses on iterative Ordinary Least Square (OLS) regression for evaluating models involving latent constructs and the directional

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relationships among them" (Hair et al., 2019). This assists in eliminating many of the restrictions and constraints that the maximum likelihood methods rely on (Khan et al., 2019). Moreover, a recent development by experts has provided support for the use of PLS-SEM as a more reliable and robust method for assessing structural models (Nitzl, 2016, 2018)

3.9.3 Guidelines justify the choice of SEM approach (PLS-SEM and CB-SEM)

To help researchers avoid common mistakes in the usage of SEM, be it CB-SEM or PLS-SEM, crucial guidelines have been documented in prior literature (Hair et al., 2014; Hair, Howard & Nitzl, 2020, Hair et al., 2021; Nitzl & Chin, 2017; Hair et al., 2017). As a result, based on justifiable grounds, researchers and experts have circumspectly considered the goals, criticisms and features of SEM before choosing the appropriate technique for any study (Hair et al., 2017; Khan et al., 2019; Šiška, 2017). Accordingly, this study used recommendations made by Hair et al. (2021) and Hair, Ringle, and Sarstedt (2011) for selecting a suitable SEM approach.

First and foremost, the choice of technique depends on the aim or objectives the study seeks to achieve. While CB-SEM is considered appropriate for validating or affirming theories; thus, to demonstrate how well the model matches (fits) the data in order to test a theory. PLS-SEM on the other hand, is considered a favourable option when the study goal seeks to make predictions or explain constructs (Hair et al., 2017). Secondly, the data characteristics should also be taken into account before choosing which method to apply, such as data distribution, the scale used, as well as missing values. CB-SEM requires large and normally distributed data since this could present misleading outcomes if these conditions are not met (Hair et al., 2014; Nitzl, 2016). Alternatively, PLS-SEM is more effective for studies with smaller sample sizes and no-normally distributed data (Hair et al., 2019; Hulland, 1999). Thirdly, the model properties should be considered, as PLS-SEM can accommodate complex models with multiple constructs (beyond five) and multiple indicators reflecting on a construct (Hair et al., 2014). Also, PLS-SEM has a unique feature to manage and use as single-item constructs (Nitzl, 2016).

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Finally, the measurement model is considered essential for determining an appropriate SEM technique. While, PLS-SEM is versatile to accommodate both formative and reflective measurement models (Hair et al., 2017). CB-SEM works well with models that use reflective models. Also, in the case of PLS-SEM, the model is evaluated by applying the latent variable values for further testing and analysis. Contrarily, CB-SEM must test and evaluate for measurement model invariance as well as the global model goodness of fit condition (Hair et al., 2012; Nitzl, 2016).

In conclusion, the researcher extrapolated that PLS-SEM technique is more appropriate for this investigation. Given its exploratory nature, the current study aimed to uncover any new associations that may probably arise from the proposed ones (Nitzl, 2016). Additionally, the complexity of the model used in this study (see Figure 2.4) is crucial, with one independent construct having up to nineteen (19) indicators matching to it (SMA usage). In light of the above issues highlighted, the researcher employed PLS-SEM technique to analyse the data. Furthermore, PLS-SEM was selected because of its high level of statistical power and ability to accommodate small sample sizes, and it is also suggested to be best suited for rigorous data analysis (Urbach & Ahlemann, 2010). In addition, the reliance on survey to measure study constructs and explore hypotheses, PLS-SEMs was deemed ideal for simultaneously and comprehensively analysing complex interactions. It is worth noting that prior literature (Nitzl, 2016; Nitzl & Chin, 2017) has implored researchers within the management accounting discourse to use PLS-SEM, further justifying its selection for this study.

3.10 Measurement Theory

Generally, in research, measurement involves assigning figures or numbers to variables or parameters (Hair et al., 2011). In structural models, the latent variables can be assessed using proxies or other variables, which is the primary focus of the measurement model. While quantifying variables like age and income level, among others, is straightforward, it becomes

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quite complex and challenging when dealing with abstract phenomena like "the frequency or extent of SMA Usage." Abstract phenomena are challenging to measure since they are unobservable. Therefore, to address this challenge, researchers rely on specific manifestations or indicators to demonstrate the presence or absence of these underlying abstract phenomena.

3.11 Measurement Model

Generally, the measurement model outlines how latent variables are measured and analysed in PLS-SEM. There are two primary measurement theories used while doing any SEM analysis: formative and reflective constructs. Formative measurement assumes that a latent variable is influenced by its measures or indicators (Hair et al., 2017). As a matter of interest, the indicators in a survey study can serve as reliable proxies of an accompanying latent variable because they assume that every indicator accurately and precisely represents a particular component of the latent construct (Henseler et al., 2015). In contrast, reflective measurement operates under the premise that indicators providing sufficient indices are more like the result of an underlying latent construct. Although the best-measurement theory used in social science research is still up for debate, upon critical assessment, the current study used a reflective measurement model for the aforementioned purposes. Chin (1998) suggests using reflective measurement models when changes in latent variables correspond to shifts in their indicators. Given that changes in the latent construct of "frequency or extent of SMA Usage" will lead to modifications in its indicators, the reflective measurement model was considered appropriate.

3.12 Assessment of Measurement Model (Outer Model)

There have been several advanced research studies on SEM that advise testing every construct's measurement model (outer model) to clarify if they meet the suggested thresholds before proceeding to the structural model analysis (Hair, Howard, & Nitzl, 2020; Hair et al., 2021; Lee et al., 2011; Urbach & Ahlemann, 2010). The assessment of the measurement model is essential because it informs how the structural model should be constructed and examines

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the association between the manifest and latent variables. The measurement model aims to achieve an acceptable level of construct validity and reliability, as suggested after testing it (Hair et al., 2019), ensuring that only reliable and accurate construct indicators are applied when evaluating the nature of the relationship in the entire model (Becker & Ismail, 2016). Hence, the study evaluated the outer model validity and reliability by assessing the internal consistency, indicator reliability, convergence validity, and discriminant validity (Hair et al., 2019; Nitzl, 2016).

3.12.1 Internal consistency

This reliability measure, internal consistency, assesses the correlations between various measurement items based on the notion that the items intended to measure a single underlying construct should yield similar results (Urbach & Ahlemann, 2010). The loadings from an item (indicator loadings) serve as a basis to evaluate the indicator's reliability (Nitzl, 2016). According to Hair et al. (2011), an indicator loading of 0.70 or higher indicates the reliability of an indicator to represent such an underlying construct. On the contrary, loadings of 0.4 and greater are sometimes considered reliable if the results of all relevant diagnostic tests, like reliability and validity assessment thresholds, have been met. This is because a set of indicators aimed at measuring a single underlying construct should yield consistent results (Hair et al., 2014). To evaluate the internal consistency of the outer model in this current study, the Cronbach Alpha (CA) and the Composite Reliability (CR) values, were employed based on prior literature (Cronbach, 1951; Jöreskog, 1971; Urbach & Ahlemann, 2010). The suggested cut-off for a construct to be regarded as valid and reliable is a Cronbach alpha or Composite reliability score of 0.70 or higher (Hair et al., 2014). Cronbach alpha only suggests that "all variables and indicators within a construct are equal in importance and meaning" (Cronbach, 1951). Contrarily, composite reliability applies the loadings acquired for its computations, taking into consideration that the indicators possessing different factor loadings from the

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threshold have distinct interpretations and meanings (Hair et al., 2011). As a result, the CR is a more accurate indicator of reliability as compared to the CA.

3.12.2 Convergent Validity

The extent to which different construct indicators correlate with each other is known as convergent validity (Urbach & Ahlemann, 2010). When dealing with reflective constructs it is logical to expect that these indicators should converge, exhibit connections, or share a significant amount of variance, since they serve as alternative measures of the same construct (Nitzl, 2016). Also, the presence of convergent validity is indicated through interactions among specific indicators within the model, and sufficient convergent validity is evaluated by employing Average Variance Extracted (AVE). In accordance with the recommendations of Hair et al. (2014), using the AVE score to assess convergent validity, study constructs should have an AVE score of 50% (0.50) or higher. A higher AVE indicates that, on average, the construct can explain more than half of the variations of its indicators, which offers evidence of convergent validity based on the AVE score (Hair et al., 2014; Nitzl, 2016).

3.12.3 Discriminant Validity

The discriminant validity evaluates whether the constructs identified in the measurement model that should have no connections are truly unrelated and distinct from each other (Hair et al., 2014; Khan et al., 2019; Urbach & Ahlemann, 2010). In essence, discriminant validity tests examine if a construct's indicators (measures) exhibit enough variation and do not overlap. While convergent validity assesses the extent to which indicators measure a study construct, discriminant validity, on the other hand, scrutinises whether the indicators of one concept are aligned to measure another construct more effectively. Therefore, a strong indicator correlation for one construct shows indications of convergent validity, and conversely; a high indicator correlation between study constructs suggests the absence of or indications of discriminant

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validity (Hair et al., 2014). Typically, discriminant validity assessments involve the use of techniques such as cross-loadings and the Fornell-Larcker criterion, as seen in prior studies, as well as the HTMT ratio, which has gained prominence in recent studies that employed PLS-SEM (Hair et al., 2019; Henseler et al., 2015).

The correlation between constructs was measured by the Fornell-Larcker criterion (Fornell & Larcker, 1981). This criterion method is based on the idea that a construct may have a higher correlation with its specific indicators than almost any study variables in a stipulated model. Therefore, for the Fornell-Larcker criterion to be met, the "square root of the AVE of a given construct should be higher than its correlation with the other constructs" (Hair et al., 2019).

Furthermore, in a simulation study, Henseler, Ringle, and Sarstedt (2015) found that the Hetero-Monotrait (HTMT) approach outperformed other approaches in detecting a lack of discriminant validity. Unlike, the Fornell and Larcker (1981) criteria, they also found that the HTMT ratio seems to be a more stringent approach. The HTMT approach generally, divides the correlations of indicators for an individual latent variable (i.e., an average of the Monotrait-Heteromethod Correlations) by the correlations of indicators across all latent constructs, so that when there is a strong relationship between two unrelated constructs is close to one (1), it denotes an absence of discriminant validity (Henseler et al., 2015). However, correlations greater than 0.90 are considered close to one (Hair et al., 2019). Ideally, this suggests that the HTMT value should be less than 1 to provide evidence of discriminant validity.

In addition, the cross-loading technique considers the association between one construct and some indicators outside its own. The general guideline is that the constructs should have a higher correlation with their respective indicators than it does with different indicators of other variables (Chin, 1998; Nitzl, 2016). Besides, while the Fornell-Larcker criteria assess discriminant validity by examining variances between constructs and their indicators, cross-

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loading achieves a similar objective by examining the variation across constructs and some other construct indicators.

3.13 Assessing the Structural Model (Inner Model)

Evaluation of the structural model, as suggested by Hair et al. (2021), Nitzl (2016), and Hair et al. (2019), is typically conducted after all validity tests and thresholds have been met within the outer model. This step involves examining the structural model to determine whether the hypothesis derived is supported by the data gathered (Urbach & Ahlemann, 2010). In essence, it makes it possible to assess the structural associations between the research constructs. Subsequently, the structural model is evaluated to see how well it can predict the endogenous constructs before moving on to test the hypothesised associations. The structural model is evaluated using multicollinearity assumptions, the predictive relevance of the model, and the coefficient of determination (Nitzl, 2016).

Firstly, the issue of collinearity in the model is theoretically predicted not to surface; nevertheless, this is rarely the case in practice (Hair et al., 2014). In addition, the Variance Inflation Factor (VIF) is the recommended approach in PLS-SEM to undertake this test since it intuitively indicates how the issue of multicollinearity about the study variables affects the study outcomes (Henseler, Ringle, & Sinkovics., 2009). A VIF value of five or higher denotes a potential multicollinearity concern (Hair et al., 2019).

In addition, the dependent variable's coefficient of determination (R^2) is a crucial structural model evaluation measure to assess the models' predictive ability (Hair et al., 2017; Nitzl & Chin, 2017). This reveals the level of accuracy with which the endogenous variable is explained by the independent variables. The degree to which the exogenous construct contributes to the variation in the endogenous construct determines the strength of the PLS path model (Chin, 1998). Consequently, a low R^2 shows that the conceptual model is unable to account for the

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variations in the endogenous construct. From prior literature, the rule of thumb for R^2 falls within the categories of 0 - 49%, 50 - 69%, as well as 70% and beyond are perceived as weak, moderate, and large, respectively (Hair et al., 2019).

