UNIVERSITY OF CAPE COAST

MANAGEMENT CONTROL SYSTEMS AND PERFORMANCE OF STATE-OWNED ENTERPRISES IN GHANA

SULEMANA ZAKARIA

2021

UNIVERSITY OF CAPE COAST

MANAGEMENT CONTROL SYSTEMS AND PERFORMANCE OF STATE-OWNED ENTERPRISES IN GHANA

BY

SULEMANA ZAKARIA

A thesis submitted to the Department of Accounting of the School of Business, College of Humanities and Legal Studies, the University of Cape Coast in partial fulfilment of the requirements for the award of Doctor of Philosophy degree in Business Administration (Accounting Option)

JUNE 2021

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature……Date……

Name: ……

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature……Date……

Name: ……

Co-Supervisor's Signature……Date……

Name: ……

ABSTRACT

The influence of the Management Control Systems (MCS) on firms' strategies and performance has been explored in many studies in the past decades. Drawing on Simon's levers of control framework, this study adds a perspective to the existing literature by examining the relationships between four MCS uses and the performance of State-Owned Enterprises (SOEs) in Ghana and exploring how knowledge management and psychological empowerment mediate these relationships. Data was gathered through a survey of middle-level managers in a cross-section of SOEs in Ghana. The data were analysed using the partial least squares (PLS) approach to structural equation modelling. The results indicate that the diagnostic uses of budgets have direct and significant positive relationships with SOEs performance. In contrast, beliefs, boundary systems and the interactive uses of budgets had no direct effect on performance. The result showed that all the four uses of MCS have a direct and significant influence on knowledge management and employee psychological empowerment. In addition, the results revealed that the diagnostic uses of a budget are partially mediated by knowledge management and employee psychological empowerment; the rest of MCS (beliefs systems, boundary systems, and the interactive uses of budgets) are fully mediated by knowledge management psychological empowerment. The study contributes to the literature in many ways. First, the study provides insights into the importance of the diagnostic uses of control, revealing that SOEs place a relatively high premium on the traditional monitoring and evaluation role of management controls. Second, the findings extend the MCS literature by providing evidence that suggests that intermediate variables mediate the impact of MCS on performance. Third, the study contributes to knowledge about the importance of MCS in knowledge practices and empowering employees and managers, highlighting the need to examine the different shades of autonomy that generate psychological empowerment and determine each control's specific roles for the various forms of autonomy. Fifth, it provides evidence of the complementary roles of the four MCS, especially in relation to knowledge management and psychological empowerment in hybrid organisations such as SOEs.

ACKNOWLEDGEMENTS

I am indebted to my supervisors, particularly the principal supervisor, Dr Mohammed Zangina Ishaq, who provided support and guidance. Furthermore, I express my sincere gratitude to Professor Mahama Habib and Professor Tahiru Azaaviela Liedong for their unrelenting and continuous reviews of my work, advice, patience and constant encouragement. I also appreciate Kojo Kakra Twum for his guidance and practical introductory support in using the Smart PLS.

My appreciation also goes to Professor Siaw Frimpong, Mr and Mrs Professor Rosemond Boohene, Dr Beatrix Allah-Mensah for their support and encouragement. Last is my gratitude to Alhaji Seidu Goodman and my family for their unwavering patience and support.

DEDICATION

To Professor Mahama Habib and Alhaji Seidu Yakubu Goodman

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

CMB	-	Common Method Bias
DC	-	Dynamic Capability
DCT	-	Dynamic Capabilities Theory
KM	-	Knowledge Management
LoC	-	Levers of Control Framework
MCS	-	Management Control System
NPM	-	New Public Management
PE	-	Psychological Empowerment
PLS	-	Partial Least Squares
SEM	-	Structural Equation Model
SOE	-	State Owned Enterprises

CHAPTER ONE

INTRODUCTION

The State-Owned Enterprise (SOEs) sector in Ghana remains immensely important to the Ghanaian economy. It controls over 50 per cent of government assets. It shows a strong presence in the energy, transportation, and financial sectors even after decades of privatisation through structural reforms (The Ministry of Finance, 2017). However, The World Bank (2015) corporate governance framework on the SOE sector reports underperformance due to conflicting objectives, weak lines of accountability and inadequate monitoring and performance management systems. While it is evident that the public sector underwent several reforms with the primary goal to dilute state control, instil better performance management and budgeting systems based on private sector management ethos (Hyndman & Lesley, 2016), very little information is known about the effects of management controls systems on the performance of SOEs.

Background of the Study

The performance of public sector organisations has attracted attention for some time now. At the global level, the rise of neoliberal ideals and the transformation of economies have led to questions about the productivity of public corporations (Bruton, Peng, Ahlstron, Stan & Xu, 2015; Evans, Richmond & Shields, 2005). Consequently, public sector organisations have witnessed transformations from Keynesian welfare-based institutions to neoliberal market-driven organisations. The market orientation of neoliberalism led to public sector reforms premised on private sector management techniques and practices. Associated with these reforms are changes in how we think about the public sector responsibility, a shift in thought from institutions focused on

maximising social welfare to institutions that must enhance enterprise performance and profitability.

The reforms have led to the transformation of state institutions into corporations that participate in the open market (Bleiklie 2018; Bleiklie, Hostaker & Vabo, 2000). These reforms have become known as the new public management (Plimmer, Bryson, Donnelly, Wilson, Ryan & Blumenfeld, 2017; Bryson, Crosby & Blooberg, 2014). New public management (NPM) reform introduced in the 1980s has become one of the most acknowledged reforms to improve public sector organisations (Pollite & Dan, 2013). Hyndman and Lapsley (2016) and van Helden (2005) suggest that the vision of NPM involves reorganising the public sector to focus attention on performance by adopting strategies that may include automation, the introduction of market competitiveness and private sector management practices. Notably, adopting the private sector-led management practices are intended to lead to improved approaches to control cost, enhanced managerial autonomy and discretionary powers, outcome-focused performance measurement and evaluation regimes, and economic efficiency (White & Bryson, 2018; Ayee, 2013; van Helden, 2005).

Contemporaneously, with the transformation in developed countries, African countries grappled with rising government expenditure, dwindling internally generated revenue, and reduced external budget support funding that threatened their social development and economic growth (Ayee, 2013). Influenced by the Bretton Wood institutions, African countries embraced public sector reforms underpinned by NPM as a potential panacea for socioeconomic development (Hyndman & Lapsley, 2016). To control government expenditure

and facilitate the efficient use of resources, implementing NPM became necessary. It was contemplated that NPM would lead to improved efficiency, service performance, and economic development (Hoper, Tsamenyi, Uddin, & Wickramasinghe, 2009; Hyndman & Lapsley, 2016). Consequently, the focus of the reforms was to encourage the judicious use of resources, break down bureaucratic systems and structures, increase organisational effectiveness to the public's satisfaction, and improve overall performance (White & Bryson, 2018).

Accordingly, these international institutions collaborated with many developing countries like Ghana to transform public sector organisations into more effective and efficient institutions (Ayee, 2013; County & Study, 2012). Consistent with the ideals of NPM, Ghana began to carry out reforms in many public institutions through what became known as the Economic Recovery Programme (ERP). The first phase of the ERP involved the transfer of several public institutions into private hands directly or through a public-private partnership, outsourcing, and corporatisation into State-Owned Enterprises (SOEs), mainly in the energy, water, mining, oil, and manufacturing sectors (County & Study, 2012; Ayee, 2010).

The second phase involved dismantling more prominent and significant public organisations into smaller institutions (County & Study, 2012; Ayee, 2010). The state continued with granting expanded managerial autonomy to allow for managerial discretions and prompt responses to the urgent internal and external business threats and opportunities these organisations face (Verhoest, 2017; Ayee, 2013). Consequently, this expanded managerial autonomy led to new organisational strategies and management practices necessitating the use of systems and techniques such as novel budgetary control models, performance

measurement and management processes, and incentive compensations systems in line with private sector management ethos (Verhoest, 2017; Hyndman & Lapsley, 2016; County & Study, 2012). By these practices, management can fashion out business models that are more private sector-led (Hammerschmid, Van de Walle & Andrews, 2018).

Collectively, some of these systems and techniques are known as management control systems (MCS). Management control systems provide behavioural and technical mechanisms to shape and implement organisational strategies (Merchant & Van der Stede, 2007; Simon, 1995). Some prior studies have sought to examine the situated functionality of these systems and practices and to examine the effects they generate. However, despite these, prior studies have primarily focused on expenditure driven public sector organisations of government ministries, departments, and local assemblies (Simons, Cruz, & Marques 2012; Van de Walle 2013; Bel, Fageda, & Mur 2014).

State-Owned Enterprises are unique in many ways. Unlike the other expenditure driven sub-sectors that operate as cost centres, SOEs have a profit orientation (Bowry & Smark, 2017). More so, while the expenditure-driven sub-sector operations are not based on market principles and virtually operate as monopolies, SOEs are modelled based on market-driven principles and are subject to competitive forces on the corporate landscape (Robinson, 2015). These imply that the strategic orientation of and the mode of MCS uses in SOEs will differ markedly from those of other public sector organisations, thereby limiting the extent to which we can generalise findings of those public sector institutions to the SOEs context. This makes the current study timely as it seeks to examine MCS uses in SOEs contexts.

However, while an appropriately designed MCS such as budgetary control and performance measurement is essential, its effectiveness depends on how it is assimilated into organisational routines to create organisational capabilities. A crucial organisational capability that may explain how MCS affects performance is knowledge management processes that engender learning. Research in MCS suggests that improved employee learning improves performance (Bedford 2015). Furthermore, organisations that embrace knowledge management practices and knowledge management orientation are more innovative and achieve higher performance than those identified as market-oriented (Simon, 2000; Darroch, 2001). The belief is that knowledge often contains new and creative ideas necessary for improving organisational routines and processes that are key to performance improvement (Nonaka & Takeuchi, 1995). Given the significance of knowledge management, it is crucial to examine whether and how it is implicated in the relationship between MCS and SOE performance.

Another crucial capability in organisational performance is managers' perception of their extent of empowerment. Known as psychological empowerment, this perception is premised on how individuals believe they can exercise choice or autonomy in determining their work processes and outcomes. Psychological empowerment is an essential determinant of performance (Velthouse,1990), while management control systems are generally considered instrumental in empowering individuals at work. As a result, it is crucial to investigate how MCS influences employees' perception of psychological empowerment and how that translates into SOEs' performance.

The study draws on Simon's levers of control framework to examine the relationships between MCS uses (beliefs systems, boundary systems, diagnostic control systems and Interactive control systems) and SOE performance and investigate how knowledge management processes and psychological empowerment mediate the relationship. As there are many MCS (budgeting, budgetary control systems, performance management and measurement systems), the study focuses on budgets as the reference point. As a significant element of MCS, budgets are widely used by private and governmental organizations management as a planning tool, coordination and communicating strategies, and controlling and monitoring strategy progress (Kamau, Rotich & Ayango, 2017). In conjunction with the controlling roles, the budget is also used as a reward system to get employees' commitment to achieving organizational objectives. Earlier research work on budgeting assumes budget serves more in controlling employees' behaviour in what is referred to by Simon as a diagnostic role. However, budgets are also used as a tool for dialoguing, debating existing assumptions, knowledge sharing and learning and providing opportunities for employee creativity and empowerment, especially when it is more participatory (Chong and Mahama, 2013).

Statement of the Problem

The public sector in Ghana has been subjected to several reforms over the years with the primary aim to improve its efficiency and effectiveness (Ayee, 2013). These reforms introduced private sector management practices into public sector management (Pollitt & Dan, 2013). However, while extensive research has been undertaken to understand the impact of private sector management practices on public sector productivity, less is known about the

extent to which these management practices have been implemented to influence SOEs performance. The point is that prior studies have primarily been focused on expenditure driven public sector organisations like government ministries, departments, and local assemblies (Essuman-Mensah, 2019; Bel, Fageda, & Mur, 2014). However, SOEs are not expenditure driven public organisations but are modelled to operate like any other private organisation to generate revenue and profit. Secondly, SOEs are seen as hybrid organisations which gives them unique features different from the institution's that are purely privates and those that are purely public (Bruton, Peng, Ahlstrom, Stan, & Xu, 2015). These suggest that the strategic direction of and the approach of MCS uses in SOEs will differ significantly from those of other public sector organisations, thereby limiting the degree to which the research findings of those public sector institutions can be simplified to SOEs context. This makes the current study timely as it seeks to examine MCS uses in SOEs contexts.

Although some studies have acknowledged improvement in public organisation performance following the adoption of private sector management practices (Joustie, 2015; Zhu & Peyrache,2017), other studies reveal otherwise (Hyndman & Lapsley, 2016; Nguyen et al., 2017). For instance, Ayee (2013) explain that though some progress has been made concerning the public sector reforms, their limited success is attributable to the limitations and constraints of the theoretical approaches. As a result, public sector reforms' outcomes have generally been poor compared to the amount of resources spent designing and implementing (Essuman-Mensah, 2019). Robinson (2015) point out that, although the imports of reforms, particularly the NPM, were extensively providing a solid and steady program for reform, its results showed mixed

record of success and failure primarily due to failure in integrating reform undertakings into broader policy and organizational levels and weak internal control systems. The inconsistency among these research findings requires additional studies. This study fills this gap by examining the uses of MCS and their effects on SOEs' performance within the public sector space in Ghana.

Similarly, despite the overwhelming reforms since the 1980s to improve public sector performance in Ghana, SOEs' performance in Ghana is still inadequate to the extent that some are faced with massive debt overhang and liquidity challenges resulting in poor performance. (Ministry of Finance, Ghana 2017). As a result, some reforms have been implemented to revamp the performance of some SOEs. These poor performances may be due to the focus on structural reforms to the exclusion of reforms at the organisational level where private sector practices transform public sector organisations strategies into desired outcomes (Sa'id, 2010). Yet, existing management research suggests that it is mainly through organisational level practices that strategic reforms become implemented and generate the desired effects (Simons, 2000). Management control systems are part of the managerial interventions at the organisational level that focus on shaping and implementing strategies (Simons, 1994; 2000). The current study focuses on the uses of MCS in SOEs. It will thus provide insights into how these controls are implicated in giving operational forms to the reforms and their consequences.

Despite the growing call for researchers to examine all four levers of control together, most prior studies have drawn primarily on the interactive and diagnostic uses to exclude beliefs and boundary systems. Few studies have examined all four levers together in their research, exploring whether they are

used as complements, substitutes or supplements (Spekle et al., 2017; Martyn et al., 2016; Mundy, 2010; Widener, 2007). Therefore, the current study strives to contribute to the present literature by applying the entire framework to test its impact on Ghana's SOE performance. Studying the complete levers is crucial because of their interrelationship in creating dynamic tension for better results (Spekle et al., 2017; Henri, 2006; Simons, 1995). Thus, studying part of the levers may overlook the associations among the four diverse levels and may result in an inadequate, inappropriate understanding of the impacts of the levers of control (Spekle et al., 2017; Henri, 2006). Therefore, the study brings fresh perspectives by examining the effects of all the levers of control on SOEs performance.

Finally, there has been a limited examination of the effects of intermediate variables (mediators) on the relationships between MCS and organisational outcomes (Spekle, Elten & Widener, 2017). Further research is needed to unearth the mechanisms through which the outcomes of MCS are realised, especially concerning organisational performance (Ahmed, 2016). This study introduces knowledge management processes (KM) and employee psychological empowerment (PE) as mediating variables between MCS and performance. Although some empirical studies have demonstrated a positive impact of the mediating roles of employee empowerment in creativity and knowledge management on firm performance (Iqbal, Latif, Mariam, Farooq & Hussain, 2019; Spekle et al., 2017), these studies have been limited mainly to the private sector.

Consequently, in seeking to contribute to the literature and practice, this study examines the relationship between the uses of the four levers of MCS and

organisational performance. It explores the extent to which these relationships are mediated by knowledge management and psychological empowerment.

Purpose of the Study

The focus of the study is to examine the influence of MCS on the performance of SOEs in Ghana.

Objectives of the Study

The specific objectives are to;

1. explore the relationship between MCS uses and organisational performance of SOEs in Ghana.
2. examine MCS uses and their influence on knowledge management of SOEs in Ghana.
3. investigate the relationship between MCS uses and employees' psychological empowerment of SOEs in Ghana.
4. explore the relationship between knowledge management and organisational performance of SOEs in Ghana.
5. examine the relationship between psychological empowerment and organisational performance of SOEs in Ghana.
6. assess the mediating roles of knowledge management and employees' psychological empowerment in the relationship between MCS and organisational performance of SOEs in Ghana.

Summary of Research Hypotheses

In achieving the objectives of this study, the following hypotheses are addressed in the study in line with the empirical review in Chapter Two.

1. **H1a-** Beliefs systems are significantly and positively associated with the performance of SOEs in Ghana.

2. **H1b-** Boundary systems are significantly and positively associated with the performance of SOEs in Ghana.
3. **H1c-** Diagnostic uses of budgets are significantly and positively associated with the performance of SOEs in Ghana.
4. **H1d-** Interactive uses of budgets are significantly and positively associated with the performance of SOEs.
5. **H2a**- Beliefs systems are significantly and positively associated with knowledge management processes in SOEs in Ghana.
6. **H2b-** Boundary systems are significantly and positively associated with knowledge management processes in SOEs in Ghana.
7. **H2c**- Diagnostic uses of budgets are significantly and positively associated with knowledge management processes in SOEs in Ghana.
8. **H2d**- Interactive uses of budgets are significantly and positively associated with knowledge management processes in SOEs in Ghana.
9. **H3a**- Beliefs systems are significantly and positively associated with employee psychological empowerment in SOEs in Ghana.
10. **H3b**- Boundary systems are significantly and positively associated with employee psychological empowerment in SOEs in Ghana.
11. **H3c-** Diagnostic uses of budgets are significantly and positively associated with employee psychological empowerment in SOEs in Ghana.
12. **H3d-** Interactive uses of budgets are significantly and positively associated with employee psychological empowerment in SOEs in Ghana.

13. **H4**-Knowledge management processes are significantly and positively associated with the performance of SOEs in Ghana.
14. **H5**- Employee psychological empowerment is significantly and positively associated with the performance of SOEs in Ghana.
15. **H6a-** Knowledge management processes significantly mediate the relationship between beliefs systems and the performance of SOEs in Ghana.
16. **H6b-** Knowledge management processes significantly mediate the relationship between boundary systems and the performance of SOEs in Ghana.
17. **H6c-** Knowledge management processes significantly mediate the relationship between diagnostic uses of budget and performance of SOEs in Ghana.
18. **H6d-** Knowledge management processes significantly mediate the relationship between interactive uses of budget and performance of SOEs in Ghana.
19. **H7a-** Employee psychological empowerment significantly mediates the relationship between beliefs systems and the performance of SOEs in Ghana.
20. **H7b-** Employee psychological empowerment significantly mediates the relationship between boundary systems and the performance of SOEs in Ghana.
21. **H7c-** Employee psychological empowerment significantly mediates the relationship between diagnostic uses of budget and performance of SOEs in Ghana.

22. **H7d-** Employee psychological empowerment significantly mediates the relationship between interactive uses of budget and performance of SOEs in Ghana.

Significance of the Study

The current study is significant in many ways. First, management control systems are an essential element of the organisational environment through which management can access and apply relevant information for organisational efficiency. The research aims to add to the literature and practice on how managers use MCS to support performance. Findings derived will help improve management practices for better organisational management.

Second, SOE is crucial to nations' social development and economic prosperity, especially in developing countries. Notably, SOEs contribute substantially to the global GDP and economic activities. For instance, the World Bank (2018) reports that SOEs contributes about 10% to global GDP and constitute more than 10 per cent of the world's leading organisations. In 2006 SOEs contributed between 5 to 20 per cent of global employment investment. In the Middle East and Africa, SOEs contributes 20–50 per cent of economic activities and is estimated to account for about 30 per cent of total employment (OECD 2012a). Given their impact, the performance of SOEs is, therefore, significant to warrant research attention.

Third, SOEs are central in delivering critical public services to citizens in crucial sectors such as the energy, finance, and natural resources sectors. In Ghana, for instance, SOEs are reported to hold over 50% of government assets (The Ministry of Finance, 2017), implying that they are significant players in the public sector space and the country as a whole. With the crucial importance

of SOEs, it is vital to examine whether and how management control systems (MCS) generally associated with private sector management are implicated in the direction of these enterprises. Therefore, the current research on SOE performance in Ghana is timely.

Organisation of study

This study is divided into six chapters. The first chapter focuses on the general background to the study, statement of the research problem, objectives, summary of hypotheses, and the study's significance. Chapter Two provides a detailed and systematic review of the literature relevant to the research problem. It reviews the literature on public sector organisations, highlighting theoretical and conceptual issues relevant to the current study

Chapter Three presents the theoretical framework of this study. It discusses how dynamic capabilities can provide a framework to investigate MCS uses at the organisational level and its relevance to the current research. This is then followed by the development of the hypotheses underlying this study. Chapter Four discusses the research paradigm adopted for the study and the different epistemological and ontological assumptions related to this paradigm. After that, the chapter presents the research design, data collection method, and the statistical approach used to analyse data. Chapter Five discusses the results of the study. It begins by looking at the reliability and consistency of the measurement model, the predictive accuracy and relevance of the structural model, and the results of hypotheses tests. It then discusses the findings. Finally, Chapter Six presents the conclusions, contributions and practical implications of the study. It also discusses the limitations of the research and identifies avenues for future research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The chapter focuses on reviewing prior studies relevant to the research problem under investigation in this thesis. It begins with a literature review on public sector organisations, highlighting what it is conceptually, and discusses prior studies in this area. It further distinguishes the performance orientation of state-owned enterprises (SOEs) from those of other public institutions. Subsequently, it proposes that SOEs performance should be measured consistently with those of their private-sector counterparts.

The review then examines the concept of organisational performance generally and relates it precisely to the SOEs context. Here, the conceptualisation of organisational performance is discussed alongside prior studies on how performance is achieved. The review then focuses on the MCS literature relevant to the study. It indicates various conceptualisation and dimensions, highlighting its potential to influence organisational processes and outcomes and critically discussing the extant literature's findings on MCS uses on organisational performance. Next, the review examines two intermediate organisational variables (psychological empowerment and knowledge management processes).

Public Sector Organisations

Debates on governance identify the significance of institutional efficiencies in steering public businesses and managing shared resources. Arguably, most national developments are championed directly by the public sector and are liable for guaranteeing quality services to society. Also, it creates

an environment where the private sector, civil society, and other non-governmental organisations flourish and become a more effective partners in developmental issues. Notably, the sector provides infrastructure, education, health and welfare services comprising social security, which is crucial for economic growth (Ayee, 2013; World Bank, 2017).

According to Fourie and Poggenpoel (2017), the public sector must provide public goods and services to improve the public's overall well-being, the private sector, and other public sector agencies. For these reasons, the sector has a broader range of interest groups, with each group having its specific interests, occasioning a multiplicity of expectations of the public sector (Ayee, 2013). In addressing all interest groups' expectations, the public sector needs to be efficient and effective to measure its performance. Therefore, the public sector's significance in delivering public goods and services in responding sufficiently to its stakeholders' desires within limited budget allocation is acknowledged (Verger & Curran, 2014).

Notably, the public sector plays a pivotal role in enabling direct and indirect contributions to developed countries and developing countries like Ghana through economic and business development. Moreover, the contributions ultimately may lead to other constructive effects, such as expanded private sector, employment generation, and enhanced service delivery to meet societal expectations (Hyndman & Lapsley 2016). Therefore, demands for the public sector's better performance are significant concerns to many (Thornhill, 2006; Ayee, 2013; Hyndman & Lapsley, 2016). This makes public sector managers face momentous challenges as they react to continuous pressure to provide more and improve customers' services with reduced budget

allocation. As a result, they look for new ways of delivering better services to customers.

However, defining specific public service performance has proved difficult and thought-provoking as performance measures are restricted to the doctrines of measuring input and outputs relationship. Therefore, measuring performance is a far more challenging mission. For instance, it is challenging to have equivalent costs or benefits for most public services than the private sector. Moreover, because of significantly different services and goods produced, it is challenging to have one standard measure of performance.

Notwithstanding these challenges, public sector organisations have become pressured to improve their performance in responding to citizens and legislative demands, especially in emerging economies like Ghana (PwC 2007, 2015). These demands require the public sector bodies to look for new options in enhancing the sector performance. This may include adopting new reforms such as the New Public Management (NPM) to address the sector difficulties (Bhuiyan & Amagoh, 2011; Verbeeten & Spekle, 2015). In particular, reforms can be used purposefully to deal with citizens' evolving economic environment and expectations. Thus new reforms are required in this direction (Merriam & Webster, 2014; Gabel-Shemueli & Capell, 2013).

New Public Management Reforms

Reforms undertaken in the name of the NPM have spurred public sector organisations to meaningfully re-examine their strategies and objectives to transform themselves into more productive, cost-efficient and accountable institutions (Verger & Curran, 2014; World Bank, 2017). Significant in this

process is the greater dependence on decentralised management, emphasising performance and sourcing funding from markets to provide public services.

While these reforms may vary in scope, depth, and level of success, the aim of NPM remained the same, institutional reforms to promote greater governmental effectiveness and efficiency (Ayee, 2013; Verger & Curran, 2014). With a particular emphasis on reducing bureaucracies into fewer and fragmented agencies, inspiring competitiveness among various public sector agencies, motivating competition among public sector organisations and private organisations using monetary incentives (Gautam, 2018, Pollitt, 2016; Hyndman & Lesley, 2016). The fundamental assumption is that management with commercial-oriented minds will lead the sector to greater cost-efficiency and effective services delivery. In addition, NPM treats citizens as customers rather than citizens and emphasises institutional productivity (Osei, 2015).

An example is Ghana, which embraced a Structural Adjustment Programme (SAP) in 1983 as part of the Economic Recovery Programme under cover of NPM (Steel & Webster 1992). A significant aspect of the reforms involved the corporatisation and privatisation of some public sector organisations to motivate management and employees for better performance (Bewayo 2009). To shift the public sector towards the culture of managing for results, private sector management practices such as budgetary controls, performance measures, and performance-based incentives have been introduced into the public sector (Afonso, Schuknecht & Tanzi 2010; Onrubia-Fernandez & Fuentes, 2017; White & Bryson, 2018).

Although traditional forms and systems of control, monitoring and evaluation in public sector organisations have always existed, NPM is a wide

range of new management control systems (MCS). These systems include analysis of customer feedback, quality standards, performance benchmarking, improving internal controls, regulation, performance reviews, markets, qualitative information, and other decision support tools, including personal and social controls to support the attainment of corporate objectives. Thus, a significant aspect of NPM is its emphasis on using a broad set of MCS (Jansen, 2004). Therefore, by implementing NPM, public sector organisations can better allocate their resources to improve operational performance and customer satisfaction for improved competitiveness (Haynes 2015; Robinson, 2015).

Fourie and Poggenpoel (2017) argue that despite the abundant resources and efforts given to NPM reforms, public sector performance improvement has remained sluggish and inadequate. The inadequacy of performance is primarily attributed to lack of managerial autonomy, non-conformity with reforms outlined, political interference, unaccountable public sector managers and employees, and the overall decline in good corporate governance (World Bank 2017). Thus, public sector reform outcomes have been steadily unsatisfactory (McCourt, 2013; Overman & van Thiel, 2016; Faurie & Poggenpoel, 2017).

Public sector management is inclined to highlight the government's interests in power, which is the central point of public sector resources, even when its interests conflict with stakeholders' needs (Fourie & Poggenpoel,2017). Besides governmental interference and lack of accountability, incompetent public servants, lousy procurement practices, and a lack of good leadership are among the reasons for the public sector organisation's poor performance (Janse van Rensburg, 2014). Besides, bad financial management, including inadequate budgeting practices, weak control

systems, nepotism and corruption, contributes to the public sector's abysmal performance (Fourie & Poggenpoel,2017). Francis (2013) stresses that lousy management is primarily caused by incompetent management and inadequate corporate governance structures in public sector organisations, hence the poor performance.

Performance of State Owned-Enterprises

There is a diversity of definitions ascribed to the concept of performance due to its subjective nature. Performance is a set of behaviours relevant to the organisation's goals and the level of attaining an organisation's tasks to achieve the goals, mission, and vision (Jenatabadi, 2015). Whooley (1996) asserts that performance is a constructed social reality and cannot be objectively measured. It is people's minds and may include components, products, consequences, and impact associated with efficiency and cost-effectiveness. Bernadin (1995) views performance as the total effects of assigned tasks, which provides a clear association with an organisation’s objective, customer satisfaction, and economic contributions.

Therefore, performance is achieved when all efforts are dedicated to attaining a set of objectives and how well organisations successfully perform with respect to achieving their intended goals and objectives. Achieving intended goals and objectives may involve analysing actual organisational results against its predetermined purposes and goals. Such purposes may include improving shareholder value, financial performance and market performance in customer satisfaction and organisational efficiency. Arguably, various authors' conceptualisation of performance has one thing in common; organisations work to attain their targets. Thus, organisational objectives and

purpose are what define its performance. The environment might impact performance, the goals to be achieved, the organisation's relevant characteristics, and, more importantly, how it is measured.

Therefore, a singular view of performance may be difficult to establish since it is dependent on several criteria of performance measures (Lebas & Euske, 2007; Jenatabadi, 2015). As a result, Lebas and Euske (2007) argue that performance is contextually a dependent concept and can be linked to several dynamics: organisational competitiveness, growth, and long-term survival. These indicators might be complementary; in some cases, they may even be conflicting. Recent empirical studies on performance embrace three specific organisational outcomes; financial performance, market-based performance and operational performance.

Traditionally, financial performance is described as economic indicators presumed to mirror the accomplishment of an organisation's commercial goals (Antony & Bhattachatyya, 2010). It has broadly been used to measure smaller and bigger organisational performance, recognising the inherent advantages of financial measures. The belief is that measures of financial performance are more objective and valuable. As such, financial performance is a widely used tool for measuring organisational performance. Financial performance is assessed using accounting-based and market-based measures. Accounting-based measures focus on the firm's historical performance and tend to be retrospective in nature. As a result, these measures are extracted from organisations' financial statements. They include return on investment such as assets, equity, and sales. Profitability measures such as net profit margin, gross profit margin, and change in net income are all accounting measures (Antony &

Bhattachatyya, 2010). Thus, financial measures are commonly stated as ratios or percentages and values for ease of comparison among organisations.

The market-based performance focuses on the stock market valuation, which is future-oriented and provides a perspective view of the performance of organisations. They are assumed to reflect investors' future organisational potential assessments and focus on their long-term value. Market-based measures are used to assess an organisation's performance, including earnings per share, price-to-earnings ratio, share price changes, dividend yield, and market-to-book ratio. Under the postulation that investors assess organisations properly, these market-based measures are said to be practical pointers of organisational performance for listed organisations.

The operational performance focuses on evaluating the efficiency with which resources are used to undertake critical activities. They cover three levels of operations: internal process, service, and customer performance. The internal process measures focus on the efficiency of converting inputs into outputs, including assessing resource consumption, product quality, processing time, employee empowerment, and employee satisfaction. At the service level, operational measures focus on the efficiency and speed of meeting internal and external customers' needs. These are generally reflected in service quality (ServeQual) standards of performance. Finally, the customer dimension of operational performance focuses mainly on product/service market performance. These include customer satisfaction, new product introduction, market share, and marketing effectiveness (Carton & Hofer, 2006; Hofer & Sandberg, 1987).

Financial and operational performance are said to be inextricably linked. Operational measure leads to financial measures, and hence improving operational measures have lag effects on financial performance. Consequently, contemporary approaches use business or balanced scorecard models involving operational and financial criteria linked to customer value, product/service innovation and internal business improvement to financial measures (Kaplan & Norton, 1992). These models support linking data from numerous financial and operational performance measures to determine whether there has been improvement in one performance sector or this has been attained at the cost of the alternative.

Despite the enormous benefits of the market and operational performance indicators, Otley (2003) argued that traditional financial performance measures, such as return on assets or net profit, are preferred by many managers when evaluating performance. However, accounting performance systems ordinarily focus on short-range performance against accounting standards. Importantly, these accounting standards cannot report progress associated with competitors, customer expectations, and other non-financial schemes that may be crucial in attaining profitability, long-term competitive strength, and strategic goals. For instance, increasing organisational capabilities may be relevant to strategic long term organisational goals but may hamper short-term accounting performance in profitability and liquidity. Consequently, complementing accounting-based measures with market-based and operational measures of performance is advocated as that provide incentives for managers to address long-term strategy in addition to short-term profitability. Therefore, Kaplan (1984) suggested that effective organisational

performance could be measured using a multidimensional view of performance that includes accounting-based, market-based and operational measures. For these reasons, the current study adopts a multidimensional performance measurement.

Objective versus Subjective Measures of Performance

An area of debate in the literature is assessing performance by employing objective or subject measures (Vij and Bedi, 2012). Objective measures are absolute and derived directly from official records such as financial statement data, capital market data, and organisations' operating documents (Wall et al., 2004). On the other hand, subjective measures are relative and mainly based on perceptions (Wall et al., 2004). Some researchers argue that objective measure is more representative of organisational performance as social desirability is not easily biased. On the other hand, subjective measures have been claimed to be subject to bias as management may be unenthusiastic to draw attention to their weaknesses. As a result, subjective measures may overstate the performance of their organisations (Razouk, 2011).

Notwithstanding this, subjective measures have been widely used in measuring organisational performance amongst scholars (Camps & Luna-Arocas, 2012). It is partly because of the incapability to gather objective data in selected organisations due, in part, to the confidentiality of data or the lack of comparable objective performance indicators (Hult et al., 2008). More so, existing research provides empirical evidence to suggest that subjective and objective performance measures are considerably connected and that the use of

any one of these approaches to measure performance will be valid (Mahama & Cheng 2013; Tzafrir, 2005; Abernethy & Stoelwinder 1991).

For instance, McClure (2010) examined subjective and objective performance measures within a data set and found that these two measures were correlated. He also acknowledged the non-presence of common method bias in the subjective measures. Dess and Robinson (1984) examined subjective and objective measures by studying the association between objective and subjective return on investment, increased sales, and overall performance measures. They establish that management's assessment of subjective and objective measures was positively correlated. Therefore, researchers may consider using subjective perceived measures instances when objective measures are not obtainable. Homburg, Artz and Wieseke (2012) likewise corroborated the existing studies examining the relationships between a subjective and objective measure of return on sales on a sub-sample of organisations. They observed a strong positive association between the two methods of measuring performance. Many other studies have found significant associations among subjective and objective organisational performance measures (Richard et al., 2009; Arya and Lin, 2007).

Following the above, the current study will rely on subjective performance measures since it will be difficult to obtain objective performance data from SOEs management. Besides, it is generally tricky to gather reported (objective) performance measures in surveys due to the confidentiality associated with such measurements. This explains why survey researchers measure performance using subjective measures (Chong & Mahama, 2013; Dess & Robinson, 1984).

