© University of Cape Coast https://erl.ucc.edu.gh/jspui

UNIVERSITY OF CAPE COAST

EFFECT OF INTERFIRM CO-OPERATION ON PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES IN THE DORMAA CENTRAL MUNICIPALITY, GHANA.

DANIEL SENA TSORME

2020

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

UNIVERSITY OF CAPE COAST

EFFECTS OF INTERFIRM CO-OPERATION ON PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES IN DORMAA CENTRAL MUNICIPALITY, GHANA

BY

DANIEL SENA TSORME

Dissertation submitted to the Centre for Entrepreneurship and Small Enterprise Development of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfilment of the requirements for the award of Master of Business Administration degree in Entrepreneurship

JANUARY 2020

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

DECLARATION

Candidate's Declaration

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

Candidate's Signature……..... Date……

Name: Daniel Sena Tsorme

Supervisor's Declaration

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

Supervisor's Signature……..... Date……

Name: Dr. (Mrs.) Mavis Benneh Mensah

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

ABSTRACT

Interfirm co-operation among organisations has become increasingly vital in modern business environments graced with immense unhealthy competitions. The study examines interfirm co-operation and performance of Small and medium-sized Enterprises in the Dormaa Municipality of Ghana. This quantitative study was underpinned by the network theory of social capital. The study employed the explanatory research design due to its research objectives. Out of a target population of 216 Small and Medium-sized Enterprises in the municipality, 140 of them were randomly sampled, using the Krejcie and Morgan (1970) sampling determination table. Questionnaires were then administered to owner/managers of these Small and Medium-sized Enterprises and obtained a response rate of 100 percent. Data obtained were processed, using Statistical Package for Service Solution version 22 and analysed, using both descriptive and inferential statistical tools such as frequencies, percentages, means, relative important index and multinomial logistics regression. The study found that some forms/types of Interfirm co-operation strategies included cluster, joint venture and networking. Also, interfirm co-operation was found to have a positive impact on firm performance such as improved sales margin and profit level. The study concluded that Small and Medium-sized Enterprises that continuously collaborate with other firms within or outside their geographical areas are able to enhance their overall performances. The study, therefore, recommended that, Small and Medium-sized Enterprises within the Dormaa Municipality should continuously integrate with other firms through clustering, networking and joint venturing to enhance their performance levels.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

KEY WORDS

Cluster

Cooperation

Firm

Performance

Small and medium-sized Enterprise (SMEs)

Strategic Partnership

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

ACKNOWLEDGEMENTS

I am grateful to my supervisor, Dr. (Mrs.) Mavis Benneh Mensah, for her support and guidance. It is her immense scrutiny and criticism that have pushed me to refine this work into its current state.

I will like to also thank all my lecturers and colleagues, whose mentorship have been of immense help to me. My profound gratitude goes to all the owner/managers of the small and medium-sized enterprises in the Dormaa Municipality for their assistance in obtaining the needed information for the study. I am thankful to the staff of National Board for Small Scale Industries, Dormaa office for supporting me in this programme.

My final gratitude goes to my wife, Sabina Edinam Afflu, my family and friends for their support and care throughout my programme.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

DEDICATION

To my loving children Nyatefe, Eyram, Kekeli and Nunana.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

TABLE OF CONTENTS

	Page
DECLARATION	ii
ABSTRACT	iii
KEY WORDS	iv
ACKNOWLEDGEMENTS	v
DEDICATION	vi
TABLE OF CONTENTS	vii
LIST OF TABLES	x
LIST OF FIGURE	xi
LIST OF ACRONYMS	xii
CHAPTER ONE: INTRODUCTION	
Background to the Study	1
Statement of the Problem	5
Purpose of the Study	6
Research Questions	7
Research Hypothesis	7
Significance of the Study	7
Delimitations	8
Limitations	8
Definition of Key Terms	8
Organisation of the Study	9
CHAPTER TWO: LITERATURE REVIEW	
Theoretical review	10
Empirical review	15

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Forms/types of Interfirm co-operation 15

Interfirm co-operation and performance 20

Challenges of Interfirm co-operation 26

Conceptual framework of the impact of interfirm co-operation on firm performance 30

Chapter Summary 31

CHAPTER THREE: RESEARCH METHODS

Research Approach 32

Study Area 34

Population 35

Sampling Procedure 37

Data Collection Instrument 37

Validity and Reliability 39

Ethical Considerations 41

Data Collection Procedures 42

Data Processing and Analysis 42

Chapter Summary 44

CHAPTER FOUR: RESULTS AND DISCUSSION

Preliminary Analysis 45

Socio-Demographic Characteristics of Respondents 45

Further Analysis 48

Forms/Types of Interfirm Co-operation 48

Impact of Interfirm Co-operation on SMEs Performance 50

How Interfirm Co-operation Has Improved Business Performance (Relative Importance Index Analysis) 50

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Relationship between Firm Performance and Forms of Interfirm Co-operation

(Multinomial Logistics Regression Analysis) 52

Challenges of Interfirm Co-operation (Relative Importance Index Analysis) 57

Chapter Summary 59

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND

RECOMMENDATIONS

Introduction 60

Summary of Findings 61

Conclusions 62

Recommendations 63

Suggestions for Further Research 64

REFERENCES 65

APPENDICES 75

APPENDIX A: Research Questionnaire 75

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

LIST OF TABLES

Table		Page
1.0	Socio-demographic Characteristics of Respondents	47
2.0	Forms/Types of Interfirm Co-operation among SMEs (Relative Importance Index Analysis)	50
3.0	Improvement in Firm Performance (Relative Importance Index Analysis)	52
4.0	Case Processing Summary	53
4.1	Model Fitting Information	54
4.2	Parameter Estimates	56
5.0	Challenges of Interfirm Co-operation (Relative Importance Index Analysis)	59

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

LIST OF FIGURE

Figure Page

1 Conceptual framework of the impact of Interfirm co-operation on firm performance 30

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

LIST OF ACRONYMS

SMEsAG	Small and Medium-sized Enterprises Association of Ghana
SME	Small and Medium-sized Enterprise
SPSS	Statistical Package for Service Solution

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

CHAPTER ONE

INTRODUCTION

Interfirm co-operation among organisations has become very relevant in modern business environments where unhealthy competitions exist. In recent times, a fast-growing number of organisations have engaged in some form of strategic alliances or co-operation in the bid to ensure competitiveness, survival and enhanced performances. Interfirm co-operation ensures organisations gain access to complementary information, innovative ideas and abundant resources. The study was underpinned by the network theory of social capital as it explains that resources are mostly embedded in one's social networks thus mobilised through social networks. Globally, SMEs are regarded as being flexible and responsive to market opportunities, but their relatively small size implies they are highly susceptible to resource constraints and, as such, many of them fail within a few years of their establishments. It is on this note that the study focuses on interfirm co-operation and performance of Small and medium-sized Enterprises (SMEs) in the Dormaa Municipality of Ghana.