Further, the predictive relevance of the model is next tested using the blindfolding guidelines from Hair et al. (2019). After calculating the model's parameters, the blindfolding technique omits some data and predicts the same withheld data using the previously estimated parameters (Hair et al., 2012). The predictive relevance (commonly known as Stone-Geisser's Q^2) and cross-validated redundancy (Sarstedt et al., 2017), assume that the value of Q^2 must be greater than zero (0) for the model to have predictive relevance (Hair et al., 2019; Stone, 1974).

Moreover, the evaluation of model fit is seen as crucial for studies employing SEM (Kline, 2011; Schuberth et al., 2022). The current study being underpinned by contingency theory assessed model fit as advanced by scholars in prior studies (Henseler et al., 2016; Nitzl & Chin, 2017; Schuberth et al., 2022). Following Henseler et al. (2016) and Hu and Bentler (1999), they suggested the use of Standardized Root Mean Square Residual (SRMR) criterion to assess model fit, then the SRMR value should be less than 0.10 or 0.08 (Henseler et al., 2016).

Last but not least, the coefficient and significance level of the paths within the structural model of the study were examined using a resampling technique known as bootstrapping to test the study hypotheses (Nitzl, 2016). The PLS-SEM method makes no assumptions about the distribution of the data concerning the indicators or error terms. Consequently, a bootstrapping method usually relies on a large number of subsamples (for example, 5,000) from the study's original data and re-estimations of the model for each subsample to assess the confidence intervals and the significance of the PLS path modelling estimates (Nitzl, 2016; Hair et al., 2019; Richter et al., 2016). The bootstrap method typically treats the observed sample as if it

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were a representative sample of the population by estimating the size, spread, and bias of the sample distribution (Hair et al., 2019).

3.14 Ethical Considerations

Typically, ethical issues revolving around research are crucial and essential elements that must not be overlooked. Ethics in research are rules that researchers must keep or follow while carrying out a research study (Bell et al., 2022). It seeks to provide a safeguard for the researcher as well as the participants. This is done to promote the authenticity, trust, and integrity of the research process by ensuring that all parties involved are not affected by any risks surrounding the research (Creswell, 2007). Before data collection, study participants were informed about the study's objectives and their permission was obtained before distributing questionnaires. Further, to ensure adherence to principles, the researcher made sure that the requirements for completing the instrument were obvious and clearly communicated. The respondents of the study were informed of their voluntary participation and were allowed to either opt-out or withdraw at any time during the data collection process. The security and privacy of the respondents was acknowledged by ensuring that any information provided is kept confidential and not disclosed to outside parties; hence, ensuring confidentiality and anonymity in the collection process as suggested by Creswell (2007). In addition, the data collection adhered to all the COVID-19 regulations and protocols; and study respondents were urged to use online or electronic versions as well as conforming to social distancing, among others.

3.15 Chapter Summary

The research design and underlying philosophical assumptions of the study were discussed in this chapter. The study used a quantitative and survey research approach, which is upheld by the positivist paradigm considering the framework and objectives of the current study. The justifications for its incorporation were provided. Moreover, the Structural Equation

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Modeling Technique (PLS-SEM) was used in this study, and the findings attained from the data analysis are assessed and discussed in the following chapter.

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CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the findings attained from data analysis based on the data gathered. An evaluation of the opinions and perceptions obtained from the sampled firms under study is also presented again in connection with the study goals. The chapter then goes on further to outline the descriptive statistics of the participants, companies that were investigated, and the antecedents of SMA Usage. In addition, this section concludes by providing a detailed discussion of the findings attained from the structural analysis, based on the hypothesised associations with the help of (PLS-SEM) Smart PLS software and SPSS.

4.2 Data Gathering, Handling and Coding

According to Saunders et al. (2019), rigorous processes and procedures are pre-requisites for handling and managing gathered data before it can be utilised for any sophisticated analysis. These procedures include the storage of gathered data, data editing, coding, and scanning before final entry. These stages assist in minimising any errors and discrepancies the data set may possess. To avoid "skewing the outcomes", the data gathered was coded and entered into SPSS version 25 whilst monitoring for any missing information and anomalies (Bell et al., 2022). For this study, a total of 550 questionnaires were issued, and 185 responses were initially received. Intending to increase the response rate, the researcher employed follow-up telephone calls, and as a result, a total of 257 responses were returned by the study respondents indicating a response rate of 46.7%. Comparatively, the appreciable increase in the response rate compared to previous studies on SMEs could be a result of the follow-up telephone calls made to some owners and managers as employed by Abdel-Kader and Luther (2008). On the contrary, further analysis relied on 228 responses (representing 41.5% of the total surveyed

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respondents, and 88.7% of the total responses received). Some of the responses were excluded due to incomplete responses as well as the inability of some respondents to answer the questionnaires appropriately to meet the usability or inclusion criterion (e.g., a firm that has been in operation for less than five years, not answering some questions regarding the main study constructs).

4.3 Descriptive Statistics

4.3.1 Demographics of study respondents

The frequency and percentages of the study's demographic data are shown in Table 4.1. It discloses that there is an appreciable representation of females compared to prior studies with men making up 54.8% of the respondents whereas females represent 45.2%. Although men are observed to predominate in establishing and managing businesses in Ghana, current trends suggest otherwise. This conclusion may be explained by the widespread promotion and education of females to gain independence in their affairs in attempts to take on new responsibilities (e.g., the fair representation of females on corporate boards and gender equality initiatives among others) regardless of the social constraints that frequently affect them from advancing in their area of interests. The majority of respondents were educated, as evidenced by the fact that only 3.5% of participants had education levels beneath the secondary school level. More precisely, about 41.7% of the sampled respondents had obtained an undergraduate degree. Table 4.1 showed that participants were distributed fairly throughout the selected domains or regions of study in Ghana. As shown by the data, Greater Accra Region provided the majority of the responses (representing 34.2%), followed by the Ashanti Region (contributing about 26.8%), with the Western Region (representing 18.4%) and Eastern Region (contributing 11.4%), and Central Region, providing the least (representing 9.2%). In developing contexts, studies done on SMEs to date often have a low number of respondents participating in survey investigations (Amidu et al., 2011). Notwithstanding, as opposed to

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earlier studies, these responses presented above appeared to be adequate (Amidu et al., 2011; Oduro, 2020).

Table 4.1: Demographics of the Study

Measures	Frequency	Percentage (%)
Gender		
Male	125	54.8
Female	103	45.2
Number of employees		
Small (6 - 29)	99	43.4
Medium (30-100)	129	56.6
Level of education		
Secondary school	8	3.5
Short-term vocational	21	9.2
Degree	95	41.7
Masters	68	29.8
PhD	9	3.9
Professional	27	11.8
Location		
Greater Accra	78	34.2
Ashanti	61	26.8
Eastern	26	11.4
Central	21	9.2
Western	42	18.4
Sector		
Service	129	56.6
Manufacturing	99	43.4
Legal status		
Sole proprietorship	96	42.1
Partnership	52	22.8
Limited liability company	73	32.0
Others	7	3.1

Source: Field Data (2022)

The distributional summary in Table 4.1 highlights the sector of affiliation among the study sample. The majority of the sampled SMEs, approximately 56.6%, were associated with the

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service sector, while a proportion of 43.4% was affiliated with the manufacturing sector. Interestingly, earlier surveys conducted, for instance, the SME Competitiveness Report in 2019, revealed similar projections thus evidencing the domination of service firms in the country. Table 4.1 indicates that this same large majority of the respondents operated as sole proprietorships (representing 42.1%); a vast number of the sampled firms were medium (representing 56.6%), indicating that most of the firms have improved the modes of operations that have helped them to expand in order to employ more workforce who will assist in their diverse capacities towards the realization of the firm's goals.

Table 4.2: Descriptive statistics of study constructs

CODE	Constructs/ Items/ Measures	Mean	Min	Max	SD
	Perceived Economic Crisis				
	COVID-19	**4.77**			1.31
COV1	Our firm's orders have been affected by COVID-19.	4.81	1	7	1.92
COV2	Our firm's sales have been affected by COVID-19.	4.68	1	7	1.85
COV3	Our firm's customers' ability to pay has been affected by COVID-19.	4.61	1	7	1.70
COV4	Our firm's suppliers' ability and reliability to provide goods or services have been affected by COVID-19.	4.41	1	7	1.75
COV5	Our firm has been affected by the availability of capital and capital controls by COVID-19.	4.68	1	7	1.73
COV6	Our company has been affected by crisis-induced currency fluctuation caused by COVID-19.	5.01	1	7	1.66
COV7	Overall, COVID-19 has greatly affected our firm.	5.21	1	7	1.68
	Banking crisis	**4.09**			1.27
BC1	Our firm's orders have been affected by the banking crisis.	3.80	1	7	1.69
BC2	Our firm's sales have been affected by the banking crisis.	3.96	1	7	1.68
BC3	Our firm's customers' ability to pay has been affected by the banking crisis.	3.92	1	7	1.63
BC4	Our suppliers' ability and reliability to provide goods or services have been affected by the banking crisis.	3.96	1	7	1.68
BC5	Our firm has been affected by the availability of capital and capital controls by the banking crisis.	4.38	1	7	1.64

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BC6	Our company has been affected by crisis-induced currency fluctuation caused by the banking crisis.	4.23	1	7	1.63
BC7	In general, our firm has been greatly affected by the banking crisis.	4.36	1	7	1.73
	Market orientation	**4.77**			1.59
MO_1	Our firm has a strong understanding of our customers.	4.96	1	7	1.85
MO_2	The functional units in our company work closely together to create superior value for our customers.	4.68	1	7	1.88
MO_3	The management in our organisation thinks in terms of serving the needs and wants of a well-defined market chosen for the long-term growth and profit potential of the company.	4.61	1	7	1.80
MO_4	Our company has a strong market orientation.	4.85	1	7	1.74
	Strategy	**4.40**			1.02
SP_1	Our firm leads in innovations in its sector.	4.45	1	7	1.66
SP_2	Our firm operates in a broad product and service domain.	4.38	1	7	1.78
SP_3	Our firm responds rapidly to early signals of opportunities in the environment.	4.50	1	7	1.72
SP_4	Our firm believes in being "first in" in the industry in the development of new products and services.	4.53	1	7	1.66
SP_5	Our firm's products and services domain are periodically redefined.	4.43	1	7	1.70
SD_1	Our firm tries to locate a safe niche with relatively stable products and service domains.	4.46	1	7	1.54
SD_2	Our firm tries to protect the environment domain in which it operates by stressing higher quality than its competitors.	4.57	1	7	1.62
SD_3	Our firm tends to offer a narrower set of products and services than its competitors.	4.11	1	7	1.64
SD_4	Our firm tries to maintain a limited line of products and services.	4.23	1	7	1.75
SD_5	Our firm places less stress on the examination of changes in the industry that are not directly relevant to the firm.	4.31	1	7	1.64
	Perceived Environmental Uncertainty	**4.50**			1.09
PEU_1	The industry price competition is extremely intense.	4.64	1	7	1.88
PEU_2	The external environment of my business unit rapidly changing.	4.55	1	7	1.63
PEU_3	There are many new products in the industry which have been marked during the past 5 years.	4.60	1	7	1.58
PEU_4	It has become more difficult to predict the market activities of our competitors during the past 5 years.	4.41	1	7	1.57
PEU_5	It has become more difficult to predict the tastes and preferences of our customers during the past 5 years.	4.20	1	7	1.71