A Conceptualisation of Management Control Systems (MCS)

Management control systems (MCS) fundamentally bring into line employee actions with organisational goals and objectives. Their traditional focus has been in search for and to ensure that management has the most relevant information systems and opportunities to shape their behaviour and that of employees for purposeful goal achievement. The concept of MCS originated from Anthony's (1965) work, which he developed from a framework consisting of analytical tools, budgeting and budgeting control systems, reporting of managerial and financial performance, and performance measurement plans (Chenhall, 2003). The framework aimed to establish a connection between strategic planning, operational planning and information from accounting records.

Thus, Anthony's (1965) conceptualisation divides organisational planning and control systems into three components: strategic planning practices, MCS, and operational control systems. These three practices are connected to the organisational structure and hierarchy. Accordingly, strategic planning activities comprise establishing long-term business objectives and goals and establishing long-term plans and guidelines for the entire organisation. Therefore, it does involve determining the organisational objectives and its changes and policies of organisations' acquisition, use, and disposal of these resources. However, operational control guarantees that explicit tasks are carried out to facilitate effectiveness and efficiency in using resources (Anthony 1965) and apply a process that links strategic planning and operational control, consisting of reconcilable sub-systems.

Consequently, Anthony (1965) described MCS as how management uses organisational resources effectively to attain the organisation's objectives. Otley et al. (1995) argue that Anthony's work was meant to address the organisation's concerns with systems that would help secure management interest in organisational goals. Therefore, management control systems are essential to organisational goal congruence as it aligns managers' interests with those of the organisation (Birnberg, 2011; Hewege, 2012).

However, Anthony's (1965) analysis of MCS was described as restrictive, limited to an accounting-based framework containing little or no discussion of behavioural and social psychological issues (Otley et al. 1995; Merchant & Otley 2007). The argument is that the traditional view of a formal control model is cybernetic. It involves comparing predetermined standards (budget or standards) with actual output as a basis for performance evaluation and corrective action (Wouters &Wilderom, 2008). They argue further that separating MCS from strategic and operational control is problematic. Otley (1995) further explains that organisations have changed in many ways in that modern organisations no longer conform to designs implicit in the traditional management control literature. Specifically, organisations are increasingly becoming smaller or bigger, specialised, less categorised, and more dependent on each other than the theory acknowledges (Otley 1995). Besides, the business setting has become more uncertain. It requires flexibility, and adaptation of management control in its traditional form, as it is too fixated on efficiency and cannot meet the contemporary period's tests. It is mainly tricky for managing unanticipated events in the control processes for an uncertain environment (Merchant and Otley, 2007; Simons, 1995; Otley, 1994).

To address the limitations associated with such a mechanical system, new approaches are advanced with greater attention to organisational and motivational factors to influence behaviour in place of rational and passive behaviour of employees. Thus, accepting that the critical features for the design and implementation of control systems are not restricted exclusively to formal ones. Accordingly, there are attempts to enhance the traditional cybernetic perspective, emphasising analysing psychosocial and cultural factors crucial in organisations' control. For instance, Anthony and Govindarajan (1998) suggested that MCS must take a more flexible standpoint embracing multiple controls mechanisms like strategic controls, performance measurement, learning and development processes that work together for organisational performance (Otley, 1980).

Thus, the delineation of MCS has progressed from a focus on formal, internally focused and quantifiable financial information to comprise outside information involving customers and expansion of markets, competitor's strategies, production practices, management decision support tools, and social controls. Given this, Bisbe and Otley (2004) labelled MCS as a set of organisational processes used to influence goal achievement. Merchant and Otley (2006) explained that the primary purpose of MCS is to provide information relevant for management planning, decision, and evaluation.

Mainly, the information gathered through MCS is used in influencing and facilitating management decisions in many ways (Henri, 2006; Simon, 1995). In the decision-facilitating role, formal MCS provides timely and essential information to organisational members before making decisions to enable management to make informed decisions. This is because it reduces pre-

decision uncertainty and improves options (Grafton et al., 2010). In a decision-influencing role, MCS avails managers of the prospect to generate a motivational effect on employees who direct or change their behaviour (Grafton, Lillis, & Widener, 2010). The distinction between decision facilitating and influencing MCS roles will help mitigate conflicts of interest between the organisation members.

Although MCS has been characterised in many ways, its primary focus is to guarantee that management has the relevant information to shape employees' behaviour, organisational goals, and objectives. Goals are primarily achieved by planning, executing, evaluating, and incentivising managers to achieve targets through formal and informal control systems. Therefore, the combination of formal and informal control systems as a bundle presents a new way forward. The reason is that when MCS is viewed through a singular use of cybernetic systems, it will be difficult to control the relevant variables for an organisation to attain its objectives.

Formal and Informal Controls

Controls have been categorised in many ways. However, the most basic classification in use for decades has been either formal or informal. Formal controls are the transcribed processes and policies that direct behaviour toward organisations goal congruence and identify and discourage misconduct (Simon, 1995). Therefore, the formal system includes explicit tools like organisational objectives and goals, budgets, reward systems, performance management, and code of ethics. The fundamental motivation for proper controls is the agency relationship between management and employees, which demands a control framework for better results. Accordingly, employee behaviour is managed by

designing and implementing formal control systems involving rules, a chain of command, behavioural standards, and defined procedures (Carenys, 2010). Under this formal arrangement, organisational control is exercised through formal systems based on control by exception, clear objectives and goals.

On the contrary, informal control systems usually originate from employees and are more organic in influencing employee behaviours. They are designed unconsciously and governed by unwritten rules involving social and cultural controls like norms, emotions, values, beliefs, stories (Soldevila, 2000; Langfield-Smith, 1997). Although culture is difficult to define, it is expressed through collective identity, social relations and ideology (Alvesson, 2004). The point here is that organisational management or prominent individual or group of employees within the organisation communicate their values to influence employee behaviour for enhanced organisational performance. Thus, employees who fail to obey an organisation's unwritten rules and ideology will be sanctioned through employee isolation from vital decision-making processes and interactions (Schein 2010).

Tsamenyi et al. (2008), for instance, reported that managers employed cultural controls instead of formal controls (such as budgets) in an Indonesian family organisation. Efferin and Hopper (2007) stated that the Chinese vendors are inclined to direct employees' behaviour through personnel and behavioural controls. Some scholars have pointed out that an organisation's control systems will probably comprise a blend of different control types for MCS to be most effective. For that reason, formal and informal controls complement each other (Bedford &Malmi, 2010; Lukka, 2007). In effect, for formal control to be effective in influencing employee behaviour, there must be specific rules to

guide specific situations, unlike informal control systems, which do not require rules to be useful for the reason that workers will be inherently motivated and will instinctively know what is anticipated from them by their organisation. Therefore, informal control systems are an exciting alternative to formal control systems (Carenys,2010) and may impact MCS design choices.

Management Control Systems Design Choices

Following the recognition that controls fall into two main categories (formal and informal), there have been scholarly attempts at guiding managers in making choices concerning these controls. Research on how organisations make management control design choices have been influenced by the contingency theory of organisations. Scholars argue that organisational design choices' effectiveness depends on its adaptation to the organisation's features. These characteristics include technology, environment, age, and size (Berry et al. 1995; Ezzamel & Hart, 1987; Gordon & Miller 1975). Following this, researchers posit that no one common management control system is suitable for adoption by organisations. Instead, the choice of controls is conditional on the organisation's context (Amat, 1991).

In their theory of organisation control, Ouchi and McGuire (1975) provided one of the earliest control classification schemes that focus on how managers control choices. Specifically, Ouchi (1977) developed a framework within which controls are classified into three modes: behavioural, output, and ritual control. The behavioural and output controls constitute formal control, while the ritual control is an informal control type. He argued that choosing one specific control type is dependent on output measurability and task programmability. Ouchi posits that output controls will be used in a situation

where the task programmability is low, and output measurability is equally high. Where task programmability is high and low output measurability, then behavioural controls will be more suitable. In situations where both are high, managers may rely on either output or behaviour control. However, where both are low, it will be difficult to rely on output and behavioural controls; hence, managers will resort to ritual controls. In a subsequent development, Ouchi (1979; 1980) developed the framework further to comprise three control modes: market, bureaucratic and clan controls.

While Ouchi's theory of organisational control provided a normative model of rational control choices, the framework was not explicit on performance control choices' effects. However, it spurred management control scholars to embark on contingency type studies focusing on how managers make control choices. First, researchers have extended Ouchi's classification controls to include personnel controls, action controls, result controls, hard and soft controls, and bureaucratic and organic controls (Tessier & Otley 2012; Chenhall 2003; Burland,1990). Results control indirectly inspires employees to achieve measurable organisational outcomes for which a reward is attached. While actions control focuses on task performance, seeking to ensure that employees take the right actions, personnel controls support employee personal motivation by engaging in specific behaviours, allowing all to act in ways that align with corporate interest (Merchant & Van der Stede, 2012).

Second, MCS researchers have extended Ouchi's work to focus on the effect of control design choices on performance (for details, see Chenhall, 2003). They argue that control systems choices that fit (i.e., are appropriately aligned with) an organisation's contingency (contextual and structural) factors

will lead to better organisational performance than those not aligned with controls. This fit concept has extensively been explored in the accounting literature to predict firm performance (Ferreira & Otley 2012).

Ouchi's theory of organisational control and the MCS research it inspired have been criticised for being overly focused on the choice of individual controls. Instead, management control scholars argue that a combination of different controls is used in contemporary organisations (Malmi& Brown, 2008; Otley, 1980). Two streams of research have emerged about the nature and form of control combinations. One strand shows how controls are used as a package, and the other aspect discusses how controls combine to form a system (Grabner & Moers 2013; Malmi & Brown 2008).

Combining MCS into a package involves using a diverse management control set to achieve organisational objectives. These controls include reward and compensation, planning, cybernetic, cultural, and administrative controls (Malmi & Brown 2008).

According to Malmi and Brown (2008), planning control aims to direct employee behaviour. It is achieved by setting goals, objectives, establishing standards, and communication channels to promote organisational goal congruence across all functional areas. Thus, planning as formal control enables coordination of corporate objectives throughout the organisation to guarantee employees' alignment with its strategy.

Cybernetic controls are formal control systems that direct employee behaviour by setting goals, evaluating activities and allocating accountability for performance (Malmi & Brown, 2008). They are similar to Merchant (1985) result or output controls that focus on desired results and hold individual

employees or teams accountable for their outcome. Cybernetic controls can take various forms such as financial measures, budgeting, non-financial measures such as operational efficiency, or incorporating non-financial and financial, termed hybrid measures (Grabner & Moers 2013; Malmi & Brown, 2008).

Malmi and Brown (2008) point out that culture is used to standardise behaviours and hence work as a control. As such, they view symbol-based controls, clan and value-based controls systems as possible cultural controls. The argument is that; symbol-based controls are visual languages fashioned out to nature-culture of a particular type and may be explicit organisational designs of any form, including but not limited to building and dress code. A case in point is an organisation designing and enforcing corporate attires for their staff to be easily identified and instil a culture of professionalism among its employees. However, value controls are a set of explicit organisational characterisations formally communicated to employees by management to emphasise fundamental values, purpose, and direction employees must follow. For example, vision and mission statements, credos, and purpose statements express values (Simons, 1994).

Clan control is a sub-culture whose member's values and skills are imparted through socialisation. Instances can be accountants, nurses, medical doctors, lawyers. Clan controls are achieved by creating values and beliefs through rituals and ceremonies (Malmi & Brown, 2008). Administrative controls refer to designing and sustaining an organisation by emphasising policies, rules, governance structure, and standard operating procedures that direct employee behaviours (Malmi & Brown 2008). These controls determine responsibilities and the conduct of processes of employees.

Finally, reward and compensation controls motivate employees to accomplish organisational goals by assigning rewards to achieve set objectives and goals. Malmi and Brown (2008) emphasise that not all compensation and rewards controls are associated with cybernetic controls. Organisations may also have to consider different reward and compensation schemes to achieve intended purposes.

Proponents of a systems approach to control argue that the concept of control as a package only explains how different controls are combined but does not explore the interdependencies among these controls and whether the choice of controls into the mix considers possible independencies (Grabner and Moers 2013). Grabner and Moers (2013) argue for the relationships among combined control elements to be examined, emphasising the extent to which collective controls are internally consistent.

Drawing on a systems approach to contingency theory, they argue that MCS form a system only when design choices and practices are mutually dependent. These interdependencies are considered in the design (Grabner & Moers 2013). Control interdependencies must be understood regarding how using a particular control type influences the usefulness of other controls. That is, the choice of control depends on the choice of different types of control. Two forms of such interdependencies are said to exist, acting as complements or substitutes (Grabner & Moers 2013). Controls act as complements when the value of using one type of control enhances the benefits of using other types of control. Conversely, they act as substitutes when utilising a kind of control that decreases another kind of control (Grabner and Moers 2013).

As indicated earlier, the research on control systems design choices is premised on the contingency theory. However, contingency theory is not without limitations. According to Amat (1992), the specified relationship between the variables in contingency theory is not amply clear, and the recommendations proposed by the idea have obtained insufficient empirical verification. Also, control systems are more comprehensive in perspective and much more complex and multidimensional than what the theory indicates. More so, contingency-based studies mechanically portray management, aligning organisational design to the prescriptions of contingent factors, ignoring the discretionary powers of management, and how their values, beliefs and philosophies may impact choices (Hopper & Powell; 1985).

Furthermore, the contingency theory was developed to believe it could bring a universal solution to control systems' choices to suit different organisational conditions and circumstances. However, studies have instead come out with a significant list of organisations' contingencies, and many of them suggest conflicting findings (Otley, 2016). For instance, Reid and Smith (2000) studied the contingency theory application in management accounting systems design and used in smaller organisations and concluded that market dynamics explain the complexities of the management accounting system, works methods and sub-unit interdependences. The study also revealed that technology uncertainty was not crucial in determining organisational form. This finding is inconsistent with previous research findings on large technologically intensive organisations. As a result of these conflicting findings, some scholars suggest that research should go beyond control systems design and examine how these controls are used. (Simon, 1994).

Management Control Systems Uses

Various MCS uses have been proposed and discussed in the literature. Most prominent are the decision influencing and facilitating roles of MCS (Grafton, Lillis & Widener, 2010), enabling and coercive uses of MCS (Radtke & Widener, 2016; Adler & Borys, 1996) and Simons' levers of control framework (Simon, 1994, 1995, 2000).

First, MCS facilitates collecting, processing and sharing information supporting management planning, controlling, and evaluating performance. Information generated serves two essential purposes: decision-facilitating and decision-influencing roles (Grafton, Lillis & Widener, 2010). In the decision-influencing position, the data generated by MCS is used for performance evaluation and motivational purposes. Thus, MCS in a decision-influencing role denotes management use of information to assess employee's performance. Graton et al. (2010) stress that by developing views about which performance measures will be used by management to evaluate performance, subordinates are inclined to make decisions that improve those measures.

In the case of MCS' decision-facilitating role, information is used for enhancing managerial decision making. Thus, the decision-facilitating position denotes the provision of relevant information to management to support quality decision-making to resolve uncertainties in decision-threatening problems (Grafton et al., 2010). Emmanuel and Otley (1985) explain that these two controls are used to capture the evaluation of actual results and formulate and use predictive information by management.

The concept of enabling and coercive control used in MCS originated from two types of bureaucracy; enabling and coercive, coined by Adler and

Borys (1996). They suggest that, in the concept of bureaucratic formalisation, formal control systems might have enabled features, especially when employees are granted expanded task and independence, or coercive features, especially when control systems are stiff, restrictive, and not interactive. When used in MCS, these features symbolise that enabling controls systems support employee integration and their actions in the organisation. Thus, promoting formalisation requires formal rules-based systems to facilitate the structuring, refining and steering of work procedures short of any hierarchical consequences (Beuren & Santos, 2014). They are procedures designed to provide support as an alternative to regulating employees' behaviours.

On the other hand, coercive formalisations are designed to control methods and procedures to compel employee compliance with established criteria. Besides, it also coerces managerial effort and constrains and punish rather than support cooperative behaviour (Beuren & Santos, 2014). Its control orientation is to institute control induce disciplined actions. Coercive control is strictly linked to the assurance of certainty and reducing opportunism in a relationship (Adler & Borys, 1996).

The enabling formalisation set structures and procedures to enthuse employees. Thus its control orientation involves actions of the empowered employee having collaborative consequences. For instance, enabling budgetary design and process provides the required structure and means for interactive discussions about choices and actions to inspire collaboration at many managerial ranks (Radtke & Widener, 2016). However, Hartmann and Maas (2011) submit that the budgetary procedure and process can also be coercive, significantly when it restricts management autonomy used to communicate to

employees how they should behave, communicate to management what they are permitted, and not permitted to accept. While these two control systems use (Enabling /Coercive and decision felicitating and influencing roles) are gaining traction, the current study draws on Simon's (1995, 2000) levers of control framework (LoC).

The LoC ensued from over ten years of discussions with senior management. Compared to other frameworks, this framework is about controlling, implementing and designing strategies using a mechanism to analyse particular ways and the dynamics among different uses of MCS. Arguably, the framework has been prevalent among academics over the past decade (Martyn et al., 2016). Thus, the current study employs the LoC as an analytical tool to address the study objectives. The reason is that the framework focuses on the different uses of MCS rather than on other features, such as the design and structure of MCS on organisational strategy. For example, Simon's (1995, 2000) LoC framework has four levers that reflect the different uses of controls; beliefs, boundaries, diagnostic, and interactive uses. The full impact of these four levers of control is realised when they are used together. Significantly, Simon (2000) suggests that the influence of these levers is in how they act to complement one another.

A review of empirical studies applying the LoC framework has revealed that it has been used in addressing diverse research questions in many research settings (Martyn et al., 2016). The LoC's gradually increasing attention advocates its sustained practicality in clarifying how MCS is applied in an organisation. Martyn et al. (2016) revealed that the levers have been used to a more substantial degree in qualitative and quantitative studies and have

enhanced understanding of antecedents and outcomes of MCS uses. The framework has been used across various organisations, including the public sector and Non-governmental, although Simons' use of the levers was on private sector organisations (Spekle et al., 2017). Therefore, the current study adopts this framework on MCS's impact on SOEs' performance in Ghana.

Simon's Levers of Control Framework (LoC)

Fundamental to Simon's (1995) control frameworks are four vital concepts and four levers of control, with each idea relating to one key aspect of organisational management. These concepts are about corporate values, avoidance of risk, crucial performance variables and strategic uncertainties. These concepts are associated with one of four control types collectively referred to as the lever of control framework. The four control levers are beliefs, boundary, interactive, and diagnostic control systems (Simons,1995,2000).

Beliefs systems are established core values, purposes and directions of an organisation to keep employees dedicated to organisational objectives and goals. An organisation's core values are important, primarily in how information is conveyed and interpreted and to encourage assurance and the pursuit of new business opportunities. As such, designated belief systems are the precise set of core organisational characterisations that management shares formally. Its highlight is to provide direction, purpose deliberately, and essential organisation values (Simon, 1995). Thus, the depiction of beliefs systems comprises formal means of creating an organisational culture and management to uphold or modify the pattern of corporate actions (Simons 1995).

Fundamental to beliefs systems is to enthuse employees to pursue opportunities and solutions (Martyn et al., 2016; Simons, 1995). As a result,

these systems establish a steady setting for employees, an essential role to challenge organisational standards, assumptions and goals through norms and ideals (Simons, 1995). Conversely, as Spekle et al. (2017) point out, employees must be limited to stop them from engaging in high-risk behaviours. A boundary system primarily accomplishes this function.

Boundary systems restrain employees' risk behaviour and inhibit employees from wasting organisational resources by setting limits and procedures to follow. They introduce what is perceived as the rules of the game. They are used to establish acceptable limits for action and highlight dangers employees must avoid, thereby reducing organisational overall strategic risk (Spekle et al., 2017; Frow, Marginson & Odgen 2010). Although boundary systems seek to minimise risks, they do not necessarily prevent subordinates from looking for alternate solutions and new opportunities (Mundy, 2010). Frequently, organisations communicate boundaries through codes of business conduct. As a result, any MCS designed to limit behaviour can be used by management as a boundary control (Spekle et al., 2017; Mundy, 2010). For example, the beliefs system encourages, while the boundary system constrains employee behaviour (Spekle et al., 2017; Widener, 2007; Simon, 1995). These two systems work in non-cybernetic control form since management does not embrace rewards or other mechanical feedback mechanisms other than reprimand if a code of conduct abuse is noticed.

Simons (1995) description of diagnostic control systems is carefully connected to the cybernetic control or traditional view of MCS. Diagnostic controls generally play the role of monitoring, evaluating, and comparing actual performance with pre-set objectives to ascertain deviations and necessary

corrective actions (Simons, 1995; Chong & Mahama, 2013). As a result, diagnostic control is perceived to constrain employees' behaviour, help spot hitches for corrections, thus motivating employees to achieve organisational intents. Crucial to diagnostic control systems is the identification of critical success factors and communicating these factors to employees. Performance targets are set for each critical performance area, with actual performance monitored and compared against pre-established targets. Deviations from the target are either sanctioned by rewards or punishment.

A crucial role of diagnostic control systems is to align employee behaviour with organisational goals. Adopting the diagnostic control systems to monitor processes could highlight difficulties and motivate managers to devise means of achieving the organisational goals (Mundy, 2010). Diagnostics control systems could limit creativity and opportunity-seeking behaviour to ensure pre-set objectives (Chong & Mahama, 2013). When objectives are explicitly defined and communicated to employees, they can reduce uncertainties and focus on the stated purposes (Bedford, 2015).

Interactive control systems constitute the fourth concept. They are used to emphasise attention on strategic organisational uncertainties and to stimulate employees to seek new opportunities. Senior managers use this control to join in employees' decision activities; this is achieved through rigorous face-to-face discussions among senior managers and employees. Such meetings provide opportunities for employees to challenge and debate fundamental business assumptions underlying current activities and operations. Interactive control systems create a rich information environment that enables double-loop learning and new ideas and strategies essential for strategy renewal (Chong &

Mahama, 2013). Simons (2000) contends that any formal management control may be used interactively, such as a budget. The point is that managers can only choose a single MCS tool as an interactive control system because of the limited time available to management.

Simons emphasises that instead of being used separately, the levers' strength lies in the fact that they can collaborate jointly and in a complementary way to generate desired effects (Bedford, 2015, Henry 2006). Thus, they develop positive and negative energies that stimulate dynamism among strategy renewal and innovation and, second, anticipated goal achievement (Kruis, Speklé & Widener, 2016). Beliefs systems and interactive control generate the needed positive force to inspire and encourage innovation. In comparison, the boundary and diagnostic control generate opposing forces to constrain action and limit choices to those who achieve predetermined organisational goals. Following this and drawing from conflict management literature, tension might be constructive for organisations and does not necessarily negatively affect performance (Simon, 1995). While tensions are generally viewed as disorderly, it is also contended that tension can also be productive to individual and organisational performance (Nicotera, 1995). For instance, the lack of pressure might minimise employee creativity, quality of management decisions, product development, and communication necessary for organisational performance (Henri, 2006).

Supporting Simons' (1995) argument that the four control levers are used together to enhance organisational strategy, Speklé et al. (2017) contend that the system comprising all four controls concepts is positively connected to creativity. Furthermore, Mundy (2010) asserts that all the levers have a pivotal

role to play as the merger of these opposing forces enriches creativity. Thus, these findings are steady with Simons' (1995) assertion concerning the co-existence of control and creativity and the prospect of simultaneously pursuing exploitation and exploration.

Several studies have drawn on the framework to study organisational innovation (Frezatti, Cruz & Machado, 2017; Bedford, 2015; Sakka, Barki & Cote, 2013; Bisbe & Malaguno,2009, Bisbe & Otley,2004)); teamwork (Chong & Mahama, 2013); motivation (Hofmann et al., 2012; Shen & Perera (2012), leadership and performance and adverse external crises (Janke, Mahlendorf & Weber, 2014). Others have studied the connection between the flexibility in culture and the levers of the control system (Heinicke, Guenther & Widener, 2014). The LoC framework deals with the uses of MCS and precisely the dissemination of management attention through these diverse uses. As a result, the framework is most suitable for addressing the current study that involves MCS and SOEs' performance in Ghana.

Despite the growing call for researchers to examine all four levers of control together, most prior studies have drawn primarily on the interactive and diagnostic uses to exclude beliefs and boundary systems. Few studies have examined all four levers together in their research, exploring whether they are used as complements, substitutes or supplements (Spekle et al., 2017; Martyn et al., 2016; Mundy, 2010; Widener, 2007). Therefore, the current study strives to contribute to the present literature by applying the entire framework to test its impact on Ghana's SOE performance. It is crucial studying the complete levers because of their interrelationship in creating dynamic tension for better results (Spekle et al., 2017; Henri, 2006; Simons, 1995). Thus, studying part of

the levers may overlook the associations among the four diverse levels and may result in an inadequate, inappropriate understanding of the impacts of the levers of control (Spekle et al., 2017; Henri, 2006). Furthermore, prior research submits that the effects of MCS may flow through intermediate variables (Rabee & Rapiah, 2016). For this reason, the current study examines whether the impact of MCS use on performance is mediated by knowledge management processes and employees' psychological empowerment.

Knowledge Management Processes

An organisation's success is influenced by leveraging knowledge and knowledge resources (Dayan, 2017). As a result, organisations invest in various knowledge products to gain a sustainable competitive advantage. In essence, the practical application of knowledge and its management can lead an organisation to a competitive advantage (Weisberg, 2010).

Studies of knowledge management involve two main thoughts: knowledge being static or dynamic. In the static view, knowledge is conceptualised as an asset. The dynamic perspective conceptualises knowledge as a process. When knowledge is seen as an asset, it implies that it can be recognised, visualised, measured and recorded in the financial statement. An example of this type of knowledge is a patent (Roberts, 2007). However, when knowledge is observed as a process, knowing knowledge is subjective and challenging to manage. As a result, knowledge, as a process, focuses on creating, sharing, and distributing knowledge (Alvesson & Karreman, 2001). Tanriverdi (2005) observed that the knowledge process is the organisation's capabilities in exploiting knowledge investment to produce cherished knowledge through a sequence of managerial practices.

Thus, both knowledge investment and process capabilities are valuable assets for a firm to fulfil its competitive strategies. These thoughts and practices can be described as knowledge management in an organisational setting (Dayan, 2017). Specifically, knowledge management can be regarded as recognising and capitalizing on the shared knowledge in an organisation to support organisations to compete favourably. Chawla and Joshi (2010) explain knowledge management as identifying and analysing existing and required knowledge to achieve organisational objectives.

Shannak (2010) viewed knowledge management as taking information from individuals' and practices of an organisation easily obtainable from databases, policies and procedures or even in people's intellect and making it accessible to wherever it can benefit. Similarly, Lee, Kim and Kim (2012) conceptualise knowledge management as practices associated with acquiring, transferring, and sharing knowledge with all the organisation's members. Arguably, knowledge management processes encompass all activities required to create, deal with, and promote the organisation's knowledge assets and their role in organisations' sustenance and operations (Wiig, 1995). Thus, knowledge management guarantees that knowledge is used well. Through good knowledge management, an organisation can support a collaborative effort between employees to create, capture, share, and leverage shared knowledge to enhance performance and productivity. However, the amount to which organisation embraces their knowledge management will result in unpredictable knowledge sharing and application.

Prior research argues that organisations that embrace knowledge management practices and knowledge management orientation are more

innovative and achieve higher performance than those acknowledged as market-oriented (Darroch, 2001). Nonaka and Takeuchi (1995) view that knowledge often comprises new ideas and creativity; thus, effective knowledge management is generally referred to as a precursor of innovation. Effective knowledge management is an enabler in its own right and critical to the firm's long-run existence. Existing literature suggests that while knowledge is a resource in its own right, managing and using it will directly impact organisational performance quality.

For Nonaka and Takeuchi (1995), knowledge management can be conceptualised as a process of organisational learning through an interaction between implicit and explicit knowledge. The view is that explicit knowledge primarily denotes the structure of knowledge expressed in images, text, and symbols imparted orally and learned through references, materials and books. Thus, explicit knowledge is not costly because it can be shared through information systems conveniently. Furthermore, sharing explicit knowledge benefits both the sharer and receiver as it will expand their current knowledge base. Organisations can, therefore, manage knowledge only by shaping the way employees use, create and share knowledge (Chawla & Joshi,2010). The impact will result in circulating creative ideas and organisational learning and improving its performance in the long run (Weisberg, 2010). Thus, when explicit knowledge management processes are well managed, it will enhance organisational creativity, leading to more exceptional organisational performance.

Tacit knowledge, on the other hand, is inherent in the minds of the employees. It encompasses conversational skills, know-how, and intuition and

maybe consequent from experience. The cognitive element of tacit knowledge includes ideals, values, beliefs, and emotional models. Unlike explicit knowledge, tacit knowledge may be difficult to express by words and symbols. Organisations exploit the features embedded in tacit knowledge to generate higher productivity, increase value, improve competitiveness, and enhance and encourage tacit knowledge exchange.

Dayan (2017) suggests that organisations with reliable control of their knowledge and which incorporate such knowledge into their organisational activities stand a greater chance to achieve higher performance. Knowledge management serves by way of a harmonising tool that alters resources to capabilities to enable organisations to realise enhanced performance (Girard & Girard, 2015).

Extant literature also reveals that while knowledge is an asset in its own right, its management and use will directly impact organisational performance quality. The potential effects of proper knowledge management may include greater use of information, improved financial performance and innovation and improved organisational learning (Buckley & Carter, 2000; Carneiro, 2000; Antonelli, 1999; Wiig, 1997; Teece, 1993).

Elden (2017) identifies knowledge management as a driver of corporate dynamic capability while describing knowledge as an asset crucial to organisational operational and financial performance. The connection between performance and knowledge management is the skill to use knowledge capability to deploy resources successfully. The point is that knowledge-based competencies and skills are among the essential elements of sustainable competitive benefit as it is usually hard to replicate. Thus, acceptable knowledge

management practices have necessary consequences for attaining more incredible organisational performance (Pillania & Rajesh, 2008). Furthermore, these routine knowledge management practices might positively affect delivering a well-organized plan through an engaged employee, occasioning excellent customer satisfaction, profitability, and enhanced organisational performance.

Importantly, knowledge management is linked to innovation. It is about generating new ideas and the exploitation of organisational resources for more significant innovation. Thus, knowledge management offers a plan for managers to nurture their organisational competency to transform. (Leal-Rodríguez et al.,2013). For example, Darroch (2005) asserts that effective knowledge management acts as an organising tool to improve novelty and organisational performance. Gathering and managing knowledge sharing and its reuse and retrieval play an essential role in bringing about improvement. This is crucial because improvement in innovation entails generating, recognising, and applying innovative ideas, among others.

Abuaddous, Sukkar and Aboalodous (2018) suggest that rapidly capturing and implementing new knowledge to employees and units can foster innovation and learning compared to those with no focus on knowledge management. Thus, the association between knowledge and organisational learning and the ensuing effect on performance is acknowledged.

Easterby-Smith and Lyles (2003) point out that learning generally focuses on the process and content of an organisation's knowledge it generates, processes, and uses. The point here is that the main aim of knowledge management is to enhance organisational members' learning for improved

performance by inspiring the generation, dissemination, and application of knowledge. Thus, knowledge management and activities are embedded in organisational knowledge processes to improve their practices and behaviours continuously. Organisational learning is one process through which the organisation can sustain greater knowledge for better innovation and performance. These processes are carefully linked to the concept of continuous enhancement through which an organisation endlessly recognises, implements and institutionalises enhancements. These enhancements are entrenched in the organisation beliefs through routines that may be written procedures, policies, and rules for dealing with frequently occurring circumstances or uncertainties.

The literature that examined the influence of knowledge management and organisational performance revealed that knowledge management practices positively influence organisational performance (Abuaddous, Sukkar & Aboalodous, 2018). Torabi and Elden (2017) investigated knowledge management's impact on an Iranian bank's organisational productivity. They established that the employees' intention to share knowledge (notably, the sharing of tacit knowledge) directly influences performance. The result shows that productivity would improve because of knowledge sharing, but employees' innovative contributions will be increased due to exposure to other knowledge, expertise, and experiences.

These findings in the literature on knowledge management confirms its importance to organisational success and organisational competitiveness. Indeed, organisations that embrace knowledge management practices and knowledge management orientation are likely to be more innovative and achieve higher performance (Liao& Chuang, 2006; Darroch, 2001). Therefore,

the above literature suggests that organisations can create a competitive advantage through innovation through proper knowledge management and sharing.

Although some prior research submits that knowledge management impacts a range of issues like organisational performance (Vhuramai, 2013), other studies also reveal that MCS has implications on knowledge management. Thus, the design and use of MCS affect corporate knowledge generation and distribution within an organisation, especially when the user is perceived as enabling and facilitating (Simon, 1995). As a result, the study seeks to add to the literature by looking at the influence of MCS on organisational knowledge management processes and whether it mediates the relationships between MCS uses and the performance of SOEs in Ghana.

Psychological Empowerment

Psychological empowerment is a multi-dimensional concept that reveals an employee's psychological assessment of the organisational environment (Spreitzer, 1995). It symbolises autonomous motivation for supporting employees' independence. It is also described as an established psychological condition of individuals necessary to feel a sense of control about their task role. Hence, psychological empowerment comprises an individual's beliefs about the meaningfulness of their work, their capability to perform their tasks successfully, their sense of independence and their abilities to influence work outcomes (Thomas & Velthouse, 1990). Instead of directing management practices that share control with employees at all ranks, the psychological perception is concerned with how employees experience and feel about their work (Sreenivas, 2014).

Expressly, psychological empowerment is assumed as an individual's intrinsic motivation in his work setting and reveals itself under four cognitions, namely: meaning, competence, self-determination, and impact (Spreitzer, 1995). *Meaning* refers to the subjective measurement of one's job's importance. *Competence* is described as a sense of usefulness to execute a job with skill. *Self-determination* denotes a sense of control, independence and autonomy of choice in commencing an action. Finally, *impact* relates to one's capability to influence specific outcomes in the work environment. These cognitions reflect an employee's active involvement at work, which, in turn, shape their work role and context.

Spritzer (1995) suggests that this construct's overall rationality will be reduced if any component is not acknowledged. Thus, employees become more resilient, innovative and resourceful in their work and dedicated to the organisation when psychologically empowered (Kuo, Yin, & Li, 2008). Employees, who trust that they are empowered psychologically, are resolute to their job and contribute valued ideas than those who are not (Seibert, Wang & Courtright, 2011). The employees are also anticipated to display positive attitudes and purpose toward the organisation. They will be more effective and efficient in using resources to enhance customer satisfaction and performance (Sreenivas, 2014). Moreover, psychologically empowered employees see themselves as more knowledgeable, experienced, and positively impacting their jobs and work situations. They are likely to proactively perform their responsibilities in ways that result in quality performance (Sreenivas, 2014).

Psychological empowerment encourages and allows employees to take personal charge for any progress in their performance of a given task while

contributing to its overall objective. Seibert, Wang and Courtright (2011) point out that psychological empowerment is connected directly to a wide variety of employee outcomes, including job satisfaction, organisational obligations, task and related performance, and adversely linked with employee anxiety and turnover. The point is that empowered employees are engaged employees who believe in corporate strategy and values and are inclined to exert significant strength on behalf of the organisation (Sreenivas, 2014).