Background to the Study

Interfirm co-operation among organisations has become necessary in this modern business environments where unhealthy competition is increasing. In bid to ensure competitiveness, survival and enhanced performances, a fast-growing number of organisations have in recent times engaged in some form of strategic alliance or co-operation (Tomlinson, 2010). Interfirm co-operation refers to a voluntary arrangement between firms in regards to sharing, exchange and co-development of technologies, goods or services (Temel,

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Mention & Torkkeli, 2013). It is, therefore, a flexible and reliable way of gaining access to complementary skills and resources, new knowledge and improvement of existing information.

Similarly, Mahdavi and Hesamamiri (2014) revealed that interfirm co-operation ensures organisations gain access to complementary information, innovative ideas and abundant resources. Also, costs and risks are shared among members of the co-operation which enables them to foster a competitive advantage, gain market power and enhance performances. Existing studies have revealed various forms of Co-operation to include networking, clustering and strategic partnership (Kale & Singh, 2009; Tang, 2011). Other forms of interfirm co-operation have been found to include subcontracting, interfirm linkages, joint purchase and joint venture (Gulati, Wohlgezogen & Zhelyazkov, 2012; Mahdavi & Hesamamiri, 2014).

Mahdavi and Hesamamiri's (2014) assertion was in line with the network theory of social capital propounded by Lin (1999). The theory posits that, resources are mostly embedded in one's social networks and as such, can be mobilised through collaborations or ties in the network (Lin, 2008). This explains that, firms can obtain adequate resources or capital to carry out projects and thus enhance performances through Interfirm co-operation or collaborations. In view of this, performances of firms have been largely attributed to Interfirm co-operation or collaborations (Mahdavi & Hesamamiri, 2014). Firm performance, for instance, is seen as the ability of a firm to meet expected standards in its operations, increase market share, improve facility, increase profitability and drastically reduce waste through capacity and efficiency optimisation (Aremu & Adeyemi, 2011).

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Furthermore, firms that fail to achieve any of these are noted as poor performers and, in most cases, they struggle to survive basically due to insufficient capital, lack of focus and succession plans and cut-throat competitions (Terziovski, 2010). As such, improved performances of firms, notably small and medium-sized enterprises (SMEs), cannot occur in isolation, but rather through the implementation of unique and key strategies of which interfirm co-operation can never be exempted (De Clercq, Thongpapanl & Dimov, 2011). SMEs would struggle to survive and compete with global or multinational organisations without collaborations because of the financial strengths and abundant resources enjoyed by the latter.

Globally, SMEs are regarded as being flexible and responsive to market opportunities, but their relatively small size implies they are highly susceptible to resource constraints and as such, many of them fail within a few years of their establishments (Baiden & Price, 2011). Interfirm co-operation is among the best ways to overcome resource constraints to ensure the survival of these vulnerable SMEs. In developed countries like USA, England, Germany, Australia and, more recently, China, for instance, most SMEs collaborate in the bid to increase their knowledge base, enter new markets, share risks and costs, gather resources, network and tackle complex projects so as to remain competitive and withstand pressures from the business environment (Hanna & Walsh, 2008; Tang, 2011).

Moreover, to these SMES, interfirm co-operation also provides supportive environment through resilient networks which, in turn offset, their fragilities. In 2015, for instance, SMEs in China comprised 97.9 percent of all registered companies of which 46.7 percent of them formed co-operation by

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

the close of the year and contributed about 42.5 percent of the entire contributions of 58.0 percent of GDP made by the SMEs (Parnell, Long & Lester, 2015). Due to the tremendous success of Interfirm co-operation in developed countries, this strategy has also been embraced by some SMEs in developing countries including Ghana in today's business world (Amoako & Lyon, 2014).

Amoako and Lyon (2014) added that, in Ghana, for instance, interfirm co-operation has been evidenced in situations where some SMEs collaborate with others and even multinational firms to work on common projects. This is because, co-operation among SMEs in the country has become an important tool in facing increasing pressures from global competitions and enhancing technological capabilities and innovativeness (Kongmanila, 2009). Such co-operations take place not only between firms within the same industry but also between firms from different industries. Practically, in 2017, Tigo collaborated with Airtel to form Airtel-Tigo in a bid to remain competitive and relevant in the telecommunication industry in Ghana.

Similarly, SMEs within the Dormaa Central Municipality cannot be excused from the benefits associated with Interfirm co-operation. Most SMEs located within this municipality are relatively small in size and thus have low market shares, limited resources and invariably low growth and performances (Ghana Statistical Service, 2015). Interfirm co-operation is one key strategy that can help the SMEs to overlook the challenges with their business operations and thus enjoy the abundant benefits associated with their businesses. It is, therefore, relevant to examine Interfirm co-operation and

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

performance of SMEs in the municipality in the bid to encourage co-operations in order to improve upon their current performances.

Statement of the Problem

In Ghana, Interfirm co-operation has been found to be very low since most SMEs prefer to operate independently rather than collaborate (Gyau & Spiller, 2008). The seeming lack of interest in interfirm co-operation may presuppose that the negative impacts outweigh the positive impact (Kuada, 2009). Alternatively, owner/managers of SMEs may not be aware of the prospects and benefits of interfirm co-operation and this has contributed to their poor level of competitiveness and low performances through low market shares and revenue margins (Gyau & Spiller, 2008). The challenges identified above in broad perspectives, coupled with possibilities of SMEs losing investments through co-operations, could explain why most SMEs in Ghana including those within the Dormaa municipality operate independently (Narteh, 2008).