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PEU_6	The political and economic constraints influencing our business unit have increased greatly during the past 5 years.	4.62	1	7	1.73
	Accountants' Participation	**4.53**			1.38
AP1	Identifying problems and proposing objectives	4.57	1	7	1.74
AP2	Generating options	4.59	1	7	1.64
AP3	Evaluating options	4.54	1	7	1.69
AP4	Develop details about options.	4.46	1	7	1.66
AP5	Take necessary actions to put changes in place	4.52	1	7	1.71
	Performance	**4.76**			1.05
PERF_1	Return on investment	4.67	1	7	1.51
PERF_2	Margin of sales	4.54	1	7	1.43
PERF_3	Capacity utilization	4.44	1	7	1.43
PERF_4	Customer satisfaction	5.11	1	7	1.48
PERF_5	Product quality	5.08	1	7	1.52
PERF_6	Development of new product	4.70	1	7	1.53
PERF_7	Growth in market share	4.79	1	7	1.55
	SMA Usage	**4.40**			1.08
	Costing	**4.33**			
SMA1	Attribute costing	4.27	1	7	1.57
SMA2	Life Cycle Costing	4.36	1	7	1.48
SMA3	Quality costing	4.34	1	7	1.43
SMA4	Target costing	4.36	1	7	1.52
SMA5	Value chain costing	4.32	1	7	1.48
SMA6	Activity-Based Costing	4.54	1	7	1.52
SMA7	Activity-Based Management	4.11	1	7	1.58
	Planning, control, and performance measure	**4.45**			
SMA8	Benchmarking	4.86	1	7	1.58
SMA9	Integrated Performance Measurement (Balance scorecard)	4.44	1	7	1.53
SMA10	Environmental Management Accounting	4.07	1	7	1.66
	Strategic decision making	**4.40**			
SMA11	Strategic costing (Strategic Cost Management)	4.36	1	7	1.64
SMA12	Strategic Pricing	4.43	1	7	1.64
SMA13	Brand valuation	4.41	1	7	1.63
	Competitor Accounting	**4.50**			
SMA14	Competitor profitability analysis	4.53	1	7	1.69
SMA15	Competitive position monitoring	4.44	1	7	1.52
SMA16	Competitor performance appraisal	4.52	1	7	1.67
	Customer Accounting	**4.43**			
SMA17	Customer profitability analysis	4.46	1	7	1.69
SMA18	Lifetime customer profitability analysis	4.36	1	7	1.61
SMA19	Valuation of customers as assets	4.46	1	7	1.73

Source: Field Data (2022)

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4.3.2 Descriptive of study constructs

The mean scores and standard deviation of the various constructs employed in this study are emphasised in Table 4.2. The construct, market orientation, attained an overall mean of 4.77, which indicates that the sampled SMEs often aim at adopting initiatives to prioritize and satisfy customer demands. The results show that a majority of SMEs "have a strong understanding of their existing and potential clients" they often deal with (as the item achieved a Mean = 4.96; SD = 1.85). On the contrary, the management was not willing to focus attention to serve the needs and wants of a chosen niche (well-defined market) to support their long-term growth and profit potential (lower mean of 4.61). This suggests that in the long-term firms usually want to attain higher outcomes or see some indication of profitability from any investment opportunity they undertake (e.g., advertising). The data gathered revealed that managers within various units work collectively together to create value that meets clients' demands.

The strategy construct had an overall mean of 4.40 and a standard deviation of 1.02, which stipulates that a majority of the sampled firms adopt a hybrid strategic orientation "analyzer" based on the seven-point scale. This presupposes that the firms complement their activities by adopting several strategies to achieve their goals. Moreover, the results hinted that most firms stress outpacing their rivals by producing high-quality products to meet current demands (as the item attained a Mean of 4.57 and SD of 1.62).

The construct PEU obtained an overall mean of 4.50, which denotes that the owners and managers agree to a large extent with the statements that describe their perception about their business environment. The data revealed that owners and managers of the sampled firms are largely faced by diverse complexities and challenges which renders the environment firms operate in to be uncertain, as such, they are always in a fierce competition for survival. From the data, it can be inferred that the majority of the sampled firms are challenged by high price volatility (price competition) in the environment they operate in (the item had a mean of 4.64

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and SD = 1.88). The study also found that, most of the sampled firms find it difficult to predict the market activities of their competitors. Interestingly, the findings also showed that the decision-making processes of a majority of the sampled firms have been greatly affected by several factors imposed by the environment as the indicator "the legal, political, and economic constraints influencing our business unit have increased greatly" had a mean score of 4.62. This could be as a result of the changes in interest rates, inflation rates, exchange rates, as well as unfavourable tax laws and levies, hence, making it challenging for managers to plan and control their operations to achieve their goals. Nevertheless, changes in the environment have placed firms in a stringent position to assess and easily predict their client's tastes and preferences (lower mean of 4.20).

From Table 4.2, the mean value of the construct accountants' participation was 4.54 and SD of 1.38, which stipulates that the majority of the SMEs studied involve accountants in diverse capacities in support of their decision-making routines. The data shows that SMEs involve accountants in generating options, thus engaging accountants to identify all available alternatives for any venture they intend to embark on (item had a mean of 4.59, SD of 1.64). This explains that those owners or entrepreneurs who do not employ dedicated accountants often turn to consult their friends and relatives in accounting roles or who are in that capacity for advice, especially regarding strategic planning and long-term sustainability-related issues. In addition, some also choose the path of outsourcing such roles by relying on professional accounting consults and auditors for help. Surprisingly, this finding could emanate from the increased sensitization of SMEs to adopt and implement International Financial Reporting Standards (IFRS) for SMEs, and could have swayed firms to involve accountants in diverse capacities that has influenced their growth, survival and sustainability. Notably, accountants play a crucial role in this modern business environment to help managers enhance their strategic planning and long-term sustainability-related engagements.

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The perceived economic crisis construct highlighted the impact of COVID-19 pandemic (had a mean of 4.77 and an SD of 1.31), which indicates that the surfacing or emergence of the pandemic had a severe impact on their business. The majority of managers and owners expressed agreement with their concerns and statements, based on the 7-point scale. More precisely, the item "overall, COVID-19 has greatly affected our firm" had the highest mean of 5.21 which captures how its incidence affected their operations entirely. Although the crisis was health-related it transcended onto the business scene, which affected orders, and the availability of suppliers to provide raw materials, finished, and semi-finished products, among others. This finding corroborates with the results attained by the Ghana Statistical Service (as shown as Figure 2.3). The incidence of the banking crisis had an overall mean of 4.08 and an SD of 1.27. This suggests that most managers are indifferent to the impact of the banking crisis on their operations. This could be a result of the impact of the banking crisis affecting a few selected entities who are related to or who transact business with those defunct banks. In comparison to COVID-19, its spread affected mainly those who had savings with those institutions whereas the former affected the entire globe of which Ghana was not an exception, hence this finding is supported by the mean scores attained for the various indicators as well.

The mean scores attained for the various performance indicators show that, on average the sampled firms performed slightly above average (mean = 4.76; SD = 1.05). Comparatively, the majority of the SMEs studied were able to meet their performance expectations as against its competitor in business environment. From the data, SMEs primarily focus on meeting and exceeding clients' needs for "customer satisfaction" (Mean = 5.11; SD = 1.48). This emphasised that the sampled SMEs are engaging in business activities that are tailored towards providing goods and services that seek to satisfy client demand. Although, the sampled firms were able to meet average customer demands, they were operating significantly below full capacity as shown by "capacity utilization" (Mean = 4.44; SD = 1.43). This suggests that in

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terms of utilization, on average the sampled firms were not efficiently allocating scarce resources to meet increasing product demands in the environment they operate in.

In addition, the construct SMA Usage had a mean score of 4.40 and an SD of 1.08, indicating that SMEs sometimes use SMA techniques based on the seven-point scale. This may either be a result of some firms not possessing sufficient knowledge about it all or some firms are using SMA techniques; however, they do not know actually what they are implementing to support their operations. The data shows that the majority of the sampled firms employ benchmarking (Mean = 4.86; SD = 1.58) to achieve their set targets. This could be a result of the level of uncertainty in the environment, which prompts managers and owners to compare their operational activities to ideal standards and that of rivals in the industry to devise relevant strategies for sustained advantage.

Table 4.3: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.893
Bartlett's Test of Sphericity	Approx. Chi-Square	8630.147
	Df.	2080
	Sig.	0.000

Source: Field Data (2022)

4.4 Exploratory Factor Analysis

Exploratory factor analysis (EFA) is regarded as a ubiquitous yet intuitive technique for discovering and understanding the theoretical foundations behind a set of variables. Accordingly, the study employed Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity to determine the factorability of the dataset under investigation. These techniques have been applied in a wide range of scientific fields that are frequently used when there is minimal to no foreknowledge about the latent composition related to variables (Dunk, 1993). Bartlett's Test

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of Sphericity determines whether a correlation matrix is suitable for factor analysis whereas the KMO measure of sampling determines whether it deviates significantly from an identity matrix (Lorenzo & Ferrando, 2021; Kaiser & Rice, 1974). This same index provides a determination of whether the parameters have psychometric properties harmonious with one another and, consequently, if the correlation matrix is suitable for factor analysis (Bartlett, 1954; Dunk, 1993). According to Kaiser (1970), factor analysis should be used whenever the KMO value is more than 0.60 because that signifies a higher level of shared variance in the correlation matrix. The KMO measure for the entire study variables is 0.893, demonstrating that the data is suitable. In addition, evaluating at the 1% significance level, Bartlett's Test of Sphericity (Bartlett, 1954) shown in Table 4.3 is statistically significant.

4.5 Common Method Bias

In many research fields, including accounting and management, Common Method Bias (CMB) similarly known as Mono-method bias or Common Method Variance (CMV) is widely acknowledged as a great concern to the integrity of study findings and conclusions (Min et al., 2016). Considering the presence of CMB, Siemsen et al. (2010, p. 457) identified the term as "the degree to which parameter estimations asymptotically converge to values distinct from their genuine population parameters". The term is used to describe variation shared amongst constructs as a result of employing relatively identical respondents or either way a survey research instrument. (Kock et al., 2021; Podsakoff et al., 2003). Previous research indicates that the existence of CMB can cause alterations to the regression statistical significance as well as construct validity and reliability, hence contributing to Type I and II errors (Kock et al., 2021; Podsakoff et al., 2012; Siemsen et al., 2010). Consequently, it was crucial to determine whether our study exhibits any form of such bias (CMB). Prior literature primarily suggests two main approaches that could be employed to control for CMB, be it procedural or statistical approaches (Kock et al., 2021; Min et al., 2016; Podsakoff et al., 2003). Thus, by carefully

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designing the research questionnaire, the impact of CMB could be statistically controlled both before and after the data-gathering process (Podsakoff et al., 2003). Statistically, Harman's one-factor test (Harman, 1976), which has been demonstrated to be the most popular statistical procedure in controlling for common method bias, was employed in the present study. Podsakoff et al. (2003) suggest that the overall variance for a single factor should not be higher than 50% for CMB not to exist. Table 4.4 indicates that our data (dependent and independent constructs) is not affected by CMB because the maximum total variation explained by a single component is just 28.16%. Hence, this result corroborates the assertions made by Podsakoff et al. (2003) and Kock et al. (2021).

Table 4.4: Assessment of Common Method Bias

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.303	28.158	28.158	18.303	28.158	28.158
2	5.070	7.800	35.958			
3	2.854	4.391	40.348			
4	2.349	3.615	43.963			
5	2.002	3.079	47.042			
6	1.925	2.962	50.004			
7	1.579	2.429	52.432			
8	1.431	2.201	54.634			
9	1.417	2.181	56.814			
10	1.321	2.032	58.846			
11	1.282	1.972	60.818			
12	1.109	1.706	62.524			
13	1.061	1.632	64.156			
14	1.029	1.584	65.740			
15	1.016	1.563	67.303			

Source: Field Data (2022)

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4.6 Normality test

Hair et al. (2012) described normality as the configuration of any given data for each metric variable as well as its conformity to the normal distribution standard for statistical methods.

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Before assessing the structural model, we took the opportunity to examine the data's normalcy. Accordingly, both univariate and multivariate normality tests were conducted using the skewness and kurtosis and Mardia's multivariate normality tests. All study variables' univariate skewness and kurtosis values (as shown in Table 4.5) were below the normalcy cut-offs of 1 for skewness and 7 for kurtosis (Nevitt & Hancock, 2001), indicating no significant shift from univariate normality. In contrast, the cut-off criteria for Mardia multivariate skewness and kurtosis (Mardia, 1974) are 1 and 20, respectively. As shown in Table 4.5, the data set was not normally distributed since both the skewness and kurtosis results were beyond the stipulated threshold for multivariate normality tests. Based to this result regarding Mardia's coefficient (as shown in Table 4.5), suggests the suitability of employing PLS-SEM for further analysis to achieve the study's objectives.

Table 4.5: Normality test result

Sample size: 228
Number of variables: 7

Univariate skewness and kurtosis

	Skewness	SE_skew	Kurtosis	SE_kurtosis
Strategy	0.000	0.161	-1.200	0.321
AP	-0.032	0.161	-0.598	0.321
PEC	-0.227	0.161	-0.430	0.321
MO	-0.303	0.161	-1.003	0.321
PEU	-0.173	0.161	-0.561	0.321
Performance	-0.325	0.161	0.192	0.321
SMA.Usage	0.032	0.161	-0.109	0.321

Mardia's multivariate skewness and kurtosis

	b	Z	p-value
Skewness	2.976222	113.0964385	0.018849
Kurtosis	63.673062	0.4526963	0.650767

Source: Field Data (2022)

Notes: AP = Accountants' Participation, PEC = Perceived Economic Crisis, MO =Market Orientation, PEU = Perceived Environmental Uncertainty, SMA Usage = Strategic Management Accounting Usage.