Nawrin (2016) examined the impact of psychological empowerment on employees' work and organisation engagement and pointed out that work engagement is influenced by psychological empowerment. In a similar study of the effects of psychological empowerment on perceived organisational commitment, Jomah (2017) pointed out that psychological empowerment and the five dimensions of organisational commitment were positively associated. Organisation commitment relied more on the level of independence specified to the employee in decision making at the workplace.

While some existing research suggests that psychological empowerment has effects, other research also reveals that MCS impacts psychological empowerment. This is because the design and use of MCS affect employees' behaviour within an organisation, especially when the system is perceived as facilitating their responsibilities (Radtke & Widener, 2017). As a result, the current study seeks to add to the literature by looking at the influence of MCS on employee psychological empowerment and whether psychological empowerment mediates the relationships between MCS uses and the performance of SOEs in Ghana.

Chapter Summary

This chapter has presented a literature review on the primary constructs examined in this thesis. It distinguished SOEs from the expenditure sub-sector of the public sector and highlighted the need to assess SOE performance similar to those of private enterprises. The review also underlined the crucial role of MCS in the effective performance management of SOE. It further reveals that prior literature suggests that other variables may mediate the impact of MCS on performance. Based on a further review of the extant literature, two of such mediating variables (knowledge management processes and employees' psychological empowerment) have been canvassed in this chapter. The next chapter focuses on the theoretical framing of the study and hypotheses development.

CHAPTER THREE

THEORETICAL FRAMEWORK

Introduction

This chapter discusses the method used to develop the theoretical framework and the hypotheses of the study. The theoretical framework is the structure or direction for research grounded on an existing theory in a field of inquiry and mirrors the study hypotheses. It is constructed by relying on an established, coherent explanation of certain phenomena and relationships. Thus, it serves as the underpinning upon which research is built (Grant & Osanloo, 2014). The current study adopts the dynamic capabilities theory (DCT) to explain the relationships among management control systems (MCS), employee psychological empowerment, knowledge management and organisational performance.

Dynamic Capabilities Theory

The dynamic capability concept is derived from an organisation's resource-based view, which contends that a corporate resource and heterogeneity allow and improves competitive gains (Teece, Pisano, & Shuen 1997). Teece (2014) refers broadly to dynamic capability as an organisation's ability to build, integrate, and transform an organisation's internal and external resources to address evolving business challenges to uphold its competitiveness. The reconfiguration refers to cross-functional routines, such as internal process collaboration, knowledge creation process, acquisition process and co-operation (Eisenhardt & Martin, 2000). The point here is that resources are tied to organisations, and sustainable competitive advantage sources are specific. These resources are valuable, rare, and cannot easily be duplicated (Barney,

1991). The principle is that organisations must identify, develop, protect, and use these resources and capabilities to ensure a viable competitive advantage. Although the concept of dynamic capabilities has been extended in scope, a specific, concise and broad definition of this concept has not been agreed on.

For instance, a dynamic capability is described as creating, storing, absorbing, and applying knowledge. Helfat et al. (2007) refer to dynamic capabilities as using an organisation's skills to produce and enhance its resource base purposefully. Protogerou, Caloghirou and Lioukas (2012) explained that dynamic capabilities principally transform and reconfigure operational capabilities. Gonzalez & Melo (2017) explain dynamic capabilities act as changing and reconfiguring operational capabilities, unlike using operational capabilities, which looks at resources to produce specific results using pre-established routines. Thus, dynamic capabilities are generated and integrated into corporate practices and not merely acquired from the marketplace. Teece et al. (2016) explain that organisational functionalities permit its presence in the marketplaces and constitute strong operational capability. Distinctively, dynamic capabilities will enable an organisation to appreciate its environment, valuable resources and suitably respond to market changes.

The dynamic capabilities literature revolves around identifying and analysing their component factors and the primary fundamental drivers that enable them to generate the needed benefits. Teece (2007) suggested classifying dynamic capabilities into three main groups: sensing, seizing, and transforming. The classification is consistent with Denford (2013) description of dynamic capability from three constructs: knowledge sensing, knowledge seizing and reconfiguring. These groupings attempt to address how opportunities are

recognised and generated, how resources are readjusted, organised and assigned to enable adaptation and novelty and how resources are reformed, extended, improved, secure, shaped and assembled. These practices need to be repetitive to generate lasting value for organisations.

Although other categorisations of dynamic capabilities exist, Teece's (2007) grouping offers a suitable balance than the different groupings. For instance, Helfat et al. (2007) classifications of dynamic capabilities function into deployment function, and the exploration and creation function is quite similar to Teece groupings of seizing and transforming. Similarly, Protogerou et al. (2012) advance the notion of a strategic competitive response capability incorporating Teece's sensing and seizing processes. Sensing here is described by Teece (2007) as the identification or creation of new market opportunities and not restricted to the broad ability to scan the environment. Limiting the scope of sensing may improve an organisation's ability to assess, evaluate and pass judgement on market data that make sensing challenging to emulate (Teece, 2014). Teece (2014) refers to seizing as essentially the deployment and integration of relevant resources to add value from opportunities in a creative way. Here, the significance of integrating organisational routines and position to a given set of resources to achieve set objectives, say expansion and launching of new product lines, is paramount.

Finally, the capacity to sense and seize opportunities and manage threats is contingent on an organisation's ability to reconfigure or transform its resource base. Transformation of resource base will alter an existing resource and new resource creation to preserve a firm resource alignment with its stakeholders in the competitive business environment (Teece, 2014; Dixon, Meyer & Day,

2010). To achieve this, it may require a broad range of tools—notably, top management roles in managing change, learning and unlearning to facilitate divergent views.

Although there are other approaches to dealing with strategic organisational capabilities, the most researched is organisational innovativeness, market orientation, organisational knowledge and learning (Henri, 2010). The current study will concentrate on the capabilities of organisational MCS, knowledge management and psychological empowerment. The study contends that the use of MCS (Simon, 2000; Henri, 2006; Widener, 2007), knowledge management and (Eisenhardt and Martin, 2000), and psychological empowerment (Helfat & Peteraf, 2015) may be crucial in creating competitive advantages in organisations.

Management Control Systems as Dynamic Capability

Dynamic capability helps explain why some organisations survive competition over time and describe their ability to create and sustain competitive advantage (Teece, 2014; Teece et al., 1997). As a result, the concept of dynamic capabilities and their bearing on organisational performance has found considerable space in extant literature. Thus, dynamic capabilities are the higher-order capabilities that direct the amount of change in competencies, such as operational capabilities, which help organisations to survive. The study established a framework to explain how management control systems influence organisational behaviours that are necessary for dynamic capabilities.

The current study argues that management control systems inhabit dynamic capabilities. As Simons (1994) argues, MCS are routines that influence behaviour and processes in organisations. As routines, a management control

system enables organisations to sense opportunities by providing information derived from scanning the organisational environment and identifying strategic uncertainties that impact the organisation's operations. In this regard, MCS provide guidance and understanding about an organisation's state and gives a sense of its potential opportunities to tap from for competitive advantage. These efforts combine to provide information that directs and sensitises employees to critical opportunities for competitive success (Teece, 2014; Henri, 2006; Teece et al., 1997; Simon,1995).

Management control systems also facilitate the seizing of opportunities as it plays significant roles in identifying, integrating and deploying valuable organisational resources in impactful ways. This is achieved through MCS capacity to facilitate and direct decisions as well as its resource allocation role. It promotes the search for and sharing knowledge, experimentation, and learning (double and single loop) in ways that generate new ideas about how to integrate and deploy resources in impactful ways.

As a critical organisational routine, MCS also foster the transformation and the reconfiguration of the organisational process that allow opportunities to be exploited. This is achieved partly through MCS to set goals and influence the alignment of actions and decisions. But, more so, transformation inevitably involves change, and MCS facilitates routines that are essential for change management, including supporting the processes of exploring, exploiting, and refining existing organisational competencies for long-term competitive advantage (Simon, 2000).

In summary, MCS promotes core values that galvanise employees to explore and generate opportunities. The feedback and forward-looking routines

and the learning and adaptive processes they inhabit encourage searching for potential competitive threats and opportunities, seizing the opportunities while minimising the threats and transforming organisational processes to exploit these opportunities. It is mainly in this sense that this study conceptualised MCS as a dynamic capability.

Hypotheses Development

The conceptual model developed in Figure 1. illustrates the link between MCS uses, knowledge management, psychological empowerment, and organisational performance. As explained earlier, the uses of MCS comprise four control systems- beliefs, boundary, diagnostic and interactive systems. Beliefs and interactive control systems promote exploration and innovation and significantly transform existing competencies or create entirely new ones. They create positive forces that inspire employees to commit to organisations' core values and direction (Henri, 2006; Simon, 2000, 1995). On the other hand, diagnostic and boundary systems create what Simon (1995) described as opposing forces that constrain employees' actions, monitor the outcomes of employee's behaviour, set standards to monitor employee's performance, reward goal achievement and punish nonperformers. It sets road maps and targets for employees with its associated rewards and punishment—these targets set in motion monitory of employee performance.

The organisational performance process requires a well-motivated and empowered employee (Liao, Chang & Wu 2010) and knowledgeable employee. Therefore, knowledge management processes and psychologically empowered employees are two key factors that can mediate the effects of MCS and organisational performance. Consequently, the current study proposes that the

belief, interactive, boundary and diagnostic control systems will enhance organisational knowledge management processes and psychologically empower employees and subsequently improve organisational performance, as illustrated in Figure 1.

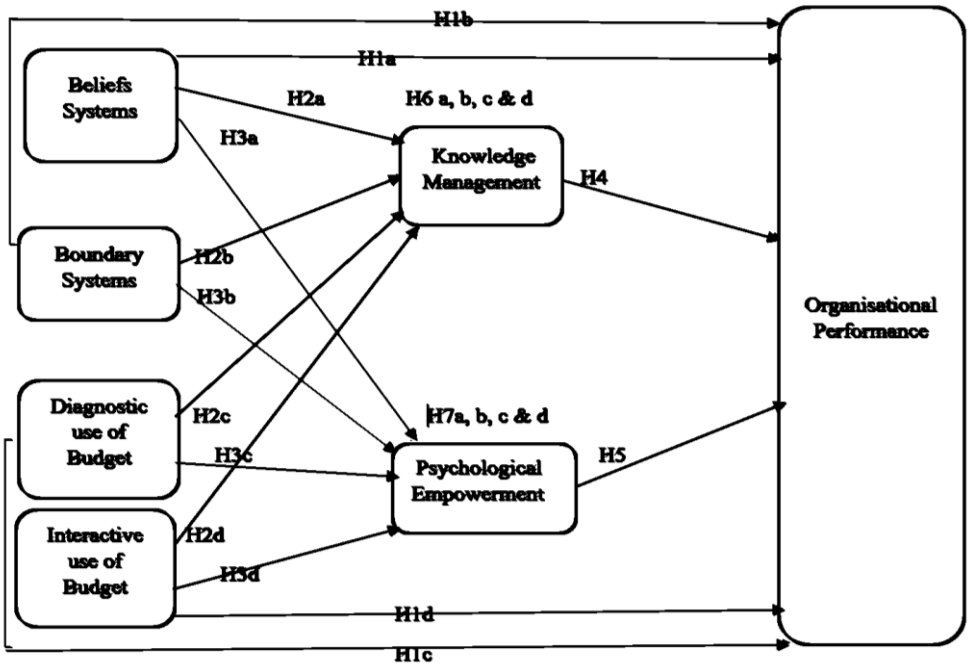

Figure 1: Conceptual Model: Management Control Systems and Organisational Performance
Source: Author's Construct, (2020)

As depicted in Figure 1, the concept of MCS is essential for enabling dynamic capability for organisational performance, from which individual hypotheses are proposed and discussed below.

Management control systems and organisational performance

Performance is contextually a dependent concept and can be linked to several dynamics such as organisational profitability, market competitiveness, and production efficiencies, and these indicators might be complementary and, in some cases, may even be conflicting (Lebas & Euske (2007). However, based on prior literature, there is a sound basis to link MCS and different

organisational performance such as an increase in sale revenue, profits, return on investment, growth in market and customer share and increase in employee production (Bedford, 2015; Adler & Chen, 2011; Akroyd, & Maguire, 2011; Bisbe, & Otley, 2004; Davila, 2000; Henri & Journeau, 2008, Widener, 2007). Thus, MCS safeguards organisations against undesirable behaviour and encourages desirable actions to promote goal congruence between the employees and the organisation.

For instance, beliefs systems are a bundle of organisational meanings that management uses to formally provide fundamental purpose, values and direction for the organisations (Simon, 1995). Thus, beliefs systems strengthen shared corporate values that present reasonably steady guards and processes to align employee judgment with the organisation's strategic intent. These beliefs systems typically take the form of organisational mission and vision statement, statement of purpose and credos; the intention is to encourage employees to adopt the values and goals embraced by management. Thus, beliefs systems are essential organisational routines that act as an antecedent to organisational capabilities and are likely to influence organisational performance. The point is that beliefs systems provide the basis of employee understanding, enabling the distribution of information between employees with different capabilities to enhance sensing of opportunities, generation and transformation of routines without advocating the specific nature of the actions (Bedford, 2015). The emergent strategy here is that beliefs systems promote, enable, and facilitate exploration and exploitation of opportunities to significantly transform existing competencies and generate entirely new ones (Bedford, 2015; Mundy, 2010). The internalisation of these core values and purpose may directly impact

employee motivation and strategic intent through their creative efforts toward higher organisational performance (Adler & Chen, 2011), and therefore, the study proposed that;

***H1a**: Beliefs Systems are significant and positively associated with the performance of SOEs.*

Risk limits the extent to which organisations succeed at a performance. A boundary system is useful in setting limits to risk-taking to ensure that predetermined goals are achieved. The boundary systems are formal channels used by organisations to define the tolerable domain of organisational activity (Simon, 1995). Thus, it is a statement of what the organisation will not do to pursue opportunities that the company will never engage in. Although this minimises the available latitude of employees, it does not certainly mean a decline in motivation (Adler & Chen, 2010). Instead, the boundary systems support employees' focus on areas considered essential to current operations' performance (Spekle et al., 2017; Bedford, 2015; Simon, 1995). By this, employees pay significant attention to looking for opportunities and transforming them to support strategic renewal likely to impact performance. The study is therefore proposing that,

***H1b**: Boundary systems are significant and positively associated with the performance of SOEs.*

Organisational performance requires that resources are used efficiently, and that predetermined goals are achieved. The diagnostic use of budget, for example, is set to achieve organisational efficiency. The point is that diagnostic use of budget helps set and monitor goals set, provide feedback on goals set, and reward goal-directed behaviour (Chong & Mahama, 2013). Besides, the

diagnostic use of budget influences the organisation to appraise and follow up on new strategies embodied in traditional feedback control by monitoring and gratifying the achievement of pre-established performance standards (Henri, 2006; Simons, 1995). The monitory part of diagnostic use of budget epitomizes a mechanism of communication between employees and management to share critical organisational issues likely to impact pre-set performance. The discussions generated by this process lead to curative action by way of learning, similar to Graton et al. (2010), who argued that diagnostic control use enables exploitation of organisational existing capabilities to improve performance.

Besides, when the budget is used as a diagnostic control, it can positively impact the development of capabilities by laying the grounds for conversation to aid better decisions such that information communicated will be understood the same way by all employees. Therefore, the diagnostic control support employees in a systematic administrative arrangement premised on assumptions of tighter control and structured communication channels (Chong & Mahama, 2013; Spekle et al., 2017) consistent with the demands for efficiency and effectiveness. Also, by making organisational intentions and improvement clear, diagnostic control systems support collective assurance and harmonized action toward desired outcomes that may enhance organisational performance (Adler & Chen, 2011).

More so, by setting goals clearly, diagnostic control systems reduce the search field to increase the effectiveness in finding solutions to job-related problems (Spekles et al., 2017). Consistent with dynamic organisational capabilities, diagnostic control emboldens single-loop learning through increased wisdom, relatively more than the scope of knowledge necessary to

exploit prevailing competencies for higher organisational performance (Chong and Mahama, 2013). Diagnostic use of budget is aligned with extrinsic reward structures, motivating employees required for creativity and higher performance (Chenhall & Moers, 2015). As a result, the study proposes that;

H1c: *Diagnostic use of budget is significant and positively associated with the performance of SOEs.*

Effective performance in a highly competitive environment requires continuous strategic renewal. This requires searching for new and creative ideas for which interactive control systems can facilitate. Interactive control systems focus on strategic uncertainties, identifying opportunities they present and capitalising on that by generating new ideas to take advantage of the opportunity (sensing and seizing). The interactive use of budget also involves a dialogue process where information and knowledge sharing occurs, leading to learning and creating innovative ideas (Bedford, 2015). Interactive use of budget establishes a platform for employees to question the assumptions underlying current processes and activities, leading to organisational strategic change and renewal (Chong and Mahama, 2013; Mundy, 2010). The information shared may sensitise members to the strategic risk confronting the organisation and the opportunities therein. These enable employees to reconsider ways of seizing such opportunities and transforming organisational routines to take advantage of the opportunities presented (Simon, 2000). By taking advantage of such opportunities will likely enhance organisational performance.

Besides, the attended challenge and ensuing interactive use of budget, for example, lead to questions about assumptions underlying existing routines that may facilitate the transformation of those routines. Such transformation

may likely improve an organisation's existing capabilities crucial for performance. The opportunity provided through participation stimulates employee motivation and commitment, enhancing their job satisfaction and performance (Spekle et al., 2017). Participation, in this case, boosts a subordinate's confidence, sense of authority, and ego with involvement with the organisation, leading to more reception of and obligation to, in turn, trigger improved performance (Bedford, 2015). Based on the above analysis, the following hypothesis is proposed:

***H1d**: Interactive use of budget is significant and positively associated with SOEs Performance*

Management control systems and knowledge management

Knowledge management requires the search for and identifying knowledge valuable to an organisation. It does require a dynamic capability that enables the sensing of expertise. Organisational beliefs systems can facilitate the sensing of knowledge. It inspires employees to pursue opportunities and communicate their core values, allowing employees to determine whether particular knowledge they have identified is valuable (Mundy, 2010). Consistent with knowledge management practices, the beliefs systems provide crucial support in knowledge identity through organisational core values, the relationship between employee and knowledge of an organisational knowledge usage (usage of organisational values to provide identity) and its spread in an organisation (Simons, 2013). By these processes, organisational beliefs systems greatly enhance employee knowledge acquisition, dissemination, and usage to affect knowledge management directly that form the foundation for learning (Henri, 2006).

Thus, a beliefs system can inspire organisational knowledge and learning by exciting employees to pursue, instigate, and search for new ideas and actions to energise the organisation to undertake strategic turnaround for competitive advantage (Marginson, 2002). Organisational beliefs indicate a common perception of organisational members that may affect their behaviours and align their vision with the organisation. The study argues that when MCS is implemented through the beliefs systems, it will encourage and spawn assurance in organisation for employees to transfer their skill on job knowledge and reinforce support to other employees; as such, the study proposes that;

H2a*: Beliefs systems are significant and positively associated with knowledge management processes.*

Unrestrained search for knowledge may pose a risk to an organisation. However, a boundary system can limit the risk associated with unrestricted knowledge acquisition as it is anticipated to guide employees' behaviour, which will aid organisational learning and knowledge management. The boundary system motivates employees to search and explore new knowledge within predefined spaces since employees have no option other than to work within an exact code of conduct (Simons, 2000). Through these processes, employees are constrained in their behaviour and search for new opportunities compelling them to focus on a structured laid down knowledge processes assignment; thus, the repetition of the same work enhances their knowledge in executing the jobs. By these structures, organisations are assured of a well-managed process in acquiring, sharing and maintaining knowledge information by employees for future use and purposes of efficiency and effectiveness (Spekle et al., 2017; Zhao et al., 2013).

Thus, the study posits that a well-managed organisational boundary system is most likely to impact an organisation's knowledge management processes and that hypothesis 2b is proposed;

***H2b**: Boundary systems are significant and positively associated with knowledge management processes.*

Learning is essential to effective knowledge management and crucial that an organisation can continuously improve its conception and utilisation (Zhao *et al.*, 2013). The studied view is that the feedback mechanisms within diagnostic use of budget, for instance, provide learning opportunities. The diagnostic use motivates employees to identify opportunities and threats through conformance to pre-set standards. Through this process, guidelines are followed through continuous monitoring of actual performance against standards for better results (Mundy, 2015). For instance, in using budget diagnostically, essential information is processed, allowing management to focus its strategy on monitoring critical achievement factors to accomplish its planned strategy. The diagnostic control is also responsible for communicating the organisation agenda and interpreting strategy by emphasising essential elements of success central to single-loop learning and crucial to knowledge management (Chong & Mahama, 2013; Simons, 2013); thus, the study proposes that;

***H2c**: Diagnostic use of budget is significant and positively associated with knowledge management processes.*

Knowledge management requires that knowledge is effectively shared throughout an organisation for a more significant impact. Interactive control systems provide such support as it engenders a dialogic process where

employees learn from each other (Chong & Mahama, 2013). Thus, top management uses interactive use of budget to send information to the entire organisation to emphasise attention on strategic uncertainties. Through this focus, pressure is put on middle-level management at all organisation ranks and stimulate information gathering, face-to-face dialogue and debate crucial to knowledge acquisition, sharing, and double-loop learning (Chong & Mahama, 2013; Batac & Camssus, 2009). The point is that employees responding to the perceived organisational opportunities and threats stirs knowledge and learning to reinvent new ideas for new strategies to emerge. In this way, interactive use of budget paves the way for better discussions and debates among employees to question prevailing fundamental business norms and procedures to support employee knowledge acquisition and sharing for better decision options.

By these processes, employees are influenced by new facts, ideas, involvements, clarity in mission and vision for better strategic decisions (Simon, 1995). The highlight is that an interactive control facilitates the information process, which leads to better knowledge acquisition, learning and sharing (Widener, 2007). Therefore, the study argues that emphasis placed on interactive use in budgeting processes generate and facilitate knowledge management processes and that;

***H2d**: Interactive use of budget is significant and positively associated with knowledge management processes.*

Management control systems and psychological empowerment

Psychological empowerment is a broad concept that echoes a motivational psychological state linked to the organisational environment (Spreitzer, 1995). Associated with this psychological empowerment are four

associated cognitions states, namely; *meaning*, the significance placed on a job purpose; *competence*, the belief of persons in their capability to perform their job effectively; *self-determination*, the sense of choice and independence in their work and *impact,* the confidence of personal skill to influence the outcomes to work (Moulang, 2015). Thus, the study posits that emphasis placed on organisational beliefs systems will enable significance on work purpose (meaning), self-determination and competence.

For instance, organisational beliefs stimulate employees to explore opportunities, make decisions, and find options to solve problems consistent with the organisation's core values. Beliefs systems offer employees better access to facts and opportunities and stimulate competence, as they are calculated to upsurge individuals' knowledge about the organisation's core values (Spekle et al., 2017). Thus, sharing information generates a sense of importance and purpose and reinforces the individual's sense of capability to trust that s/he is cherished and respected in the organisation (Moulang, 2015). It thus increases the feeling of empowerment across all dimensions, and therefore, the study posits that;

H3a*: Beliefs systems are significant and positively associated with employee psychological empowerment*.

Associated with employee psychological empowerment are the person's beliefs in their capability to perform their job effectively and the individual's trust in their ability to impact work outcomes. The study suggests that emphasis placed on boundary systems promotes employee competence and impact. Crucial to boundary systems is that they enable an organisational setting characterised by freedom of choices within stipulated boundaries; thereby,

fostering empowerment (Simons 1995). Boundary systems thus create a corporate environment that facilitates both the autonomy support and organised guidance needed to encourage intrinsic motivation and self-regulated behaviours (Spekle et al., 2017) and therefore, it is proposed that;

***H3b**: Boundary systems are significant and positively associated with employee psychological empowerment.*

Spreitzer (1995) suggests that achieving organisational empowerment entails expanding and facilitating information about operational activities and standards of performance for all employee categories using different means. Thus, access to information is essential to psychological empowerment feelings (Quinn & Spreitzer, 1997). The diagnostic use of budget, for instance, is suggested to facilitate the processes of setting standard performance for all employees' categories and disseminating these standards for performance evaluation. Thus, diagnostic control can promote employee psychological empowerment since it provides the right direction by monitoring and evaluating and corrective action necessary to bring the needed impact. It also provides a sense of involvement by encouraging a reduction in errors and sharing knowledge, skills across all organisational levels, and feedback on their performance (Adler & Borys, 1996).

The study argues that the diagnostic use of budget systematically provides employees with the trust that they have options within a precisely defined range, thus giving autonomy support necessary for employee motivation, innovation, and psychological empowerment. Essentially, diagnostic use of budget can increase autonomy by providing various information, such as organisational goals, and measuring performance criteria,

which helps employees independently (Mahama & Cheng, 2013). This facilitates employee integration with the organisation's activities by inspiring them to increase their sense of meaning and to accomplish organisational objectives (Ahrens & Chapman, 2004). For these reasons, the study proposes that;

***H3c**: Diagnostic use of budget is significant and positively associated with employee psychological empowerment.*

Connected to psychological empowerment are employee cognition of capability, the individual's trust in their ability to perform their job effectively, and self-determination (Moulang, 2015). Interactive controls provide a framework for employee competence, self-determination and impact. Interactive controls manage strategic uncertainties and identify opportunities through continuous discussions and debates that question existing underlying business assumptions to enable organisational capability and strategies (Chong & Mahama, 2013; Simon 1995). Through this process, employees are motivated to acquire new knowledge, ideas, experiences, clarity in mission and vision. Employees will also be encouraged to take on risks based on the autonomy granted and psychologically empowered to make informed decisions. The ensuing debates and discussions characterised by an interactive control process also provide employees with the needed autonomy, competence, and impact. The effect of this is that employees feel cherished, respected. They will be motivated to do more since they are exposed to a multiplicity of amusing information comprising information about the individual employee and organisational performance, responsibilities and expectations (Hartmann & Maas, 2011). Thus, interaction and participation in the decision process are

positively linked with improved psychological empowerment perception (Mundy, 2010). The employee believes that they are essential to the organisation and impact (Spreitzer, 1996).

The view of the study is that interactive control provides a setting where employees are allowed access to a diversity of relevant data and are involved in decision making within the organisation through the day to day, face-to-face dialogue, discussions and debate, which can increase the general perception of employee psychological empowerment (Hartmann & Maas, 2011). By these processes, employees get to place meaning on their work, acquire the necessary competence to perform their job effectively, sense self-determination and independence in their work and require impact to influence work outcomes. Thus, the study posits that interactive use of budget, for instance, can positively influence employees psychologically. Therefore, the study proposes that;

***H3d**: Interactive control systems is significant and positively associated with employee psychological empowerment.*

Knowledge management and SOEs performance

Organisations must improve their ability to incorporate internal and external knowledge to solve operational efficiencies, innovation, customer satisfaction, market share expansion, and profitability to create a competitive advantage (Danford, 2013; Zheng et al., 2011). Therefore, organisational knowledge management processes serve as a strategic asset for sustainable competitive advantage for a remarkable performance (Teece, 2000). Organisational knowledge management becomes a strategic asset that links knowledge management practices to strategy to enable exploration and exploitation opportunities for better understanding. Developing acceptable

knowledge management practices encompassing knowledge generation, knowledge spreading, and responsiveness to ability reinforces knowledge management's organisational knowledge process capability (Darroch, 2003).

Consequently, organisations with well-organised knowledge management practices have a unique capability in knowledge management that is believed to be a central element of organisational performance. Thus, organisational performance can be enhanced when knowledge is deployed successfully across organisational structures with routine knowledge integration processes (Grant, 1996). The argument is that strategy works together to provide a well-executed strategy through employees' involvement, occasioning excellent customer satisfaction, profitability, and outstanding performance. The fact is that the organisational system vigorously leverages knowledge management practices to create value and enhance organisational learning and effectiveness (Gold et al., 2001). Learning has been acknowledged as a trigger for better organisational performance (Tippins & Sohi,2003) and one of many ways to compete in the long run (Widener, 2007). This is consistent with the argument that learning can increase organisational capabilities in decreasing errors, rapid responses to change for more significant innovative ideas (Gold et al., 2001). Discovering new ways through routines reinforces an organisation capacity to sense and seize new opportunities (Teece, 2014) to enable performance.

The current study, therefore, posits that acceptable knowledge management practices are vital in achieving organisational performance (Pillania & Rajesh, 2008) and that it generates a focus on organisational elements to provide a well-executed strategy through an involved staff,

occasioning an excellent customer experience, profitability and high organisational performance (Vayrynen, 2014; Suzana & Kasim, 2010). It is therefore hypothesised that:

H4: *Knowledge management is significant and positively associated with the performance of SOEs.*

Psychological empowerment and SOEs performance

Jenatabadi (2015) described the performance as an established bundle of behaviours relevant to an organisation's objectives and efficiency in achieving tasks, purposes, mission, and vision. However, attaining an organisational job depends on individual employee effectiveness and efficiency and are directly linked with employee behaviour and the goals of an organisation. Performance is, therefore, an important pointer of how sound responsibilities are achieved by employees (Zare, Zarmehr & Ashrafi-rizi,2015). Thus, the study argues that psychologically empowered employees will contribute immensely to organisational performance. The point is that psychological empowerment affects employees' output and efficiency at work directly and indirectly through job satisfaction, improvement in individuals' employee ability to acquire knowledge and skills crucial for progress in organisational performance (Siachou & Gkorezis, 2014). Importantly, empowered employees sense the feeling of happiness and are less controlled by their responsibilities, such that they are more likely to help others and be impulsive in their careers. Besides, empowered employees feel more identified with their work, enhancing employees' attitudes and behaviours through meaning instilled in employees to be dedicated, action-focused, and motivated to support the organisation (Spreitzer,1995).

Psychological empowerment also can enhance creativity through identified motivation, which can mainly be impacted through the meaning cognition of psychological empowerment (Spreitzer, 1995; Adler & Chen, 2011). Therefore, psychological empowerment facilitates commitment to organisations' goals, freedom to engage enables creative behaviours, a strong feeling of personal control and influence (Bass, 1985), better levels of flexibility, innovativeness, ingenuity, and flexibility associated with perceived choice in employee's actions (Thomas & Velthouse, 1990). By improved psychological empowerment perceptions, conditions are created where innovation and creativity flourish to enhance organisational performance. Consequently, the following hypothesis is proposed;

H5: *Psychological empowerment is significant and positively associated with the performance of SOE.*

The mediating role of knowledge management

The initial hypotheses (H1a, H1b, H1c, H1d and H2a, H2b, H2c, H2d) link MCS's (Beliefs, boundary, diagnostic and interactive control systems) to organisational performance and knowledge management, respectively. Therefore, the study indirectly suggests that the four levers of control systems impact organisational performance through knowledge management practices. Thus, the following hypotheses are proposed:

- ***H6a****: Knowledge management mediates the relationship between and beliefs systems and the performance of SOEs.*
- ***H6b****: Knowledge management mediates the relationship between and boundary systems and the performance of SOEs.*

- ***H6c**: Knowledge management mediates the relationship between and diagnostic use of budget and performance of SOEs.*
- ***H6d**: Knowledge management mediates the relationship between and interactive use of budget and performance of SOEs.*

The Mediating role of psychological empowerment

While the initial hypotheses (H1a, H1b, H1c, H1d, and H3a H3b, H3c, H3d) link MCS uses' relationships (Beliefs, boundary, diagnostic and interactive control systems) to organisational performance and employee psychological empowerment, respectively. It indirectly suggests that the four levers of control systems impact organisational performance through psychological empowerment. Therefore, the following hypotheses are proposed.

- ***H7a**: Employee psychological empowerment mediates the relationship between beliefs systems and the performance of SOEs.*
- ***H7b**: Employee psychological empowerment mediates the relationship between boundary systems and the performance of SOE.*
- ***H7c**: Employee psychological empowerment mediates the relationship between diagnostic use of budget and performance of SOEs.*
- ***H7d**: Employee psychological empowerment mediates the relationship between interactive use of budget and performance of SOE.*

Chapter Summary

The chapter presents the theoretical framework and hypotheses development process. The theoretical framework examined the impact of the MCS uses (beliefs, boundary, diagnostic and interactive uses of budget) on organisational performance, knowledge management and employee psychological empowerment. It also discussed the relationship among them

along with the direct and indirect influence on SOE performance. Figure 1 presents the study framework used to guide the hypotheses for the study. The ensuing chapter presents an overview of the method used to test the hypotheses projected in the current research.

CHAPTER FOUR

RESEARCH METHODS

Introduction

This chapter presents the methodology and the research design used to gather and analyse the data relevant to this study. Its objectives are linked with the study's empirical results presented in the next chapter and the conceptual framework established in the preceding chapter. The chapter discusses the philosophical assumption, the study design, the research setting, sampling approach, measurements of constructs, data collection and data analysis.

Philosophical Assumptions/ Research Paradigm

Generally, researchers have always sought to discover reality through many schools of thought. Some maintain that reality is a factual matter that exists worldwide; others suggest that it is subjective and contingent on our intellectual perceptions of that reality (Sekaran & Bougie, 2016). Accordingly, research philosophy is explained as a system of philosophies and norms about generating knowledge (Saunders, Lewis & Thornhill,2016). Thus, any research framework entails conventions about the nature of reality (ontology), epistemology, the theory that informs the research and how that knowledge is obtained (axiology). These research beliefs cause differences in research paradigms and methodologies used in social science studies (Sekaran & Bougie, 2016).

The main research paradigms that inform contemporary business research are pragmatism, constructivism, positivism, and critical realism. Analysis relying on positivism is built on the conviction in reality as a natural substance that occurs and functions in line with cause-effect principles; as such,

positivism can be known using a logical methodology (Sekaran & Bougie, 2016). However, constructivism trusts that reality is socially created and not absolute. On the one hand, critical realism combines positivism and constructivism and holds that realism is a fact and dismisses the assumption that reality can be objectively measured (Wahyuni, 2012). Finaly, Sekaran and Bougie (2016) contend that pragmatism trusts using several opinions and views to explain and answer research questions.

The current study's research philosophy relies on the concept of the positivist paradigm. Positivism is derived from science and rational social realism standpoint to produce good generalisations (Van Buren, Greenwood & Sheehan, 2011). Within this paradigm, the nature of truth is presumed to be free of the researcher's mind; thus, the truth is out there. The researcher is capable of studying a phenomenon without influencing its outcome or being influenced by the research. By objective examination using acceptable methods allowed in scientific research, reality can be discovered. Practically positivism is the overriding philosophy in MCS research (Van Buren et al., 2011). The belief is that organisations possess the natural person's characteristics, and for that reason, management principles can be a consequence of a systematic study of cause-effect relationships. Thus, organisations are viewed as stable empirical phenomena with unitary objectives of achieving business goals. As a result, the behaviour of employees can be determined by the managerial influence of situational variables (Saunders, Lewis &Thornhill, 2016).