In spite of these, SMEs within the Dormaa Central Municipality need to embrace Interfirm co-operation due to current complex and highly competitive business environment, which constantly threatens their survival and growth (Friedman et al., 2015). Interfirm co-operation has, therefore, been found to have both positive and negative impact on firm performance, thus this study was set out to assess in the Dormaa Municipality, since there appears to be few Interfirm co-operation among the SMEs there. The study would contribute to the gaps in existing literature while educating and encouraging cautious collaborations among the SMEs in the municipality.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Despite the immense contributions of interfirm co-operation in the performance, survival, development and competitiveness of SMEs across the globe (Kim, Lee & Kang, 2015; Temmink, 2016), existing literature focusing on SMEs in the Dormaa Municipality appears scanty. Also, some of these researchers failed to indicate the theory underpinning their studies (Kim et al., 2015; Temmink, 2016). Likewise, other studies failed to properly describe the research methods used in their respective studies (Temmink, 2016). For instance, Temmink (2016) failed to describe the design, approach and population of the study although 210 college students were sampled. Moreover, the study used experiment as a data collection tool, which was inappropriate for quantitative analysis such as regression.

It is to also note that most of the existing literatures are not directly linked to the study despite their usage and, for instance, Friedman et al.'s (2015) study was on "Untangling micro-behavioural sources of failure in mergers and acquisitions: A theoretical integration and extension". Also, in Ghana, existing studies on Interfirm co-operation and performance of SMEs appear to be scanty (Narteh, 2008; Kuada, 2009), and this could be a contributory factor of owner/manager's low awareness of benefits associated with co-operation in the country. Therefore, gaps have been created in existing literature which this study sought to fill.

Purpose of the Study

The purpose of the study was to examine the impact of Interfirm co-operation on performance of SMEs within the Dormaa Municipality, Ghana. Specifically, the following objectives were developed to:

1. assess the forms/types of Interfirm co-operation available to SMEs.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

2. examine the effects of Interfirm co-operation on performance of SMEs.
3. analyse the challenges of Interfirm co-operation.

Research Questions

The following were the research questions of the study:

1. What are the forms/types of Interfirm co-operation available to SMEs?
2. What are the challenges of Interfirm co-operation?

Research Hypothesis

The study tested the hypothesis below:

H_0: There is no positive significant relationship between interfirm co-operation and performance of SMEs.

H_1: There is a positive significant relationship between interfirm co-operation and performance of SMEs.

Significance of the Study

The study examines the effects of Interfirm co-operation on performance of SMEs within the Dormaa Municipality, Ghana. As such, results from the study will provide in-depth knowledge to owner/managers of SMEs within this municipality to enable them adopt Interfirm co-operation in order to make them more competitive, share resources and enhance their current performances. Also, the results will provide owner/managers and their management team (if any) with guidelines in relation to formulating policies and strategies that will assist them overcome potential challenges of Interfirm co-operation.

Further, the study's results will assist policy makers such as Ministry of Trade and Industry, Small and Medium Enterprise Association of Ghana (SMEsAG), among others, to establish new policies that will encourage co-

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

operation among SMEs in Ghana, and even strengthen existing ones. Also, this study will add to existing literature on Interfirm co-operation and performance of SMEs and thus assist potential researchers with results which will help them approve or disapprove their findings.

Delimitations

The study was conducted within the scope of examining the impact of Interfirm co-operation and performance of SMEs. The study focused on only management of SMEs within the Dormaa Municipality and thus employees of these SMEs were excluded. Also, SMEs in Ghana, other than those within this municipality were excluded in the study.

Limitations

The outcome of the study is limited to the views and opinions of management of SMEs within the Dormaa Municipality, Bono Region of Ghana. Also, the study's results might not reflect the reality of events since all the items such as Interfirm co-operation and performance measured in the study were self-reported by the respondents through questionnaires rather than observed.

Definition of Key Terms

This section presents definition of key terms of the study. They include:

Interfirm co-operation: It refers to a voluntary arrangement between firms in regards to sharing, exchange and co-development of technologies, goods or services (Temel, Mention & Torkkeli, 2013).

Performance: It is the ability of a firm to meet expected standards in its operations, increase market share, improve facility, increase profitability and

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

drastically reduce waste through capacity and efficiency optimisation (Aremu & Adeyemi, 2011).

Organisation of the Study

The study is divided into five Chapters and each chapter is also divided into various sub sections. Chapter One presents the introduction of the study and deals with background to the study, statement of the problem, purpose of the study, objectives, research questions, significance of the study, delimitations, limitations and definition of terms as well as the organisation of the study. Chapter Two focuses on the review of relevant literature in relation to Interfirm co-operation and performance.

Furthermore, Chapter Three deals with the description of the study's research methods which comprise the research design, study area, population, sampling procedure, data collection instrument, data collection procedures, data processing and analysis. The results and discussion of data was done in Chapter Four. Chapter Five presents the summary of key findings of the study, conclusions and recommendations to management of SMEs and policy makers such as Ministry of Trade, Small and Medium-sized Enterprises Association of Ghana (SMEsAG). The Chapter concludes with recommendations for further research.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

CHAPTER TWO

LITERATURE REVIEW

This chapter discussed reviews of literature related to the study. It focused on theoretical review with explanation of key concepts, empirical reviews and concluded with a conceptual framework of the study.

Theoretical review

This section presents the theory underpinning the study. In relation to the purpose of the study, the network theory of social capital by Lin (1999) underpinned the study. For network theory of social capital be well understood, it is necessary to place it in the context of both a concept and a theory (Lin, 2008; Lin & Erickson, 2010). As a concept, capital describes how investment in specific resources provide value to society, whereas as a theory, it describes the processes by which it is captured and reproduced for returns. Capital theory has also been sub-divided into human and social capital theories respectively (Sweetland, 1996; Lin, 2002). The human capital theory, for instance, posits that investing in certain human resources (knowledge and skills) may provide economic returns, even for labourers in the production market (Nafukho, Hairston & Brooks, 2004).