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4.7 Assessment of Measurement Model

Owing to prior literature on SEM, data analysis was initiated by assessing the measurement model before giving any other further empirical findings from PLS-SEM. In this section of the study, the validity and reliability of the constructs and the corresponding measurement items are evaluated. We commenced with the reliability analysis regarding indicator reliability because all study constructs were underpinned by reflective measures.

4.7.1 Indicator Reliability

The indicator loadings of the various study constructs were used to evaluate the validity and reliability of the indicators within the measurement model. An indicator's reliability generally, demonstrates the validity of the questions that were used to measure each of the research constructs. Although an indicator loading of 0.708 and above is the suggested criterion, indicator loadings of 0.400 (Sarstedt, et al., 2017; Hair et al., 2019) are acceptable once all reliability and validity tests have been completed. Consequently, it is anticipated that items with loadings below the criterion will be eliminated from the model whereas others will be maintained. Likewise, Nitzl (2016) recommended that items with loadings below 0.700 but above 0.400 must be carefully examined to affirm whether their removal will not affect the other relevant validity tests (e.g., composite reliability and AVE) of any related construct. As shown in Table 4.6, the indicator loadings of the various constructs appeared to be satisfactory since, the findings from the data analysis, showed that all loading fell within the acceptable range as most of the indicator loadings are more than 0.50, which is the minimum loading required by Hair et al. (2014).

Table 4.6: Indicator loadings, AVEs and CR

Constructs	Items	Loadings	CR	AVE
Accountants' Participation	AP1	0.782	0.909	0.668
	AP2	0.866		
	AP3	0.820		
	AP4	0.783		

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	AP5	0.833		
Perceived Economic Crisis	PEC_BC3	0.575	0.895	0.519
	PEC_COV1	0.760		
	PEC_COV2	0.803		
	PEC_COV3	0.729		
	PEC_COV4	0.767		
	PEC_COV5	0.696		
	PEC_COV6	0.671		
	PEC_COV7	0.739		
Market Orientation	MO_1	0.887	0.927	0.761
	MO_2	0.880		
	MO_3	0.892		
	MO_4	0.830		
Perceived environmental uncertainty	PEU_1	0.766	0.792	0.559
	PEU_2	0.703		
	PEU_6	0.772		
Strategy	STRA.SD_1	0.730	0.88	0.512
	STRA.SD_2	0.650		
	STRA.SP_1	0.749		
	STRA.SP_2	0.643		
	STRA.SP_3	0.731		
	STRA.SP_4	0.770		
	STRA.SP_5	0.727		
SMA Usage	SMA1	0.713	0.929	0.501
	SMA12	0.685		
	SMA15	0.692		
	SMA17	0.704		
	SMA18	0.707		
	SMA19	0.685		
	SMA2	0.729		
	SMA3	0.710		
	SMA4	0.749		
	SMA5	0.703		
	SMA6	0.723		
	SMA7	0.712		
	SMA9	0.691		
Performance	PERF_1	0.741	0.867	0.52
	PERF_2	0.717		
	PERF_3	0.747		
	PERF_4	0.697		
	PERF_5	0.713		
	PERF_7	0.711		

Source: Field Data (2022)

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4.7.2 Internal Consistency Reliability

Following the evaluation of the indicator's reliability, which produced favourable outcomes, the internal consistency test was assessed. Internal consistency evaluates how closely or precisely a group of indicators will be able to capture and predict an underlying construct or concept. Prior literature suggests two crucial approaches to assess internal consistency, which are Cronbach Alpha (CA) and Composite Reliability (CR).

First of all, to determine reliability of study variables, correlations of the Cronbach alpha (Cronbach, 1951) provide a reliable estimate. Hair et al. (2019) predicate that a Cronbach alpha value of 0.70 is sufficient but that a higher alpha (CA) value is preferred. Results from Table 4.7 indicate that all constructs met this threshold of 0.70 except PEU (perceived environmental uncertainty), which had an alpha value below the criterion. Despite it being lower than the alpha criterion, it met the conditions of a more robust measure. Likewise, an appropriate level of internal consistency is a composite reliability (CR) score of 0.70; in contrast, a higher CR value denotes greater internal consistency. In the last iteration of the study results, all indicators met the minimal CR requirement of 0.70, as shown in Table 4.7. Interestingly, PEU, which did not approximately meet the threshold for CA, rather attained a CR score greater than the threshold hence satisfying its justification to be maintained in the study model.

Notwithstanding these approaches, the most preferred measure in PLS-SEM is composite reliability (Hair et al., 2019). According to Chin (1998), Hair et al. (2011) and Sarstedt et al. (2017), CR is preferable to CA since the latter presupposes that all indicators are weighted equally, whereas practically this may not be the case. On the other hand, CR makes use of certain indicator loadings that originate from the measurement model as a whole. Accordingly, due to diverse inherent limitations in CA, the current study relied on the CR approach to achieve internal consistency reliability as proposed by Hair et al. (2014).

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4.7.3 Convergent validity

The convergent validity of the measurement model was evaluated using the Average Variance Extracted (AVE) criterion, as recommended by Fornell and Larcker (1981). The AVE's preferred cut-off point is 0.50 and over, meaning that each construct should account for at least 50% of the variance in its array of indicators. All of the AVEs were above 0.50 as shown by the findings in Table 4.7, and the measurement model's constructs all exhibited sufficient convergent validity (Henseler et al., 2015; Hair et al., 2019). This denotes that questions (items) were collectively able to account for 50% variance in each construct.

Table 4.7: Cronbach Alpha, Composite Reliability and AVE

	C A	CR	AVE
Accountants' Participation	0.875	0.909	0.668
Perceived Economic Crisis	0.866	0.895	0.519
MO	0.896	0.927	0.761
PEU	0.606	0.792	0.559
Performance	0.817	0.867	0.520
SMA Usage	0.917	0.929	0.501
Strategy	0.841	0.880	0.512

Source: Field Data (2022)

4.7.4 Discriminant validity

Discriminant validity is a crucial factor to consider when assessing the validity of any study's constructs. However, there are a variety of ways to do this, and the current study chose to discuss the three most prevalent and acknowledged measures. These methods include the use of cross-loadings (analysing indicator loadings of various constructs), the Fornell-Larcker criterion, and the Heterotrait-Monotrait Ratio (HTMT ratio). Nevertheless, the Fornell and Larcker (1981) criterion seems to be the most frequently used to evaluate the discriminant validity in practice. With this technique, the squared correlation between a study construct and every other construct in the structural model is compared to the AVE value for each construct. In other words, to meet this criterion, the average variance extracted (AVE) for each construct

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must be compared to its squared correlations with other constructs in the model (Franke, 2019; Henseler et al., 2015).

According to the Fornell-Larcker criterion, a study's construct ought to have the square root of its AVE greater than the correlations between the study constructs. Thus, the square root of every construct's AVE score, as shown in Table 4.8, should have its diagonal (establishing correlations between constructs and itself) being greater than any other correlations with other constructs within the Fornell-Larcker matrix. Consequently, as displayed in Table 4.8, it can be accentuated that the elements outside the diagonal in the respective rows and columns have a score lower than the square root of the AVEs as shown (bold elements) by the diagonal of the matrix. This validity test ascertained that all of the study constructs were reliable.

Table 4.8: Fornell and Larcker Criterion of Discriminant Validity

	1	2	3	4	5	6	7
AP (1)	***0.817***						
PEC (2)	0.245	***0.721***					
MO (3)	0.590	0.400	***0.873***				
PEU (4)	0.363	0.445	0.461	***0.748***			
Performance (5)	0.562	0.206	0.511	0.354	***0.721***		
SMA Usage (6)	0.585	0.361	0.589	0.507	0.640	***0.708***	
Strategy (7)	0.578	0.363	0.632	0.537	0.632	0.585	***0.716***

Source: Field Data (2022)

Notes: AP = Accountants' Participation, PEC = Perceived Economic Crisis, MO = Market Orientation, PEU= Perceived Environmental Uncertainty, SMA Usage =Strategic Management Accounting Usage.

HTMT Ratio

The HTMT was the next method used to assess the discriminant validity. Henseler, Ringle, and Sarstedt (2015) revealed that the HTMT ratio is the average of the correlation of items inherent in a study's construct. They stressed that the HTMT Ratio is a more rigorous test than the approach postulated by Fornell and Larcker (1981) to assess discriminant validity. On the other

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hand, the appropriate threshold for justifying discriminant validity when employing the HTMT technique has generated contention in recent literature (Franke & Sarstedt, 2019). To attain discriminant validity, some studies advise that the correlation between constructs should be less than 0.85 (Kline, 2011), while others advise 0.90. (Henseler et al., 2015; Gold, Malhotra & Segars 2011). The study outcomes, as displayed in Table 4.9, fall below either of the suggested thresholds, indicating that discriminant validity was successfully met in the study.

Table 4.9: HTMT Criterion of Discriminant Validity

	1	2	3	4	5	6	7
AP (1)	-						
PEC (2)	0.279	-					
MO (3)	0.667	0.450	-				
PEU (4)	0.497	0.608	0.630	-			
Performance (5)	0.653	0.232	0.598	0.499	-		
SMA Usage (6)	0.646	0.397	0.644	0.672	0.719	-	
Strategy (7)	0.668	0.418	0.730	0.766	0.757	0.656	-

Source: Field Data (2022)

Notes: AP = Accountants' Participation, PEC = Perceived Economic Crisis, MO = Market Orientation, PEU= Perceived Environmental Uncertainty, SMA Usage =Strategic Management Accounting Usage.

Cross loadings

Furthermore, the study examined discriminant validity using the cross-loading of various indicators (cross-loading analysis). This study employed the rule of thumb proposed by Hair et al. (2017), who theorised that indicator loading should have higher correlations with the latent construct that they are intended to measure compared to any other latent constructs in the model under consideration (Sarstedt et al., 2017). All measuring items effectively load onto their respective latent variables, as evidenced by the cross-loading results (see Table 4.10), which

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also demonstrate that the correlations between the items and any other construct are significantly lower than those between the items and their respective latent variables (see Table 4.10). Hence, discriminant validity was sufficiently established.

Table 4.10: Cross loadings

	AP	PEC	MO	PEU	PERF	SMA	STRA
AP1	**0.782**	0.148	0.497	0.289	0.499	0.517	0.489
AP2	**0.866**	0.238	0.473	0.294	0.505	0.475	0.507
AP3	**0.82**	0.156	0.481	0.295	0.426	0.458	0.454
AP4	**0.783**	0.245	0.476	0.318	0.393	0.431	0.455
AP5	**0.833**	0.22	0.482	0.291	0.462	0.5	0.455
PEC_BC3	0.182	**0.575**	0.172	0.186	0.102	0.236	0.167
PEC_COV1	0.176	**0.76**	0.314	0.348	0.183	0.281	0.304
PEC_COV2	0.237	**0.803**	0.326	0.354	0.206	0.333	0.313
PEC_COV3	0.099	**0.729**	0.218	0.295	0.056	0.236	0.19
PEC_COV4	0.212	**0.767**	0.299	0.341	0.163	0.258	0.292
PEC_COV5	0.144	**0.696**	0.289	0.279	0.078	0.235	0.223
PEC_COV6	0.165	**0.671**	0.349	0.414	0.225	0.269	0.339
PEC_COV7	0.171	**0.739**	0.318	0.32	0.127	0.185	0.215
MO_1	0.498	0.347	**0.887**	0.371	0.491	0.501	0.589
MO_2	0.545	0.371	**0.88**	0.417	0.421	0.496	0.539
MO_3	0.505	0.37	**0.892**	0.449	0.43	0.576	0.529
MO_4	0.517	0.303	**0.83**	0.364	0.445	0.472	0.556
PERF_1	0.352	0.113	0.303	0.23	**0.741**	0.431	0.443
PERF_2	0.322	0.127	0.32	0.235	**0.717**	0.413	0.44
PERF_3	0.457	0.188	0.377	0.336	**0.747**	0.555	0.493
PERF_4	0.44	0.121	0.44	0.235	**0.697**	0.393	0.437
PERF_5	0.473	0.166	0.389	0.282	**0.713**	0.523	0.451
PERF_7	0.362	0.158	0.382	0.184	**0.711**	0.41	0.465
PEU_1	0.277	0.359	0.302	**0.766**	0.282	0.389	0.423
PEU_2	0.235	0.314	0.417	**0.703**	0.308	0.337	0.447
PEU_6	0.299	0.326	0.329	**0.772**	0.215	0.407	0.346
SMA1	0.437	0.259	0.425	0.441	0.571	**0.713**	0.463
SMA12	0.44	0.212	0.442	0.366	0.443	**0.685**	0.474
SMA15	0.453	0.384	0.479	0.403	0.421	**0.692**	0.452
SMA17	0.379	0.284	0.386	0.312	0.352	**0.704**	0.384
SMA18	0.372	0.257	0.368	0.351	0.415	**0.707**	0.36
SMA19	0.323	0.281	0.37	0.301	0.38	**0.685**	0.334
SMA2	0.437	0.196	0.444	0.285	0.485	**0.729**	0.405