The positivist paradigm is operationalised through a hypothetic-deductive approach. This involves drawing on an informing theory or the existing literature to generate hypotheses about the nature of the reality

underpinning the relationships being investigated (Antwi & Hamza, 2015). The hypotheses are developed following a pattern of logical reasoning. Thus, the hypotheses developed in Chapter Three are consistent with this approach. The hypothetico-deductive approach requires evidence to support or reject the hypotheses developed. Methodologically, such evidence is gathered and analysed using quantitative methods. The adoption of the positivist approach in this thesis is also consistent with several prior studies that have used quantitative methods and survey data to study MCS (Widener, 2007): psychological empowerment (Degago, 2014; Nawrin, 2016): knowledge management (Lin & Lee, 2005; Wu & Chen, 2014) and organisational performance (Acquaah, 2013). The outline of the research setting is discussed below.As a result, a quantitative approach was adopted in this thesis research design, where data was collected through a survey and analysed using statistical techniques.

Research Approach

The quantitative approach aims to measure social phenomena, gather and analyse statistical data, and focus on the associations between various characteristics across various circumstances (Saunders, Lewis & Thornhill, 2016). It is envisioned to project, describe, and validate empirical associations in reasonably measured settings for generalisation; thus, quantitative research believes that reliable facts are grounded on direct observation of natural occurrences through practical means (Antwi & Hamza, 2015). Consequently, positivists promote applying methods to generate reliable and valid data to examine relationships among variables in a well-designed research setting.

Research Design

The study design is a plan for gathering, assessing and analysing data to respond to research questions. Thus, the current research design adopts a single data gathering method, the survey, and a systematic quantitative process classified as a mono-method quantitative study. Specifically, a cross-sectional survey was adopted to conduct the study. The researcher believes that the positivist position was ideal for this research. The belief is grounded on the notion that factual knowledge is gained from the human reflection of objective truth and that the objects being researched are based on experimental evidence (Bourdeau, 2010). Consequently, the role of the researcher is limited to data collection and interpretation through the adopted design.

Research Settings/Population

Public sector organisations typically comprise organisations owned, funded and operated by the Government, including State-Owned Enterprises (SOEs). In Ghana, the public sector is enormous and multidimensional; consisting of four main categories: the civil service (with over ten sub-service types including central and local government); public institutions other than those created for profitmaking ventures; public services are created by the Constitution; and other public services the Legislature may recommend. The Constitution, together with the public services commission (PSC) Act 484, interpretation of public sector may include commercial state-owned enterprises (SOEs) and regulatory organisations including boards, agencies, sub-vented organisations, commissions, and joint ventures.

The current study limits its scope to only the SOEs listed by the State Interest and Governance Authority (SIGA) and the Public Services Commission

(PSC). Currently, the SOEs consists of one hundred and forty-four (144) entities operating in various sectors of the economy (energy, finance, agriculture, construction, manufacturing, mining). Ninety-two (92) are wholly owned SOEs, and fifty-two (52) partially owned entities (JVCs). Of the ninety-two (92) SOEs, thirty-six (36) are categorised as commercial SOEs, of which twenty-six (26) are Limited Liability Companies. The remaining commercial SOEs are Statutory Corporations established by Acts of Parliament. The fifty-two (52) Joint Venture Companies includes mining companies in which the state has up to 10 per cent carried interest.

Specifically, middle-level management in SOEs in Ghana were the subjects considered for the study. The point is that middle-level managers are those who occupy different functional areas and implement organisational strategies to contribute to planning, implementing, and communicating processes (Huy, 2001). They are crucial in fostering and communicating organisational beliefs, missions, and goals to the employee since they interact daily with different employees at all levels. They will have direct knowledge of the use of MCS and are expected to provide a reliable assessment to validate the use of MCS and its implication on employee psychological empowerment, employee knowledge management, and its eventual implication on SOEs' organisational performance.

Sample Size and Sampling Technique

The target population for the study is SOEs in Ghana, including their subsidiaries. Given that the total number of SOEs is known and limited to 144 SOEs, a census method was employed. Census is attractive for smaller populations, as it is in this current study. The study embraced a cross-sectional

survey method to gather data from the target sample using the survey as a data collection mechanism. As a result, a self-administered questionnaire was designed to solicit data on the variables examined in this study.

Of the 144 survey questions distributed, 127 questionnaires completed were returned, providing an 88.2 per cent response rate. However, 123 were used for analysis due to non-completion, suspicious answer patterns and double responses. Baruch and Holtom (2008) suggest that in organisational research, the average individual response rate is about 52.7 per cent and standard deviation of about 20.4 per cent. The response rate is about 30% higher than the average recommended response rate and is appropriate for the current study.

As presented in Table 1, the respondents were categorised into seven different SOEs as follows: Energy and Utilities 11.8%, Media and Communication 6.3%, Agriculture Sector 15%, Infrastructure Sector 10.2%, Manufacturing Sector 12.6%, Financial Sector 11.8%, Joint Venture /Mining 32.3%. The average age and size of these organisations were 34 years and 466 employees, respectively, as presented in Table 2.

Table 1: Distribution of Respondents by Sector

Sector	Useable	Percentage (%)
Energy & Utilities	15	12.2
Media and Communication	8	6.5
Agriculture Sector	19	15.4
Infrastructure Sector	13	10.6
Manufacturing Sector	16	13.0
Financial Sector	15	12.2
Joint Venture /Mining	37	30.1
Total	**123**	**100**

Source: Field Survey, (2021)

Table 2: Demographic Profile of the Participants

Demographic Variable	Category	Frequency	Percentage (%)
Age of Organisation	1–15 years	11	8.9
	16–30 years	47	38.2
	31–45 years	31	25.2
	46–60years	18	14.6
	over 60 years	16	13.0
Average age	34.5 years		
Size of Organisation based on number of employees	100-250	21	17.1
	251-500	43	35.0
	501-750	26	21.1
	751-1000	19	15.4
	1001- over	14	11.4

Source: Field Survey, (2021)

Data Collection Instrument

The questionnaire was presented in readable PDF format comparable to paper-based questionnaires that could be answered in a computer directly when opened or printed for manual answering. Each section of the questions was designed to ensure that each question was answered before moving to the next if a respondent decided to respond directly from his computer. This helped in minimising the amount of missing data. Before undertaking the survey, a pre-test of the instruments was conducted with five SOEs in Accra. The pre-test was to help decide whether or not participants involved were understanding questions correctly and ensure the order of questions are not influencing the answering patterns (Lee, & Podsakoff, 2003). The participants were then requested to provide their observations about the questionnaire, problems in understanding the questions, or its instructions. No significant changes were made to the final instrument.

To minimise the effect of common method bias (CMB), the study employed several measures recommended by Podsakoff *et al.* (2012). In the

introductory section of the questionnaires, the respondents were informed that there were no correct or incorrect responses, and their answers would be treated as confidential and anonymous. Further, the study separated questions for both dependent and independent variables to reduce linkages between the questions in line with psychological separation. Under this method, all sets of questions were divided and positioned in different questionnaire sections with their guidelines. Thus, moving from a set of questions to another compels participants to read a set of instructions to answer that set of questions. The point here is that this decreases the likelihood of the respondent using earlier answers as a guide to answering subsequent questions. Additionally, the study tried to eliminate the ambiguity of questions by phrasing them in ways that will provide clear meaning for each question.

Data Collection Procedure

Potential respondents (middle-level managers) targeted were drawn from State Interest and Governance Accountability(SIGA) and Social Security and National Insurance Trust SSNIT online databases and cross-validated with the actual list obtained from websites of individual SOEs. This provided information of the company's operations, addresses, employees size and in some cases, the names and designations of organisational, functional heads. A questionnaire was distributed to the targeted middle-level managers in line with the data gathering approach adopted in this study. A total of 144 questionnaires were distributed first by email to those organisations whose email addresses were found and the rest by hard copies. The researcher explained the study's purpose to the target population, and the potential respondents were guaranteed

confidentiality and anonymity. They were encouraged to complete the questionnaires between one week to two weeks.

Ethical Consideration

Consistent with prior studies, the current study was undertaken with strict adherence to the professional, ethical code of the Institutional Review Board of the University of Cape Coast. The research ethics committee had to approve this study's ethical compliance because it involves human participants. Participation was entirely voluntary, and this was communicated to the potential participants. Every participant was given ample information to enlighten them about the nature and purpose of this study. All respondents were guaranteed privacy and secrecy about the data collected. The data have been safely stored on the researcher's computer and external drive, and hard copies are kept in a secured drawer. No private identifiable information has been held with the dataset. The dataset has been used exclusively for this research purpose.

Measurement of the Variables

The primary constructs of this study are latent. This implies that they cannot directly be observed but can be measured through their indicator. There are two main types of indicator models used in measuring latent constructs: the formative indicator model and the reflective indicator model. In a formative indicator model, the latent construct is said to be shaped by a combination of its measurable dimensions (Chong & Mahama, 2013; Chin 1999). The measurable dimensions (indicators) need not co-vary with each other, but any change in one of these measurements will change the latent construct. The construct is said to be caused by the indicators, and these indicators are not interchangeable. Hence the omission of any of the dimensions conceptually changes the construct.

On the other hand, reflective indicator models focus on measuring the observable effects of the latent construct. Therefore, modifications in the latent construct lead to changes in all its indicators, and all indicators are expected to co-vary with one another (Hair et al., 2017; Chong & Mahama, 2013, Chin 1999). Also, under the reflective indicator model, the measured indicators are interchangeable; therefore, dropping or addition of an indicator does not change the latent construct.

Following Hair et al. (2017) and Chong and Mahama (2013), all the constructs in this study were measured using reflective indicator models. Each latent construct was measured using multi-item indicators. The scale items used in measuring the indicators were adapted from previously developed and validated survey instruments. All the scale items were anchored on a seven-point Likert scale, ranging from *1* (*strongly disagree*) to *7* (*strongly agree*). The specific measurement of the constructs is discussed below. The full questionnaire is reported in Appendix A.

Uses of management control systems

All the variables were measured using previously developed and validated instruments to the extent possible. *The beliefs system* was measured using Widener's (2007) four-item scale and captured employees' awareness of organizational core values and how they enthuse them. Its factor analysis shows that the variables form one dimension, with 68.6 per cent variance explained. Scale reliability is fully adequate (Cronbach's alpha 0.85).

The Boundary system was measured using the four-item scale established by Widener (2007). Respondents were asked about the impact of using the organisation's code of business conduct and information on

organisational risks. Its factor analysis indicates 71.3 per cent of the variance explained. Thus, scale reliability is quite acceptable at Cronbach's alpha of 0.87.

The *diagnostic uses of budget* are measured using four items from Henri (2006) and Widener (2007) and capture how management relies on performance measures to observe and evaluate employee performance. Factor analysis shows that the items explain 65.6 per cent of the variance in the construct and offers acceptable scale reliability of Cronbach's alpha of 0.83.

The *interactive uses of budgets* are measured using six items from Chong and Mahama (2013) and capture how management uses performance metrics indicators to concentrate attention on strategy-related issues. Factor analysis indicated that the items explain 65.6 per cent of the variance in the construct and shows acceptable scale reliability of Cronbach's alpha of 0.913.

Knowledge management

Knowledge management was measured as a second-order reflective construct with three dimensions (knowledge acquisition, knowledge application, and knowledge sharing) serving as its first-order reflective constructs. The scale items for the first-order constructs were adapted from Kasasbeh (2015) and Wu and Chen (2014). *Knowledge acquisition* was measured with a four-item scale. The measures focused on how organisations generate knowledge. Prior studies report high reliability (factor loadings 0.820 and Cronbach's alpha 0.863). *Knowledge application* was measured with three items adapted from Wu and Chen (2014). The measures relate to how organisations apply knowledge in adding value to the innovative process. Prior studies report high reliability (factor loadings 0.787 and Cronbach's alpha 0.781). *Knowledge sharing* was measured using a three-item scale adopted. The

measures capture the extent to which organisations disseminate knowledge among organisational members. Prior studies report high reliability (factor loadings 0.862 and Cronbach's alpha 0.782).

Psychological empowerment

Psychological empowerment was measured as a second-order reflective construct with all dimensions comprising meaning, competence, self-determination and impact serving as its first-order reflective constructs. Each of the four first-order constructs was measured with three-item scales adapted from Spreitzer (1995). In a review of over twenty studies, Boudrias, Gobert, Savoie, and Vandenberghe (2003) report that Spreitzer's (1995) psychological empowerment questionnaire has been used in several empirical studies with acceptable Cronbach alphas; averaging 0.82 across the studies reviewed. Besides, each of the four dimensions had satisfactory reliability ($\alpha \geq .70$) across all studies. As a result, the current study used these measures.

Organisational performance

Organisational performance was measured with scale items developed by Hung, Lien, Yang, Wu, and Kuo (2011). The construct comprised eleven items measuring customer satisfaction level, market expansion, production efficiencies, return on investment and profitability over the previous three years. The scale items have been reported to have high reliability in prior studies with factor loadings above 0.70. In addition, Cronbach coefficients range between 0.80 to 0.90, making it suitable for current study use.

Control Variables

Following the suggestion of Chong and Mahama (2013), three variables were controlled; organizations' age, size, and industry type. This is particularly

important because an organisation's age, size, and sector can affect its resource deployment. For instance, big organisations may be characterised by more resources than smaller ones, crucial in determining their performance. Similarly, older organisations may better understand the business environment than younger organisations and potentially leverage their knowledge for better performance. Besides, sectors of the organisation may differ in characteristics and may have different influences on performance. As a result, these variables were measured and included in the statistical analysis to partial out their effects. *Age* was estimated as the number of years the organization has been in existence since its establishment. *Size* is measured using the number of employees in an organization.

Data Analysis

Data screening and preparation

The collected data were screened and prepared before statistical analysis. First, the data were filtered for outliers and missing values. Only four questionnaires items had missing values. Of these four variables, two had fewer than one per cent missing values, and the remaining two variables (BL2 and PE 4) had about 1.5 per cent. Thus, less than five per cent are deemed within realistic parameters and may not cause any difference in the statistical results (Hair *et al.*,2017). For this reason, missing values were replaced using the median of all values for each item since all indicators are ordinal and measured on a 7-point Likert scale (Gaskin, 2016).

The data were also vetted for outliers to determine whether participants proved extreme responses to any questions (Hair *et al.*, 2018). The current study measured all by a 7-point Likert scale. Therefore, outliers were probable as

some participants might have a diverse view about a specific question by providing a wide range of answers. Thus, the Mahalanobis distance measure was used for the current study. The outcomes show no observations of extreme outliers. Hair et al. (2016) suggest that even if any such outliers exist, they should be maintained to avoid restricting the generalisation of the entire population. The statistical analysis may not be challenging, especially when the sample is bootstrapped (Kline, 2005).

Statistical tool used for data analysis

The SmartPLS approach with software version 3.3 was used to analyse the data. The PLS provides a solution to studies with smaller data sizes, multiple constructs, and many items (Hair et al., 2017). Unlike covariance-based structural equation modelling (SEM), PLS is a hybrid modelling approach with the intent to maximize variances while minimizing error (Hair et al., 2017). As a non-parametric approach, PLS makes no specific distributional assumptions about data and accommodates both normal and non-normal data. For this reason, the R square is considered a fitting indicator for measuring the model predictiveness. As such, the bootstrapping resampling procedure is employed to examine the significance of factor loadings and path coefficients.

As a general rule, the lowest data set or sample size vital for PLS analysis is ten times the number of independent variables in the regression model. For this study, the dependent variable with the most complex regression is organizational performance, which has nine predictors (made up of six independent variables and three control variables). This implies a minimum sample size of 90. Thus, the number of useable responses of 123 for the current study is sufficient for the planned data analysis using SmartPLS.

PLS is considered the most malleable technique for causal predictive inferences, and like the covariance-based SEM, it comprises analysing both measurement and a structural model simultaneously (Hair et al., 2016). The technique is also appropriate for describing composite associations, such as causal-predictive analysis in a low theoretical information context (Hair et al., 2017). Thus, it is for both theory validation and developing proposals to test further. Hair et al. (2016) suggest that the PLS-SEM is the best, capable of suitable assessment technique when the researcher simultaneously examines the associations among multiple variables. Consequently, the researcher finds PLS the most ideal for this current study due to the nature of the construct being investigated and the small sample size. Its use for the present study is consistent with other accounting studies deployed to test path models. The data collected were saved as a CVS file: the format acceptable to the Smart PLS software.

In applying the PLS approach to analyse data, preparing a path model indicating the relationships between scale-items and their respective constructs and the relationships among constructs is essential, as shown in Figure 2. Two components are acknowledged in the path model. First, the measurement model, also known as the outer model, explains the connections between the latent variables (constructs) and their indicators. Second, the structural models, also called the inner model, define the latent variables' relations (Hair *et al.*, 2018).

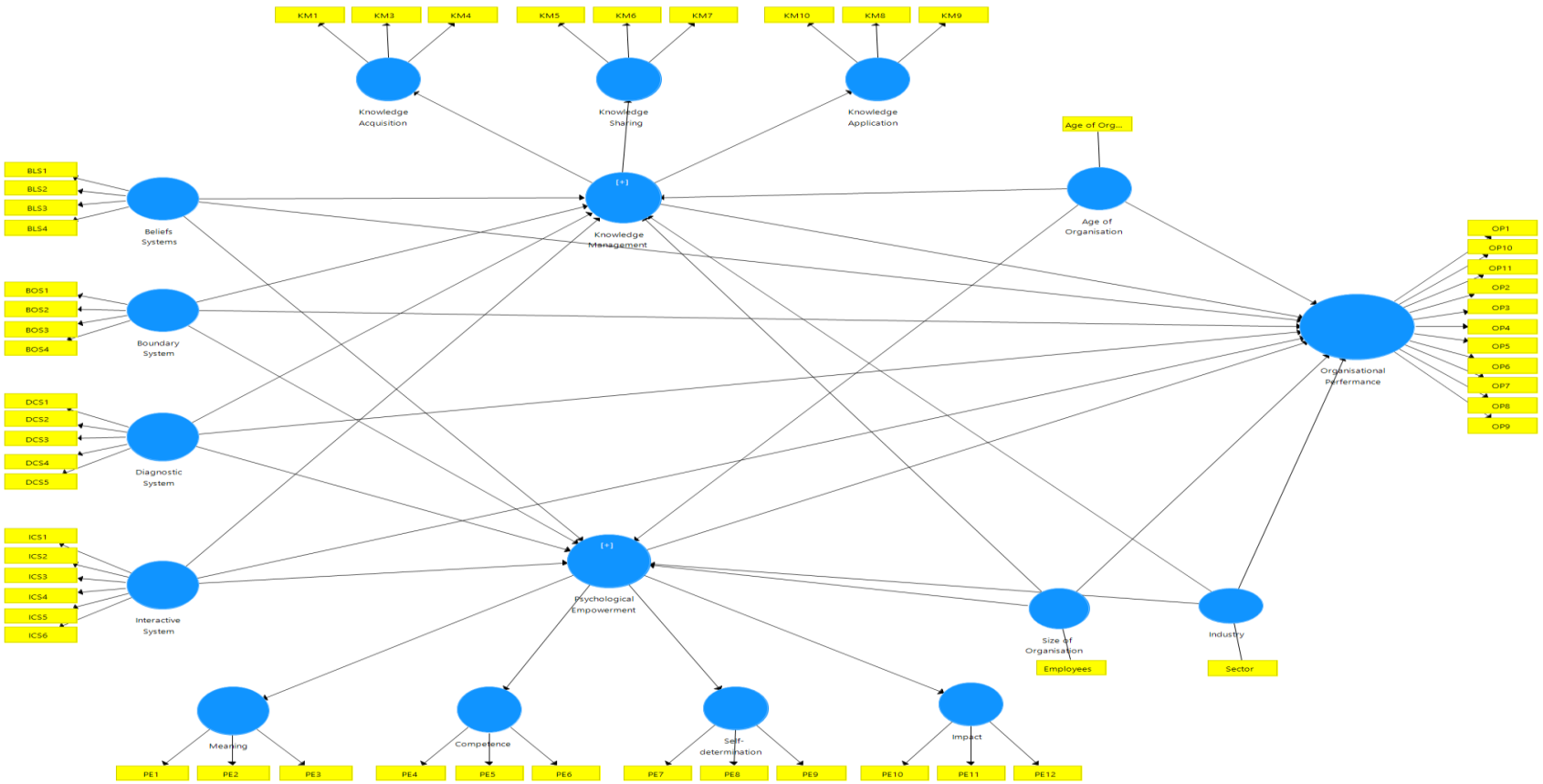

Figure 2: Path Model (Source: Author's Construct, 2021)

Assessing measurement model results

The primary phase in estimating PLS-SEM results comprises analysing the measurement models. The appropriate benchmarks vary between formative and reflective constructs. The constructs in this current study are reflective and assessed using classical test theory involving estimating the reliability and validity of the measurement models.

Measurement model reliability

Reliability assesses the amount to which scale items consistently measure what they are intended to measure across time and space. Reliability is evaluated at two levels: specific item reliability and construct reliability. Individual item reliability focuses on individual factor loadings. In assessing specific item reliability, we obtained the factor loadings for each scale item from the PLS measurement model. The item loadings represent the relationship between the individual item and its construct. Each item loading was measured to determine whether to maintain the item as a reliability measure of the construct it is intended to measure. Factor loadings of 0.70 or greater are recommended to establish acceptable individual item reliability; those loadings below 0.70 are to be considered for elimination (Hair et al., 2016). However, researchers are advised to carefully consider the effects of eliminating any item on the composite reliability when they are below 0.7. Thus, indicators should be reviewed for removal only when removing the indicator will increase the average variance extracted and the composite reliability (Hair et al., 2016). However, indicators with very small factor loadings (below 0.50) should permanently be ignored from the construct (Hair et al., 2016). Hair et al. (2016) suggest that reflective indicators are virtually

exchangeable, and eradicating individual indicators will not change the theoretical sphere of the construct and will not cause substantial concerns in terms of conceptual misspecification, so long as the construct has adequate reliability. Based on finding acceptable reliability, two indicators were removed from the measurement model with loadings lower than 0.5. As shown in Table 3, all the other items loaded significantly on their respective constructs with factor loading more than 0.7, demonstrating adequate reliability.

Table 3: Descriptive statistics, factor loadings and t-values

Construct		Scale Items	First- Order				Second-Order	
			Factor Loadings	Mean	Standard Deviation	T Statistics	Factor Loading	T Statistics
Management control systems	Beliefs Systems	BLS1	0.713	4.268	1.476	12.765		
		BLS2	0.776	5.106	0.994	14.361		
		BLS3	0.868	5.154	1.112	32.072		
		BLS4	0.833	5.073	0.973	22.799		
	Boundary System	BOS1	0.888	4.333	1.631	44.587		
		BOS2	0.855	4.522	1.527	20.959		
		BOS3	0.753	4.756	1.511	11.408		
		BOS4	0.764	4.675	1.506	19.304		
	Diagnostic uses of budgets	DCS1	0.729	4.569	1.46	15.014		
		DCS2	0.782	4.439	1.368	20.361		
		DCS3	0.730	4.561	1.170	14.532		
		DCS4	0.738	5.163	1.074	12.749		
		DCS5	0.717	5.065	0.969	9.784		
	Interactive uses of budgets	ICS1	0.721	4.911	0.865	15.268		
		ICS2	0.828	5.133	0.987	26.706		
		ICS3	0.782	5.073	1.005	21.928		
		ICS4	0.768	5.049	0.944	14.282		
		ICS5	0.821	4.951	0.978	25.494		
		ICS6	0.802	5.089	0.826	21.323		
Knowledge Management	Knowledge Acquisition	KM1	0.833	5.163	0.999	26.334	0.908	45.51
		KM3	0.899	5.134	1.036	46.902		
		KM4	0.826	5.171	1.065	22.297		
	Knowledge Sharing	KM5	0.857	5.179	1.023	34.713	0.927	64.803
		KM6	0.809	5.195	1.009	18.179		

	Knowledge Application	KM7	0.827	5.154	1.036	28.619		
		KM8	0.833	5.122	1.001	30.681	0.907	57.943
		KM9	0.841	4.919	1.048	33.104		
		KM10	0.831	4.743	1.475	25.729		
Psychological empowerment	Meaning	PE1	0.806	4.959	1.271	21.606	0.802	33.473
		PE2	0.875	5.057	1.121	39.028		
		PE3	0.789	5.154	0.963	18.614		
	Competence	PE4	0.856	4.463	1.45	29.376	0.913	58.719
		PE5	0.894	4.699	1.597	56.271		
	Self-determination	PE6	0.807	4.626	1.346	24.176		
		PE7	0.866	4.618	1.347	41.836	0.797	28.28
		PE8	0.757	4.263	0.936	14.992		
	Impact	PE9	0.678	4.724	1.218	9.145		
		PE10	0.774	4.683	0.858	12.448	0.717	18.722
		PE11	0.637	5.049	0.863	9.857		
		PE12	0.843	5.049	1.125	32.464		
Organisational Performance		OP1	0.812	4.333	1.733	23.738		
		OP2	0.812	5.089	1.104	25.776		
		OP3	0.829	5.008	1.304	20.689		
		OP4	0.799	5.065	1.286	20.982		
		OP5	0.683	4.992	1.206	12.191		
		OP6	0.738	4.854	1.057	13.67		
		OP7	0.798	5.081	1.123	19.134		
		OP8	0.749	4.992	1.115	20.208		
		OP9	0.773	5.154	1.004	21.457		
		OP10	0.796	4.911	1.337	20.055		
		OP11	0.697	4.976	1.055	11.681		

Source: Field Survey, (2021) n= 123; All factors loadings are significant at the 0.001 level

The next is the construct reliability assessment, which focuses on the internal consistency among the indicators measuring a construct. In this study, reliability was assessed using composite reliability, rho_A and Cronbach's alpha (Hair *et al.*, 2018). Composite reliability, discussed as McDonald's coefficient, is achieved by relating all the actual score variances and covariance's in the composite indicator variables connected to constructs. It is achieved by dividing the sum of the score by the total variance in the composite. Unlike Cronbach's Alpha, the factor loadings are assumed to be the same for all items; composite reliability considers the varying factor loadings of the items. Composite reliability of 0.7 or greater is required for a construct to establish acceptable reliability (Drolet and Morrison, 2001).

Cronbach's alpha is another way of assessing construct reliability that adopts similar measures but produces lower values than composite reliability. It measures how a bundle of scale items comprising the construct as a group are associated. Like the Cronbach alpha, rho_A is another method of assessing internal consistency and also take on a similar threshold as the other two measures but produces stricter standards of the relationship among a bundle of items measuring the construct as a group. The current study assesses reliability using all these three measures. As reported in Table 4, all the indicators showed values above the acceptable threshold values.

Table 4: Model Internal Consistency and Reliability

Latent Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Beliefs Systems	0.811	0.821	0.876	0.639
Boundary System	0.839	0.870	0.889	0.667
Competence	0.812	0.813	0.889	0.728
Diagnostic System	0.798	0.813	0.858	0.547
Impact	0.646	0.713	0.798	0.572
Interactive System	0.877	0.877	0.907	0.620
Knowledge Acquisition	0.813	0.819	0.889	0.729
Knowledge Application	0.783	0.783	0.873	0.697
Knowledge Sharing	0.776	0.778	0.870	0.691
Meaning	0.767	0.786	0.864	0.679
Organisational Performance	0.932	0.937	0.942	0.597
Self-determination	0.664	0.722	0.813	0.594

Source: Field Survey, (2021)

Measurement model validity

Validity denotes the amount to which scale items measure the underlying constructs. Two categories of validity assessments are crucial in PLS: convergent validity and discriminant validity. Convergent validity describes the degree to which the construct come together to clarify the discrepancy of its items. The average variance extracted (AVE) for each construct criteria is used to assess its convergence. The AVE measures the extent of inconsistency captured by a construct relative to the aggregate of variance is due to measurement error. Thus, the AVE is determined by taking the square of the loading of individual indicators on a construct and its mean value. An adequate AVE is 0.50 or greater, indicating that the construct explains at least 50 per cent or more of its items' variance. As reported in Table 4, the AVEs of the constructs in this study were between 0.547 and 0.729. These indicate acceptable convergent validity.

Discriminant validity measures construct to determine whether, theoretically, the constructs that are not thought to be associated are distinct or not correlated. Thus, the discriminant validity was measured using the Fornell-Larcker criterion, long-established for reflective construct as the square root of the AVE of the respective construct is higher than its highest correlation with any other construct (Hair et al., 2018). Thus, discriminant validity is validated when the squared correlation in two constructs is lower than the average variance extracted. Table 5 shows the contrast between squared correlations of each construct, and all the constructs show evidence of discriminate validity. Therefore, the measurement model exhibited evidence of discriminate validity.

Table 5: Discriminant Validity- Fornell-Larcker Criterion

	Constructs	1	2	3	4	5	6	7	8	9	10	11	12
1	Beliefs Systems	**0.800**											
2	Boundary System	0.403	**0.817**										
3	Competence	0.493	0.488	**0.853**									
4	Diagnostic uses of budgets	0.451	0.533	0.589	**0.740**								
5	Impact	0.454	0.446	0.491	0.437	**0.756**							
6	Interactive uses of budgets	0.299	0.514	0.441	0.479	0.445	**0.788**						
7	Knowledge Acquisition	0.390	0.588	0.587	0.562	0.617	0.599	**0.854**					
8	Knowledge Application	0.463	0.556	0.577	0.629	0.612	0.523	0.720	**0.835**				
9	Knowledge Sharing	0.494	0.500	0.532	0.596	0.550	0.532	0.765	0.797	**0.831**			
10	Meaning	0.463	0.497	0.651	0.630	0.466	0.497	0.572	0.461	0.480	**0.824**		
11	Organizational Performance	0.485	0.541	0.588	0.662	0.629	0.522	0.692	0.654	0.700	0.672	**0.773**	
12	Self-determination	0.431	0.481	0.704	0.528	0.574	0.393	0.613	0.650	0.613	0.522	0.615	**0.771**

Source: Field Survey, (2021)

Note: Square roots of the AVE are in diagonal, and correlations are in the off-diagonal

Assessing common method bias

Many scholars are consistent with the view that common method bias (CMB) is a risk to the validity of the measurement method (Chong & Mahama, 2013). Thus, common method bias is the variance linked to the measurement method relative to the constructs they measure. Given that the current study used a questionnaire to collect data in a self-reported survey, CMB may emanate from different sources. These may include scale items complexity; items ambiguity to respondents; respondents wanting to show socially acceptable behaviour; and less thorough responses from respondents (Malhotra, Schaller, & Pati, 2017; Chong & Mahama, 2013; MacKenzie & Podsakoff, 2012). Furthermore, common method bias yields a methodical covariation above the proper relationship between the scale items. As a result, the transformed values of the observed associations and other relevant indicators might lead to inappropriate assessments of constructs' reliability and convergent validity. Two main approaches have been recommended to deal with common method bias issues (Chong & Mahama, 2013). The first is to apply some sequence methods to remedy common method bias in the design of survey questions. This has been dealt with under the data collection stage in the current study. The second approach is to adopt statistical techniques to identify the possibility of common method bias and to partial out its effects.

The current study adopts the unmeasured latent method factor technique to uncover and partial out common method bias. The method allows researchers to model the impact of common method bias at the measurement model level without formerly determining the precise cause of the bias. As a result, the method does not have scale measures of its own. Instead, it uses the scale items

associated with the constructs under the study presumably affected by common method bias (Chong & Mahama, 2013). Therefore, the current study used all the indicators of the primary constructs in the research and modelled them as single-indicator latent first-order constructs to create a common method factor. The primary constructs were modelled as second-order constructs of their single-indicator variable, as suggested by Chong and Mahama (2013). In addition, the single-item indicators are modelled as first-order constructs of the common method factor. By this, the technique removes all variance between the common method factor and the construct studied. The path coefficients between the single-indicator latent first-order construct and the main constructs (primary constructs and common method factor) are interpreted as factor loading (Chong & Mahama, 2013; Liang et al., 2007). As shown in Table 6, the single-indicator latent first-order construct loaded higher onto the primary constructs of the study as compared to the common method factor. In addition, the average variance explained by the primary constructs (0.688) is far considerable than the average variance expounded by the common method factor (0.039). These results suggest that common method bias is not a risk in this study.

Table 6: Results of Common Method Bias Test

		Factor Loadings			
Constructs	Items	Primary constructs (R1)	$R1^2$	Common Method Factor (R2)	$R2^2$
Beliefs Systems	BLS1	0.662	0.438	0.088	0.008
	BLS2	0.837	0.701	-0.129	0.017
	BLS3	0.887	0.787	-0.038	0.001
	BLS4	0.826	0.682	0.032	0.001
Boundary Sys-tems	BOS1	0.924	0.854	-0.030	0.001

	BOS2	0.988	0.976	-0.219	0.048
	BOS3	0.925	0.856	-0.284	0.081
	BOS4	0.517	0.267	0.355	0.126
Diagnostic Control Systems	DCS1	0.927	0.859	0.379	0.144
	DCS2	0.465	0.216	-0.086	0.007
	DCS3	0.854	0.729	-0.291	0.085
	DCS4	0.886	0.785	-0.215	0.046
	DCS5	0.851	0.724	-0.193	0.037
Interactive Control Systems	ICS1	0.638	0.407	0.138	0.019
	ICS2	0.864	0.746	-0.077	0.006
	ICS3	0.762	0.581	0.036	0.001
	ICS4	0.794	0.630	-0.033	0.001
	ICS5	0.876	0.767	-0.093	0.009
	ICS6	0.842	0.709	-0.063	0.004
Knowledge Generation	KM1	0.774	0.599	0.071	0.005
	KM3	0.965	0.931	-0.082	0.007
	KM4	0.816	0.666	0.015	0.000
Knowledge Sharing	KM5	0.868	0.753	-0.017	0.000
	KM6	0.716	0.513	0.123	0.015
	KM7	0.908	0.824	-0.105	0.011
Knowledge Application	KM8	0.907	0.823	-0.098	0.010
	KM9	0.889	0.790	-0.068	0.005
	KM10	0.722	0.521	0.148	0.022
Meaning	PE1	0.673	0.453	0.168	0.028
	PE2	0.900	0.810	-0.016	0.000
	PE3	0.964	0.929	-0.251	0.063
Competence	PE4	0.925	0.856	-0.103	0.011
	PE5	0.908	0.824	-0.019	0.000
	PE6	0.734	0.539	0.109	0.012
Self-determination	PE7	0.806	0.650	0.083	0.007
	PE8	0.827	0.684	-0.108	0.012
	PE9	0.704	0.496	-0.025	0.001
Impact	PE10	0.911	0.830	-0.178	0.032
	PE11	0.794	0.630	-0.188	0.035
	PE12	0.655	0.429	0.236	0.056
Organisational Performance	OP1	0.544	0.296	0.289	0.084
	OP2	0.780	0.608	-0.100	0.010

OP3	0.753	0.567	-0.325	0.106
OP4	0.903	0.815	-0.340	0.116
OP5	1.125	1.266	-0.411	0.169
OP6	1.112	1.237	-0.265	0.070
OP7	1.055	1.113	-0.035	0.001
OP8	0.984	0.968	0.517	0.267
OP9	0.832	0.692	0.402	0.162
OP10	0.283	0.080	0.012	0.000
OP11	0.406	0.165	-0.067	0.005
Average	0.813	0.688	-0.026	0.039

Source: Field Survey, (2021)

Given that the measurement model demonstrates adequate reliability and validity and is not severely affected by common method bias, the researcher moved to assess the structural model results.