The social capital theory, on the other hand, views production as a process whereby a surplus value is earned through investing in social relations (Lin, 2002). According to Lin (2002), social capital refers to resources generally acquired from one's social networks which can be mobilised through ties in the network. These social relations enable an actor to borrow or capture resources of other actors. Unlike the sociological theory, which posits that a society contains individuals, the social network theory defines societies as

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

comprising networks made up of sets of ties or relations. Therefore, a society starts from relationships between individuals rather than the individuals working independently (Lin, 2002, 2008). Lin (2008) added that performance of firms is highly dependent on the strength of existing relations/networks in the society.

According to Lin (1999, 2002), the theory is underpinned by three (3) fundamental assumptions: structural positions, network locations and purpose of action. The structural positions deal with the actor's position in the hierarchical structure of the network, while the network locations deal with the actor's location in the networks that display certain characteristics such as openness or closeness and the purpose of action deals with gaining wealth, reputation, power, maintaining cohesion, well-being or solidarity from the social network. This theory and its assumptions have been acknowledged by scholars who have even contributed to this theory (Fine, 2002; Liao & Welsch, 2005; Carrington, Scott & Wasserman, 2005).

Carrington et al. (2005), for instance, identified four (4) additional assumptions of models built, using social network theory, and they include independence of actors, relations contained in the flow or transfer of resources, enabling individual actors by networks and generating long-lasting ties and networks through social structures. In simple terms, the theory explains that, societies are made up of networks or ties and as such actors within them share resources and/or work together to achieve group goals rather than individual goals. In a social network, "every node is not tied to every other node and this results in any given network having particular features" (Tonn, Zambrano & Moore, 2001, p.205). The network creates

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

rather clusters where many actors are tied to each other like a family and these clusters can connect to each other through sparsely connected areas to form bridges.

Additionally, the network theory of social capital posits that, resources found within social networks comprise social support, companionship, time, expertise, information, business transactions, shared activity and emotional support (Lin, 2002; 2008). Also, the major relationships which could be found within a society include networking, clustering and strategic partnerships (Lin, 1999, 2002, 2008). Moreover, other scholars have supported these forms of relationships, but also added that, in a typical working environment, other relationships which could be found include alliances, joint venture, mergers/acquisitions, subcontracting, franchise and integration (Huggins, 2010; Najafian & Colabi, 2014; Oyelaran-Oyeyinka, 2001; Tang, 2011; Temmink, 2016; Van der Gaag & Snijders, 2004).

Furthermore, Huggins (2010) grouped these forms of relationships into two (2): those postulated by the study formed the major group, whereas those added by other scholars formed the minor group and in a working environment, they can broadly be classified as forms of Interfirm co-operation. This was also supported by scholars such as Jenssen and Nybakk (2013), Najafian and Colabi (2014) and Temel et al. (2013). Jenssen and Nybakk (2013) were of the opinion that, social network is related to general relationships and as such the use of interfirm co-operation/relationship is more preferable in working environment. Najafian and Colabi (2014) added that the survival and performance of organisations, in recent times, more than ever rely primarily on Interfirm co-operation in bid to share resources and gain

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

competitive advantages. This was supported by findings by Hoetoro (2014) and Kim, Lee and Park (2015).

In view of this, variables such as interfirm co-operation, comprising networking, clusters and strategic partnerships and performance, can be found in Lin's theory. Interfirm co-operation also known as inter-organisational network has been defined differently by scholars such as Temel, Mention and Torkkeli (2013), and Pouwels and Koster (2017). Temel et al. (2013), for instance, defined Interfirm co-operation as a voluntary arrangement between firms in regards to sharing, exchange and co-development of technologies, products or services. Similarly, Pouwels and Koster (2017) defined it as a means for sharing resources and spreading risks of innovating across organisations. Pouwels and Koster (2017) added that interfirm co-operation generally helps in minimising risks for individual actors by sharing costs, reducing time span of projects, innovativeness and increasing possibility of success and growth.

In the context of this study, interfirm co-operation was measured by using its major forms, comprising networking, clustering and strategic partnerships, propounded by Lin (1999, 2001, 2008) and supported by Huggins (2010), Jenssen and Nybakk (2013), Najafian and Colabi (2014), Tang (2011) and Temel et al. (2013). Despite the presence of other forms of Interfirm co-operation identified by Van der Gaag et al. (2004), Tang (2011) and Temmink (2016), these major forms were adopted and used as measurement of this variable due to its theoretical support (Lin, 1999, 2001) and also worldwide recognition.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Additionally, performance as another key variable identified in the theory has also been defined by scholars in different contexts such as personal-related, group-related and firm/organisation-related (Aremu & Adeyemi, 2011; Mahdavi & Hesamamiri, 2014; Inmyxai & Takahashi, 2009). In a firm/organisation context, performance is defined as the ability of a firm to meet expected standards in its operations, increase market share, improve facility, increase profitability and drastically reduce waste through capacity and efficiency optimisation (Aremu & Adeyemi, 2011). It can also be defined as the accomplishment of a firm's objectives against set goals (Aguinis, 2009). He stressed that the ultimate goal of a firm is to attain sustainable competitive advantages. This proposition has been supported by other scholars (Armstrong & Taylor, 2014; Barney, 2012; Mahdavi & Hesamamiri, 2014).

According to Barney (2012), for instance, the primary goal of any organisation is to achieve competitive advantages over rivals or competitors and this could create rooms for other benefits such as increased market shares, profits, sales volumes, output levels, among others. Also, Mahdavi and Hesamamiri (2014) added that firms that fail to enjoy or sustain a competitive advantage over their rivals tend to perform poorly and thus struggle to attain the other benefits associated with it. Similarly, Rahardjo, Idrus and Hadiwidjojo (2014) used sustainable competitive advantage to measure firm performance by justifying that firms that strive to sustain competitive advantages improve their performances at all times. Unsurprisingly, these assertions have been supported by other scholars (Engelen, Gupta, Strenger & Brettel, 2015; Laszlo & Zhexembayeva, 2017).

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Firm performance has also been defined as achieving sustainable competitive advantages through waste elimination, increasing market share, accumulating resources, improving profit levels, gaining new markets and improving capacity and efficiency (Engelen et al., 2015). Generally, firm performance has been measured in terms of competitive advantage, financial, employee and organisational performances (Engelen et al., 2015; Ralston, Blackhurst, Cantor & Crum, 2015; Saeidi, Sofian, Saeidi, & Saeidi, 2015).