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SMA3	0.448	0.3	0.411	0.388	0.484	**0.71**	0.433
SMA4	0.445	0.263	0.449	0.408	0.508	**0.749**	0.51
SMA5	0.361	0.307	0.391	0.39	0.413	**0.703**	0.409
SMA6	0.397	0.178	0.376	0.309	0.479	**0.723**	0.334
SMA7	0.458	0.229	0.46	0.322	0.405	**0.712**	0.378
SMA9	0.402	0.175	0.395	0.358	0.484	**0.691**	0.406
STRA.SD_1	0.449	0.236	0.469	0.379	0.412	0.425	**0.73**
STRA.SD_2	0.46	0.33	0.497	0.459	0.418	0.392	**0.65**
STRA.SP_1	0.374	0.269	0.373	0.401	0.464	0.403	**0.749**
STRA.SP_2	0.307	0.22	0.388	0.35	0.406	0.341	**0.643**
STRA.SP_3	0.426	0.267	0.502	0.374	0.52	0.471	**0.731**
STRA.SP_4	0.5	0.245	0.455	0.321	0.502	0.476	**0.77**
STRA.SP_5	0.356	0.256	0.476	0.428	0.43	0.403	**0.727**

Source: Field Data (2022)

Notes: AP = Accountants' Participation, PEC = Perceived Economic Crisis, MO = Market Orientation, PEU= Perceived Environmental Uncertainty, STRA = Strategy, SMA =Strategic Management Accounting Usage, PERF= Performance

4.8 Structural Model Assessment

The evaluation of the structural model was deemed necessary after affirming the reliability and validity of the outer model. The structural model ideally depicts the theoretical and conceptual underpinning of the investigation. As a result, how well the data collected establishes or predicts the framework or assumptions is one of the criteria used to evaluate the structural model. It also inculcates that assessing the predictive capabilities and associations between the model's constructs are both necessary for structural model evaluation.

4.8.1 Collinearity Assessment

Multicollinearity was tested before the study's hypotheses were put to the test by determining the Variance Inflation Factor (VIF) for every one of the constructs in the model (Henseler & Ringle, 2009). The permissible threshold values for the VIF have also been the subject of several discussions. Whereas other research (Diamantopoulos & Siguaw, 2006; Hair et al., 2011) advise that VIF values should be less than 5 to be devoid of collinearity problem, Hair et al. (1995) proposed that a VIF value less than 10 demonstrates the non-existence of the

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multicollinearity problem. Hair et al. (2019) and Becker et al. (2015) advanced that, ideally, VIF scores should be situated around 3 or below this value. The VIF value, as shown in Table 4.11, is within the suggested thresholds, with a lower bound of 1.333 and an upper bound of 2.114, which also met the recent criterion as suggested by Hair et al. (2019) and Becker et al. (2015).

Table 4.11: Variance Inflation Factors (VIF) of study constructs

Constructs	VIF
Accountants Participation	1.724
Perceived Economic Crisis	1.333
MO	2.04
PEU	1.588
Strategy	2.114

Source: Field Data (2022)

4.8.2 Coefficient of determination (R^2)

The Coefficient of Determination popularly regarded as R^2 is the proportion of variance that can be accounted for in the dependent variable (endogenous variable) by the independent variables. Due to the predictive nature of the PLS-SEM approach, a high R^2 value reveals the predictive accuracy held by the predictors present in the estimated model, which this approach heavily dwells on. Typically, the anticipated R^2 value often falls within the scope of 0 to 1. For instance, Chin (1998) argues that a PLS path model's R^2 can be either substantial (0.67), moderate (0.33), or weak (0.19) depending on the amount of variability in the dependent variable explained by the exogenous constructs. However, other SEM literature proposes a rule of thumb indicating that R^2 "values of 0.75, 0.5, and 0.25, might be regarded as substantial, moderate, and weak respectively", (Hair et al., 2019; Henseler et al., 2009; Sarstedt et al., 2017). In this study, R^2 is presented together with the findings.

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4.8.4 Predictive relevance (Q^2)

The predictive relevance of the model is the next assessment of the structural model, which measures the strength, reliability and magnitude of the path model. Hair et al. (2014) and Sarstedt et al. (2017) offer threshold values of 0.02, 0.15, and 0.35 (small, medium, and big, respectively), but Chin (1998) and Hair et al. (2019) argue that the value of the Q^2 should be greater than zero to forecast the predictive relevance of the endogenous concept. Accordingly, since the study is underpinned by reflective measures, Stone-Geisser's Q^2 was employed to assess the model (Geisser, 1974; Stone, 1974; 1977). The findings revealed that the Q^2 values were greater than zero (as shown in Table 4.12), which purports that the endogenous constructs in the study model possess an acceptable level of predictive relevance.

Table 4.12: Blindfolding

Construct	Q^2 (=1-SSE/SSO)
SMA Usage	0.242
Performance	0.262

Source: Field Data (2022)

4.8.5 Assessment of Model Fit

The concept of model fit is seen as crucial for studies employing SEM (Kline, 2011). Similarly, some scholars have advanced the relevance of model fit under studies employing SEM (Schuberth et al., 2022; Henseler et al., 2016). Studies conducted by Nguyen (2018) and Li, Anaba, Ma and Li (2021) have likewise used this approach to assess their model structure under contingency fit associations. Accordingly, the current study employed the approach implored by Henseler et al. (2016) and Hu and Bentler (1999). They stipulated that using the Standardized Root Mean Square Residual (SRMR) criterion to assess model fit means, the SRMR value should be less than 0.10 or 0.08 (Henseler et al., 2016). The findings from Table 4.13 highlight that the model is fit for the associations emphasised by the models under

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investigation. The finding demonstrates that all the models were fit since the SRMR values attained for all the models were below the threshold of 0.08 as stipulated by Henseler et al. (2016).

Table 4.13: Model fit assessment

		SRMR	d_ULS	d_G	Chi-Square	NFI
Model 1	Direct impact of SMA Usage on firm performance	0.061	2.321	0.847	1022.067	0.779
Model 2	Moderating effect of PEU on the impact of SMA Usage on firm performance	0.062	2.827	1.047	1264.19	0.746
Model 3	Moderating effect of perceived economic crisis on the impact of SMA Usage on firm performance	0.061	3.471	1.338	1560.472	0.733

Source: Field Data (2022)

4.8.6 Path diagram

The path diagrams (Figure 4.1, Figure 4.2, and Figure 4.3) were employed as a reference in analysing the proposed hypotheses and objectives of the current study in Smart PLS 3.0. The path diagrams indicate the linkages between key study constructs taking into consideration the conceptual framework of the current study. Based on the tenet of contingency, the study evaluates the direct associations between SMA Usage and firm performance (as shown in Figure 4.1). Also, Figure 4.2 and Figure 4.3 present the moderating role of perceived economic crisis and perceived environmental uncertainty on the relationship between SMA Usage and firm performance, respectively.

4.9 Hypothesis Testing

This section presents a discussion of the findings attained from the data gathered in the quest to evaluate the proposed hypotheses relying on the path diagram shown in Figure 4.1 to Figure 4.3 and the results summary displayed in Table 4.14 to Table 4.16.

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The findings displayed in Table 4.14 showed that SMA Usage had a positive significant relationship with firm performance ($t = 5.868$, $p = 0.000 < 0.01$). Similarly, accountants' participation ($t = 2.411$, $p = 0.016 < 0.5$) and strategy ($t = 4.218$, $p = 0.000 < 0.01$) recorded a positive significant relationship with firm performance whereas market orientation attained a positive insignificant association with firm performance ($t = 0.054$, $p = 0.957 > 0.10$).

4.9.1 The relationship between SMA Usage and firm performance

The findings of this study showed that SMA Usage has a positive significant relationship with firm performance ($\beta = 0.347$, $t = 5.868$, and p-value $= 0.000 < 0.01$ as shown in Table 4.14). This suggests that the more firms adopt modern innovative management accounting tools (more precisely, SMA techniques), the more firms' strategic decisions and control activities will be enhanced as a result of acquiring relevant information. Thus, SMA plays a pivotal role in enhancing the long-term planning and control activities of the firm. The evidence attained suggests that the explored firms give credence to a variety of information sources -internal, external and future-oriented information - to support their strategic initiatives (Turner et al., 2017). SMA provides diverse practices that equip firms to gain a comprehensive perspective of their operations, which extends beyond the traditional approach to MA (Cadez & Guilding, 2008). Moreover, with the primary focus of SMA on obtaining, analysing, and interpreting varied data, it enables organisations to evaluate a wide range of elements in their decision-making processes (Cadez & Guilding, 2008). This, in turn, supports the development of more agile and responsive strategies capable of adapting to changing market conditions and developing opportunities, resulting in improved performance (Ojra et al., 2021; Nik Abdullah et al., 2022; Ma et al., 2022). Further, the argument here is that the adoption and implementation of SMA techniques provide management with better information to underpin their competitive strategies and promote the effectiveness of their decisions as compared to rivals, thereby enhancing organisational efficiency and sustained outcomes (Rashid et al., 2021; Nik Abdullah

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et al., 2022). Empirically, this finding is in line with prior literature (Cadez & Guilding, 2008; Kalkhouran et al., 2017; Ojra et al., 2021; Nuhu et al., 2017; Oboh & Ajibolade, 2017; Turner et al., 2017). In the same vein, the results corroborate with the management accounting literature, which asserts that firms will likely perform better if they successfully adapt their MAS to their organisational and environmental situations (Chenhall, 2003; Cadez & Guilding, 2008; Hadid & Al-Sayed, 2021; Otley, 2016).

Figure 4.1: Graphical output on the direct effect of SMA Usage on firm performance

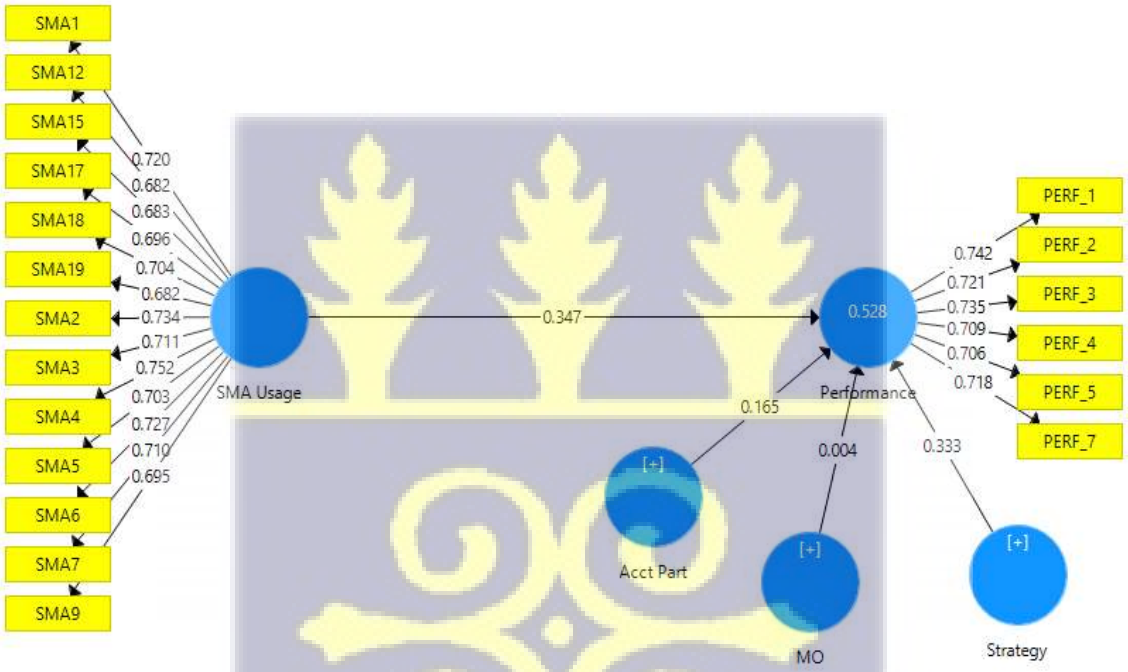

Table 4.14: Structural path coefficients on the impact of SMA on firm performance

	Coefficient	T Statistics	Hypothesis
SMA Usage_ -> Performance	0.347	5.868***	Supported
Control variables			
Acct Part -> Performance	0.165	2.411**	Supported
MO -> Performance	0.004	0.054	Not supported
Strategy -> Performance	0.333	4.218***	Supported

Note: ***p<0.01; **p<0.05; *p<0.10
Source: Field Data (2022)

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4.10 Moderation Analysis

Furthermore, the study examined the moderating role of perceived environmental uncertainty and perceived economic crisis on the relationship between SMA Usage and firm performance.