Assessing structural model results

Shmueli et al. (2016) suggest that when the assessed measurement model is acceptable, the subsequent stage assesses PLS-SEM results by estimating the structural model. Generally, assessment benchmarks include the R^2, the coefficient of determination (R^2), the Q^2 blindfolding-based cross-validated redundancy measure, the statistical significance and relevance of the path coefficients (Hair *et al.*, 2018). The R^2 denotes the proportion of the variance in the dependent variable collectively explained by the independent variables. It is benchmarked from 1 to 0, with figures closer to 0 to signify poor fit and 1 representing a good fit (Hair *et al.*, 2018). As shown below in Table 7, the value of R^2 in the current study ranged between 0.604 and 0.661, demonstrating a good model fit.

Another method of measuring the PLS path model's predictive precision is by computing the Q^2 value. Hair et al. (2018) explained that Stone-Geisser's Q^2 value indicates a model's predictive relevance. Model Q^2 values greater than

zero indicate the exogenous constructs predictive importance for the endogenous construct under consideration (Hair *et al.*, 2018). Table 7 shows that all three constructs have Q^2s that are significantly above zero, providing ample evidence of the model's predictive relevance

Table 7: R^2 and Q^2 values in the Structural Model

	R^2	Adjusted R^2	Q^2
Organisational Performance	0.661	0.634	0.374
Knowledge Management	0.609	0.585	0.329
Psychological Empowerment	0.604	0.580	0.305

Source: Field Survey, (2021)

Multi-collinearity test

In advance of measuring the structural associations, multicollinearity was tested to confirm that it does not prejudice the regression results. Multicollinearity is assessed by examining the variance inflation factors (VIFs) of all regressions in a model (Hair et al., 2017a). Given that all constructs in the model were reflective, the only regressions in the model were in the structural model; as such, assessment of multicollinearity was carried out using the structural (inner) model's VIFs. VIF values above 5 are suggestive of potential collinearity issues among the predictor constructs. Becker et al. (2015) point out that collinearity problems is possible at lower VIF values of 3-5 and suggested that the VIF values must be three and lower. As reported in Table 8, the inner model VIF values for all the predictor constructs are below three (3), the recommended amount. Severe collinearity is therefore not an issue in the study's structural model. Hence, the researcher moved on to test the study hypotheses.

Table 8: VIF Values in the Structural Model

	Knowledge Management	Psychological Empowerment	Organisational Performance
Beliefs Systems	1.322	1.322	1.522
Boundary System	1.690	1.690	1.844
Diagnostic Uses of Budgets	1.701	1.701	2.134
Interactive Uses of Budgets	1.494	1.494	1.707
Knowledge Management			3.000
Psychological Empowerment			2.962

Source: Field Survey, (2021)

Chapter Summary

The chapter deliberated the research paradigm, the strategy, and the design of the study. The philosophical assumptions of the study are positivist paradigm. For this reason, the quantitative research approach used in the study has been thoroughly discussed. A cross-sectional survey design was used to collect data from a target sample of 144 middle managers of SOEs in Ghana. The PLS-SEM was used as the principal data analysis method in the current study. The measurement model results, the predictiveness of the structural model and multicollinearity tests were also discussed. Thus, the structural model results relating to the hypotheses test is discussed in the next chapter.

CHAPTER FIVE

RESULTS AND DISCUSSION

Introduction

This study has focused on investigating the influence of MCS on SOEs' performance and the mediating roles of knowledge management processes and employees' psychological empowerment. Data was gathered through a cross-sectional survey and analysed using the PLS-SEM approach. The chapter focus is to present and analyse the findings of the results.

Results of Hypotheses Testing

The structural model provides results for the magnitude, direction and significance of path coefficients among constructs, thereby providing the basis for hypotheses testing. Unlike parametric approaches where t-values are generated for significance tests, PLS is a nonparametric approach and relies on bootstrap resampling procedure to test the significance of estimates (Hair et al., 2017). In this study, a bootstrapping process was used to generate 5,000 randomly drawn samples with replacement. One-tailed tests were implemented owing to the one-directional nature of the study's hypotheses, and the t-values were matched against the critical values of $p < 0.05$. Hair et al. (2018) point out that, depending on the standard error obtained by bootstrapping to get *t*- values and *p* - values for all structural path coefficients, the relations could be described as significant or insignificant. When *t*- value is higher than the critical value, the decision is that the coefficient is statistically significant at a certain likely error level or significance level. However, following the suggestion of Mahama (2006), the bootstrap confidence interval method provides the most powerful and reasonable method of obtaining confidence limits for specific indirect effects in most study settings and is considered superior to the use of p-values and was therefore used. The model highlight is shown in Figure 3.

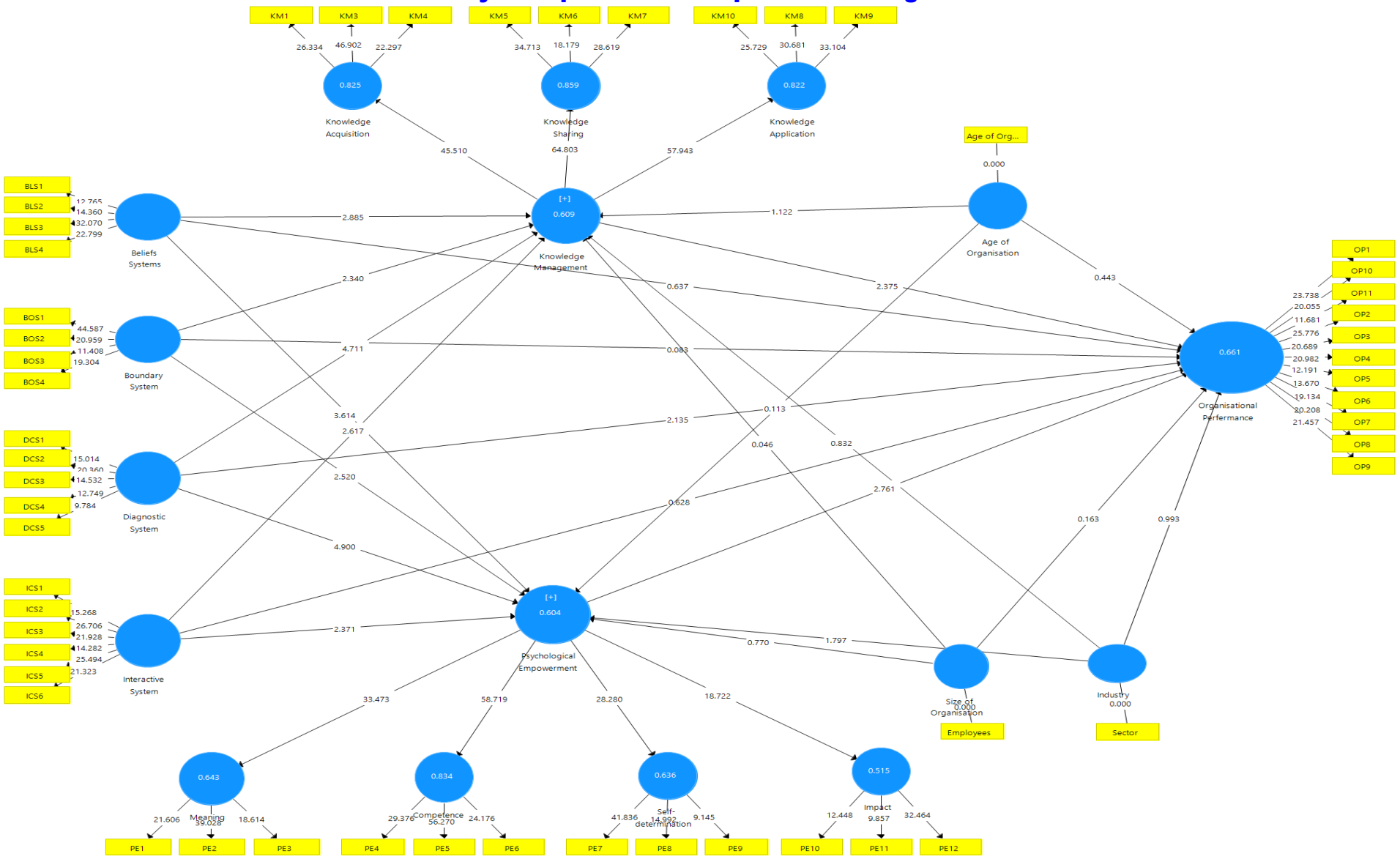

Figure 3: The structural model

Direct effects

Table 9 summarises the path coefficient, *t*-values, confidence intervals and *p*-values of the direct relationships among constructs.

Table 9: Results of the Structural Model (Direct Effects)

Hypotheses	Path	Path Coefficient	T Stat	P Values	Confidence-Level 5%	Confidence-Level 95%
H1a	Beliefs Systems -> Organisational performance	0.045	0.637	0.262	-0.077	0.159
H1b	Boundary System -> Organisational performance	0.007	0.083	0.467	-0.122	0.145
H1c	Diagnostic uses of budgets -> Organisational performance	0.202*	2.135	0.016	0.049	0.358
H1d	Interactive uses of budgets -> Organisational performance	0.044	0.628	0.265	-0.072	0.157
H2a	Beliefs Systems -> Knowledge Management	0.1738*	2.885	0.002	0.074	0.271
H2b	Boundary System -> Knowledge Management	0.220*	2.340	0.010	0.050	0.359
H2c	Diagnostic uses of budgets -> Knowledge Management	0.331*	4.711	0.000	0.209	0.441
H2d	Interactive uses of budgets -> Knowledge Management	0.283*	2.617	0.004	0.115	0.470
H3a	Beliefs Systems -> Psychological Empowerment	0.271*	3.614	0.000	0.148	0.393
H3b	Boundary System -> Psychological Empowerment	0.185*	2.520	0.006	0.062	0.302
H3c	Diagnostic uses of budgets -> Psychological Empowerment	0.355*	4.900	0.000	0.231	0.472

H3d	Interactive uses of budgets -> Psychological Empowerment	0.163*	2.371	0.009	0.056	0.283
H4	Knowledge Management -> Organisational performance	0.317*	2.375	0.009	0.119	0.557
H5	Psychological Empowerment -> Organisational performance	0.314*	2.761	0.003	0.112	0.485

Source: Field Survey: (2021)
*p < 0.05

Management Control Systems and Organisational Performance

The study hypothesised in H1a that beliefs systems would be significant and positively affect organisational performances. The results in Table 9 and Figure 3 establish positive but insignificant association between beliefs and organisational performance (β = 0.045; t =0.637; p-value= 0.262, CI= -0.077-0.159). Thus, hypothesis H1a is not supported and consistent with the findings of Altinay and Altinay (2004). However, the result is inconsistent with many studies that beliefs systems directly support organisational performance (Mohamed, Hui, Rahman, & Aziz, 2008; Widener, 2007). However, it is vital to highlight that though there was no significant association between beliefs and organisational performance, the indirect results suggest that the relationship between the two constructs occur via some intervening variables, which will be discussed under mediation analysis.

Hypothesis H1b predicted that the use of boundary systems would positively impact organisational performance. The results in Table 9 and Figure 3 reveals insignificant association between boundary system and organisational performance (β = 0.007; t = *0.083; p-value= 0.467, CI= -0.122-0145*). Thus the hypothesis is not supported. While this hypothesis is also not supported, it is imperative to highlight that the indirect results suggest that the link between boundary and organisational performance occur via some intervening variables that will be discussed further under mediation analysis.

Hypothesis H1c predicted that the diagnostic uses of budgets would positively impact organisational performance. The results presented in Table 9 and Figure 3 show a significant positive association between the diagnostic uses of budgets and organisational performance (β = 0.202; t =*2. 135; p-*

value=0.016, CI=0.049-0.357). Thus, H1c is supported. The results for H1c are consistent with Jalali et al. (2016), Bedford (2015), Sakka, Barki and Cote (2013) and Widener, (2007), who found that diagnostic use of MCS is significant and positively related to organisational performance. As diagnostic uses of budgets are part of broader control practices used in planning and evaluating better performance, the result shows its importance in managing SOEs in deriving visions. Sakka, Barki and Cote (2013) found that the diagnostic use of MCS increased project performance, especially when task uncertainty is low.

Similarly, in a study on MCS on firm performance, Bedford (2015) found that the diagnostic use of MCS enriched performance in firms specialising in either exploitation or exploration. However, his finding also suggests that the diagnostic had no direct influence in ambidextrous firms. Muhammad, Jamil and Mohamed (2013), Hofmann, Wald and Gleich (2012), and Widener (2007) support the study argument that diagnostic uses of budgets positively impact organisational performance.

Hypothesis H1d predicted that the interactive uses of budgets would positively impact organisational performance. The results reported in Table 9 and Figure 3 show a positive but insignificant relationship between the interactive uses of budgets and organisational performance (β = *0.044*; t =0.628; p-value=0.265, CI=-0.072-0.157). Hypothesis H1d is therefore not supported. The results are also inconsistent with the findings of Bedford (2015), Naranjo-Gil & Hartmann's (2007) and Bisbe and Otley (2004). They specifically argued that emphasis placed on interactive control systems was associated with performance. However, an analysis of the results for indirect effects shows that

the interactive uses of budgets affect performance through other intermediate variables.

Overall, the results for H1a-H1d confirms the need to evaluate more the possibility of mediating variables in the relationships between the uses of MCS and organisational performance in SOEs. It supports the necessity for examining the developmental processes by which MCS influences organisational performance (Nitzl et al., 2016).

Management Control Systems and Knowledge Management

Hypothesis H2a predicted that there would be a positive association between the use of beliefs systems and knowledge management. Consistent with this prediction, the results presented in Table 9 and Figure 3 shows a positive and significant relationship between hypothesis H2a ($\beta = 0.173$; $t = 2.885$; p-value = 0.002; CI = 0.074-0.271). Thus, H2a is supported. The significant relationship suggests that beliefs systems have a crucial role in inspiring management to engage in knowledge management processes. This is consistent with findings in prior studies (Weinberg, 2015; Marrginson, 2002). The results show that the SOEs beliefs systems stimulate knowledge-sharing behaviours, inspire and encourage employees to explore, acquire relevant knowledge, and share knowledge (Spekle et al., 2017; Simon, 1995). The findings show the importance of using beliefs systems in SOEs and the belief that management needs to implement projects that emphasise organisational beliefs to enhance knowledge management.

Hypothesis H2b explored the relationship between boundary systems and knowledge management. It was predicted there would be a positive association between boundary systems and knowledge management. The results

reported in Table 9 and Figure 3 show a positive and significant path coefficient from boundary systems to knowledge management (β =0.220; t = 2.340; p-value = 0.010; CI0.050-0.359). Thus, the hypothesis is supported. Consistent with the study prediction, the result supports the study view that a boundary system motivates employees to search and explore new knowledge within predefined spaces since employees have no option but to work within an exact code of conduct (Mundy,2015; Simon, 2000).

Hypothesis H2c investigated the association between the diagnostic uses of budgets and knowledge management. It was anticipated there would be a positive link between the diagnostics uses of budget and knowledge management. As reported in Table 9 and in Figure 3, the results show positive and significant association between the diagnostics uses of budgets and knowledge management (β = 0.331; t *=4.711; p-value=0.000; CI= 0.209-0.441*). Thus, Hypothesis H2c is supported. The result is consistent with the findings of Meutia & Ahmed (2017), who found a significant direct association between feedback (diagnostic) control and knowledge management. It is also consistent with Henri (2006), who contend that diagnostic control systems are useful for evaluating the learning process and form the base for amending organisational plans and strategy. Diagnostic uses of control facilitate identifying a routine problem, focusing attention on critical processes, and fostering corrective action through the single-loop learning it inhabits. Thus, as a feedback control system, the diagnostic uses of budgets help managers provide information for discussion through which knowledge is further generated.

Hypothesis H2d examined the linkage between the interactive uses of budgets and knowledge management. The results reported in Table 9 and Figure

3 show a positive and significant between interactive uses of budgets and knowledge management (β =0.283; t = 2.617; p-value=0.004; CI=0.115-0.470). Thus, hypothesis H2d is supported. The results are consistent with Chong and Mahama (2013) argument that the interactive uses of budgets lead to improved knowledge through double-loop learning. Generally, the interactive uses of budgets enhance practices in exploiting and exploring organisational capability for better corporate knowledge management (Bedford, 2015; Henri, 2006). It encourages novelty through its influence on the generation, dissemination, and application of knowledge.

In sum, the results for H2a-H2d support the notion that MCS possess the dynamic capability for acquiring, sharing and using knowledge. These findings are significant as knowledge is considered an essential vehicle for securing and maintaining competitive organisations. Therefore, the results suggest that one way MCS uses may influence organisational performance is through its effect on knowledge management. For this reason, this study assesses the mediating role of knowledge management influence between the uses of MCS and organisational performance in SOEs.

Management Control Systems and Psychological Empowerment

Hypothesis H3a explored the relationship between beliefs systems and psychological empowerment. The results reported in Table 9 and Figure 3 indicate significant association between beliefs systems and psychological empowerment (β = 0.271; t = 3.614; p-value= 0.000; CI= 0.148-0.398). Thus, the hypothesis is supported. Moreover, the result is consistent with the findings of Spekle et al. (2017). In a study on the relationship between MCS and creativity, Spekle et al. (2017) found that emphasis on organisational beliefs

systems are associated with improved employee empowerment. Baird, Su and Munir (2018) also found that using the beliefs system is linked directly and indirectly with employee empowerment.

Hypothesis H3b investigated the relationship between boundary systems and psychological empowerment. The results in Table 9 and Figure 3 show a positive and significant relationship between the use of boundary system and psychological empowerment (β =0.185; t = 2.520; p-value= 0.006; CI=0.062-0.302). Thus, Hypothesis H3b is supported. The results as anticipated support Spekle et al. (2017) findings that emphasis placed on organisational boundary systems directly influences employee empowerment.

Hypothesis H3c predicted that the relationship between the diagnostics uses of budgets has a positive relationship with employee psychological empowerment. The results reported in Table 9 and Figure 3 reveal a positive and significant paths from the diagnostics uses of budgets and employee psychological empowerment (β = 0.355; t = *4.900*; p-value= 0.000; CI= 0.231-0.472). Thus, Hypothesis 3c is supported. Thus, it supports Ahrens & Chapman's (2004) findings that the diagnostic use of control systems facilitates employee integration with the organisation's activities by inspiring them to accomplish organisational objectives, increasing their sense of meaning.

Similarly, hypothesis H3d investigated the relationship between the interactive uses of budgets and psychological empowerment. It was predicted that there would be a positive relationship. The results in Table 9 and Figure 3 demonstrate significant positive relationship between the interactive uses of budgets and employee psychological empowerment (β =0.163; t = 2.371; p-value= 0.009; CI= 0.056-0.283). Accordingly, Hypothesis H3d is supported.

The findings support Webster's (2010) and Baird et al. (2018), who stressed that the interactive use of MCS had a significant direct relationship with employee psychological empowerment.

Knowledge Management and Organisational Performance

Hypothesis H4 looked at the association between knowledge management and organisational performance. Consistent with this prediction, the results presented in Table 9 and Figure 3 shows significant relationship between knowledge management and organisational performance (β = 0.317; t = 2.375; p-value= 0.009; CI=0.119-0.557). Thus, Hypothesis H4 is supported. The result is consistent with the findings in prior studies that suggest that knowledge management positively impacts organisational performance (Pauleen & Wang 2017; Mills & Smith, 2011). Shannak (2010) found that knowledge management systems significantly affect the effectiveness of strategic decisions that will lead to better organisational performance. Pauleen and Wang (2017) found that knowledge develops human capabilities in decision making and analysing data to achieve organisational performance. The results imply that good knowledge management practices (acquisition, knowledge dissemination and knowledge application) by SOEs management enhance organisational performance.

Psychological Empowerment and Organisational Performance

Hypothesis H5 predicted a positive link between psychological empowerment and organisational performance. Consistent with this prediction, the results presented in Table 9 and Figure 3 shows a positive and significant relationship between psychological empowerment and organisational performance (β =0.314; t = 2.761; p-value 0.003; CI=0.112-0.485). Thus,

Hypothesis H5 is supported. The results are consistent with Siachou and Gkorezis, (2014) findings that employees' efficiency at work is highly linked to his psychological empowerment and indirectly through job satisfaction, improvement in individuals' employee ability to acquire knowledge and skills crucial for progress in organisational performance.

Mediating Relationships

The bootstrap test method was adopted for the current study mediation analysis in line with Zhao, Lynch and Chen (2010) suggestion. The technique is thought to be an improvement over the theoretical and methodological hitches acknowledged in the literature about the Baron and Kenny (1986) approach test for mediation analysis (Hair et al., 2018). Hair et al. (2018) suggest that the bootstrap methods produce advanced statistical control levels related to the Baron and Kenny (1986) method and indicate that all mediators must be assessed simultaneously in one model in multiple mediation analysis. By this, a full view of the mechanism of the mediator's effect will be ascertained. Consequently, the current study adopted the steps Nitzl et al. (2016) recommended, as illustrated in Figure 3.

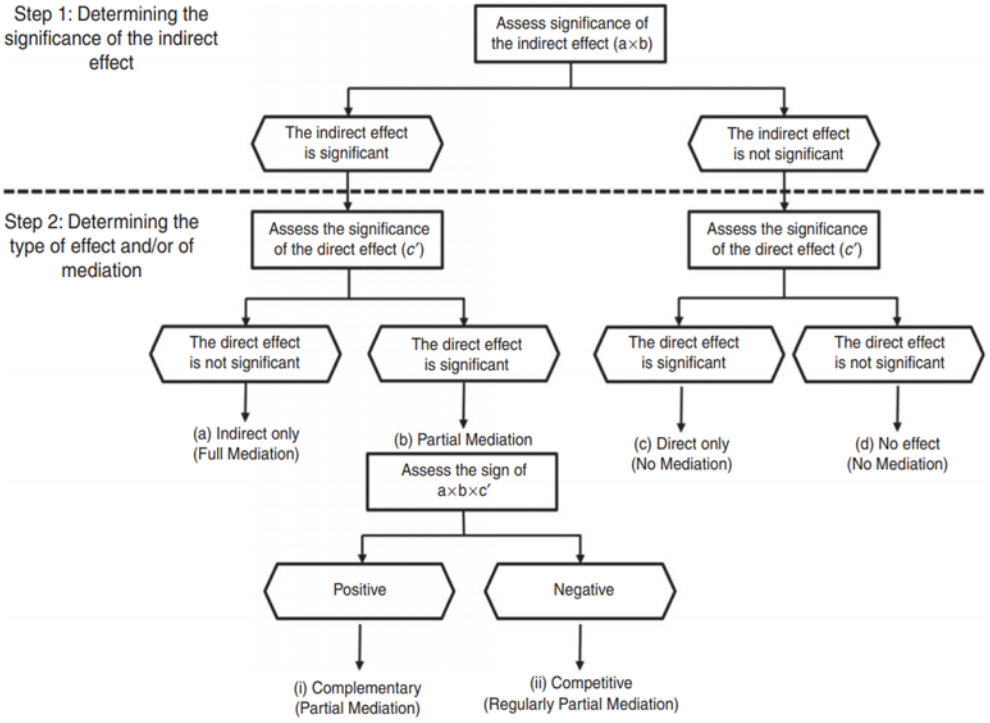

Figure 4: Mediation analysis procedure in PLS
Source: Adopted from Nitzl et al. (2016).

A mediating effect exists when the indirect impact is significant. Depending upon the power of the direct effects, mediation can be described as full or partial. Nitzl et al. (2016) describe full mediation as when the direct effects are insignificant while the indirect effect is significant. In the case of partial mediation, both the direct impact and the indirect impact are substantial. This approach to mediation analysis was adopted in this study. Table 10 reports the mediation results and includes the coefficients, t-values, confidence interval, and the corresponding significance levels. These results are discussed below.

Table 10: Mediation Results

Hypotheses	Variables	Indirect Effects					Direct Effects	Mediation Type
		Path Coefficient	T Stat	P Values	Confidence Interval 5% -95%			
H6a	Beliefs Systems -> Knowledge Management -> Organisational Performance	0.055	1.586	0.056	0.013	0.125	Insignificant	Full mediation
H6b	Boundary System -> Knowledge Management -> Organisational Performance	0.070	1.844	0.033	0.011	0.133	Insignificant	Full mediation
H6c	Diagnostic uses of budgets -> Knowledge Management -> Organisational Performance	0.105	2.060	0.020	0.034	0.201	Significant	Partial mediation
H6d	Interactive uses of budgets -> Knowledge Management -> Organisational Performance	0.089	1.526	0.063	0.021	0.209	Insignificant	Full mediation
H7a	Beliefs Systems -> Psychological Empowerment -> Organisational performance	0.085	1.968	0.025	0.022	0.163	Insignificant	Full mediation
H7b	Boundary System -> Psychological Empowerment	0.058	1.758	0.039	0.010	0.118	Insignificant	Full mediation

	-> Organisational performance							
H7c	Diagnostic uses of budgets -> Psychological Empowerment -> Organisational performance	0.111	2.435	0.007	0.037	0.184	Significant	Partial mediation
H7d	Interactive uses of budgets -> Psychological Empowerment -> Organisational performance	0.051	2.055	0.020	0.012	0.093	Insignificant	Full mediation

Source: Field Survey, (2021)

Mediating role of knowledge management

Hypothesis H6a predicted that knowledge management would mediate the relationship between beliefs system and organisational performance. The results reported in Table 10 show a significant indirect relationship (β =0.055; t = 1,586; p-value=0.056; CI= 0.013-0,125). Although the direct effect of beliefs systems on knowledge management (β =0.175; t = 2.885; p-value=0.002; CI= 0.074-0.271) and knowledge management to organisational performance (β =0.317; t = 2.375; p-value=0.009; CI= 0.119-0.557) are both positive and significant, there is no significant direct relationship between beliefs system and organisational performance (β =0,045; t = 0.637; p= 0.262; CI= -0.077- 0.159). As a result, knowledge management fully mediated the link between beliefs systems and organisational performance. Thus, Hypothesis 6a is supported.

In hypothesis H6b, it was predicted that knowledge management would mediate the relationship between boundary systems and organisational performance. The results reported in Table 10 show a significant indirect relationship between boundary systems and organisational performance via knowledge management (β =0.070; t = 1,844; p-value= 0.033; CI= 0.011-0.133). While the coefficients of the paths from boundary systems to knowledge management (β =0.220; t = 2.340; p-value=0.010; CI= 0.050-0.359) and knowledge management to organisational performance (β =0.317; t = 2.375; p-value=0.009; CI= 0.119-0.557) are both positive and significant, there is no significant direct effect from the boundary systems to organisational performance (β =0.007; t =0.083; p= 0.467; CI=-0,122-0.145). Therefore, knowledge management also fully mediates the link between boundary systems

and organisational performance (Hair et al., 2017). Hypothesis 6b is therefore supported.

Hypothesis H6c predicted that knowledge management would mediate the relationship between the diagnostic uses of budgets and organisational performance. The results in Table 10 reveals a significant indirect relationship between the diagnostic uses of budgets and organisational performance via knowledge management (β =0.105; t= 2.060; p-value= 0.020; CI=0.034-0.201). Besides, the direct association between the diagnostic uses of budgets and organisational performance is significant (β =0.202; t= 2.135; p-value= 0.016; CI=0.049-0.358), confirming that knowledge management partially mediated the relationship between the diagnostic uses of budgets and organisational performance. Hypothesis 6c is thus supported.

Finally, in hypothesis H6d, it was predicted that knowledge management would mediate the interaction between the interactive uses of budgets and organisational performance. The results in Table 10 confirmed that the indirect relationship between the interactive uses of budgets and performance via knowledge management is significant (β =0.089; t= 1.526; p-value=0.063; CI= 0,021-0.209). However, while the relationships between the interactive uses of budgets and knowledge management (β =0.283; t = 2.617; p-value=0.004; CI= 0.115-0.470) and knowledge management and organisational performance (β =0.317; t = 2.375; p-value=0.009; CI= 0.119-0.557) are both positive and significant, there is no significant direct effect between the interactive uses of budgets and organisational performance (β =0.044; t =0,628; p= 0.265; CI=-0.072-0.157). As a result, the relationship between the interactive uses of

budgets and organisational performance is fully mediated by knowledge management. Hypothesis 6d is therefore supported.

Overall, the results suggest that knowledge management processes serve as an essential conduit through which MCS influences organisation performance.

Mediating role of psychological empowerment

Hypothesis H7a predicted that psychological empowerment would mediate the relationship between the four MCS uses and organisational performance in SOEs. The results as shown in Table 10 reports a significant indirect relationship between beliefs systems and performance via psychological empowerment (β =0.085; t= 1.968; p-value= 0.022; CI=0,022-0,163). Even though the path coefficients of beliefs systems to psychological empowerment (β= 0.271; t= 3.614; p-value= 0.000; CI=0.148-0.393) and psychological empowerment to organisational performance (β= 0.314; t= 2.761 p-value= 0.003; CI=0.112-0.485) are both positive and significant, there is no significant direct effect from the beliefs systems to organisational performance (β= 0.045; t=0.637 p-value= 0.262; CI=-0.077-0.159). Given that the indirect relationship is significant, but the direct association is insignificant, the relationship between beliefs systems and organisational performance is fully mediated by psychological empowerment. Thus, hypothesis H7a is supported.

In hypothesis H7b, it was predicted that psychological empowerment would mediate the relationship between boundary systems and organisational performance. The results in Table 10 show a significant indirect relationship between boundary systems and organizational performance through psychological empowerment (β = 0.058; t=1.758; p-value= 0.039; CI=0.010-

0.118). The paths leading from boundary systems to psychological empowerment (β= 0.185; t= 2.520 p-value= 0.006; CI=0.062-0.302) and psychological empowerment to organisational performance (β= 0.314; t= 2.761 p-value= 0.003; CI=0.112-0.485) are both positive and significant. However, there is no significant direct effect from boundary systems to organisational performance (β= 0.007; t=0.083 p-value= 0.467; CI=-0.122-0.145). For that reason, the relationship between boundary systems and organisational performance is fully mediated by psychological empowerment. Therefore, hypothesis H7b is supported.

In hypothesis H7c, it was predicted that psychological empowerment would mediate the relationship between the diagnostic uses of budgets and organisational performance. The results as reported in Table 10 reveals a significant indirect relationship between the diagnostic uses of budgets and organisational performance via psychological empowerment (β= 0.111; t= 2.435; p-value= 0.007; CI=0.037-0.184). As reported earlier, the paths leading from the diagnostic uses of budgets to organisational performance (β = 0.202; t=2.135; p-value= 0.016; CI=0.049-0.358), the diagnostic uses of budgets to psychological empowerment (β= 0.355; t=4.900 p-value= 0.000; CI=0.231-0.472) and psychological empowerment to organisational performance (β= 0.314; t= 2.761 p-value= 0.003; CI=0.0112-0.485) are all positive and significant. Thus given the significant direct and indirect effects, psychological empowerment partially partially mediated the relationship between the diagnostic uses of budgets and organisational performance. The results, therefore, support hypothesis H7c.

Finally, hypothesis H7d predicted that psychological empowerment would mediate the relationship between the interactive uses of budgets and organisational performance. The results in Table 10 show a significant indirect relationship between the interactive uses of budgets and organisational performance through psychological empowerment (β =0.051; t= 2.055; p-value= 0.020; CI=0.012-0.093). As reported earlier, the path leading from the interactive uses of budgets to psychological empowerment (β= 0.163; t=2.371; p-value= 0.009; CI=0.056-0.0283) and psychological empowerment to organisational performance (β= 0.314; t= 2.761 p-value= 0.003; CI=0.112-0.485) are both positive and significant. However, the direct relationship between the interactive uses of budgets and organisational performance is not significant (p-value=0.265). Given these findings, the relationship between the interactive uses of budgets and organisational performance is fully mediated by psychological empowerment. Thus, Hypothesis H7d is supported.

Control variables

Three control variables that may affect the dependent variables were incorporated into the model to determine and partial out their effect on the results. Consequently, organisational age, size (number of employees), and industry type were controlled. Table 11 shows that these control variables, except the path from industry to psychological empowerment, had no significant association with the dependent variables. Consequently, they were excluded from further analysis (Hair *et al.*, 2017).

Table 11: Effects of Control Variables on Dependent Variables

Constructs	Path Coefficient	T Stats	P Val	Relationship	Effect
Age of Organisation -> Knowledge Management	-0.069	1.122	0.131	None	No
Age of Organisation -> Organisational Performance	-0.025	0.443	0.329	None	No
Age of Organisation -> Psychological Empowerment	0.007	0.113	0.455	None	No
Industry -> Knowledge Management	0.045	0.832	0.203	None	No
Industry -> Organisational Performance	0.058	0.993	0.160	None	No
Industry -> Psychological Empowerment	0.106	1.797	0.036	positive	No
Size of Organisation -> Knowledge Management	-0.002	0.046	0.482	None	No
Size of Organisation -> Organisational Performance	0.008	0.163	0.435	None	No
Size of Organisation -> Psychological Empowerment	-0.046	0.770	0.221	None	No

Source: Field Survey, (2021)

Discussion of Results

The outcomes of this study contribute to the growing literature on the impact of MCS use on organisational performance. While prior research has found that MCS uses are primarily beneficial for a wide array of corporate issues (Simon, 2000), the results of this study submit that their impact on performance depends on the particular style of use and specific context. This section aims to extend our understanding of the influence of MCS on the performance of SOEs by discussing the study's empirical findings.

Management control systems uses and organisational performance

First, while earlier studies have found direct link links between MCS uses and organisational performance, the results of this study show that only the diagnostic uses of budgets are directly related to organisational performance within the SOE context. The rest (beliefs, boundary and interactive uses of budgets) are not directly linked to organisational performance. The positive influence of the diagnostic uses of budgets may be due to its focus on the organisation's efficient and effective use of resources for goal accomplishment. When controls are used diagnostically, they demand efficiency from management through its monitoring and evaluation functions. By this, the diagnostic uses of budgets help discover variance and facilitate remedial actions if needed (Henri, 2006). This translates into improving SOEs performance as operating costs may fall below pre-specified targets, as Emsley (2001) suggested.

It also illustrates the extent to which the SOEs in Ghana are significantly influenced by the public sector ethos of conformance to predetermined budget standards, even though they are meant to be operating with the flexibility and

value orientation generally associated with private sector organisations. This may be explained by the significant ownership percentage of the Ghana government and the government's control of the boards of these SOEs. Thus, if SOE management's principal objective is about efficiency, then the diagnostic uses of budgets become the most appropriate means of implementing that strategic orientation (Simons 2005).

Specifically, the influence of the diagnostic uses of budgets in SOEs may be attributed to several probable reasons. The results establish the prominence of a monitoring role in SOEs; reminiscent of public sector ethos where budgets are used to promote efficiency and accountability, the hallmark of New Public Management (NPM) reforms. The point is that NPM focuses on managing for results by setting standards to influence public sector performance, the basis upon which diagnostic uses of budgets works, to monitor and measure for results.