However, this study measured performance of SMEs in terms of sustainable competitive advantage, because Vorhies and Morgan (2005), Aguinis (2009), Barney (2012), Mahdavi and Hesamamiri (2014), Rahardjo et al. (2014) and Saeidi et al. (2015) have proven that the other measurement indicators are subsets of sustainable competitive advantages. This implies that firms that are able to sustain their competitive advantages boast of good financial, employee and organisational performances.

Empirical review

This section presents reviews of related literature on the objectives of the study. Therefore, these reviews were done in relation to assessing the forms of Interfirm co-operation, impact of Interfirm co-operation on firm performance and challenges of Interfirm co-operation.

Forms/types of Interfirm co-operation

In relation to the various forms of interfirm co-operation, a number of studies were reviewed. The studies were conducted by Oyelaran-Oyeyinka (2001), Kongmanila and Takahashi (2009), Huggins (2010), Tang (2011), Jenssen and Nybakk (2013), Najafian and Colabi (2014) and Temmink (2016)

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Oyelaran-Oyeyinka (2001)'s study was conducted in Nigeria on networks and linkages in African manufacturer cluster. The study investigated the basis for long-term sustainable development of industrial clusters located in Lagos, Nigeria and also examined the forms and intensity of Interfirm linkages. The survey design was employed because the study was quantitative in nature whereas structured questionnaires and face-to-face interviews of selected firms in Lagos were used. Data were analysed using percentages and narrations and it was found that, Interfirm co-operation, in both developed and developing countries, were in several forms such as market linkages with customers and suppliers, subcontracting, joint venture, franchise, backward integration and forward co-operation. He concluded that firms employ one or more of these forms of co-operation during Interfirm co-operation.

Similarly, a study conducted by Kongmanila and Takahashi (2009) on Interfirm co-operation and firm performance of Lao Garment Industry cluster. The study primarily aimed at examining the relationship between types of Interfirm co-operation and firm performance and also looked at the various types of co-operation. Using quantitative method and adopting a descriptive survey design, data were collected from 44 out of 52 garment manufacturing firms located in Vientiane Capital City (VCC) through questionnaires and interviews. Employing descriptive statistics tools such as frequencies and percentages, the study found that the types of Interfirm co-operation include subcontracting, joint purchase, sharing for capacity, joint marketing, networking, market linkages, collaborations and vertical linkages.

Further, Jabar, Othman and Idris (2011) conducted a study on enhancing organisational performance through strategic technology alliances

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

in Malaysia. As part of the objectives, the study assessed the various forms of strategic alliances of Malaysia manufacturers. The study failed to describe the research approach and design employed but the resource-based theory underpinned the study. Moreover, the study randomly sampled 2,500 organisations from a list of 3,717 manufacturing organisations obtained from Federation of Malaysian Manufacturers (FMM) directory. However, only 335 usable responses were analysed using descriptive such as means and standard deviations. The study found that collaborations, partnerships, clusters, alliances, networking and market linkages were the major forms of strategic alliance but, collaborations and partnerships were the most used.

In China, Tang (2011) conducted a study on the influence of networking on the internationalisation of SME, using internationalised Chinese firms. As part of the objectives, the study aimed at identifying whether network is generally accepted as a form of co-operation. The study adopted a purely quantitative approach and thus relied on explanatory research design. The study collected primary data from 210 Chinese SMEs in Hong Kong and Beijing but, however, failed to describe the population and instrument used. Using descriptive such as percentages, the study found that about (85%) of the SMEs agreed that networking, clusters and strategic alliance are types of Interfirm co-operation but networking was the most used. Thus, networking is a key Interfirm co-operation technique adopted by internationalised SMEs in China.

Additionally, Kim et al. (2015) carried out a study on the effect of co-operation-strategy fit on the performance of sub-contractors of Samsung Co. Ltd in Korea. As part of the objectives, the study assessed the forms of

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

cooperative relationships exiting between Samsung Electronics and its subcontractors. The study was underpinned by the contingency theory and co-operation strategy fit and performance were the key variables. The study employed the quantitative method and adopted a survey design. Out of a population size of 160 subcontractors' executives of Samsung Electronics, the study sampled and randomly selected 104 of them. Questionnaires were administered and only 90 were retrieved and used for data analysis.

Furthermore, Kim et al. (2015) used descriptive and inferential statistical tools such as means, standard deviations and regression in the study. It was found that the forms of cooperative relationships comprised clustering, strategic partnership and alliance, networking, franchise and competitive-strategy fit which consisted of competitive strategy and cooperative relationship. The study found that subcontractors of Samsung Electronics adopted competitive-strategy fit, which was followed by networking. This implies that competitive-strategy fit comprising competitive strategy and cooperative relationship is very vital to the success of Samsung Electronics.

Also, Temmink (2016) carried out a research work on the effect of Interfirm organisational team co-operation on collaborative innovation performance. As part of the objectives, the study looked at the various forms of Interfirm organisational team co-operation available to firms in Netherland. The study was purely quantitative and employed an explanatory research design. Data were obtained through experiments from 210 randomly sampled college students of the University of Twente. Using descriptive tools such as means and standard deviations in the data analysis, the study found that the forms of Interfirm organisational team co-operation comprised joint

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

marketing, joint purchases, capacity sharing, strategic alliance, subcontracting, Interfirm linkages, Public Private Partnerships (PPP), franchise and joint ventures.

Hoffman, Belussi, Martines-Fernandez and Reyes (2017) conducted a study on "United we stand, divided we fall? Clustered firms' relationships after the 2008 crisis". As part of the objectives, the study looked at the various forms of inter-organisational relationships which exist after the 2008 crisis. In this regard, the study adopted mixed approach and thus employed a descriptive research design but failed to indicate the theory underpinning the study. Data were collected through semi-structured interviews from seven managers of six local institutions and twelve other entrepreneurs in Valencia, Spain. Results were presented in narrations and it was found that, the forms of inter-organisational relationships majorly comprised horizontal co-operation, vertical co-operation, networking, clusters and alliances.