To begin with the perceived economic crisis, before the inclusion of the interacting variable (ECP*SMA Usage), the R^2 was 0.533 (as shown in the Appendix). However, when the interacting variable was included the R^2 moved to 0.540. This indicates that the inclusion of the interaction term accounts for 0.007 of the variability in the dependent variable (performance); and evaluating the interaction term critically, the results showed a negative and significant moderating effect of perceived economic crisis on the relationship between SMA Usage and firm performance (β = -0.073, t = 1.711, and p-value = 0.087 < 0.10, as shown in Table 4.15).

Moreover, the study assessed whether perceived environmental uncertainty moderates the impact of SMA Usage on firm performance. Before the interaction variable (PEU*SMA Usage) was included in the structural model, the R^2 was 0.532 (as shown in the Appendix). On the other hand, upon including the interaction term the R^2 increased to 0.539 (see Figure 4.4) highlighting an increase of 0.7% in the variability explained by the exogenous constructs in the model (interaction term inclusive). As shown in Table 4.16, the findings revealed a negative and significant moderating effect of PEU on the relationship between SMA Usage and firm performance (β = -0.079, t = 1.904, and p-value = 0.057 < 0.10, as shown in Table 4.16).

Surprisingly, findings in Table 4.15 and Table 4.16 revealed unique findings. The findings showed that perceived economic crisis has a negative significant association with firm performance. Similarly, the Ghana Statistical Service in collaboration with the UNDP and the World Bank produced similar results (as shown in Figure 2.3). Based on their survey conducted, they demonstrated that the firm's sales decreased significantly more precisely, the

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average decrease in the surveyed firm's sales was 60.6% which corresponds to about 115.2 million Ghana Cedis (Ghana Statistical Service, 2020). On the contrary, PEU has a negative insignificant relation with firm performance This finding reinforces the assertions put forward by Pavlatos and Kostakis (2018a), where they found that there is no significant relationship between perceived economic crisis (PEC) and PEU denoting that these uncertainties are distinct and must be examined separately. Hence, future studies can probe further into these concepts to provide a better understanding although these concepts are unique uncertainties that hold the potential to affect entities.

4.10.1 The moderating role of economic crisis on the relationship between SMA Usage and firm performance

The findings showed that perceived economic crisis (PEC) significantly moderates the relationship between SMA Usage and firm performance. It indicates that as PEC gets intensified or gets severe, the impact of SMA Usage on performance is weakened. Thus, the relationship between SMA and performance is not constant, but it actually varies in response to PEC, instigating that, at a low level of perceived economic crisis, the influence of SMA Usage on firm performance is much stronger when compared to the high level of perceived economic crisis. The findings explain that, during periods of relative stability and reduced crisis intensity, strategic deployment of SMA techniques becomes a powerful driver of business performance, providing more significant favourable outcomes. Nonetheless, the complexities caused by the crisis have profound consequences for strategic management during economic downturns. It emphasises the significance of adaptive management practices that are responsive to the economic context. During times of crisis, when the economic environment is highly volatile and unpredictable, the role of SMA in directing and supporting business performance remains critical, but with potentially less immediate influence. As a result, effective strategic decision-makers must find a balance between short-term crisis management

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and long-term performance optimisation. While the influence of SMA may be reduced during severe crises, it remains a crucial tool for laying a foundation for post-crisis recovery and long-term sustainability.

Figure 4.2: Graphical output on the moderating role of economic crisis

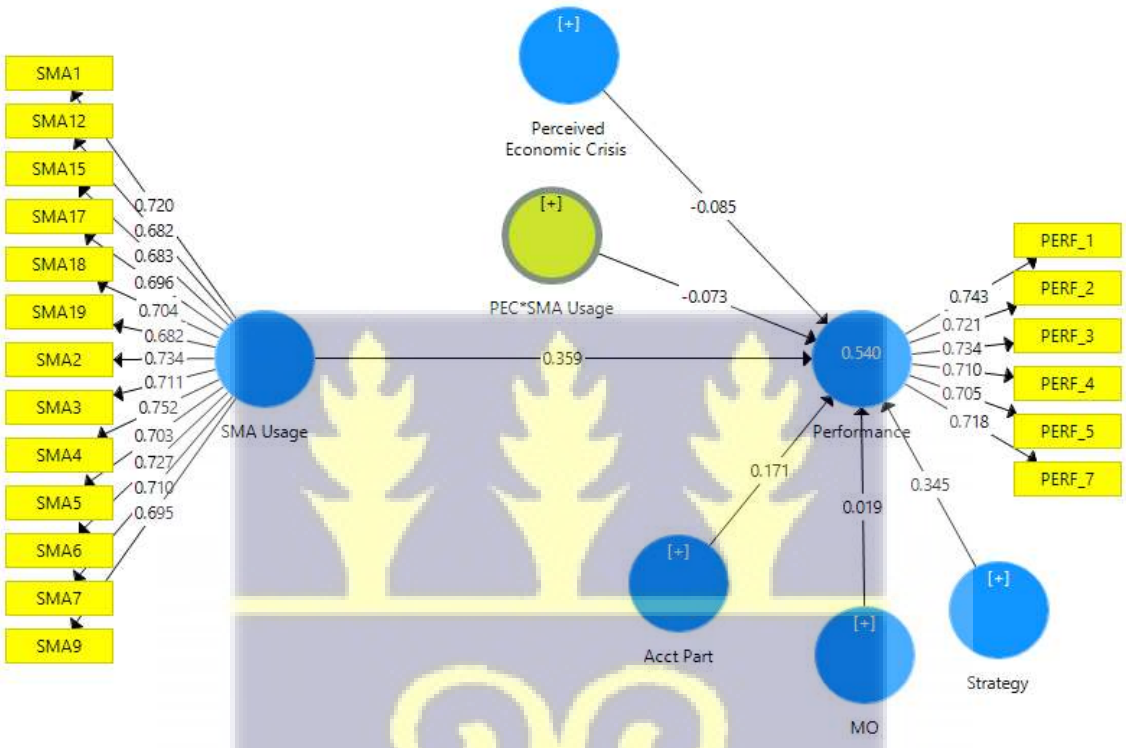

Table 4.15: Structural path coefficients on the moderating effect of economic crisis

	Coefficient	T Statistics	Hypothesis
SMA Usage_ -> Performance	0.359	5.930***	Supported
ECP*SMA Usage -> Performance	-0.073	1.711*	Supported
Perceived Economic Crisis -> Performance	-0.085	1.683*	Supported
Control variables			
Acct Part -> Performance	0.171	2.550**	Supported
MO -> Performance	0.019	0.256	Not supported
Strategy -> Performance	0.345	4.438***	Supported

Note: ***p<0.01; **p<0.05; *p<0.10
Source: Field Data (2022)

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Moreover, the argument here is that; SMA techniques equip entities and managers with resources, practices and analytical capabilities required to navigate challenges, devise agile strategies, and prepare for an eventual recovery when economic conditions improve. According to Becker et al. (2016), firms located in Austria, Germany, and Switzerland attached greater importance to MA initiatives such as the usage of budgeting during the incidence of the 2008 economic crisis; and Hoque et al. (2022) revealed that accounting tools such as budgets can be relied on during periods of crisis considering the crucial role budgeting plays in assisting operational and strategic choices, which supports the findings of this study. Likewise, Pavlatos and Kostasis (2018a), while examining the association between economic crisis and management accounting innovations, showed that as the economic crisis intensified firms adopted innovative tools to manage and control the predicament caused by the economic crisis.

4.10.2 The moderating role of environmental uncertainty on the relationship between SMA Usage and firm performance

The findings showed that PEU significantly moderates the relationship between SMA Usage and firm performance which denotes that as managers and owners perceive the environment to be highly uncertain, the relationship between SMA Usage and firm performance is weakened. Analysing the output indicates that SME owners and managers consider perceived environmental uncertainty as a crucial factor in the design of SMA systems to promote the efficiency of the firm. This explains that the design and use of SMA techniques to provide vital information varies according to the level managers perceive uncertainty (Afifa & Saleh, 2022). Accordingly, PEU challenges managers to allocate resources effectively by adapting to environmental changes and leveraging on systems for survival (Hoque, 2004; Afifa & Saleh, 2022).

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Figure 4.3: Graphical output on the moderating role of environmental uncertainty

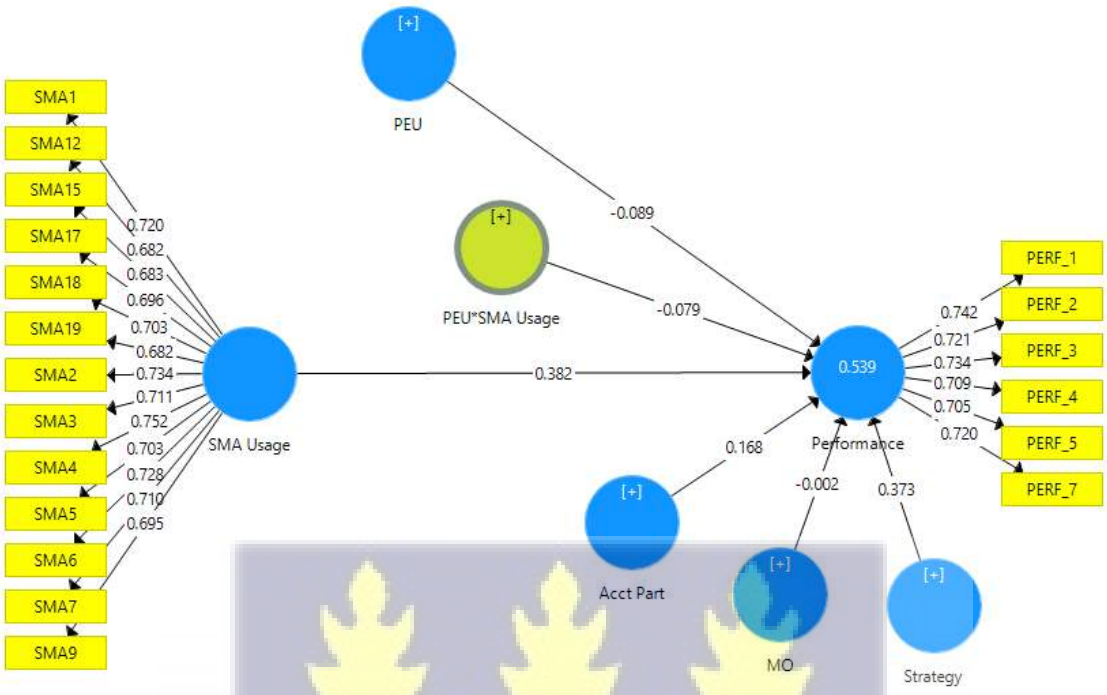

Table 4.16: Structural path coefficients on the moderating effect of PEU

	Coefficient	T-Statistics	Hypothesis
SMA Usage_ -> Performance	0.382	5.964***	Supported
PEU -> Performance	-0.089	1.553	Not supported
PEU*SMA Usage -> Performance	-0.079	1.904*	Supported
Control variables			
Acct Part -> Performance	0.168	2.423**	Supported
MO -> Performance	-0.002	0.021	Not supported
Strategy -> Performance	0.373	4.687***	Supported

Note: ***p<0.01; **p<0.05; *p<0.10
Source: Field Data (2022)

Moreover, in an effort to survive in the dynamic business environment caused by intense competition, political, and technological changes will cause managers and owners to fall on the extensive use of SMA techniques (Cescon et al., 2019; Oyewo, 2022); implying, that SME

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owners and managers who perceive the environment as uncertain will leverage on aligning their SMA techniques with the environment to survive competition (Afifa & Saleh, 2022; Cescon et al., 2019; Oyewo, 2022). This is because managers will attempt to reduce and mitigate the risks and costs emanating from the uncertainties. A study by Afifa and Saleh (2021), provides support that adopting and implementing sophisticated accounting systems aids companies in improving information quality and control levels, as well as decreasing risks. Furthermore, the findings resonate that as the external environment becomes more complex as a result of the increase in uncertainties manager's information needs will increase. Therefore, managers will attempt to satisfy their needs as well as their interests to support their decision-making processes, hence may adopt SMA techniques (that provide both financial and non-financial information) to support their operations. A similar opinion was held by Hoque (2004), Oyewo (2022), and Pavlatos (2015) while examining the role of environmental uncertainties. Consequently, this finding supports the contingency theory, which assumes that the effectiveness of the firm depends on the fit between an entity's context and its structure (Chenhall, 2003; Abdel-Kader & Luther, 2008; Afifa & Saleh, 2022).