However, the study found no evidence of beliefs, boundary and interactive use of budget directly influencing SOEs performance. The evidence from the result demonstrated that those beliefs systems have no direct impact on performance. This may partly be due to the nature of the beliefs and values articulated for SOEs, which may not directly or explicitly demand efficiency. For instance, the mission of one of the SOEs is "to make the company a commercially focused and compliance-driven organisation". The nature of these values articulated in the mission may not inspire their employees to profitability. Focusing on compliance may stifle initiative and encourage employees to do the minimum so long as they comply with rules. Although compliance policies serve critical internal and sometimes external regulations meant to improve efficiency

and performance, overemphasizing compliance may create a risk aversion environment that may stifle continuous innovation, a crucial task for improving performance. Thus, this vision statement example aligns with the diagnostic and boundary use of control systems that emphasise compliance rather than value generation. This finding implies that, although there is the presence of beliefs systems in SOEs, it is not effective in ways that will impact their performance.

Similarly, the boundary system was not supported. The insignificant result is somewhat surprising given the rules and regulations brought to bear on SOEs. Thus, the results may suggest difficulty establishing accountability, lack of credible punishment mechanisms, and the will to implement those rules and regulations as enshrined in the boundary systems. The absence of a significant relationship between the interactive uses of budgets and performance is consistent with prior studies. They found the interactive uses of control not significantly related to organizational performance in the private sector context (see, for example, Abernethy and Brownell, 1999; Bisbe and Otley, 2004; Widener, 2007; Hofmann et al., 2012). Instead, these prior studies found the interactive uses of control significantly related to intermediate organizational variables and capabilities that have performance implications (Abernethy and Brownell, 1999; Bisbe and Otley, 2004; Widener, 2007; Hofmann et al., 2012). The findings of this study and prior studies suggest that some intermediate variables could be conduits for transmitting the effects of the interactive uses of controls to organisational performance. Hofmann et al. (2012) and Widener (2007) suggest that the lack of direct effects on performance may be due to the cost of the interactive uses of controls.

While the findings do not support the direct influence of beliefs, boundary and interactive control on performance, the results highlight their indirect impact on organisational performance. Thus, the findings support the indirect relationship through knowledge management to organisational performance. Specifically, the four uses of MCS affect organizational performance through the intervening roles of knowledge management and psychological empowerment. The result suggests that psychological empowerment mediates the relationship between the four MCS uses (beliefs, boundary, diagnostic and interactive uses of budgets) and organisational performance. While it partially mediated the relationship between the diagnostic uses of budgets and organisation performance, it fully mediated the relationships between beliefs, boundary and interactive uses of budgets and organisational performance. The result thus demonstrates that knowledge management and employee psychological empowerment is crucial in leveraging the benefits of MCS for improved organisational performance.

Management control systems uses and knowledge management

The findings support the argument that MCS uses (comprising beliefs, boundary, diagnostic and interactive uses of budgets) positively influence organisational knowledge management of SOEs in Ghana. Thus, it suggests that SOE beliefs systems stimulate employee motivation to learn, engage in knowledge-sharing behaviours, and use the acquired acknowledge for the organisation's benefits (Weinberg 2015). Thus the nature of the values enshrined in SOEs beliefs systems promotes learning and knowledge sharing and applying that knowledge. By virtue of NPM, SOEs have significant learning to incorporate private sector practices into managing these hybrid organisations.

Therefore, the values (beliefs systems) they set for themselves may inspire SOE managers to seek and acquire knowledge about private sector practices and share such knowledge among themselves. They may need to develop skills about competition, market positioning and dynamics, customer service orientation, cost-effectiveness and all the ideals of private-sector practices that underscore NPM.

The findings also highlight that interactive uses of budgets facilitate the information exchange process, leading to better knowledge acquisition, learning, and sharing among SOEs' employees. The basis of this finding may be partly due to the context within which SOE operates, as SOE operation is characterised by significant strategic uncertainties from multiple sources, including political uncertainties with the attendant ideological shifts depending on the party in government. Also, with competition from private sector entities, these SOEs forfeit their monopololistic positions in the name of NPM, leading to market uncertainties. The implication is that, unlike pure public sector organisations, SOEs face strategic uncertainties for which they need a continual adaption of their strategies and operations to stay competitive. Therefore, they rely on the interactive uses of control to stimulate double-loop learning about these uncertainties and their impacts and facilitate the search for knowledge and capabilities to adapt, compete, and engage in strategic renewal. Thus, using budgets interactively provides them with the dynamic capability to sense the uncertainty in their environment, seize the opportunities to learn and share knowledge about the environment, and transform existing knowledge and capabilities.

The study also found boundary systems to be significantly associated with knowledge management. Although boundary systems are concerned about imposing limits and constraints and represents the traditional view of control systems, the result reaffirms the belief that the boundary system motivates the search for new ideas in predetermined domains. The work reaffirms the self-determination theory that, when boundaries are specified for their learning task, they shift their attention from the centre to the edges. They explore and acquire new knowledge that can then be shared and assimilated into work tasks. Without clear boundary systems, SOE managers may seek comfort and security in exclusively applying existing knowledge. However, boundary systems allow them to explore and generate knowledge within limits set by the boundary systems (Spekle et al., 2017). The result reaffirms that SOEs boundary system provides direction and enrich employees' know-how of action-outcome relations.

The results also show the significant role of diagnostic uses of control in the knowledge management processes of SOEs. In the diagnostic uses of budgets, feedback from variance provides SOE managers with the opportunities for stimulating single-loop learning and the search for knowledge about techniques that can correct undesirable budget variances and thus, enable them to achieve predetermined efficiency levels. Thus, the diagnostic uses of budget facilitate the acquisition of knowledge that supports the adjustment of operating practices to ensure predetermined goals are met.

To sum, the findings of this study highlight the dynamic role of MCS in SOEs knowledge management processes. Whereas the diagnostic uses focus SOE manager's knowledge management practices on achieving predetermined

goals (taking for granted the organisation's strategy), the interactive uses provide opportunities for questioning the strategy and pursuing strategic renewal. This is consistent with the notion of balancing exploitation (with its focus on short-term efficiency) with exploration (with its emphasis on challenging existing strategies and focusing attention on continual renewal of strategy). Opportunities for these balancing acts are created by beliefs systems (that inspires and stimulate learning) and boundary systems (that provides limits within which learning should take place). Overall, the four MCS complement each other in facilitating knowledge management in SOE.

Management control systems uses and psychological empowerment

Management control systems use (comprising beliefs, boundary, diagnostic and interactive uses of budgets) are significantly positively related to employee psychological empowerment. We learn from the results that rather than seeking forced compliance, controls enable managers' autonomy and freedom, making them believe in their competence and their ability to make an impact (Spekle et al., 2017). Notably, the finding shows consistency with the Self-Determination Theory (SDT) view that an employee who feels that he has control over his decision choices is more motivated to take an informed action necessary for an effective outcome (Ryan & Deci, 2000). The findings thus show that MCS leverages its uses to nurture employees' autonomous motivation.

Contrary to the traditional view that boundary systems take away autonomy by restricting actions, the results suggest otherwise. Though a boundary system may limit excessive risk-taking by drawing limits for action, employees exercise freedom and self-determination within these limits.

Clearly, within the context of SOEs, the boundary systems create a setting to support both autonomy and organised guidance desired to raise intrinsic motivation and self-regulated behaviours (Spekle et al., 2017).

A general belief is that the diagnostic uses of control force compliance to predetermined standards, thereby taking away autonomy and self-determination as one must follow the rules and standards prescribed. The results provide a different perspective, and that is, the diagnostic use of control may take away the autonomy in deciding on outcomes (as they are already pre-specified). However, managers may still exercise autonomy and freedom in determining the activities and operational processes of achieving those outcomes. Certainly, the results call for SOEs management to consider the multiple shades of autonomy in organisations, especially those of a hybrid nature such as SOEs. Targets set through diagnostic uses make work meaningful, facilitating managers' belief in their self-efficacy to impact. Monitoring and reviews enable them to determine their impact.

The interactive use of budget and psychological empowerment were found to have a meaningful relationship. This finding supports the literature associating the features fundamental to interactive control use with enhanced feelings of psychological empowerment (Spekle et al., 2017; Spreitzer,1996). It thus complements Spekle et al. (2017) findings suggesting that the interactive control provides a work setting rich with information and inspires employees to take purposeful action in directed ways. The significance of access to information is that it is an essential antecedent to feelings of psychological empowerment (Mahama & Cheng, 2013; Simon, 2000; Spreitzer,1996). Therefore, employees participating in the interactive uses of budgets increase

access to information through continuous discussions and debates that question existing underlying business assumptions, improve the meaningfulness of strategic activities, and make individuals contribute to determining the organisation's future course. These strengthen their sense of empowerment and intrinsically motivate them as they feel valued and feel that their opinions will influence outcomes.

Knowledge management and organisational performance

The result provides support that SOE management uses corporate knowledge management to improve its performance. This is consistent with the study's projection and prior studies. The results also support the dynamic capabilities theory's (DCT) claim that organisational knowledge is a strategic asset for a sustainable competitive advantage. Knowledge improves organisations ability to integrate, apply internal and external expertise to solve internal problems in ways that enhance operational efficiencies, innovation, customer satisfaction, profitability, and competitive advantage (Danford, 2013; Zheng et al., 2011). Thus, leveraging knowledge management practices to create value and enhance organisational learning is crucial (Gold et al., 2001). Tippins and Sohi (2003) assert that learning is a trigger for better corporate performance and one of many ways to compete in the long run (Widener, 2007).

Therefore, the result supports the argument that learning can increase organisational capabilities, decrease errors, and enable rapid responses to change (Gold et al., 2001). Furthermore, knowledge management routines reinforce a firm's ability to sense and seize new opportunities to enable performance (Han & Li,2015; Teece, 2014). Consequently, the management of

SOEs should continue to leverage the critical knowledge resources available to their organisation.

Psychological empowerment and organisational performance

The result of the study provides support for the expectation that employee psychological empowerment will positively influence organisational performance. This result is also consistent with prior studies that suggest that employee psychological empowerment directly impacts organisational performance (Degago, 2014). Thomas (1994) found that psychological empowerment positively impacts employee work effectiveness, job satisfaction, and performance. Similar studies have also found significant relationships between psychological empowerment and organisational performance (Chiang & Hsieh, 2012; Wat & Shaffer, 2005). Thus, the result indicates that emphasising employee psychological empowerment promotes organisational performance. It is suggested that the management of SOEs should continue to improve processes that will facilitate employee empowerment for enhanced competitive advantage.

Chapter Summary

The current study focused on the uses of MCS by SOEs and their impact on organisational performance. The general inference, providing a contribution to literature from the present study, is that out of the four MCS uses, only diagnostic uses of the budget is directly associated with SOEs' performance. The other three (beliefs system, boundary systems and interactive uses of budgets) had no direct significant association with organisational performance. While beliefs system, boundary systems, and interactive uses of budgets do not show a direct link with performance, the findings indicate significant indirect

relationships between the four control uses (beliefs systems, boundary systems, diagnostic and interactive uses of budget) and organizational performance via, knowledge management and psychological empowerment. The results support the mediating role of knowledge management and psychological empowerment in the relationship between MCS uses and organisational performance in SOEs, significant to the current study. The findings in this chapter form the basis upon which the contribution and implication of the study are drawn and discussed in Chapter Six.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The chapter focuses on the summary, conclusions and recommendation of the study. The study's main aim was to examine the influence of the management control system on SOEs performance in Ghana. In furtherance of the purposes, the study sought to accomplish the following specific objectives.

- To assess the relationship between MCS uses and organisational performance
- To examine MCS uses and their influence on knowledge management
- To analyse the relationship between MCS and employee psychological empowerment.
- Explore the relationship between knowledge management and organisational performance.
- Examine the relationship between psychological empowerment and organisational performance.
- To assess the mediating roles of knowledge management processes and employees' psychological empowerment in the relationship between MCS and performance.

The chapter summarises the significant findings from which conclusions of the study are drawn about its contribution to knowledge. Finally, recommendations are made to enhance MCS use in SOE management, the study's limitations are presented, and areas of future research are identified.

Summary of Findings

The study's principal objective was to examine the relationship between MCS and SOEs performance in Ghana. The first objective was to explore the relationships between MCS uses and organizational performance. Based on structural model results, the effect of MCS on SOEs performance took two paths, directly and indirectly, through two intermediate variables; knowledge management and psychological empowerment. This finding confirms the importance of mediating variables in the relationship between uses of MCS and organisational performance. Thus, the study model was empirically supported.

Objective two was to measure the influence of MCS on knowledge management. The sampled managers generally perceived that MCS highly impacted knowledge management in SOEs, thus supporting objective two. The third objective was to measure the impact of MCS uses on psychological empowerment. The study discovered that the use of MCS greatly impacted psychological empowerment, thus fulfilling objective three. The fourth objective was to measure the influence of knowledge management on organisational performance. The study discovered that knowledge management highly influenced the performance of SOEs. The fifth objective was to examine the impact of psychological empowerment on organisational performance, and the findings show that psychological empowerment immensely impacted the performance of SOEs. The final objective was to measure the mediatory role of two intermediate variables; knowledge management and psychological empowerment. The results reinforced the importance and mediating functions of these two intermediate variables in the relationships between MCS uses and

the performance of SOEs. Thus, objective four was supported by the study model.

The Study Contribution

This study has comprehensively examined how management control systems influence SOE performance from the Ghanaian perspective and contributes to the literature in many ways.

Contribution to theory

First, the study contributes to knowledge about the importance of MCS in knowledge practices. While beliefs systems and interactive uses of controls are generally associated with knowledge management in the extant literature, the study highlights that boundary systems and the diagnostic uses of control equally influences knowledge management.

Second, the study is one of the few studies that have examined the impact of the four MCS uses together in a single model involving SOEs. It provides evidence of the complementary roles of the four uses of MCS, especially concerning knowledge management and psychological empowerment in hybrid organisations such as SOEs.

Thirdly, the study provides a process model that contributes to explaining the pathways by which the four uses of MCS influence organizational performance. It shows that except for the diagnostic uses of a budget that directly impacts organisational performance, all the other MCS use effects are transmitted through mediators.

Finally, the findings extend the MCS literature by providing evidence that suggests that intermediate variables mediate the impact of MCS on performance.

Contribution to practice

First, the study contributes to improving our understanding of the role of MCS in empowering employees and managers.

Second, the study highlights the importance of the diagnostic uses of control. It reveals that SOEs place a relatively high premium on the traditional monitoring and evaluation role of management controls.

Practical Implications and Recommendations of the Study

Based on the findings presented above, some practical implications are noted and recommended for SOEs and possibly Ghana's public sector entities and policymakers.

Implications to management of state-owned enterprises

First, the study highlights the importance of designing and implementing all four uses of MCS. This will allow SOEs to have the full benefits of their complementarity effects as the four uses of MCS are relevant and impact organisational capabilities in different ways. This is consistent with Simon (2000) view that an effective control system must comprise all four uses.

Second, the study highlights that if the management of SOEs seeks to empower managers and employees, they should focus on structural empowerment and attach importance to the beliefs employees hold about their empowerment (that is, their psychological empowerment). Management control systems can prove helpful in developing such empowerment. The study also implies that other management intervention that facilitates psychological empowerment must be explored.

Third, the study implies the need for SOE management to invest in the knowledge management process. Rather than considering knowledge

management practices such as training, conferences, seminars as discretionary, the study highlights that they have significant performance benefits and must therefore be encouraged and adequately supported by SOE management.

Implications to policy makers

The study implies that the direct effect of management control on organisational performance is weak, suggesting that intermediary factors play a crucial role in their relationship. Consequently, this study encourages management and policymakers to invest in systems to enhance MCS to promote other organisational factors that may provide useful mediation in improving organisational performance for sustained competitive advantage. Importantly, since the design and use of MCS may be expensive (Mundy 2010), policymakers should find innovative ways to emphasise its uses throughout the public sector, evident in its impact on performance.

Limitation of the Study

While this research explains the relationship between MCS uses, knowledge management processes, employee psychological empowerment, and SOE performance, its limitations must be considered when interpreting the results.

First, since the data was collected from self-administered questionnaires, common method bias cannot entirely be ruled out even though efforts were made to reduce its occurrence. Questions were separated for both dependent and independent variables at the questionnaire stage to reduce linkages between the questions in line with psychological separation. Additionally, the study tried to eliminate the ambiguity of questions by phrasing them in ways that will provide clear meaning for each question. In the introductory section of the

questionnaires, the respondents were informed that there were no correct or incorrect responses. At the analysis stage, the study adopted the unmeasured latent method factor technique to uncover and partial out common method bias. The method allows researchers to model the impact of common method bias at the measurement model level without formerly determining the precise cause of the bias.

Second, though the sample used in the study is adequate for the statistical analysis undertaken, the study would have benefited from a much large sample. This was addressed by bootstrapping process to generate 5,000 randomly drawn samples with replacement.

Third, while the study draws on Simons' LoC framework, the results may not be generalisable to other forms of control configurations and use (Enabling/Coercive and Decision Influencing /Facilitating roles). More so, the focus has been on budget uses, limiting the ability to generalize the results to other forms of management controls systems like performance management, costing systems and compensation systems, among others.

Direction for Future Research

The following future research avenues are recommended for extending the findings of this study. First, the present study obtained a weak direct relationship between MCS uses and organisational performance, with only diagnostic use directly affecting performance. Replication of the study in a different context will enhance the validity and reliability of the findings and provide a sound basis for further model development. Second, this study focused on the uses of budgets. Future research may investigate other types of

controls (such as performance measurement systems, incentive compensation systems) on SOEs performance.

Fourth, the current research has explored associations among constructs and cannot conclude with definite statements about causality. Future research could use experimental approaches to establish potential causal relationships among the focal constructs of the study.

REFERENCES

Abernethy, M. A., & Brownell, P. (1999). The role of budgets in organizations facing strategic change: An exploratory study. *Accounting, Organizations, and Society, 24*(3), 189–204.

Abuaddous, H. Y., Al Sokkar, A. A. M., & Abualodous, B. I. (2018). The impact of knowledge management on organizational performance. International *Journal of Advanced Computer Science and Applications,*9(4), 204–208.

Abubakar, A., Saidin, S. Z., & Ahmi, A. (2017). Empirical evidence of the relationship between performance management antecedents and public-sector organizational performance. *International Journal of Economic Research, 14*(16), 373–386.

Acquaah, M. (2013). Management control systems, business strategy and performance: A comparative analysis of family and non-family businesses in a transition economy in sub-Saharan Africa. *Journal of Family Business Strategy, 4(2*), 131–146.

Addison, D. (2013). The Quality of Budget Execution and Its Correlates. World Bank Policy Research Working Paper (October). Retrieved from http://www-wds.worldbank.org/external/default.

Adeyemi, B., & Adenugba, A. (2011), *Corporate Governance in the Nigerian Financial Sector: The Efficacy of Internal Control and External Audit*. Paper Presented at the Global Conference on Business and Finance Proceedings, San Jose, Costa Rica.

Adler, P. S., & Borys, B. (1996). Two types of bureaucracy: Enabling and coercive. *Administrative science quarterly*, 61-89.

Adler, P. S., & Chen., J. (2011). Combining creativity and control: Understanding individual motivation in large-scale collaborative creativity. *Accounting Organization and Society 36*(2): 63-85.

Adongo, K. O., & Jagongo, A. (2013). Budgetary Control as a Measure of Financial Performance of State Corporations in Kenya. *International Journal of Accounting and Taxation, 1*(1), 38–57.

Afonso, A., Schuknecht, L., and Tanzi, V. (2010b). Public sector efficiency: Evidence for new EU member states and emerging markets. *Applied Economics, 42*(17): 2147–2164.

Agbejule, A., & Jokipii, A. (2009), Strategy, control activities, monitoring and effectiveness. *Managerial Auditing Journal, 24*(6), 500-522.

Ahmed, M. S., & Ph, D. (2017). Comparison of knowledge management literature from 2002 -2016

Ahrens, T. (2018). Management Controls that Anchor Other Organizational Practices. *Contemporary Accounting Research, 35*(1), 58-86.

Ahrens, T., & Chapman, C. S. (2004). Accounting for flexibility and efficiency: A field study of management control systems in a restaurant chain. Contemporary.

Akroyd, C., & Maguire, W. (2011). The roles of management control in a product development setting. *Qualitative Research in Accounting & Management. 8*, 212-237. 10.1108/11766091111162061.

Alabar, T., & Abubakar, H. S. (2013). Impact of employee empowerment on service quality: An empirical analysis of the Nigerian banking industry. *British Journal of Marketing Studies, 1*(4), 32-40

Alistair, D. (2011). The Wellness Imperative Creating More Effective Organization. World Economic Forum, 1–16. Retrieved from http://www3.weforum.org/docs/WEF_HE_WellnessImperativeCreatingMoreEffectiveOrganizations_Report_2010.pdf

Altinay, L. & M. Altinay. (2004). The Influence of Organizational structure on Entrepreneurial Orientation and expansion performance, International *Journal of Contemporary Hospitality Management, 10* (6). 334-344.

Alvesson, M., & Sandberg, J. (2013). Has Management Studies Lost Its Way? Ideas for More Imaginative and Innovative Research. *Journal of Management Studies, 50*(1), 128–152. https://doi.org/10.1111/j.1467-6486.2012.01070.x

Amankwah-Amoah, J & Lu, Yi (2018), *Historical Evolution of Entrepreneurial Development in the Global South: The Case of Ghana*, *1957-2010.* Online at https://mpra.ub.uni-muenchen.de/88179/ MPRA Paper No. 88179

Amat, J.M. (1991), Los sistemas de control en empresas de alta tecnología: el caso de dos empresas del sector químico-farmacéutico, ICAC, Madrid. (1992): El control de gestión: una perspectiva de dirección,. Ed. Gestión 2000, Barcelona.

Anderson, J.C., Gerbing, D.W. (1988), Structural equation modelling in practice: A review and recommended a two-step approach. *Psychological Bulletin, 103*(3), 411-423.

Andrews, R. & Van de Walle, S. (2013). New Public Management and Citizens' Perceptions of Local Service Efficiency, Responsiveness, Equity and Effectiveness. *Public Management Review, 15*(5), 762-783.

Andrews, R. et al. (2012). *Strategic Management and Public Service Performance*. Basingstoke: Palgrave Macmillan.

Ankowska, A., Nagengast, A. J., & Perea, J. R. (2009). The Middle-income Trap: Comparing Asian and Latin American Experiences. *Policy Insights*, (96), 2

Anthony, R. N., & Govindarajan, V. (2003). Management Control System. *Management Control Systems*, 1–15.

Anthony, R. N., (1965). *Management Planning and Control Systems: A Framework for Analysis*. Harvard Business School Press.

Anthony, R.N. and D.W. Young, (2002), *Management Control in Non-profit Organizations (*7th ed). New York, McGraw-Hill,

Anthony, R.N., & Govindarajan, V. (2007), *Management Control Systems*. Boston: McGraw-Hill.

Antony, J. P. & Bhattacharyya, S. (2010) 'Measuring organizational performance and organizational excellence of SMEs – Part 2: an empirical study on SMEs in India. *Measuring Business Excellence, 14*(3), 42–52. DOI: 10.1108/13683041011074209.

Antwi, S. K., & Hamza, K. (2015). Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management, 7*(3), 217-225.

Armistead, C. (1990). Service Operations Strategy: Framework for Matching the Service Operations Task and the Service Delivery System. *International Journal of Service Industry Management.*

Armstrong, J. S. & Overton, T. S. (1977) 'Estimating Nonresponse Bias in Mail Surveys. *Journal of Marketing Research, 14*(3), 396–402. DOI: 10.2307/3150783.

Arya, B. & Lin, Z. (2007). 'Understanding collaboration outcomes from an extended resource-based view perspective: the roles of organizational characteristics, partner attributes, and network structures. *Journal of Management*, 33, 697–723.

Ashraf, J., & Uddin, S. (2016). New public management, cost savings, and regressive effects: A case from a less developed country. *Critical Perspectives on Accounting*, 41, 18–33.

Asiaei, K., Bontis, N., & Zakaria, Z. (2020). The confluence of knowledge management and management control systems: A conceptual framework. *Knowledge and Process Management, 27*(2), 133–142.

Athanassopoulos, A. D. (1997), "Service Quality and Operating Efficiency Synergies for Management Control in the Provision of Financial Services: Evidence from Greek Bank

Ayee, J. K. A., (2013) The Developmental State Experiment in Africa: The Experience of Ghana and South Africa. The Round Table: *The Commonwealth Journal of International Affairs, 102*(3):259-280

Ayee, J.K.A., (2010). *Innovation and Best Practices in Public Sector Reforms: The case of the Civil Service in Ghana, Kenya, Nigeria and South Africa*. Addis Ababa UNECA

Ayee, J.K.A., (2012), *Improving the Effectiveness of the Public Sector in Africa through the Quality of Public Administration*; in K.T. Hanson, G. Kararah and T.M. Shaw (eds): Rethinking Development Challenges for

Public Policy: Insight from Contemporary Africa: Palgrave Macmillan

Bagozzi, R.P., & Yi, Y. (1988), On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*(1), 74-97.

Baird, K., Su, S., & Munir, R. (2018). The relationship between the enabling use of controls, employee empowerment, and performance. *Personnel Review, 47*(1), 257-274.

Barney, J. (1991) 'Firm Resources and Sustained Competitive Advantage', *Orvosi hetilap, 17*(1), 99–120. doi: 10.1177/014920639101700108.

Baron, R. M. & Kenny, D. A. (1986), The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations', *Journal of Personality and Social Psychology, 51*(6), 1173–1182. doi: 10.1037/0022-3514.51.6.1173.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology, 51*(6), 1173 – 1183.

Baron, R.M., & Kenny, D.A. (1986), The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Barret, P. (1996), Some thoughts on the roles, responsibilities and future scope of auditors-general. *Australian Journal of Public Administration, 55*(4), 137-146.

Bartle, J., & Shields, P. (2008). Applying Pragmatism to Public Budgeting and Financial Management. Association for Budgeting and Financial

Management Conference. Retrieved from https://digital.library.

Baruch, Y. & Holtom, B. C. (2008) 'Survey response rate levels and trends in organizational research. *Human Relations, 61*(8), 1139–1160. doi: 10.1177/0018726708094863.

Batac, J., & Carassus, D. (2009), Interactions between control and organizational learning in the case of a municipality. A comparative study with Kloot (1997). *Management Accounting Research,* 20, 102-116.

Batac, J., & Carassus, D. (2009). Interactions between control and organizational learning in the case of a municipality. A comparative study with Kloot (1997). *Management Accounting Research, 20*(2), 102–116.

Becker, J.-M., Ringle, C.M., Sarstedt, M. & Völckner, F. (2015), "How collinearity affects mixture regression results". *Marketing Letters,* 26(4), 643-659.

Becker, K. (2016). *Budgeting in Times of Economic Crisis Contemporary Accounting Research*. Wiley Online Library. (n.d.).

Bedford, D & Malmi, T. (2010). Configurations of control: An exploratory analysis. *Management Accounting Research*, 27.

Bedford, D. S. (2015). Management control systems across different modes of innovation: Implications for firm performance. 28, 1995–1997.

Bedford, D. S., Bisbe, J., & Sweeney, B. (2019). Performance measurement systems as generators of cognitive conflict in ambidextrous firms. *Accounting, Organizations and Society, 2*, 21–37.

Berahim, N., Jaafar, M.N., & Zainudin, A.Z. (2015), An audit remarks on Malaysian local authorities' immovable asset management. *Journal of Management Research, 7*(2), 218-228.

Bernadin, H. K. Kane, J. S. Spina, J. D. R., & Johnson, D. L. (1995). *Performance appraisal design, development and implementation*. In G. R. Ferris, S. D. Rosen, & D. J. Barnum (Eds.). Handbook of human resource management, Blackwell, Cambridge, mass.

Berry, A. J., Coad, A. F., Harris, E. P., Otley, D. T., & Stringer, C. (2009). Emerging themes in management control: A review of recent literature. *British Accounting Review, 41*(1), 2–20.

Beuren, I. M., Santos, V. dos., & Bernd, D. C. (2020). Effects of the Management Control System on Empowerment and Organizational Resilience. Brazilian Business Review, 17(2), 211–232.

Bewayo, E. D. (2009) 'Family business in Africa: A comparison with the US-Western model. *Journal of Global Bus. 3*(1): 171-181.

Bhuiyan, S. H., & Amagoh, F. (2011). Public sector reform in Kazakhstan: Issues and perspectives. *International Journal of Public Sector Management, 24*(3), 227–249.

Bilal Afsar & Bilal Bin Saeed, (2010). "Subordinate's Trust in the Supervisor and its Impact on Organizational Effectiveness. *Romanian Economic Journal, Department of International Business and Economics from the Academy of Economic Studies Bucharest,13*(38), 3-25.

Birnberg, J. G. (2011). A proposed framework for behavioral accounting research. *Behavioral Research In Accounting 23*(1) 1-43.

Bisbe, J., & Malagueño, R. (2009). The choice of interactive control systems under different innovation management modes. *European Accounting Review, 18*(2), 371-405.

Bisbe, J., & Malagueño, R. (2015). How control systems influence product innovation processes: examining the role of entrepreneurial orientation. *Accounting and Business Research 45*(3), 356-386.

Bisbe, J., & Otley, D. (2004). The effects of the interactive use of management control systems on product innovation. Accounting, Organizations, and Society, 29(8), 709–737.

Bisbe, J., & Sivabalan, P. (2017). Management control and trust in virtual settings: A case study of a virtual new product development team. *Management Accounting Research,* 37, 12–29.

Bleiklie, I. (2020). Encyclopedia of International Higher Education Systems and Institutions. Encyclopedia of International Higher Education Systems and Institutions, (March). https://doi.org/10.1007/978-94-017-9553-1

Bleiklie, I., Hostaker, R., & Vabo, A. (2000), *Policy and Practice in Higher Education: Reforming Norwergian Universities, Higher education policy series.* London: Jessica Kingsley Publishers

Bollen, K.A. (1989), *Structural Equation with Latent Variables*. New York: Wiley.

Bourdeau, M., (2010), "Auguste Comte", The Stanford Encyclopedia of Philosophy Edward N. Z. (ed.), Available at: http://plato.stanford.edu

Bowrey, G., Hui, F., & Smark, C. (2017). An 1831 discussion on New Public Management. *Accounting History, 22*(3), 370–386.

Boyne, G. (2000), Developments: External Regulation and Best Value in Local

Government. *Public Money and Management, 20*(3), 7-12.

Bradshaw, E. L., Ryan, R., Noetel, M., Saeri, A. K., Slattery, P., Grundy, E., & Calvo, R. A. (2020). *Information safety assurances affect intentions to use COVID-19 contact tracing applications, regardless of autonomy-supportive or controlling message framing*.

Brandon-Jones, A. & Knoppen, D. (2018), "The role of strategic purchasing in dynamic capability development and deployment: A contingency perspective". *International Journal of Operations & Production Management, 38*(2), 446-473.

Brignall, S., & Modell, S. (2000). An institutional perspective on performance measurement and management in the 'new public sector'. *Management Accounting Research,* 11, 281-306.

Brinkerhoff, D. W., & Brinkerhoff, J. M. (2015). Public Sector Management Reform in Developing Countries: Perspectives Beyond NPM Orthodoxy. *Public Administration and Development, 35*(4).

Bruton, G. D., Peng, M. W., Ahlstrom, D., Stan, C., & Xu, K. (2015). State-owned enterprises around the world as hybrid organizations. *Academy of Management Perspectives, 29*(1), 92–114.

Bruton, G. D., Peng, M., W., Ahlstrom, D., Stan, C., & Xu, K. (2015), State-Owned Enterprises Around the World as Hybrid Organizations, *The Academy of Management Perspectives, 29*, 1, 92-114

Bryan, E., Ted, R., & John Shields (2005) Structuring Neoliberal Governance: *The Nonprofit Sector, Emerging New Modes of Control and the Marketisation of Service Delivery, Policy and Society, 24*(1), 73-97.

Bryman, A. & Bell, E. (2015) *Business research methods*. Oxford: Oxford

University Press.

Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public Administration Review, 74*(4), 445- 456.

Buckley, P. & Carter, M. (2000), ‘‘Knowledge management in global technology markets’’. *Long Range Planning, 33*. 55-71.

Burke, R. J., Koyuncu, M., Wolpin, J., Yirik, Ş., & Kadife, K. (2014). Organizational Empowerment Practices, Psychological Empowerment, and Work Outcomes among Male and Female Front-Line Service Employees in Five-Star Turkish Hotels - Signs of Progress. *Management Today, 4*(2), 39–45.

Burns, T., & Stalker, G. M. (1961). The management of innovation. London: Tavistock Publications

Burrell, G., & Morgan, G. (1979). Sociological Paradigms and Organizational Analysis - Elements of the Sociology of Corporate Life. Sociological Paradigms and Organisational Analysis, 448.

Byrne, B. (2010) Structural equation modeling with AMOS: Basic concepts, applications, and programming. Routledge.

Byrne, B. M. (2010) Structural Equation Modeling with AMOS. 2nd edn, Structural equation modeling with AMOS: Basic concepts, applications and programming. 2nd edn. New York: Routledge

Camps, J. & R. Luna-Arocas (2012). ‘A matter of learning: how human resources affect organizational performance. *British Journal of Management,* 23, 1–21

Carenys, J. (2012). Management control systems : A historical perspective.

International Journal of Economy, Management and Social Sciences, 1(1), 1–18.

Carton, R. (2004). Measuring Organizational Performance: An Exploratory Study By Robert B. Carton (Under the Direction of Charles W. Hofer). 11(2), 2–4.

Carton, R. B., & Hofer, C. W. (2006). Measuring organizational performance: Metrics for entrepreneurship and strategic management research. Measuring Organizational Performance: Metrics for Entrepreneurship and Strategic Management Research.

Caruana, A. (1997). INTQUAL – an internal measure of service quality and the link between service quality and business performance. 31(8), 604–616.

Chakraborty, K., B. Biswas, & W.C. Lewis, (2001), "Measurement of Technical Efficiency in Public Education: A Stochastic and Non-Stochastic Production Function Approach". *Southern Economic Journal 67*(4), 889–905.

Chan, Y.C.L. (2004), Performance measurement and adoption of balanced scorecards: A survey of municipal governments in the USA and Canada. *The International Journal of Public Sector Management, 17*(3), 204-221.

Chang T. & Chuang S (2011). Performance implications of knowledge management processes: Examining the roles of infrastructure capability and business strategy. *Expert Systems with Applications*, 38: 6170–6178.

Cheng, M., Dhaliwal, D., & Zhang, Y. (2013). Does investment efficiency improve after the disclosure of material weaknesses in internal control over financial reporting? *Journal of Accounting and Economics 56* (1), 1–18.

Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future. 28, 127–168.

Chenhall, R. H., & Moers, F. (2015). The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, Organizations and Society*, 47, 1–13.

Chenhall, R.H. (2003), Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations, and Society,* 28, 127-168.

Chenhall, R.H. (2007), Theorizing contingencies in management control systems research. *Handbook of Management Accounting Research*, 1, 163-205.

Chenhall, R.H., & Euske, K.J. (2007), The role of management control systems in planned organizational change: An analysis of two organizations. *Accounting, Organizations, and Society*, 32, 601-637.