From the reviews in this section, it was seen that majority of the studies were not underpinned by any theory (Hoffman et al., 2017; Kongmangla & Takahashi, 2009; Oyelaran-Oyeyinka, 2001; Tang, 2011). Additionally, most of the key elements in research methods such as design, approach, population size, sample size, collection instrument, data processing and analysis were poorly or inadequately described in some of the studies (Jabar, Othman & Idris, 2011; Oyelaran-Oyeyinka, 2001). Despite the wide usage of results from Oyelaran-Oyeyinka's (2001) study, the use of face-to-face interview was inappropriate for a quantitative study.

Also, scanty literature exists in the Ghanaian context. In spite of these shortfalls, existing literature have revealed several forms of Interfirm co-

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

operation and some of which included networking, subcontracting, joint venture, strategic alliances and Interfirm linkages. It was, therefore, relevant to assess the forms of Interfirm co-operation adopted by Ghanaian SMEs due to prevalence of Interfirm co-operation among some organisations in the country. Also, results from the study can contribute to existing literature and fill gaps found in existing literatures. For instance, clearly describing the research methods employed in this study can fill the gaps created by studies which have inappropriately or poorly described their research methods.

Interfirm co-operation and performance

This section reviewed literature in relation to the second research objective as regards the impact of Interfirm co-operation on firm performance. These reviews were done to provide relevant literature to support or disapprove the study's findings. The review focuses on studies by Nadvi (2007), Kongmanila and Takahashi (2009), Gutierrez-Martinez, Duhamel, Luna-Reyes, Picazo-Vela and Huerta-Carvajal (2015).

Nadvi (2007) conducted a quantitative study on collective efficiency and international competitiveness in Pakistan. The study employed explanatory design and collected data through structured questionnaires. Although the population and sample size were not described, the study employed correlation in its data analysis. It was pointed out that, Interfirm co-operation through co-operation with customers and suppliers have a positive significant relationship with performance of firms in Pakistan. This implies that collaborative relationships within horizontal linkages between two or more local producers enhance firm performances.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Similarly, a study was conducted by Kongmanila and Takahashi (2009) on Interfirm co-operation and firm performance of Lao Garment Industry cluster. The study aimed at examining the relationship between types of Interfirm co-operation and firm performance. Using quantitative method and adopting a descriptive survey design, data were collected from 44 out of 52 garment manufacturing firms located in Vientiane Capital City (VCC) through questionnaires and interviews. In bid to achieve the study's objectives, factor analysis and multiple regression analysis methods were used in analysing data. The study found that co-operation among garment firms and distant suppliers influence firm performance. They concluded that performance of garment firms is highly dependent on the strengths of co-operation with others.

Stuart (2010) carried a study on inter-organisational alliances and the performance of high-technology industry. The study specifically investigated the relationship between intercorporate technology alliance and firm performance. The key variables consisted of alliance and performance although no theory underpinned the study. The data was quantitative in nature and adopted descriptive survey design. The study failed to indicate the population size, sample size, data collection instrument, data processing and analysis and how reliability and validity issues were handled. However, the study found a positive significant relationship between inter-corporate technology alliance and firm performance. The study concluded that organisations with large and innovative alliance partners performed better than firms that lacked such partners.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Tang (2011) carried a study in China on the influence of networking on the internationalisation of SME using internationalised Chinese firm. The study specifically sought to investigate the influence of networking, a form of Interfirm co-operation, on the internationalisation of internationalised Chinese SMEs. Using the quantitative approach and explanatory research design, data from 210 Chinese SMEs in Hong Kong and Beijing were used for analysis although the population, research instrument and sample size were not defined. Moreover, regression analysis was conducted in bid to achieve the study's objectives and findings indicated that, ability of SMEs to strategically plan and carry out networking activities with key partners is vital to acquiring influential resources for fast-tracking foreign business development. This implies that, networking influences internationalisation of internationalised SMEs in China.

In Malaysia, Jabar, Othman and Idris (2011) conducted a study on enhancing organisational performance through strategic technology alliances. The study aimed at examining the relationship between strategic technology alliance (STA) and organisational performance (OP) of Malaysia manufacturers. The study failed to describe the research approach and design employed but the resource-based theory underpinned the study. Moreover, the study randomly sampled 2,500 organisations from a list of 3,717 manufacturing organisations obtained from Federation of Malaysian Manufacturers (FMM) directory. However, only 335 usable responses were analysed using Structural Equation Modelling (SEM) and the results revealed that, there is a positive significant relationship between STA and OP. This implies that organisations that increase internal resources through STA are

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

likely to enjoy competitive advantages which enable them achieve superior manufacturing performances.

Further, a study was conducted on co-operation and competition among clustered MSEs in East Java, Indonesia by (Hoetoro, 2014). The study purposely examined the relationships between Interfirm linkages and business strategies applied simultaneously by MSEs and their impacts on the firm's performance. The study was quantitative in nature and thus adopted the explanatory survey design. However, the study failed to provide the theory underpinning the study likewise the population size and sample size. In spite of these, data were gathered through questionnaires and analysed using multiple regression. The study found that Interfirm linkages and business strategies have positive impact on firm performance. The study also found that Interfirm linkages within small industrial clusters were less effective as compared to business strategies when affecting a firm's performance.

Also, in Gutierrez-Martinez et al.'s (2015) study on the role of joint actions in the performance of IT clusters in Mexico, a descriptive survey design and quantitative method were employed. The population of the study comprised IT firms in Mexico, but the population size was not indicated likewise the sample size. The study used structured questionnaires in data collection and employed descriptive such as means and standard deviations and inferential tool like regression in their analysis. The study found that co-operation with suppliers, business associations and other IT firms are positively associated with firm performances in Mexico. This implies that, IT firms that cooperate are more successful than their independent counterparts in Mexico.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Additionally, Kim et al. (2015) carried out a study in Korea on the effect of co-operation-strategy fit on the performance of sub-contractors of Samsung Co. Ltd in Korea. The aim of the study was to examine the effect of cooperative relationships and competitive strategies on the performance of Samsung Electronics' subcontractors. The study was underpinned by the contingency theory and co-operation strategy fit comprising cooperative relationship and competitive strategies and performance were the key variables. The study employed the quantitative method and adopted a survey design. Out of a population of 160 primary subcontractors' executives of Samsung Electronics, the study sampled and randomly selected 104 of them. Questionnaires were administered and only 90 were retrieved and used for data analysis.