4.11 Chapter Summary

This chapter examined the descriptive characteristics of study participants as well as the variables employed in this investigation. The study went further to assess the hypothesis teased out from the review of literature; and the findings provided empirical support that SMA Usage has a positive association with the performance of SMEs. Moreover, perceived environmental uncertainty and perceived economic crisis play a crucial role in the design of SMA techniques, which supports the contingency approach to management accounting. Thus, the performance of SMEs can be enhanced by aligning their organisational structures with their environment.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section provides a summary of the major findings of the study based on the research objectives. Further, based on the findings and the conclusions drawn, this section outlines the contribution of the study. The chapter concludes with the limitations of the study as well as suggestions for further study and practical recommendations. (Carlsson-Wall et al., 2015)

5.2 Research Summary

The study investigated the factors associated with the design of SMA Usage among SMEs situated in Ghana and the direct impact of SMA Usage on firm performance. Elaborately. it examines the effect of perceived environmental uncertainty and perceived economic crisis on the association between SMA Usage and firm performance. The study adopted the quantitative design; thus, the survey method was used in data collection and the analysis of data was carried out using the Partial Least Square Structural Equation Modelling (PLS-SEM) method to analyse the proposed associations.

5.3 Summary of Research Findings

5.3.1 SMA Usage and Firm Performance

Additionally, the outcome of the analysis demonstrates a positive significant association between SMA Usage and firm performance. This suggests that the adoption and usage of SMA techniques tend to help SME owners and managers gain relevant information of both financial and non-financial nature that are also long-term and market-oriented to support their decisions. Hence, relying on these techniques places them above their rivals, which further leads to improved performance and survival. This finding corroborates the hypothesis proposed by the

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study, and was supported by prior literature. Thus, the use of SMA techniques will drive firms' operations towards achieving their goals and ensuring their growth and sustainability.

5.3.2 SMA Usage, Economic crisis and firm performance

In addition, the contingency effect (moderating role) of perceived economic crisis on the impact of SMA Usage on firm performance was evident. The findings show that perceived economic crisis has a negative moderating effect on the impact of SMA Usage on firm performance. This implies that during periods of severe crises, like the global pandemic (COVID-19) and the global financial crisis of 2008, firms need to use SMA techniques to decrease the threats of the crisis to their firms' survival and sustainability.

5.3.3 SMA Usage, Environmental uncertainty and firm performance

The findings show that perceived environmental uncertainty has a negative moderating effect on the impact of SMA Usage on firm performance. This implies that during periods of high environmental uncertainty managers need to adopt and implement SMA techniques to help decrease their information needs in order to reduce the uncertainties that affect or may probably affect the firms' outcomes. Thus, the complexity caused by environmental uncertainties impedes managers' ability to make predictions, plan, and control operational activities, among others, hence the need to adopt and use SMA techniques to overcome these challenges in order to promote firm performance.

Consequently, the findings on the contingency effect show that the impact of SMA Usage on firm performance is negatively moderated by PEU and perceived economic crisis. This study provides empirical evidence that the performance and survival of an entity rely on the fit between context and structure (Otley, 2016). Hence, managers need to align their processes with the context in which they operate.

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5.4 Conclusions of the Study

The purpose of the study was to investigate factors influencing owners' and managers' (key decision makers) choices to use SMA techniques among SMEs in Ghana, a relatively unexplored context. From this study, it can be understood that the use of modern accounting practices like SMA (as a strategic tool) will serve as a competitive weapon in enhancing the firm's performance as well as providing assurance for the firm's sustainability. Underpinned by the contingency theory, the findings revealed that contextual factors predict SMA Usage among firms. Among the factors studied, the PEU and PEC have been identified as important contextual factors to predict the design of SMA Usage to enhance firm performance. Similarly, SMA Usage was identified as a crucial antecedent found to influence firm outcomes. The results support prior research on the contingency theory that there is no one accounting system that fits all, but that it is dependent on the structure and context of the organisation (Chenhall, 2003).

5.5 Contribution of the Study

The results attained contribute to literature (accounting research), to policy and to practice. First and foremost, to policy, the findings of the study provide more knowledge to the government and policy-making agencies in efforts to promote the growth and survival of SMEs in the country. Further, the findings provide insights to stakeholders such as the government on how to outline measures and policies to help SMEs handle and mitigate any form of uncertainty (crises such as COVID-19, and banking crisis, among others) that may emerge in the country. Consequently, based on the findings firms and managers can minimize the impact of uncertainty by aligning their organisation with their contexts, since the use of SMA critically assesses the market to design crucial actions and strategies that promote a firm's survival.

To practice, the findings from this study provide owners with guidance on how to promote firms' growth during periods of uncertainty by adopting strategic tools like SMA that align

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firms' processes with the environment. It also provides insights to professional bodies and managers of businesses on the relevance of using SMA techniques. Further, guided by the findings, professional bodies and agencies (such as CIMA) will know how and what form their program structure and activities will take in order to design programs to train upcoming professionals and managers. Further, with the quest to promote the reportage of their operations using IFRS for SMEs, accountants will play a major role in that regard. Hence, the findings will assist professional bodies in developing relevant modules to train and equip professionals on how to help SMEs meet these changing needs.

To literature, the study extends the literature on SMA Usage among SMEs in Ghana as well as the factors likely to influence managers' and owners' strategic choices to use SMA techniques. Moreover, the current study is among the few if not the first to have examined the relationship between perceived economic crisis on a management accounting variable as well as market orientation in management accounting literature. Likewise, the findings provide empirical evidence on how perceived economic crisis and perceived environmental uncertainty distinctively affect the relationship between SMA Usage and firm performance. Further, the findings attained provide some preliminary empirical evidence, which also adds to the literature on the contingency theory of MA. It is recommended that future studies should build on the model of this study to explore other determinants of SMA design.

Empirical evidence has shown that SMA Usage enhances a firm's outcomes and competitive advantage as confirmed by previous studies (Cadez & Guilding, 2008; Oyewo, 2022; Kalkhouran et al., 2017; Turner et al., 2017); however, the benefit expected to be gained from its usage or applicability is limited since most owners and managers of SMEs seldom use these tools. The results support claims made in earlier studies (Gyamfi, 2020; Jaradat et al., 2021) that although the usage rates among large firms are generally high, the extent of usage is still quite low for SMEs. Nonetheless, based on the findings and SMEs regarded as crucial

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engines of economic growth, the usage of SMA techniques will ensure their long-term survival and growth since SMA usage adds value by improving industry assessment and being able to sustain their competitive advantage and, hence, survival (Nartey & van der Poll, 2021).

5.6 Recommendations of the Study

This section offers valuable insights for practitioners and academics, based on the findings attained. Firstly, the adoption and usage of SMA play a crucial role in enhancing the performance of SMEs in Ghana. To promote the effectiveness and sustained outcomes of SMEs, owners and managers should integrate SMA techniques to support their decision-making processes to effectively carry out their administrative roles, including planning, directing, controlling, and decision-making, fostering productivity. Secondly, entrepreneurs should leverage on SMA techniques as planning and control measures to support their strategic initiatives, ensuring optimal and efficient allocation of scarce resources, which ultimately improves firm performance. Thirdly, to achieve optimal firm performance requires SME owners and managers to align their SMA practices with the operating environment. This alignment ensures the provision of high-quality financial and non-financial information that not only meets the needs of managers but also maximizes stakeholder interests. Fourthly, owners and managers of SMEs should embrace SMA as a strategic tool for industry and market assessment, risk mitigation, and effective response to emerging opportunities and threats emanating from either crisis or uncertainties. SMA can play a crucial role in promoting effective risk and crisis management practices to enable SMEs thrive in highly dynamic and uncertain environments.

In addition, the findings indicate that a positive impact on performance can be achieved by SME owners and managers integrating SMA practices that adapt to the environment. To remain competitive and sustainably survive in the rapidly changed business environment SMEs should embrace SMA systems and practices. These provide valuable strategies to help SMEs

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anticipate, adapt and effectively address foreseeable scenarios to ensure SME owners and managers are equipped with knowledge and information to implement relevant practices to achieve optimal outcomes. Furthermore, findings can serve as an instructive guide for policymakers, regulators, and professional groups, like CIMA, to advance the field of MA. Professional bodies and GEA should extend the insights on the relevance of using SMA to SME owners and managers to ensure firms sustainably survive and remain competitive in the current dynamic environment (e.g., COVID-19 pandemic). Lastly, this study is among the few to examine the role of PEU and economic crisis in the association between SMA and firm performance in one single study. It is recommended that future studies should extend on this knowledge of SMA by examining other potential factors that may potentially affect the design and implementation of SMA aside from the factors explored in this study.

5.7 Limitations and Directions for Future Studies

Notwithstanding the numerous contributions of this study to the extant literature, it was not exempted from limitations and hence the researcher acknowledges the following drawbacks and recommendations for further studies. Firstly, the data used for analysis was gathered from the study participants at a particular point in time however, their responses may likely change as time elapses. In that line of action, further studies could employ a longitudinal approach over a cross-sectional design in this area of study to help identify the determinants of SMA Usage over several periods. Furthermore, the study sample is mainly drawn from SMEs operating in the manufacturing and service sectors and that may have attributed to the finding that was attained. As a result, further studies could conduct similar studies inculcating other sectors such as the agro-processing sector, which could provide new insights to understand the usage of SMA techniques.

Secondly, this current study relied solely on a quantitative design approach, and as a result, could not gather in-depth knowledge as to why and how respondents furnished certain

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responses regarding the usage of SMA and other variables employed in this study. Hence, further studies can adopt a qualitative design approach (e.g., case studies, focus group discussions, in-depth interviews) to examine the SMA: more precisely, what accounting practices are firms using in this modern era of profuse uncertainty. In addition, the qualitative design will help provide an understanding of the degree of SMA adoption and usage among SMEs since some professionals and academicians have put forward that some SMEs are using these innovative management accounting practices (SMA) in their normal course of business however, they do not know what they are actually using. Hence, a qualitative design will succinctly help address these concerns.

Furthermore, aside from the factors examined in this study, there are equally other factors that could influence a firm's strategic choices to use SMA techniques that were not explored in this study. Further studies could examine, top management characteristics (e.g., level of experience, gender, age, education, tenure, personality, capabilities), culture (organisational culture and national culture), the intensity of competition, life cycle stage, historical performance (Pavlatos, 2015; Pavlatos & Kostakis, 2018b), quality of information system, and organisational structure (formalized and decentralized). Likewise, according to the contingency theory, no single study can examine all contingencies (Cadez & Guilding, 2008; Chenhall, 2003), hence the need to examine other predictors that were not explored in this study.

Lastly, recent developments have shown the importance of issues related to sustainability, the Fourth Industrial Revolution (IR 4.0) and global climate change (Cadez, Czerny, & Letmathe, 2019). On the contrary, its emphasis in the domains of SMA literature remains unknown. Notably, the increase in the usage of smart technologies has extended the impact of the Fourth Industrial Revolution among businesses over the past 30 years. This has ushered in exponential changes to the way we live, work and interact with each other (Abdullah et al., 2022; Nik

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Abdullah et al., 2022; Rashid et al., 2021). For instance, web-based marketing strategies, economic models, and related information technologies (such as cloud services, big data, blockchain, and AI) are quickly changing the digital economy and industry in which firms operate (Nik Abdullah et al., 2022; Rashid et al., 2021). For this reason, businesses have undergone significant changes; therefore, it will be particularly interesting to see how cutting-edge MAC approaches (such as innovative accounting practices like SMA) can be applied within the new business contexts (Moll & Yigitbasioglu, 2019; Rashid et al., 2021). In addition, there is still little research on the function of management accountants (or strategic management accountants) as business partners in the changed business model due to digital technologies such as the Internet of things in attempts to create and promote value (Hadid et al., 2021; Karlsson et al., 2019; Rashid et al., 2021). Moreover, this study entirely focused on SMEs, hence further studies could expand the literature on SMA by considering higher educational institutions (K. Hutaibat, 2019; K. Hutaibat & Alhatabat, 2020), and hospitality firms.