Chenhall, R.H., Kallunki, J.P., & Silvola, H. (2011), Exploring the relationships between strategy, innovation, and management control systems: The roles of social networking, innovative organic culture, and formal controls. *Journal of Management Accounting Research,* 23, 99-128.

Chiang, C.-F., & Hsieh, T.-S. (2012). The impacts of perceived organizational support and psychological empowerment on job performance: The mediating effects of organizational citizenship behavior. *International Journal of Hospitality Management, 31*(1), 180–190.

Chong M. & Lau, M., S. (2005). Financial and nonfinancial performance measures: How do they affect job satisfaction?,The British Accounting Review, 37(4), 389-413.

Chong, K. M., & Mahama, H. (2014). The impact of interactive and diagnostic uses of budgets on team effectiveness. *Management Accounting Research, 25*(3), 206–222.

Chuang, C., H. & Liao, H. (2010) 'strategic human resource management in service context: taking care of employees and customers. *Personnel Psychology, 63*(1), 153–196.

Churchill, G. A. & Iacobucci, D. (2005) *Marketing Research: Methodological Foundations*. 9th edn. Mason, Ohio: Thomson/South-Western.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillside, NJ: Lawrence Erlbaum Associates.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155–159. doi:10.1037/0033-2909.112.1.155

Connell, Julia & Voola, Ranjit.(2013), Knowledge Integration and Competitive-ness: A Longitudinal Study of an Industry Cluster". *Journal of Knowledge Management*, 17 (2) 208 – 225

Coradi, A., Heinzen, M., & Boutellier, R. (2015). A Longitudinal Study of Workspace Design for Knowledge Exploration and Exploitation in the Research and Development Process. *Creativity and Innovation Management*. 24. 10.1111/caim.12099.

Country, F., & Study, C. (2012). Evaluation of Public Financial Management Reform in Ghana, 2001–2010.

Crosby, B., Bloomberg, L., & Bryson, J. (2014). Public Value Governance:

Moving Beyond Traditional Public Administration and the New Public Management. *Public Administration Review, 74*(4), 445–456.

Crotty, M. (1998) *The Foundations of Social Research: Meaning and Perspective in the Research Process*. London (UK): Sage Publications.

Daniel, S. J., & Reitsberger, W. D. (1991). Linking quality strategy with management control systems: Empirical evidence from Japanese industry. *Accounting, Organizations & Society*, 16, 601–618.

Danks, N., Ray, S., & Shmueli, G. (2017). Evaluating the Predictive Performance of Constructs in PLS Path Modeling. *SSRN Electronic Journal*.

Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of knowledge management, 9*(3), 101-115.

Darroch, J., & McNaughton, R. (2001). Developing a measure of knowledge management. In World congress on intellectual capital readings (pp. 226-242).

David H.W., & Quang L H., (2013). Mediating Role of Knowledge Management in Effect of Management Accounting Practices on Firm Performance. *Journal of Knowledge Management, Economics and Information Technology, Scientific Papers 3*(3), 1-10,

Davila, A., & G. Foster, (2007), Management accounting systems adoption decisions: Evidence and performance implications from early-stage/startup companies. *The Accounting Review 80*(4): 1039–68.

Davila, A., Foster, G., & Li, M. (2009). Reasons for management control systems adoption: Insights from product development systems choice by early-stage entrepreneurial companies. *Accounting, Organizations and Society, 34*(3-4), 322-347.

Davila, A., Foster, G., & Oyon, D. (2009). Accounting and control, entrepreneurship and innovation: Venturing into new research opportunities. *European Accounting Review, 18*(2), 281-311.

Davila, T. (2000). An empirical study on the drivers of management control systems' design in new product development. *Accounting, Organizations and Society, 25*(4/5), 383–409.

Dayan, R., Heisig, P., & Matos, F. (2017). Knowledge management as a factor for the formulation and implementation of organization strategy. *Journal of Knowledge Management, 21*(2), 308-329

Deci, E. L., & R. M. Ryan. (1987) The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology 53*(6): 1024–1037.

Degago, E. (2014). A Study on Impact of Psychological Empowerment on Employee Performance in Small and Medium Scale Enterprise Sectors. *European Journal of Business and Management, 6*(27), 60–72.

Delery, J. E. & Roumpi, D. (2017) 'Strategic human resource management, human Capital and competitive advantage: is the field going in circles?', *Human Resource Management Journal, 27*(1), 1–21.

Denford, J. (2013). Building knowledge: Developing a knowledge-based dynamic capabilities typology. *Journal of Knowledge Management.* 17.

Dess, G. & Robinson J. R. B. (1984), Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit. *Strategic Management Journal, Strat. Mgmt. J. 5*(3).

Dixon, S., Meyer, K., & Day, M. (2010). Stages of Organizational

Transformation in Transition Economies: A Dynamic Capabilities Approach. *Journal of Management Studies, 47.* 416-436.

Donna P., Nau, D. P., McDonough, K., & Pierre, Z. (2009), Development and testing of performance measures for pharmacy services. *Journal of the American Pharmacists Association, 49*(2), 212-219.

Dorothea Greiling, (2006),"Performance measurement: a remedy for increasing the efficiency of public services? *International Journal of Productivity and Performance Management, 55*(6) 448 – 465.

Drolet, A. L., & Morrison, D. G. (2001). Do We Really Need Multiple-Item Measures in Service Research? *Journal of Service Research, 3*(3), 196–204.

Dumitrescu, A. (2014). Budgeting mechanisms in public administration - meeting today's and tomorrow's development challenges. *Theoretical & Applied Economics, 21*(1), 131–140.

Dunk, A. S. (1993) The effect of budget emphasis and information asymmetry on the relation between budgetary participation and slack. *The Accounting Review 68* (2): 400–410.

Dunk, A. S., (2011) Product innovation, budgetary control, and the financial performance of firms. *The British Accounting Review* 43, 102–111.

Easterby-Smith M, & Lyles M, (2003), *Watersheds of Organizational Learning and Knowledge Management, The Blackwell Handbook of Organizational Learning and Knowledge Management.* Blackwell Publishing, Oxford.

Eddy Cardinaels, P. M.G. & Veen-Dirks, V. (2010), Financial versus non-financial information: The impact of information organization and presentation in a Balanced Scorecard. *Accounting, Organizations and Society, 35*(6), 565-578.

Ehsan, M., & Naz. (2003). Origin, Ideas and Practice of New Public Management: Lessons for Developing Countries. *Asian Affairs 25* (3):30–48.

Eisenhardt, K.M. and Martin, J.A. (2000), Dynamic capabilities: what are they? *Strat. Mgmt. J.,* 21, 1105-1121.

Emmanuel, C., Otley, D., & Merchant, K., (1990). *Accounting for Management Control*. (2nd ed). International Thomson Business Press, London.

Ergeneli, A., G. Saglam Ari, & S. Metin. (2007). Psychological empowerment and its relationship to trust in immediate managers. *Journal of Business Research 60*(1): 41–49.

Fatile, J. O. (2014). Performance Management Systems Productivity in the Public Sector: Wither African Public Administration. *Africa's Public Service Delivery and Performance Review, 2*(3), 77.

Ferreira, A. & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research*, 20, 263-282.

Fibuch E., & Vanway, CW., (2011), What Is a Knowledge Management System and Why Should Care? 37(5), 34-39.

Fourie, D., & Poggenpoel, W. (2017). Public sector inefficiencies: Are we addressing the root causes? *South African Journal of Accounting Research, 31*(3), 169–180.

Frezatti, F., de Souza Bido, D., da Cruz, A. P. C., & Machado, M. J. C. (2017).

Impacts of interactive and diagnostic control system use on the innovation process. *BAR - Brazilian Administration Review, 14*(3), 1–24.

Frow, N., Marginson, D., & Ogden, S. (2010). "Continuous" budgeting: Reconciling budget flexibility with budgetary control. *Accounting, Organizations and Society, 35*(4), 444–461.

Fugate, B.S., Stank, T.P. & Mentzer, J.T. (2009). Linking improved knowledge management to operational and organizational performance. *Journal of Operations Management*, (27), 247-264.

Gabel-Shemueli, R., & Capell, B. (2013). Public sector values: Between the real and the ideal. *Cross Cultural Management, 20*(4), 586–606.

Gaskin, J. (2016) Data screening, Gaskination's StatWiki. Available at: http://statwiki.kolobkreations.com/index.php?title=Data_screening (Accessed: 5 November 2018).

Gautam, A. K. (2018). A Review of New Public Management Practice in Developing Countries. *Scholarly Research Journal for Interdisciplinary Studies,* 49366, 5–43.

George, D. & Mallery, P. (2010) *SPSS for Windows Step by Step. A simple Guide and Reference*. USA: Ed. Boston, MA.

Ghana National Development Planning Commission (GNDPC), (1995). *Ghana Vision 2020: Presidential Report on Coordination Programme of Economic and Social Development Policies*. GNDPC, Accra, Ghana.

Ghana National Development Planning Commission (GNDPC), (1997). *Ghana Vision 2020: The Medium-term Development Plan (1997–2000).* GNDPC, Accra.

Ghana's Public Services Commission Act, 1994

Ghana's Constitution of 1992 with Amendments through 1996

Gharakhani, Davood & Mousakhani, Morteza. (2012). Knowledge management capabilities and SMEs' organizational performance. *Journal of Chinese Entrepreneurship, 4*. 35-49.

Girard, J. P., & Girard, J. L. (2009). *A Leader's Guide to Knowledge Management: Drawing on the Past to Enhance Future Performance.* New York: Business Expert Press

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems, 18*(1), 185-214.

Golubova, E. (2010). The Impact of New Public Management On Efficiency of Work and Quality Of Services In Vocational Education Institutions. *9th Milan European Economic Workshop,10*(11), 10–11.

Gomez-Conde, J., Lunkes, R. J., & Rosa, F. S. (2019). Environmental innovation practices and operational performance: The joint effects of management accounting and control systems and environmental training. *Accounting, Auditing and Accountability Journal, 32(*5), 1325–1357.

Gong, M. Z., & Ferreira, A. (2014). Does consistency in management control systems design choices influence firm performance? An empirical analysis. *Accounting and Business Research*, 44(5).

Gonzalez, R & Valio D. (2018). Dynamic Capability: an analysis in multi-unit service providers. Production, 28, e20180046. Epub November 29, 2018.https://doi.org/10.1590/0103-6513.20180046

Gordon, L., & Miller, D. (1976). A contingency framework for the design of accounting information systems. *Accounting Organization & Society, 1*(1), 59–69

Goyal, Praveen & Rahman, Zillur & Kazmi, A.A. (2013). Corporate Sustainability Performance and Firm Performance Research: Literature *Review and Future Research Agenda. Management Decision*, 51. 361-379.

Grabner, I., & Moers, F. (2013). Management control as a system or a package? Conceptual and empirical issues. *Accounting, Organizations and Society, 38*(6–7), 407–419.

Grafton, J., Lillis, A. M., & Widener, S. K. (2010), The role of performance measurement and evaluation in building organizational capabilities and performance. *Accounting, Organizations and Society, 35*(7), 689-706.

Grant, C. & Osanloo, A. (2014), Connecting Education, Practice, and Research. *Administrative Issues Journal, 4* (2),12-26

Greiling, D. (2005), "Performance measurement in the public sector: The German experience". *International Journal of Productivity and Performance Management, 54*(7), 551-67.

Greve, J., Ax, C., Bedford, D. S., Bednarek, P., Brühl, R., Dergård, J., & Willert, J. (2017). The impact of society on management control systems. *Scandinavian Journal of Management, 33*(4), 253–266.

Gronroos, C. (1984). A service quality modal and its marketing implication. *European Journal of Marketing, 18*(4), 36-44

Guo, J., Chen, J., Fu, J., Ge, X., Chen, M., & Liu, Y. (2016). Structural empowerment, job stress and burnout of nurses in China. *Applied*

Nursing Research, 31, 41–45

Gupta B., Iyer L. & Aronson, J., (2000). Knowledge management: practices and challenges. *Industrial Management & Data Systems, 100*(1): 17-21

Gupta, V. & Chopra, M. (2018), "Gauging the impact of knowledge management practices on organizational performance – a balanced scorecard perspective. *VINE Journal of Information and Knowledge Management Systems, 48*(1)21-46.

Habib M, & Cheng; M. M. (2013). The Effect of Managers' Enabling Perceptions on Costing System Use, Psychological Empowerment, and Task Performance. *Behavioral Research in Accounting; 25*(1): 89–114.

Hair, J. F. (2016) *Multivariate Data Analysis*. (7th ed). Pearson.

Hair, J. F. (2017). *A primer on partial least squares structural equation modeling* (PLSSEM). (2nd ed). Thousand Oaks: SAGE Publications Inc.

Hair, J. F. (2018) *Advanced Issues in Partial Least Squares Structural Equation Modeling*. Thousand Oaks: SAGE Publications, Inc.

Hair, J. F., Ringle, C. M. & Sarstedt, M. (2013) 'Editorial-Partial Least Squares Structural Equation Modeling : Rigorous Applications , Better Results and Higher Acceptance. *Long Range Planning, 46*(1–2), 1–12.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–152.

Hall, M. (2008). The effect of comprehensive performance measurement systems on role clarity, psychological empowerment and managerial performance. *Accounting, Organizations and Society 33* (2-3): 141–163.

Hammerschmid, G., Van de Walle S., & Andrews. R (2018). New public

management reforms in Europe and their effects: findings from a 20-Country top executive survey. *International Review of Administrative Sciences.*

Hammerschmid, G., Van de Walle, S., Andrews, R., & Mostafa, A. M. S. (2019). New Public Management reforms in Europe and their effects: findings from a 20-country top executive survey. *International Review of Administrative Sciences, 85*(3), 399–418.

Han, S., Seo, G., Li, J., & Yoon, S. W. (2015). The mediating effect of organizational commitment and employee empowerment: how transformational leadership impacts employee knowledge sharing intention. *Human Resource Development International, 19*(2), 1-18.

Han, S., Seo, G., Yoon, S. W., & Yoon, D.-Y. (2016). Transformational leadership and knowledge sharing: Mediating roles of employee's empowerment, commitment, and citizenship behaviors. *Journal of Workplace Learning, 28*(3), 130-149.

Hartline, M. D. and Ferrell, O. C. (1996). The Management of Customer-Contact Service Employees: An Empirical Investigation. *Journal of Marketing, 60*(4), 52–70.

Hartmann, F.G., & Maas, V.S. (2011). The effects of uncertainty on the roles of controllers and budgets: an exploratory study. *Accounting and Business Research, 41*(5), 439-458.

Hawkesworth, I., Huerta Melchor, O., & Robinson, M. (2012). Selected budgeting issues in Chile: Performance budgeting, medium-term budgeting, budget flexibility. *OECD Journal on Budgeting, 12(*3), 1–39.

Haynes, Philip. (2015). *Managing Complexity in the Public Services*. (2nd ed).

London: Routledge.

Heinicke, A., Guenther, T. W., & Widener, S. K. (2016). An examination of the relationship between the extent of a flexible culture and the levers of control system: The key role of beliefs control. M*anagement Accounting Research,* 33, 25–41.

Helfat, C. E. & M. Peteraf (2011), "Understanding dynamic capabilities: progress along a developmental path. *Strategic Organization, 7*(1), 91-102

Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. & Winter, S.G., (2007). *Dynamic capabilities: Understanding strategic change in organization*s. John Wiley & Sons.

Henri, J. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, Organizations and Society 31* (6): 529–558.

Henri, J. F., & Journeault, M. (2010). Eco-control: The influence of management control systems on environmental and economic performance. *Accounting, Organizations and Society, 35*(1): 63-80

Hewege, C. (2012). *A Critique of the Mainstream Management Control Theory and the Way Forward*. SAGE.

Ho, J. L., Huang, C.-J., & Wu, A. (2011). The Impact of Management Control Systems on Efficiency and Quality Performance —An Empirical Study of Taiwanese Correctional Institutions. *Asia-Pacific Journal of Accounting & Economics, 18*(1), 77–94.

Hofmann, S., Wald, A., & Gleich, R. (2012). Determinants and effects of the diagnostic and interactive use of control systems: An empirical analysis on the use of budgets. *Journal of Management Control, 23*(3), 153–182.

Holzer, M., Mullins, L. B., Ferreira, M., & Hoontis, P. (2016). Implementing Performance Budgeting at the State Level: Lessons Learned from New Jersey. *International Journal of Public Administration, 39*(2), 95–106.

Homburg, Christian & Artz, Martin & Wieseke, Jan. (2012). Marketing Performance Measurement Systems: Does Comprehensiveness Really Improve Performance? *Journal of Marketing.* 76. 56-77.

Hood C (1995) The New Public Management in the 1980's: variations on a theme. *Accounting, Organizations and Society*, 20, 93-109.

Hood C., R. Dixon (2016). Not What It Said on the Tin? Reflections on Three Decades of UK Public Management Reform. *Financial Accountability & Management, 32*(4), 409–28.

Hood, C. & Dixon, R. (2015) A Government that Worked Better and Cost Less? Evaluating Three Decades of Reform and Change in UK Central Government. Oxford: Oxford University Press.

Hood, C. (1991) 'A public management for all seasons?', Public administration, 69, pp. 3–19.

Hood, C. (2011) *The blame game: Spin, bureaucracy, and self-preservation in government.* Princeton, NJ: Princeton University Press.

Hopper, T., & Powell, A. (1985). Making Sense of Research Into the Organizational and Social Aspects of Management Accounting: a Review of Its Underlying Assumptions. *Journal of Management Studies, 22*(5), 429–465.

Hopper, T., Tsamenyi, M., Uddin, S., & Wickramasinghe, D. (2009). Management Accounting in Less Developed Countries: What We Know and Need to Know. *Accounting, Auditing, and Accountability Journal,*

22(3), 469–514.

Hoque, Z., & Chia, M. (2012). Competitive forces and the levers of control framework in a manufacturing setting. *Qualitative Research in Accounting & Management, 9*(2), 123–145.

Hult, G. T. M. (2008). An assessment of the measurement of performance in international business research. *Journal of International Business Studies, 39*(6), 1064–1080.

Hung, R. Y. Y., Lien, B. Y. H., Yang, B., Wu, C. M., & Kuo, Y. M. (2011). Impact of TQM and organizational learning on innovation performance in the hightech industry. *International business review, 20*(2), 213-225.

Huy, Q. N. (2001). In praise of middle managers. *Harvard business review, 79*(8), 72-9.

Hyndman, N., & Lapsley, I. (2016). New Public Management: The Story Continues. *Financial Accountability and Management, 32*(4), 385–408.

Hyndman, N., & Lapsley, I. (2016). New Public Management: The Story Continues *Financial Accountability & Management, 32*(4), 385-408.

Ilias, N. (2016), *Management Control Systems and Performance: Evidence from Malaysian Local Authorities*. Unpublished Doctoral Dissertation. Malaysia: Universiti Teknologi MARA, Selangor.

Ilias, N., Abdulatiff, N. K., Zuriati, W., Zakaria, W., & Wahab, N. (2016). The Effects of Management Control Systems on Service Quality Performance in Malaysian Local Authorities: *Management Perspective, 6*(4), 915–920.

Ing-Long, W., & Jian-Liang C. (2014). Knowledge management driven firm performance: the roles of business process capabilities and organizational learning. *Journal of Knowledge Management, 18*(6),1141-1164.

Iqbal, A., Latif, F., Marimon, F., Sahibzada, U. & Hussain, S. (2019). From knowledge management to organizational performance: Modelling the mediating role of innovation and intellectual capital in higher education", Journal of Enterprise Information Management, 32(1), 36-59.

Jalali Ali & Abadi, F. (2016). Determinants and Effects of Diagnostic and Interactive Use of Budget in Iranian Companies. *International Journal of Business and Economics Research, 5*(3), 46.

Jamil, C. Z. M., & Mohamed, R. (2013). The Effect of Management Control System on Performance Measurement System at Small Medium Hotel in Malaysia. *International Journal of Trade, Economics and Finance*, (1), 202–208.

Jan Van Helden G. (2005). Researching Public Sector Transformation: The Role of Management Accounting. 21(2), 99-133.

Janke, R., Mahlendorf, M. D., & Weber, J. (2014). An exploratory study of the reciprocal relationship between interactive use of management control systems and perception of negative external crisis effects. *Management Accounting Research, 25*(4), 251–270.

Jansen, E. P. (2004), Performance Measurement in Governmental Organizations: A Contingent Approach to Measurement and Management Control. *Managerial Finance, 30*(8) 54–68.

Järvenpää, M., & Länsiluoto, A. I. (2011). Linkages between the Elements of Management Control Systems in a Non-Profit Organization. *Electronic*

Journal.

Jenatabadi, Hashem S, (2015) An Overview of Organizational Performance Index: Definitions and Measurements. Available at SSRN: https://ssrn.com/abstract=2599439

Jomah, N. B. (2017). Psychological Empowerment on Organizational Commitment as Perceived by Saudi Academics. *World Journal of Education, 7*(1), 83.

Joshi, H., Farooquie, J. A., & Chawla, D. (2016). Knowledge Management Practices in Indian Organizations—A Sectoral Comparison. *Vision, 20*(3), 211–223.

Joustie, H. (2015). *Public Sector Reform in Finland*. (September).

Kakouris, A. P., & Meliou, E. (2011). New Public Management: Promote the Public Sector Modernization Through Service Quality. Current Experiences and Future Challenges. *Public Organization Review, 11*(4), 351–369.

Kaplan, R. & Norton, D. (1996). strategic learning & the balanced scorecard. *Strategy & Leadership, 24*(5), 18-24.

Kaplan, R. S., & Norton, D. P. (1996). *Using the balanced scorecard as a strategic management system*.

Kärreman, D., & Alvesson, M. (2004). *Cages in Tandem: Management Control, Social Identity, and Identification in a Knowledge-Intensive Firm*. Organization.

Kasim, Raja. (2010). The Relationship of Knowledge Management Practices, Competencies and the Organizational Performance of Government Departments in Malaysia.

Katou, A. A. (2017) How does human resource management influence organisational performance? An integrative approach-based analysis. *International Journal of Productivity and Performance Management, 66*(6), 797–821.

Katsamunska, P. (2012). "Classical and Modern Approaches to Public Administration. *Economic Alternative Review.*

Katsuro, P., Mapira, N., Mangava, S., & Chimbindi, V. (2013). Impact of Knowledge Management on Organizational Performance: A Case Study of Grain Marketing Board (GMB). *Greener Journal of Business and Management Studies, 3*(6), 270–278.

Kattan, F., Pike, R., & Tayles, M. (2007). Reliance on management accounting under environmental uncertainty. *Journal of Accounting & Organizational Change, 3*(3), 227–249.

Kebriaei, A., Rakhshaninejad, M., & Mohseni, M. (2014). Influence of psychological empowerment on organizational commitment among medical employees in a hospital setting. *Bangladesh Medical Research Council Bulletin, 40*(3), 107–112.

Keegan, D., Eiler, R., & Jones, C. (1989). Are your performance measures obsolete? *Management Accounting, 70*(12), 45-50.

Kettle D. (2000) *The global public management revolution*. Washington: Brookings institution press.

Kharabsheh, I. Magableh, & S. Sawadha, (2012), Knowledge Management Practices (KMPs) and Its Impact on Organizational Performance in Pharmaceutical Firms. European *Journal of Economics, Finance and Administrative Sciences*, (48), 6-15

Kim, J. B., Song, B. Y. & Zhang, L. (2011). Internal control weakness and bank loan contracting: Evidence from SOX section 404 disclosures. *The Accounting Review 86* (4): 1157–88.

Kim, J. H., Ji, P., & Ahmed, K. (2017). Significance Testing in Accounting Research: A Critical Evaluation Based on Evidence. *Electronic Journal*, 1–33.

Kim, K., & Lee, S. (2016). Psychological Empowerment. 3–5.

Kim, K.K., Ryoo, S.Y., & Jung, M, D. (2011). Inter-organisation information systems visibility in buyer-supplier relationships: The case of telecom-munication equipment component manufacturing industry. Omega, 39, 667-676.

Kim, N. & Cho, W. (2015) 'Agencification and Performance: The Impact of Autonomy and Result-Control on the Performance of Executive Agencies in Korea. *Public Performance and Management Review*, *38*(2), 214–233.

Kimberly, J. R., & Evanisko, M. J. (1981). Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. *Academy of management journal, 24*(4), 689-713.

King, A. (2007). Cooperation between corporations and environmental groups: a transaction cost perspective. *Academy of Management Review, 32*(3), 889-900.

King, A. W. (2007). Disentangling inter-firm and intrafirm causal ambiguity: A conceptual model of causal ambiguity and sustainable competitive advantage. *Academy of Management Review, 32*(1), 156–178.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. (2nd ed). New York: The Guilford Press.

Kloot, L. (1997). Organizational learning and management control systems:

Kloot, L. (1999), Performance measurement and accountability in Victorian local government. *The International Journal of Public Sector Management, 1*2(7), 565-583.

Kloot, L., & Martin. J. (2000). Strategic performance management: A balanced approach to performance management issues in local government. *Management Accounting Research*, 11, 231-251.

Kober, R., Ng, J., & Paul, B. J. (2007). The interrelationship between management control mechanisms and strategy. *Management Accounting Research, 18*(4), 425–452.

Kock, N. & Lynn, G. (2012) 'Lateral Collinearity and Misleading Results in Variance-Based SEM: An Illustration and Recommendations. *Journal of the Association for Information Systems, 13*(7), 546–580.

Kock, N. (2015) 'Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration, 11*(4), 1–10.

Koene, B. A., Vogelarr, A. L., & Soeters, J. L. (2002). Leadership effects on organizational climate and financial performance: Local leadership effect in chain organizations. *Leadership Quarterly, 13*(3), 193-215.

Kraus, K., Kennergren, C., & von Unge, A. (2017). The interplay between ideological control and formal management control systems – A case study of a non-governmental organisation. Accounting, Organizations and Society, 63, 42–59.

Kreutzer, M., Cardinal, L. B., Walter, J & Lechner, C. (2016) Formal and Informal Control as Complement or Substitute? The Role of the Task Environment. *Strategy Science 1*(4):235-255.

Kroll, A., & Proeller, I. (2013). Management control system and performance: Accountability attributes in local authorities. *International Journal of Public Sector Management 26* (1), 74-85.

Kruis, A. (2008). *Management Control Systems Design and Effectiveness*. Doctoral dissertation, Nyenrode Business University.

Kruis, A. M., Speklé, R. F., & Widener, S. K. (2016). The Levers of Control Framework: An exploratory analysis of balance. *Management Accounting Research*, 32, 27–44.

Kruis, A., R. F. Spekle´, & S. K. Widener, (2016). The levers of control framework: An exploratory analysis of balance. *Management Accounting Research* 32: 27–44.

Langfield-Smith, K. (1997). Management control systems and strategy: A critical review. *Accounting, Organizations and Society, 22*(2), 207–232.

Laughlin, R. (1995), "Empirical research in accounting: alternative approaches and a case for “middle-range” thinking". *Accounting, Auditing & Accountability Journal, 8*(1), 63-87.

Laughlin, R. (1999). Critical accounting: Nature, progress and prognosis. *Accounting, Auditing & Accountability Journal, 12(*1), 73–78.

Lawrence, P., & Lorsch, J. (1967) Differentiation and Integration in Complex Systems. *Administrative Science Quarterly, 12* (1), 1-47.

Leal Rodríguez, A. L., Leal Millán, A. y Roldán Salgueiro, J. L. (2013).

Knowledge Management and the Effectiveness of Innovation Outcomes: The Role of Cultural Barriers. *Electronic Journal of Knowledge Management, 11* (1), 62-71.

Lebas, M., & Euske K., (2007). *A conceptual and operational delineation of performance: Business performance measurement.* (2nd ed). Cambridge University Press, United Kingdom, 125-139.

Lee H. & Choi B. (2003) Knowledge management enablers, processes, and organizational performance: An integrative view and empirical examination. *Journal of Management Information Systems, 20*(1): 179–228

Lee, S., Gon Kim, B.& Kim, H.(2012). An integrated view of knowledge management for performance. Journal of Knowledge Management, 16(2), 183-203.

Li, I., Chen, Y., & Kuo, H. (2008). The Relationship Between Work Empowerment and Work Stress Perceived by Nurses at Long-Term Care Facilities in Taipei City. *Journal of clinical nursing*, 17, 3050-8.

Liao, S. H., Chang, W. J., & Wu, C. C. (2010). Exploring TQM-innovation relationship in continuing education: A system architecture and propositions. *Total Quality Management and Business Excellence, 21*(11), 1121–1139.

Liden, R.C, Wayne, S.J & Sparrowe, R.T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships and work outcomes. *Journal of Applied Psychology, 85*(3): 407-416.

Lin, H. F., & Lee, G. G. (2005). Impact of organizational learning and knowledge management factors on e-business adoption. In Management Decision.

Lin, Y. T. & Liu, N. C. (2016) 'High performance work systems and organizational service performance: The roles of different organizational climates. *International Journal of Hospitality Management*, 55, 118–128.

Lin, Y., & Wu, L. Y. (2014). Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *Journal of Business Research, 67*(3), 407–413.

Liu, J. & Liu, Y. hui (2016) 'Perceived organizational support and intention to remain: The mediating roles of career success and self-esteem. *International Journal of Nursing Practice, 22*(2), 205–214.

Li-Yun, S., Zhen, Z., Jin, Q, & Zhen, X. C. (2012), Empowerment and creativity: A cross-level investigation. *The Leadership Quarterly, 23*(1), 55-65,

Llach, J., Marquès, P., Bikfalvi, A., Simon, A. & Kraus, S. (2012). The innovativeness of family firms through the economic cycle. *Journal of Family Business Management, 2* (2), 96-109. https://doi.org/10.1108/20436231211261853

Lopez-Valeiras, E., Gomez-Conde, J., & Lunkes, R. J. (2018). Reacciones de los empleados ante la utilización de sistemas de control de gestión en hospitales: motivación vs. amenaza. *Gaceta Sanitaria, 32*(2), 129–134.

Loxley, J. (2016). Review of African Political Economy Structural adjustment in Africa: reflections on Ghana and Zambia Structural Adjustment in

Africa: Reflections on Ghana and Zambia. (47), 8–27.

Lynch, R., & Cross, K. (1991). *Measure up—the essential guide to measuring business performance.* London: Mandarin.

Mahama, H. (2006). Management Control Systems, Cooperation and Performance in Strategic Supply Relationships: A Survey in the Mines. *Management Accounting Research,* 17, 315-339.

Malmi, T., & Brown, D. A. (2008). Management control systems as a package-Opportunities, challenges and research directions. Management Accounting Research, 19(4), 287–300.

Mankins, M.C., & Steele, R. (2005). Turning Great Strategy into Performance. Harvard Business Review; 65-72

Marginson, D. E. W. (2002). Management control systems and their effects on strategy formation at middle-management levels: Evidence from a U.K. organization. *Strategic Management Journal, 23*(11), 1019–1031.

Marginson, D., L. McAulay, M. Roush, and T. van Zijl. (2014). Examining a positive psychological role for performance measures. *Management Accounting Research 25* (1): 63–75.

Martín-de Castro, G. (2015). Knowledge management and innovation in knowledge-based and high-tech industrial markets: The role of openness and absorptive capacity. *Industrial Marketing Management*, 47, 143-146.

Martyn, P., Sweeney, B., & Curtis, E. (2016). Strategy and control: 25 years of empirical use of Simons' Levers of Control framework. *Journal of Accounting and Organizational Change, 12*(3), 281–324.

McClure, R. (2010). *Response bias in self-reported measures of organizational performance: a pilot study.* Paper presented at the Society for Marketing Advances Conference, Atlanta, GA, USA.

Melo, A. I., Sarrico, C. S., & Radnor, Z. (2008). *The effects of New Public Management on the measurement, reporting and management of performance in higher education: A comparative study between Portuguese and British universities.* ECPR 2008 Workshop "From Politics to Management? Public Services Performance, Accountability and Distributional Outcomes in Social Politics," 1–21.

Meng Q, & Sun F. (2019), The Impact of Psychological Empowerment On Work Engagement Among University Faculty Members In China. *Psychol Res Behav Manag,* 12, 983-990

Merchant, K. A., & Otley, D. T. (2006). A Review of the Literature on Control and Accountability. *Handbooks of Management Accounting Research,* 2, 785–802.

Merchant, K. A., & Van der Stede, W. A. (2012).Management control systems: Performance measurement, evaluation and incentives. Harlow: Pearson Education.

Merriam-Webster. (2014). *Reform*. Retrieved from http://www.merriam-webster.com/dictionary/ reforms

Miller, J. G., Meyer, A. & Nakane, J. (1992). *Benchmarking Global Manufacturing: Understanding International Suppliers, Customers and Competitors.* Homewood, IL: Irwin.

Mills A. & Smith T. (2011). Knowledge management and organizational performance: a decomposed view. *Journal of Knowledge Management, 15*(1): 156-171.

Mimba, N. P. S. H., Van Helden, G. J., & Tillema, S. (2007). Public sector performance measurement in developing countries: A literature review and research agenda. *Journal of Accounting & Organizational Change, 3*(3), 192–208.

Mind Tools. (2014). *Root cause analysis.* Retrieved from http://www.mindtools.com/pages/article/ newTMC_80.htm

Mir, M., & Sutiyono, W. (2013). Public Sector Financial Management Reform: A Case Study of Local Government Agencies in Indonesia. *Australasian Accounting, Business and Finance Journal, 7(*4), 97–117.

Modell, S. (2005). Performance management in the public sector: Past experiences, current experiences and future challenges. *Australian Accounting Review, 15*(37), 56–66.

Mohamed, R, Hui, W.S, A Rahman, I K. & Aziz, R.A. (2008). Strategic Performance Measurement System and Organisation Capabilities: Using Levers of Control Framework. *International Review of Business Research Papers, 4*(3), 151-166.

Mongkol, K. (2011). The Critical Review of New Public Management Model and Its Criticisms. *Research Journal of Business Management, 5* (1):35–43.

Moulang, C. (2015). Performance measurement system use in generating psychological empowerment and individual creativity. *Accounting & Finance 55*(2), 519–544

Mundy, J. (2010). Creating dynamic tensions through a balanced use of management. *Accounting, Organizations and Society 35*(5): 499– 523.

Naranjo-Gil, D. (2016). Role of management control systems in crafting realized strategies. *Journal of Business Economics and Management, 17*(6), 865–881.

Naveed, S., Salman, Y., Jabeen, N., Jadoon, Z. I., & Irfan, S. (2018). Governance and Management of State-Owned Enterprises in Pakistan. *Pakistan Economic and Social Review, 56*(1), 47–66.

Nawrin, R. (2016). Impact of Psychological Empowerment on Employees' Work and Organization Engagement: A Study in the Manufacturing Sectors, Bangladesh. *Mediterranean Journal of Social Sciences, 7*(5), 389–395.

Ngah, R., Tai, T., & Bontis, N. (2016). Knowledge management capabilities and organizational performance in roads and transport authority of Dubai: The mediating role of learning organization. *Knowledge and Process Management, 23*(3), 184-193.

Nguyen, T. T., Mia, L., Winata, L., & Chong, V. K. (2017). Effect of transformational-leadership style and management control system on managerial performance. *Journal of Business Research*, 70, 202–213.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science, 5*(1), 14-37.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford university press.