Moreover, Kim et al. (2015) used descriptive and inferential statistical tools such as means, standard deviations and regression in their study and found that, cooperative relationship and competitive strategy which formed co-operation-strategy fit had positive effects on corporate performance. Thus, it was concluded that the co-operation between subcontractors of Samsung Electronics and their principal company (Samsung Electronics) have key effects on their competitive strategy and invariably on their business performances.

Moreover, Pouwels and Koster (2017) carried out a comparative study on inter-organisational co-operation and organisational performance in Netherlands. The study aimed at integrating previous studies investigating the relationship between inter-organisational co-operation and organisational innovation using cross-national comparative datasets. The gap that prompted

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

the study was that, existing studies have provided mixed results basically due to empirical bias since they focused on one sector, one form of innovation or one country. The study failed to indicate the design, approach adopted and population, but data were collected from 32 European countries and 6 different sectors having 27,019 organisations, using questionnaires. Data were analysed using logistic regression analysis and found a positive relationship between inter-organisational co-operation and organisational innovation.

From the reviews in this section, it was seen that, majority of the studies were not underpinned by any theory (Kongmangla &Takahashi, 2009; Nadvi, 2007; Pouwels & Koster, 2017; Stuart, 2010; Tang, 2011). Additionally, most of the key elements in research methods such as design, approach, population size, sample size, collection instrument, data processing and analysis were poorly or inadequately described in some of the studies (Hoetoro, 2014; Jabar, Othman & Idris, 2011; Nadvi, 2007; Pouwels & Koster, 2017; Stuart, 2010). For instance, studies by (Gutierrez-Martinez et al., 2015; Nadvi, 2007; Stuart, 2010) failed to describe the population size and sample size and this affected the results and generalisation of the study's findings.

In spite of these shortcomings, existing literature revealed similar results in relation to the impact of Interfirm co-operation on firm performance. For instance, most of the studies found that, some forms of Interfirm co-operation such as strategic alliance, inter-organisational alliances, networking had positive relationships with firms' performance (Jabar, Othman & Idris, 2011; Kongmanila & Takahashi, 2009; Pouwels & Koster, 2017; Stuart, 2010). Whereas other studies found that some elements of Interfirm co-

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

operation such as competitive strategy fit, Interfirm linkages, business strategies, networking have positive effects or impacts on firm performance (Hoetoro, 2014; Kim et al., 2015; Tang, 2011).

Surprisingly, none of the literature were found in Ghana despite the prevalence of Interfirm co-operation. In view of the above, it was relevant to examine the impact of Interfirm co-operation on performance of SMEs in Ghana and precisely those within the Dormaa Municipality in bid to add to existing literature and thus fill existing gaps in literature. The study, therefore, described all the elements of research methods employed in a bid to correct the shortcomings identified from the reviews.

Challenges of Interfirm co-operation

This section reviewed the literature in bid to identify challenges associated with Interfirm co-operation. For instance, Lichtenthaler (2008) conducted a study on 'open innovation in practice: an analysis of strategic approaches to technology transactions. The study identified the challenges of co-operation among technology-based industries. The study failed to describe the design, approach and population employed in the study. However, questionnaires were administered and collected from 154 middle and large companies and frequencies and percentages were used to analyse the data. The study found that cultural differences and risks of losing capital were the major challenges associated with co-operation.

Similarly, Van de Vrande, De Jong, Vanhaverbeke and De Rochermont (2009) did a study on open innovation in SMEs in Netherlands. The study also looked at the trends, motives and perceived management challenges associated with open innovation as a form of Interfirm co-

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

operation. The study employed the quantitative method and relied on the survey design. Drawing a database collected from 605 innovative SMEs in the Netherlands, frequencies and percentages were used to analysis the data. The study found that cultural issues as a consequence of dealing with increased external contacts was the most important challenge to open innovation. They, therefore, concluded that, cultural issues are the most important challenge to firms that adopt open innovation in the Netherlands.

Further, Grimshaw, Rubery and Marchington (2010) conducted a study on managing people in networked organisations in United Kingdom (UK). The study analysed the perceived challenges firms face when managing people in networked organisations in UK. The study failed to describe the approach, design, population size, sample size and theory. However, questionnaires were administered to management of organisations in London and data collected was analysed using frequencies and percentages. The study found risks as the major challenge facing management of organisations. Also, issues of trust and limited control over partners were also found to be other challenges of networking.

Additionally, Marchington, Hadjivassiliou, Martin and Cox (2011) conducted a study on the impact of Interfirm relationships-employment and working conditions. The study failed to describe the approach, design, population size, sample size, data collection instrument and data analysis tools. Also, no theory underpinned the study. However, the study revealed that mismatch of resources and/or objectives, inappropriate organisational structures and/or processes, lack of trust and inadequate communication were the major challenges associated with Interfirm relationships. This implies that

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

despite the numerous benefits of Interfirm relationships, firms are also faced with some of the challenges above.

Similarly, Gulati, Wohlgezogen and Zhelyazkov (2012) carried out a study on the two facets of collaboration: co-operation and coordination in strategic alliances. The study specifically looked at partner's commitment and alignment of interests as key determinants of collaborative success and also the challenges of strategic alliances. The study employed a quantitative method and focused on descriptive survey design but no theory underpinned it. The data collection instrument and data analysis tool were not described. However, the study found that lack of complementary resources, high risks, absence of compatible operating systems, cultural issues and poor decision-making processes were the major challenges of strategic alliances.

Likewise, Najafian and Colabi (2014) carried out a research on inter-organisational relationship and innovation in Iran. The purpose of the research was to present a systematic review of research linking the networking of firms with their innovation strategies and also to identify the challenges associated with inter-organisational relationship. The key variables in the study comprised inter-organisational network, innovation and innovative performance although no theory underpinned the study. The study focused on reviews of literatures and focused on Scopus database as such, the design, approach, population size, sample size and data collection instrument were not defined. The study found that high level of risks, poor communication, delay in decision making process, absence of compatible operating systems, cultures and poor decision-making processes were the prime challenges of inter-organisational relationship.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Friedman et al. (2016) also carried out a study on 'untangling micro-behavioural sources of failure in mergers and acquisitions: a theoretical integration and extension'. The study specifically examined potential failure and success of mergers and acquisitions. The study adopted the descriptive design and relied on the quantitative approach. Data were collected through questionnaires although the population size and sample size were not provided. Also, no theory was employed to underpin the study. However, using descriptive statistical tools such as means and standard deviations, it was found that cultural differences, risk issues and shifting objectives that no longer meet individual objectives are major challenges, while lack of capacity to provide expected internal coordination and political factors are minimal challenges of mergers and acquisitions.