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APPENDIX 1: QUESTIONNAIRE

UG BS
University of Ghana Business School

Dear Sir/ Madam,

I am Stephen Kweku Ackon, a Master of Philosophy (MPhil) candidate at the University of Ghana Business School. I am undertaking a research study to investigate the impact of contextual factors on the design of Strategic Management Accounting (SMA) practices. More precisely, the effect of environmental uncertainty and economic crisis on the relationship between SMA and the performance of SMEs in Ghana, in partial fulfilment of an academic degree. I believe your sincere opinions and contributions can provide accurate and relevant information to aid me in achieving my goals. I humbly request your assistance by responding to this survey questionnaire. This study is solely conducted for academic purposes driven by ethical guidelines. Hence, your responses will be highly handled with the utmost confidentiality.

Thank you.

SECTION A: DEMOGRAPHIC DATA

Please indicate and or tick [√] the most appropriate response that applies to you.

1. How many years has your business been in operation?

   [ ] less than 5 years [ ] 6-10years [ ] 11-15years [ ]16-20years [ ] more than 20years

2. How many employees are in your firm? ……..

   [ ] less than 5 [ ] 6 – 29 [ ] 30 – 99 [ ] more than 100

3. What is the Legal status of your firm?

   [ ] Sole proprietorship [ ] Partnership [ ] Limited Liability Company [ ] Others, specify……

4. What sector is your firm affiliated with? [ ] Manufacturing [ ] Service [ ] Others……..
5. What is your gender? Male [ ] Female [ ]
6. What is your age? [ ] < 25 [ ] 26- 35 [ ] 36-45 [ ] 46-55 [ ] > 55
7. What is your job title in the firm? …….
8. How many years have you served the organization?
   [ ] less than 5years [ ] 5-10years [ ] 10-15years [ ] 15-20years [ ] more than 20years
9. What is your highest level of education?

   [ ] Secondary school [ ] Short-term vocational education [ ] Undergraduate
   [ ] Masters [ ] Doctoral level (PhD) [ ] Professional

10. Where is your Business located in Ghana? (Please state the city/town and the region)

……

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SECTION B: PERCEIVED ECONOMIC CRISIS

This section collects data on your perceived impact (effect and intensity) of COVID-19 (Coronavirus) and the banking crisis on your firm. On a scale of 1 (strongly disagree) and 7 (strongly agree), indicate your level of agreement with the statements.

COVID-19		1	2	3	4	5	6	7
PEC_COV1	Our firm's orders have been affected by COVID-19.							
PEC_COV2	Our firm's sales have been affected by COVID-19.							
PEC_COV3	Our firm's customers' ability to pay has been affected by COVID-19.							
PEC_COV4	Our firm's suppliers' ability and reliability to provide goods or services have been affected by COVID-19							
PEC_COV5	Our firm has been affected by the availability of capital and capital controls by COVID-19.							
PEC_COV6	Our company has been affected by crisis-induced currency fluctuation caused by COVID-19.							
PEC_COV7	Overall, COVID-19 has greatly affected our firm.							
BANKING CRISIS		1	2	3	4	5	6	7
PEC_BC1	Our firm's orders have been affected by the banking crisis.							
PEC_BC2	Our firm's sales have been affected by the banking crisis.							
PEC_BC3	Our firm's customers' ability to pay has been affected by the banking crisis.							
PEC_BC4	The banking crisis has affected our suppliers' ability and reliability to provide goods and services.							
PEC_BC5	The banking crisis has affected the availability of capital and capital controls in our firm.							
PEC_BC6	Our company has been affected by crisis-induced currency fluctuation caused by the banking crisis.							
PEC_BC7	In general, our firm has been greatly affected by the banking crisis.							

SECTION C: MARKET ORIENTATION

Market orientation is an initiative adopted to prioritize and satisfy customers' demands. This section collects data on your firm's approach to clients' demands. On a scale of 1 (strongly disagree) and 7 (strongly agree), kindly indicate your level of agreement with the statements below.

	MARKET ORIENTATION	1	2	3	4	5	6	7
MO1	Our firm has a strong understanding of our customers.							
MO2	The functional units in our company work closely together to create superior value for our customers.							
MO3	The management in our organization thinks in terms of serving the needs and wants of well-defined markets chosen for their long-term growth and profit potential for the company.							
MO4	Our company has a strong market orientation.							

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SECTION D: STRATEGY

A strategy is an approach that informs firms' actions towards the achievement of goals. On a scale of 1(strongly disagree) and 7 (strongly agree), kindly evaluate and indicate how each statement shows a true reflection of your entity's engagements (actions).

	Strategy	1	2	3	4	5	6	7
SP1	Our firm leads in innovations in its sector.							
SP2	Our firm operates in a broad product and service domain.							
SP3	Our firm responds rapidly to early signals of opportunities in the environment							
SP4	Our firm believes in being "first-in" in the industry in developing new products and services.							
SP5	Our firm's products and services domain are periodically redefined.							
SD1	Our firm tries to locate a safe niche in relatively stable products and service domains.							
SD2	Our firm tries to protect the environment domain in which it operates by stressing higher quality than its competitors.							
SD3	Our firm offers a narrower set of products and services than its competitors.							
SD4	Our firm tries to maintain a limited line of products and services.							
SD5	Our firm places less stress on examining changes in the industry that are not directly relevant to the firm.							

SECTION E: PERCEIVED ENVIRONMENTAL UNCERTAINTY

This section collects data on your perception of changes in the firms' operational environment. On a scale of 1 (strongly disagree) and 7(strongly agree), indicate your level of agreement with these statements.

	Perceived environmental uncertainty	1	2	3	4	5	6	7
PEU1	The industry price competition is extremely intense.							
PEU2	The external environment of my business unit is rapidly changing.							
PEU3	Many new products and/ or services in the industry have been marketed during the past 5 years.							
PEU4	It has become challenging to predict the market activities of our competitors during the past 5 years.							
PEU5	It has become challenging to predict the tastes and preferences of our customers during the past 5 years.							
PEU6	The legal, political and economic constraints influencing our business unit have increased greatly during the past 5 years.							

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SECTION F: ACCOUNTANTS' PARTICIPATION IN STRATEGIC DECISION-MAKING PROCESS

This section collects data on the participation of stakeholders in the decision-making process. On a scale of 1 (not at all) and 7 (fully involved), kindly indicate the level of involvement of accountants/ management accountants, in aspects of the strategic management process in your firm tailored towards strategic decision-making.

	Accountants' participation in strategic decision-making process	1	2	3	4	5	6	7
AP1	Identifying problems and proposing objectives							
AP2	Generating options							
AP3	Evaluating options							
AP4	Develop details about options.							
AP5	Take necessary actions to put changes in place							

SECTION G: ORGANISATIONAL PERFORMANCE

This section collects data on the perception of your company's performance relative to it competitors in the industry your firm operates. On a scale of 1 (far below average) and 7 (far above average), kindly assess and indicate the level of your firm's performance relative to your competitors in the industry.

	Performance	1	2	3	4	5	6	7
PERF1	Return on investment							
PERF2	Margin of sales							
PERF3	Capacity utilization							
PERF4	Customer satisfaction							
PERF5	Product quality							
PERF6	Development of new product							
PERF7	Growth in market share							

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SECTION H: Strategic Management Accounting Usage Intensity

This section collects data regarding the use of strategic-oriented techniques in aiding management decisions. On a scale of 1 (not at all/ never) and 7 (very great extent/all the time), indicate your level of use with the following strategic management accounting techniques. Below is an appendix defining the various techniques to help your assessment.

Strategic Management Accounting Usage Intensity		1	2	3	4	5	6	7
COSTING								
SMA1	Attribute costing							
SMA2	Life Cycle Costing							
SMA3	Quality costing							
SMA4	Target costing							
SMA5	Value chain costing							
SMA6	Activity-Based Costing							
SMA7	Activity-Based Management							
PLANNING, CONTROL, AND PERFORMANCE MEASURE								
SMA8	Benchmarking							
SMA9	Integrated Performance Measurement (Balance scorecard)							
SMA10	Environmental Management Accounting							
STRATEGIC DECISION MAKING								
SMA11	Strategic costing (Strategic Cost Management)							
SMA12	Strategic Pricing							
SMA13	Brand valuation							
COMPETITOR ACCOUNTING								
SMA14	Competitor cost assessment							
SMA15	Competitive position monitoring							
SMA16	Competitor performance appraisal							
CUSTOMER ACCOUNTING								
SMA17	Customer profitability analysis							
SMA18	Lifetime customer profitability analysis							
SMA19	Valuation of customers as assets							

Thanks very much for your co-operation and participation.

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APPENDIX 2: GLOSSARY OF TERMS

Activity-based costing

A two-stage procedure is used to assign overhead costs to products. In the first stage, significant activities are identified, and overhead costs are assigned to activity cost pools according to how the activities consume the resources. In the second stage, overhead costs are allocated from each product line in proportion to the amount of the cost driver consumed by the product line.

Activity-based management

The use of information provided by an activity-based cost (ABC) analysis to improve organisational profitability.

Attribute costing

The costing of specific product attributes that appeal to customers. Attributes that may be costed include operating performance variables, reliability, warranty arrangements, assurance of supply, and after-sales service.

Benchmarking

The comparison of internal processes to an ideal standard.

Brand valuation

The financial valuation of a brand through the assessment of brand strength factors such as; leadership, stability, market, internationality, trend, support, and protection combined with historical brand profits.

Competitor cost assessment

The provision of regularly scheduled updated estimates of a competitor's unit cost.

Competitive position monitoring

The analysis of competitor positions within the industry by assessing and monitoring trends in competitor sales, market share, volume, unit costs, and return on sales. This information can provide a basis for assessing a competitor's market strategy.

Competitor performance appraisal

The numerical analysis of a competitor's published statements as part of an assessment of a competitor's key sources of competitive advantage.

Customer profitability analysis

This involves calculating the profit earned from a specific customer. The profit calculation is based on costs and sales that can be traced to a particular customer. This technique is sometimes referred to as "customer account profitability".

Environmental Management Accounting

The practice of tracking, tracing, and treatment of costs, earnings, and savings incurred in relation to the company's environmental-related activities.

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Integrated performance measurement

A measurement system that focuses typically on acquiring performance knowledge based on customer requirements and may encompass non-financial measures. This measure involves departments monitoring those factors critical to securing customer satisfaction.

Life cycle costing

The appraisal of costs based on the length of stages of a product or services' life. These stages may include design, introduction, growth, maturity, decline and eventually abandonment.

Lifetime customer profitability analysis

This involves extending the time horizon for customer profitability analysis to include future years. The practice focuses on all anticipated future revenue streams and costs involved in servicing a particular customer.

Quality costing

Quality costs are costs associated with the creation, identification, repair and prevention of defects. These can be classified into three categories: prevention, appraisal, and internal and external failure costs. Cost of quality reports are produced for the purpose of directing management attention to prioritize quality problems.

Strategic costing (strategic cost management)

The use of cost data based on strategic and marketing information to develop and identify superior strategies that will produce a sustainable competitive advantage.

Strategic pricing

The analysis of strategic factors in the pricing decision process. These factors may include competitor price reaction, elasticity, market growth, economies of scale, and experience.

Target costing

A method used during product and process design that involves estimating a cost calculated by subtracting a desired profit margin from an estimated (or market-based) price to arrive at a desired production, engineering, or marketing cost. The product is then designed to meet that cost.

Valuation of customers as assets

The technique refers to the calculation of the value of customers to the company. For example, this could be undertaken by computing the present value of all future profit streams attributable to a particular customer.

Value chain costing

An activity-based approach where costs are allocated to activities required to design, procure, produce, market, distribute, and service a product or service.

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APPENDIX 3: STRUCTURAL MODEL BEFORE INTERACTION TERM INTRODUCED

This section presents the structural models before the interaction terms for the study variable (perceived economic crisis and perceived environmental uncertainty).