OECD (2012a), Towards New Arrangements for State Ownership in the Middle East and North Africa, OECD Publishing

Ohemeng, F. (2010). The dangers of internationalization and "one-size-fits-all" in public sector management: Lessons from performance management policies in Ontario and Ghana. *International Journal of Public Sector Management, 23*(5), 456–478.

Onrubia-Fernández, J., & Sánchez Fuentes, A. J. (2017). How costly are public sector inefficiencies? A theoretical framework for rationalising fiscal consolidations. *Economics,* 11.

Osei, P. D. (2015). *Public Sector Reform in Jamaica. In Rethinking the Reform Questio*n. Cambridge Scholars Publishing.

Otley, D. (2003), Management control and performance management: whence and whither? *The British Accounting Review,35*(4), 309-326.

Otley, D. (2014). The contingency theory of management accounting and control : 1980 – 2014

Otley, D. (2016). The contingency theory of management accounting and control: 1980-2014. *Management Accounting Research.*

Otley, D., (1999). Performance management: a framework for management control systems research. *Management Accounting Research* 10, 363–382.

Otley, D.T. (1980), The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society, 5*(4), 413-428.

Otley, D.T., Berry, A. (1994), Case study research in management accounting and control. *Management Accounting Research*, 5, 45-65.

Ouchi, W. G. (1980). Markets, bureaucracies, and clans. *Administrative Science Quarterly, 25*(1), 129-141.

Ouchi, W. G., & Maguire, M. A. (1975). Organizational control: Two functions. *Administrative Science Quarterly, 20(*December), 559-569.

Ouchi, W.G, (1979): "A conceptual framework for the design of organizational control mechanisms. *Management Science, l25*(9), 833-848.

Ouchi, W.G., (1977): "The relationship between organizational structures and organizational control", Administrative Science Quarterly, 22,95-113.

Overman, S. & van Thiel, S. (2016) 'Agencification and Public Sector Performance: A systematic comparison in 20 countries. *Public Management Review. Routledge, 18*(4), 611–635.

Park J, Song Y, & Teng CI. (2011), Exploring the links between personality traits and motivations to play online games. *Cyberpsychol Behav Soc Netw.;14(*12):747-51

Patrick, B., Oguta M., Elijah, M., & Lucas, A. (2011). Belief Control Practices and Organizational Performances: A Survey of Sugar Industry in Kenya. *International Multidisciplinary Journal, Ethiopia, 5*(4), 1-17

Pauleen D J, & Wang W Y C. (2017). Does big data mean big knowledge? KM perspectives on big data and analytics. *Journal of Knowledge Management. 21* (1): 1–6

Peljhan, D., & Tekavčič, M. (2008). The Impact of Management Control Systems - Strategy Interaction on Performance Management: A Case Study. *Organizacija, 41*(5), 174–184.

Personal, M., & Archive, R. (2018). *Munich Personal RePEc Archive Historical Evolution of Entrepreneurial Development in the Global South*: The,

(88179).

Pešalj, B., Pavlov, A. & Micheli, P. (2018). The use of management control and performance measurement systems in SMEs: A levers of control perspective. *International Journal of Operations & Production Management, 38*(11), 2169-2191.

Pestieau, P., & Tulkens, H. (2007). Assessing and Explaining the Performance of Public Enterprises: Some Recent Evidence from the Productive Efficiency Viewpoint. *Public Goods, Environmental Externalities and Fiscal Competition,* (February), 343–372.

Peter, N. (2017). *Influence of Balanced Scorecard on Organizational Performance of Kenya Electricity Generating Company Limited : a Case of Central Office in Nairobi City County*.

Pillania, R. K. (2008), Information technology strategy for knowledge management in Indian automotive components SMEs. Knowl. *Process Mgmt., 15*, 203-210.

Pisano, G. P. (2017). Toward a prescriptive theory of dynamic capabilities: Connecting strategic choice, learning, and competition. *Industrial and Corporate Change, 26*(5), 747–762.

Plimmer, G., Bryson, J., Donnelly, N., Wilson, J., Ryan, B., & Blumenfeld, S. (2017). The Legacy of New Public Management (NPM) on Workers, Management Capabilities, and Organisations. *New Zealand Journal of Employment Relations, 42*(1), 19.

Podsakoff, P. M. et al. (2003) 'Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies', *Journal of Applied Psychology, 88*(5), 879–903.

Podsakoff, P. M., MacKenzie, S. B. & Podsakoff, N. (2012) 'Sources of Method Bias in Social Science Research and Recommendations on How to Control it. *Annual review of psychology*, 63, 539–569.

Pollit, C. et al. (2001) 'Agency fever? Analysis of an international policy fashion Agency Fever?', *Journal of Comparative Policy Analysis: Research and Practice, 3*(3), 271–290.

Pollitt, C. & Bouckaert, G. (2011). *Public management reform: a comparative analysis - into the age of austerity*. (4th ed). New York: Oxford University Press.

Pollitt, C. & Dan, S. (2013) 'Searching for Impacts in Performance-Oriented Management Reform. *Public Performance & Management Review, 37*(1), 7–32.

Pollitt, C. & Talbot, C. (2004). *Unbundled government: a critical analysis of the global trend to agencies, quangos and contractualisation*. London: Routledge.

Pollitt, C. (2016) Managerialism Redux? *NPM Dead or Alive*,32,(4) 429-447.

Pollitt, C. et al. (2004) Agencies: how governments do things through semi-autonomous organizations. Palgrave Macmillan.

Pollitt, C. et al. (2005). *Agencies. How Governments Do Things through Semi-Autonomous Organisations*. New York: Palgrave Macmillan.

Pollitt, C., Thiel, S. van & Homburg, V. (2007) *New public management in Europe: adaptation and alternatives*. Palgrave Macmillan.

Protogerou, A., Caloghirou, Y. & Lioukas, S. (2012), "Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change, 21*(3),615-647.

Pun, K. F. & White, A. S. (2005). A performance measurement paradigm for integrating strategy formulation: a review of systems and frameworks. International Journal of Management Reviews, 7(1), 49-71.

Pwc. (2007). The Road Ahead for Public Service Delivery. Public Sector Research Centre, 1–68.

Quinn, R. E., & Spreitzer, G. M. (1997). The road to empowerment: Seven questions every leader should consider. *Organizational Dynamics, 26*(2), 37–49.

Rabee S & Rapiah B., M. (2016), Management control system, organizational learning, and firm's performance: An empirical study from developing economy. *International Journal of Advanced and Applied Sciences, 3*(10) 79-88.

Radtke, R & Widener, S. (2016). The Complex World of Control: Integration of Ethics and Uses of Control.

Ramseook-munhurrun, P., Lukea-bhiwajee, S. D., & Naidoo, P. (2010). *Service quality in the public service. 3*(1), 37–50.

Randolph, W. A. (1995). Navigating the journey to empowerment. *Organizational Dynamics*, 23, 19-32.

Randolph, W. A. (2000). Re-thinking empowerment: Why is it so hard to achieve? *Organizational Dynamics,* 29,94-107.

Randolph, W. A., and M. Sashkin. (2002). Can organizational empowerment work in multinational settings? *Academy of Management Executive* 16,102-15.

Rasdi, R.M., Ismail, M., & Garavan, T.N. (2011), Predicting Malaysian managers' objectives and subjective career success. *The International*

Journal of Human Resource Management, 22(17), 3528-3549.

Raudla, R., Taro, K., Agu, C., & Douglas, J. W. (2016). The impact of performance audit on public-sector organizations: The case of Estonia. *Public Organization Review, 16*(2), 217-233.

Razouk, A. (2011). High performance work systems and performance of French small- and medium-sized enterprises: examining causal order'. *International Journal of Human Resource Management,* 22, 311–330

Reid, G. C. & Smith, J. A. (2000). The impact of contingencies on management accounting system development. *Management Accounting Research*, 11, 427-450.

Richard, P., Devinney, T., Yip, G., & Johnson, G. (2009). Measuring Organizational Performance: Towards Methodological Best Practice. *Journal of Management*, 35.

Rimantas D. (2011). *Impact of New Public Management on Efficiency of Work and Quality of Services in Vocational Education Institutions; Public Policy and Management Institute.*

Ringa, R., Randma-Liiv, T., & Savi, R. (2015). Public Sector Financial and Personnel Management during Cutbacks: Looking back at the Literature of the 1970s and 1980s. *Administrative Culture 16* (2), 117-140

Robert, S. (1991). Strategic Orientation and Top Management Attention to Control Systems. *Strategic Management Journal 12*(1), 49.

Robinson, M. (2013). *Performance Budgeting*. In R. Allen, R. Hemming and B. Potter (eds). The International Handbook of Public Financial Management. Palgrave Macmillan. 237-258.

Robinson, M. (2015). *From Old Public Administration to the New Public Service*. UNDP Global Centre for Public Service Excellence.

Rodolfo. (2005). Organizational Learning and Market Orientation: Interface and Effects on Performance. *Industrial Marketing Management*, 34. 187-202.

Rosanas, J. M., & Velilla, M. (2005), The ethics of management control systems: Developing technical and moral values. *Journal of Business Ethics,* (57), 83-96

Rowan, M., & Lerner, A. (1995). Bureaucracy, organizational redundancy, and the privatization of public services. *Public Administration Review* 55, 193–200.

Ryan, B., Scapens, R. W., & Theobold, M. (2002). *Research Methof and Methodology in Finance and Accounting*.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well- being. *The American Psychologist 55* (1): 68–78.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness.* The Guilford Press.

Sa'id, H. A. (2010). *Public sector reforms and management control systems in a developing country: a case study of a large state enterprise in Nigeria*. University of Birmingham. Ph.D.

Sakka, O., Barki, H., & Côté, L. (2013). Interactive and diagnostic uses of management control systems in IS projects: Antecedents and their impact on performance. *Information and Management, 50*(6), 265–274.

Saltman, R. B., Durán, A. & Dubois, H. F. W. (2011). *Governing Public*

HospitalsReform strategies and the movement towards institutional autonomy. WHO Regional Office for Europe: Cophenhagen

Samuli Leppälä, (2012). "Economic Analysis Of Knowledge: The History Of Thought And The Central Themes," Center for the History of Political Economy Working Paper Series 2012-05, Center for the History of Political Economy.

Saunders, M., Lewis, P. & Thornhill, A. (2016) *Research methods for business students*. (7th ed). Harlow: Pearson.

Schein, E.H, (2010). Organizational Culture and Leadership: The Jossey- Bass Business & ManagementSeries. https://books.google.com.gh/books, John Wiley & Sons.

Schneider, B. & White, S. S. (2004). *Service quality: Research perspectives.* Thousand Oaks, CA: SAGE.

Seibert, S., Wang, G, & Courtright, S. (2011). Antecedents and Consequences of Psychological and Team Empowerment in Organizations: A Meta-Analytic Review. *The Journal of applied psychology,* 96. 981-1003.

Sekaran, U. & Bougie, R. J. (2016) *Research Methods for Business: A Skill Building Approach.* Chichester: John Wiley & Sons Ltd.

Shalley, C. E., Gilson, L. L., & Blum, T. C. (2009). Interactive effects of growth need strength, work Context, and job complexity on self- reported creative performance. *Academy of Management Journal 52* (3): 489–505.

Shannak R., (2010), Knowledge-based Systems Support for Strategic Decisions. *European Journal of Economics, Finance and Administrative Sciences*, (21), 7-20.

Shannak, R. O., Masa'deh, R. M., & Akour, "Mohammad A. (2012). Knowledge Management Strategy Building: Literature Review. *European Scientific Journal, ESJ, 8*(15).

Shehata, G.M. (2015), "Leveraging organizational performance via knowledge management systems platforms in emerging economies: Evidence from the Egyptian Information and Communication Technology (ICT) industry. *VINE, 45*(2), 239-278.

Shen, S. S. Q., & Perera, S. (2012). Diagnostic and interactive uses of budgets and the moderating effect of strategic uncertainty. *Asia Pacific Management Accounting Journal, 7*(2), 127–154.

Short, J.C., Ketchen, D.J., Palmer, T.B., & Hult, G.T.M., (2007). Organisation, Strategy group and Industry Influences on Performance. *Strategic Management Journal, 28*(3), 147-167

Siachou, E. & Gkorezis, P. (2014). Do empowered employees absorb knowledge? An empirical investigation of the effects of psychological empowerment dimensions on absorptive capacity. *Management Research Review,* 37, 130-151.

Sierens, E., Vansteenkiste, M., Goossens, L., Soenens, B., & Dochy, F. (2008). The synergistic relationship of perceived autonomy support and structure in the prediction of self-regulated learning. *The British journal of educational psychology,* 79, 57-68.

Simm, A. L. (2010). A Contingency Model of Strategy, Performance Measurement Systems and Management Accounting Practices: An Empirical Investigation in English Local Authorities. School of Management, Faculty of Law, Arts and Social Sciences, Doctor of, 348.

Simonet, D. (2013), New public management and the reform of French public hospitals. *Journal of Public Affairs*, 3.

Simons, R. (1990). The role of management control systems in creating competitive advantage: New perspectives. *Accounting, Organizations and Society 15* (1/2), 127–143.

Simons, R. (1994). How New Top Managers Use Control Systems as Levers of Strategic Renewal. *Wiley Stable 15(*3), 169–189.

Simons, R. (1995a). *Levers of Control: How Managers use Innovative Control Systems to Drive Strategic Renewal*. Boston, MA: Harvard Business School Press.

Simons, R. (1995b). *Control in an age of empowerment.* Harvard Business Review (March/April): 80–88.

Simons, R. (2000). *Performance Measurement and Control Systems*. Upper Saddle River, NJ: Prentice Hall.

Spekle, R. F., van Elten, H. J. & Widener S. K. (2017). Creativity and Control: A Paradox—Evidence from the Levers of Control Framework: Behavioral Research in Accounting. *American Accounting Association 29*(2). 73-96.

Spreitzer, G. (1995). Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation. *Academy of Management Journal, 38*(5), 1442–1465.

Spreitzer, G. M., M. A. Kizilos, and S. W. Nason. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness, satisfaction, and strain. *Journal of Management*, 23, 679–704.

Sreenivas, J. N. G. (2014). Impact of Psychological Empowerment on

Employee Performance - A Conceptual Review. *IOSR Journal of Business and Management, 16*(6), 01–05.

Steel, W., & Webster, L. (1992) 'How small enterprises in Ghana have responded to adjustment. *World Bank Economic Review*, 6, 423–438

Steinbock, D. (2000). Building dynamic capabilities. JMM: *The International Journal on Media Management,* 2, 178–194.

Strauß, E., & Zecher, C. (2013). Management control systems: A review. *Journal of Management Control, 23*(4), 233–268.

Strauß, E., & Zecher, C. (2013b). Management control systems: A review. *Journal of Management Control, 23*(4), 233–268.

Sun, R. & Henderson, A.C. (2017), Transformational Leadership and Organizational Processes: Influencing Public Performance. *Public Admin Rev,* 77: 554-565.

Sunder, S., (2002), "Management Control, Expectations, Common Knowledge, and Culture. *Journal of Management Accounting Research*, 14, 173–187.

Sutton, N. C., & Brown, D. A. (2016). The illusion of no control: management control systems facilitating autonomous motivation in university research. *Accounting and Finance, 56*(2), 577–604.

Suzana R. & Kasim R. (2010). The Relationship of Knowledge Management Practices, Competencies and the Organizational Performance of Government Departments in Malaysia. *International Journal of Human and Social Sciences,5*(4): 219:225.

Tanriverdi, H. & Venkatraman, N. (2005), Knowledge relatedness and the performance of multi business firms. *Strat. Mgmt. Journal*, 26, 97-119.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal, 28*(13), 1319-1350.

Teece, D. J. (2018). Business models and dynamic capabilities. Long Range Planning, 51(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal, 18*(7), 509-533.

Teece, D., & Pisano, G. (1994). The dynamic capabilities of firms: an introduction. *Industrial and corporate change, 3*(3), 537-556.

Teece, David. (2014). A dynamic capabilities-based entrepreneurial theory of multinational enterprise. *Journal of International Business Studies*.

Tessier, S., & Otley, D. (2012). A conceptual development of Simons' Levers of Control framework. *Management Accounting Research, 23*(3), 171–185.

Thatcher, M.E. & J.R. Oliver, (2001), "The Impact of Technology Investments on a Firm's Production Efficiency, Product Quality, and Productivity". *Journal of Management Information Systems 18*(2), 17–45.

The Ministry of Finance (2017), State Ownership Report, Ghana

The World Bank Database, vide data.worldbank.org

The World Bank. (2017). Ghana-Government Constraints to Administrative Delivery,1-78

Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *The Academy of Management Review, 15*(4), 666–681.

Thompson, J. D. (1967). *Organizations in action.* New York: McGraw-Hill.

Thornhill, D. (2006). Productivity attainment in a diverse public sector. Presentation at Institute of Public Administration seminar on promoting productivity in a diverse public sector.

Tippins, M.J. & Sohi, R.S. (2003), IT competency and firm performance: is organizational learning a missing link? *Strat. Mgmt. J*, 24: 745-761.

Toonen, T. A. J. (2007). Administrative Reform: Analytics, In B.G. Peters and J. Pierre (Eds.), *The Handbook of Public Administration*. London: SAGE.

Torabi, F., & El-Den, J. (2017). The impact of Knowledge Management on Organizational Productivity: A Case Study on Koosar Bank of Iran. *Procedia Computer Science*, 124, 300–310.

Triantafylli, A.A., & Ballas, A.A. (2010), Management control systems and performance: Evidence from the Greek shipping industry. *Maritime Policy and Management, 37*(6), 625-660.

Tsamenyi, M., Sahadev, S., & Qiao, Z.A. (2011), The relationship between business strategy, management control systems and performance: Evidence from China. *Advances in Accounting, Incorporating Advances in International Accounting*, 27, 193-203.

Tsekouras, G., Poulis, E., & Poulis, K. (2011). Innovation and dynamic capabilities in a traditional service sector. *Baltic Journal of Management, 6*(3), 320–341.

Tuomela, T. S. (2005). The interplay of different levers of control: A case study of introducing a new performance measurement system. *Management Accounting Research, 16(*3), 293–320.

Tynkkynen, L.-K., Keskimäkia, I. & Lehtoa J. (2013), Purchaser–provider splits

in health care—The case of Finland, Health Policy, 3.

Tzafrir, S. S. (2005) 'The relationship between trust, HRM practices and firm performance. *The International Journal of Human Resource Management, 16*(9), 1600–1622.

U, D. O. (1999). Performance management: a framework for management control systems research, (September), 363–382.

Ulin, P. R., Robinson, E. T., & Tolley, E. E. (2005). Qualitative methods in public health. *Med Sci Sports Exerc, 37*(7), 1249.

Van Buren, H. J., Greenwood, M. & Sheehan, C. (2011) Strategic human resource management and the decline of employee focus. *Human Resource Management Review, 21*(3), 209–219.

Van de Walle, S. (2008). Comparing the performance of national public sectors: Conceptual problems. *International Journal of Productivity and Performance Management, 57*(4), 329–338.

Van De Walle, S., & Hammerschmid, G. (2011). The impact of the new public management: Challenges for coordination and cohesion in european public sectors. *Halduskultuur, 12(*2), 190–209.

Van der Kolk, B. (2016). Management control and motivation: An empirical analysis of the object-of-control framework. *The University of Groningen, The Netherlands Abstract*, 1–35.

Van der Stede, W. A. (2001). Measuring 'tight' budgetary control. *Management Accounting Research*, 12, 119–137.

Van der Stede, W. A., S. M. Young, & C. X. Chen. (2005). Assessing the quality of evidence in empirical management accounting research: The case of survey studies. *Accounting, Organizations and Society 30* (7/8): 655–

684.

Van Helden, G. J., & C. Reichard. (2016) "Commonalities and Differences in Public and Private Sector Performance Management Practices: A Literature Review." In Performance Management and Management Control: Contemporary Issues (Studies in Managerial and Financial Accounting Vol 31), edited by M. Epstein, F. Verbeeten, and S. Widener. Bingley: Emerald Publishers

Vasarhelyi, M. (2017). A review of literature in management control system (MCS), business strategy, and firm's performance. *International Journal of Accounting Information System, 7*(2), 99–112.

Väyrynen, H., Helander, N., & Kukko, M. (2014). Knowledge Management Practices in Large Companies. *The Macrotheme Review, 3*(9), 56-72.

Vehkalahti, K., Puntanen, S. & Tarkkonen, L. (2006) Estimation of reliability: a better alternative for Cronbach's alpha. Preprint 4, Reports on Mathematics. Preprint 4. Helsinki: Department of Mathematics and Statistics, University of Helsinki.

Velthouse, B. A. 1990. Creativity and empowerment: A complementary relationship. *Review of Business 12*(2): 13–19.

Verbeeten, F. H. M., & Speklé, R. F. (2015). Management Control, Results-Oriented Culture and Public Sector Performance: Empirical Evidence on New Public Management. *Organization Studies, 36*(7), 953–978.

Verger, A., & Curran, M. (2014). New public management as a global education policy: its adoption and re-contextualization in a Southern European setting. *Critical studies in education, 55*(3), 253- 271.

Verhoest, K. & Lægreid, P. (2010) *Organizing Public Sector Agencies:*

Challenges and Reflections', in Governance of Public Sector Organizations. London: Palgrave Macmillan UK.

Verhoest, K. (2017). *Agencification in Europe', in The Palgrave Handbook of Public Administration and Management in Europe.* Basingstoke: Palgrave Macmillan.

Vij, S. & Bedi, H.S. (2016), "Are subjective business performance measures justified? *International Journal of Productivity and Performance Management, 65*(5), 603-621.

Von Krogh, G. (1998). Care in knowledge creation. *California management review, 40*(3), 133-153.

Wahyuni, D. (2012) 'The research design maze: Understanding paradigms, cases, methods and methodologies', *Journal of applied management accounting research, 10*(1), 69–80.

Wang, S., Noe, R. A., & Wang, Z. M. (2014). Motivating Knowledge Sharing in Knowledge Management Systems: A Quasi–Field Experiment. *Journal of Management, 40*(4), 978–1009.

Wang, Z. & Xu, H. (2017). How and when service-oriented high-performance work systems foster employee service performance: A test of mediating and moderating processes. *Employee Relations, 39*(4), 523–540.

Wat, Dennis & Shaffer, Margaret. (2005). Equity and relationship quality influences on organizational citizenship behaviors: The mediating role of trust in the supervisor and empowerment. *Personnel Review,* 34, 406-422.

Webster, P. (2010). University of Birmingham Research Archive. I(June).

Weinberg, Frankie. (2014). Epistemological beliefs and knowledge sharing in work teams: A new model and research questions. *The Learning Organization,* 22. 40-57. 10.1108/TLO-11-2013-0067.

Wendy Larner (1997) "A Means to an End": Neoliberalism and State Processes in New Zealand. *Studies in Political Economy, 52*:1, 7-38.

White, M. & Bryson, A. (2018) HPWS in the Public Sector: Are There Mutual Gains? 11965. Bonn, Germany

Wholey J. S. (1996). Formative and Summative Evaluation: Related Issues in Performance Measurement. *American Journal of Evaluation*,17 (2).

Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society,* 32, 757–788.

Wiig K. (1995). *Knowledge management foundations thinking about thinking-how people and organizations create, represent, and use Knowledge.* Texas: Schema Press Arlington

William F. Steel, Leila M. Webster (1992), How Small Enterprises in Ghana Have Responded to Adjustment. *The World Bank Economic Review, 6*(3),423–438.

William R. S. & Charles W. H. (1987). Improving new venture performance: The role of strategy, industry structure, and the entrepreneur .*Journal of Business Venturing,* 2(1), 5-28

World Bank Report (2015). Annual Economic Update: Recent economic developments and medium-term reform agenda. *World Bank Country Development;* Oxford University Press.

World Bank Report (2017), Service Quality of Public Institutions in Ghana

Wouters, M., & Wilderom, C. P. M. (2008). Developing performance

measurement systems as enabling formalization: A longitudinal field study of a logistics department. *Accounting, organizations and society*, *33*(4-5), 488-516.

Wu, I. L., & Chen, J. L. (2014). Knowledge management driven firm performance: The roles of business process capabilities and organizational learning. *Journal of Knowledge Management, 18*(6), 1141–1164.

Wu, X. & He, J. (2009). Paradigm Shift in Public Administration: Implications for Teaching in Professional Training Programs, Public Administration Reviews1.

Yahya, M.N., Ahmad, N.N.N., & Fatima, A.H. (2008), Budgetary participation and performance: Some Malaysian evidence. *International Journal of Public Sector Management, 21*(6), 658-673.

Yuliansyah, Y., & Khan, A. A. (2017). A revisit of the participative budgeting and employees' self-efficacy interrelationship–empirical evidence from Indonesia's public sector. *International Review of Public Administration, 22*(3), 213–230.

Zahra, A. & Jadoon, M. Z. I. (2016) 'Autonomy of public agencies in Pakistan: does structure matter? *International Journal of Public Sector Management, 29*(6), 565–581.

Zairi, M., & Jarrar, Y. F. (2010). Employee Empowerment - A UK Survey of Trends and Best Practices Employee Empowerment. *Total Quality Management*, 1–10.

Zare, M., Zarmehr, F., & Ashrafi-Rizi, H. (2015). Relationship between psychological empowerment and productivity of medical librarians.

Acta Informatica Medica, 23, 142–146.

Zehir C., Ertosun O.G., Zehirs & Muceldilli B., (2016). Total Quality Management Practices. International Engineering Research and Innovation Symposium

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing, 60(*2), 31–46.

Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science, 30*(4), 362–375.

Zhang, B. & Morris, J. L. (2014) 'High-performance work systems and organizational performance: testing the mediation role of employee outcomes using evidence from PR China', The International Journal of *Human Resource Management, 25*(1), 68–90.

Zhang, R. Y. et al. (2011) 'Service climate and employee service performance: Exploring the moderating role of job stress and organizational identification. *Service Industries Journal, 31*(14), 2355–2372.

Zhang, X. K. & Bartol, K. M. (2010). Linking Empowering Leadership and Employee Creativity the Influence of Psychological Empowerment, Intrinsic Motivation, and Creative Process Engagement. *Academy of Management Journal, 53*(1), 107–128.

Zhao, X., Lynch, J. G. and Chen, Q. (2010) 'Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research*, 37(2), 197–206.

Zhao, Yingxin & Lu, Yanqiu & Wang, Xiangyang. (2013). Organizational unlearning and organizational relearning: A dynamic process of knowledge management. *Journal of Knowledge Management*.

Zheng, W., Yang, B., & McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research, 63(*7), 763–771.

Zhu, M., & Peyrache, A. (2017). The quality and efficiency of public service delivery in the UK and China. *Regional Studies, 51*(2), 285–296.

Zuriana, C., & Jamil, M. (2008). The Moderating and Mediating Effect of the Environmental Management Control Systems on Environmental Performance: The Case of Malaysian Hotel Sector.

APPENDIX A

CONSENT FORM

Dear Sir/Madam,

A Study of Management Control Systems and Performance of State-Owned Enterprises in Ghana

You are invited to participate in an academic study that examines how management control systems influence performance of state-owned enterprises (SOEs) in Ghana. It should take no more than 20 minutes for you to complete this survey.

THE STUDY

I am interested in understanding how organizations (like yours) use their management control systems for employee knowledge management and empowerment and the effect of that on your organizational performance. As a manager, you have a vital role to play in improving our understanding of how management control systems influence performance. Answers to the attached questionnaire will help us in developing a model that will better serve the management control needs of yourself and other managers.

Please answer the attached questions independently of anyone else whom you know may have received the questionnaire. It is important that you complete all questions.

CONFIDENTIALITY AND ETHICS

Any information obtained from this questionnaire will be treated in strict confidence and will be used solely for the purposes of this project. Please be assured that the information you provide in this questionnaire will not be distributed to any third parties. Your responses are anonymous. As the

questionnaires are not labelled, they cannot be traced to any individual. Although your responses to this questionnaire would be greatly valued, your participation is voluntary. Completion and return of this questionnaire will be regarded as consent.

If you have any questions regarding ethical aspects of this research, you may contact:

Sulemana Zakaria

Accounting Department

University of Cape Coast

Phone: 0244337896

Email: zsulemana68@gmail.com

Thank you very much for your contribution to this important research.

Yours sincerely,

Sulemana Zakaria

APPENDIX B

QUESTIONNAIRE

INSTRUCTIONS

In this questionnaire, I am interested in measuring the impact of management control systems on Organisational performance. Though you may feel that it is difficult to generalize, I would like you to answer the questions as accurately as you can. For each of the following questions, please tick the box on the scale that best corresponds to your understanding.

PART A

---

1. In responding to the following questions, consider the processes and procedures by which your organization develops, gathers and communicates information about values, conduct, strategies, key performance indicators, processes and outcomes to management at different levels in the organization in order to implement your organization's objectives

Management Control Systems Uses

Please rate the extent to which you strongly agree or strongly disagree with the following:		**Strongly Disagree**						**Strongly Agree**
		1	**2**	**3**	**4**	**5**	**6**	**7**
BLS-1	The organization's mission statement clearly communicates core performance values to our workforce.							

BLS-2	Top managers communicate performance core values to our workforce.							
BLS-3	Our workforce is aware of the organization's performance core values.							
BLS-4	Our mission statement inspires our workforce to improve performance							
BOS-5	Our organization relies on a code of business conduct to define appropriate performance related behaviour for our workforce.							
BOS-6	Our code of business conduct informs our workforce about performance related behaviours that is off-limits.							
BOS-7	Our organization has a system that communicates to our workforce performance-related risks that should be avoided.							
BOS-8	The workforce is aware of the organization's code of conduct related to performance.							

DCS-9	We rely on our budgeting systems to track progress towards predetermined goals and objectives							
DCS-10	Our budgeting systems are aimed at achieving predetermined performance results.							
DCS-11	We use our budgeting systems to compare actual performance to expected results							
DCS-12	Performance related data from our budgeting systems are reported through formal reporting procedures.							
DCS-13	Management are inclined not to frequently be involved, except on an exceptional basis, with data from our budgeting systems.							
ICS-14	Management often uses information from our budgeting system as a means of questioning and debating ongoing decisions							

	and actions of managers at all levels.							
ICS-15	Our budgeting systems represent a continuous process and demand regular and frequent attention from managers at all levels.							
ICS-16	Management uses our budgeting system as a means to discuss with peers and subordinate's changes occurring in the organization.							
ICS-17	The information generated by our budgeting system is an important and recurring agenda addressed by the highest level of management.							
ICS-18	The organization budgeting system enables managers at all levels to continually challenge and debate underlying data, assumptions and action plans.							
ICS-19	Our budgeting systems enable the organization to focus on critical success factors							
ICS-20	The information provided by our budgeting system is interpreted							

	and discussed in face-to-face meetings with subordinates and peers.							

2. In answering the questions below, please consider the meaningfulness of your work roles, your autonomy to make judgments about your work, your ability to perform a specific task and the impact of your work on organizational outcomes.

Employee Pschological Empowerment

Please rate the extent to which you strongly agree or strongly disagree with the following:		**Strongly Disagree**						**Strongly Agree**
		1	**2**	**3**	**4**	**5**	**6**	**7**
PE-1	The work I do is very important to me							
PE-2	My job activities are personally meaningful to me							
PE-3	The work I do is meaningful to me							
PE-4	I am confident about my ability to do my job							
PE-5	I am self-assured about my capabilities to perform my work activities							
PE-6	I have mastered the skill necessary for my job							

PE-7	I have significant autonomy in determining how I do my job							
PE-8	I can decide on my own how to go about doing my work							
PE-9	I have considerable opportunity for independence and freedom in how I do my job							
PE-10	My impact on what happens in my department is large							
PE-11	I have a great deal of control over what happens in my department							
PE-12	I have significant influence over what happens in my department							

3. In answering the following questions, please consider how knowledge is acquired, applied and shared in your organization

Knowledge Management

Please rate the extent to which you strongly agree or strongly disagree with the following:		**Strongly Disagree**						**Strongly Agree**
		1	**2**	**3**	**4**	**5**	**6**	**7**
KM-1	The organization has processes for workers to acquire meaningful knowledge to do their jobs better							

KM-2	In this organization, processes have been put in place for workers to generate new knowledge based on existing knowledge.							
KM-3	In this organization, management has put in place processes for acquiring knowledge on developing new products, processes, and services.							
KM-4	The organization has processes for integrating different sources and types of knowledge.							
KM-5	The organization has processes for transferring organizational knowledge to employees.							
KM-6	The organization has processes for filtering knowledge.							
KM-7	The organization has processes for applying experiential knowledge.							
KM-8	The organization has processes for applying knowledge to solve new problems.							

KM-9	The organization has a standardized reward system for sharing knowledge.							
KM-10	The organization designs processes to facilitate knowledge sharing across functional boundaries.							

4. When responding to the following items, consider the processes by which your organization achieves pre-set performance

Organisational Performance

Please rate the extent to which you strongly agree or strongly disagree with the following:		**Strongly Disagree**						**Strongly Agree**
		1	**2**	**3**	**4**	**5**	**6**	**7**
OP-1	During the last three years, our organization's response time for customer complaints has improved							
OP-2	During the last three years, our organization's customer satisfaction is greater than previous years							
OP-3	During the last three years, the number of suggestions implemented has improved							

NOP-4	During the last three years, time to market product and services has decreased							
NOP-5	During the last three years, the number of new products or services introduced is greater than previous years							
NOP-6	The market share of our organisation have increased over the last three years							
OP-8	Our organization's unit cost of production or service has decreased during the last three years							
OP-9	Employee productivity has improved significantly during the last three years							
OP-10	During the last three years, turnover of our organization has improved significantly							
OP-11	During the last three years, our organization profitability has improved.							

OP-12	During the last three years, return on investment is greater than previous years							

Environment uncertainty

Please rate the extent to which you strongly agree or strongly disagree with the following:		**Strongly Disagree**						**Strongly Agree**
		1	**2**	**3**	**4**	**5**	**6**	**7**
EU	In this industry, the level of governmental control has significant influence on performance							
EU	In our industry, the technology of products and services changes rapidly							
EU	Our industry has strong competition in terms of the quality or price of products or services.							
EU	Our industry has considerable diversity with regard to competition							

PART B

Please answer the following questions. (Note: Responses will be kept strictly confidential)

1. Please indicate which of the following industries best reflects your organization.

a. Manufacturing ☐
b. Oil and Gas ☐
c. Construction ☐
d. Financial Services ☐
e. Wholesale, Retail, Distribution ☐
f. Consultancy ☐
g. Hospitality ☐
h. Agriculture ☐
i. Utilities ☐
j. Other (Please specify) _____

2. Approximately, how many full-time employees do you have in your organization? (Please circle as appropriate)

a. Fewer than 100 ☐
b. 100 to 250 ☐
c. 251 to 500 ☐
d. 501 to 750 ☐
e. 751 to 1000 ☐
f. 1001 and over ☐

3. Please in which year was the organisation established: _____

4. Please indicate how long you have been working for this organization: _____

5. Please indicate how long you have been in your current position: _____

Please indicate your job title: _____

Thank you for participating in this research