From the reviews, it was revealed that Interfirm co-operation is marred with several challenges, which were found by various scholars (Friedman et al., 2016; Gulati et al., 2012; Lichtenthaler, 2008; Marchington et al., 2009; Najafian & Colabi, 2014). In spite of these findings from various countries, none of them were in relation to Ghana. Further, none of the literature employed a theory to underpin their study. Also, most of the literature failed to describe key research methods such as approach, design, population size, sample size, collection instrument and data analysis instrument (Lichtenthaler, 2008; Grimshaw et al., 2010; Marchington et al., 2011). These shortcomings have created a gap in the existing literature which the study sought to fill. These challenges reviewed were also employed in this study in bid to find out if they are also relevant in the Ghanaian context, more precisely Dormaa municipality.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Conceptual framework of the impact of interfirm co-operation on firm performance

This section presents a framework to further explain the impact of Interfirm co-operation and performance of SMEs. The framework, therefore, provides the linkage/relationship between the key variables (Interfirm co-operation, firm performance) of the study. This conceptual framework is presented in Figure 1.

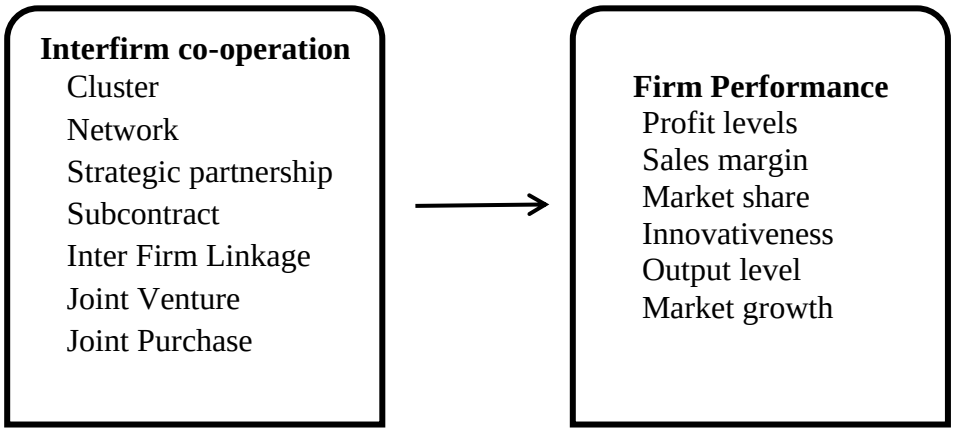

Figure 1: Conceptual framework of the impact of Interfirm co-operation on firm performance

Source: Author's own construct, Tsorme (2019)

From Figure 1, firm performance is directly dependent on Interfirm co-operation, comprising clustering, networking and strategic partnership where firms begin to share resources such as ideas, input supplies and technical supports. As such, a change (either positively or negatively) in any of the major forms of interfirm co-operation directly impact on firm performance. Simply put, a positive change in clustering, for instance, would lead to a positive change in firm performance and vice versa. The framework is supported by reviews conducted earlier on the works of Hoetoro (2014), Jabar et al. (2011), Kongmangla and Takahashi (2009), Nadvi (2007) and Pouwels and Koster (2017). Interfirm co-operation was measured by its major forms

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

such as networking, clustering and strategic partnerships, as identified in Lin's theory and supported by Oyelaran-Oyeyinka (2001), Huggins (2010), Jenssen and Nybakk (2013), Lin (2001, 2008), Temel et al. (2013) and Najafian and Colabi (2014).

On the other hand, firm performance was also measured by sustainable competitive advantages, as suggested by Aguinis (2009), Barney (2012), Mahdavi and Hesamamiri (2013) and Rahardjo et al. (2013). These indicators, including market share, profit levels, market growth, output levels and innovativeness, were employed to measure the firm performance in the study in a bid to support or disapprove this framework formulated from reviewing existing literatures. On this note, this framework was, therefore, developed to underpin the study in relation to impact of Interfirm co-operation on performance of SMEs in Dormaa municipality, Ghana.

Chapter Summary

This chapter dealt with reviews of the literature related to the study. The study was underpinned by the network theory of social capital. It was found that there are various forms of Interfirm co-operation of which clustering, networking and strategic partnerships were the major forms. From the reviews, Interfirm co-operation has a positive relationship with firm performance and as such, positively impacts on the latter. However, it was found that most of the literature were not underpinned by theories and were also marred with poorly described research methods. Finally, none of the literature reviewed was directly related to Ghana and justify the conduction of this study. A conceptual framework linking the study's variables was also constructed.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

CHAPTER THREE

RESEARCH METHODS

This chapter presents the research methods employed in the study. It, therefore, discusses research design, study area, population, sampling procedure, data collection instrument, ethical issues, data collection procedures and data processing and analysis.

Research Approach

Discussion of a research approach is an important part of any scientific study irrespective of the research area. A research approach is a plan and procedure for a research which spans the steps from broad assumptions to detailed methods of data collection, analysis and interpretation (Creswell, 2014). Creswell stressed that, a research approach is in two (2) main paradigms which include social constructivist paradigm and positivist paradigm. A social constructivist paradigm emphasises the socially constructed nature of reality and it basically focuses on attaining rich and complex understanding of people's experience and not in obtaining information which allows generalisations to larger groups. This paradigm favours more of the qualitative approach.

On the other hand, the positivist paradigm primarily involves collection and conversion of data into numerical form which allows statistical calculations to be made and conclusions to be drawn (Creswell & Creswell, 2017). This paradigm also favours quantitative approach/method other than qualitative approach. In view of this, scholars have identified three (3) main approaches to comprise qualitative, quantitative and mixed approaches respectively (Creswell & Creswell, 2017; Saunders, Lewis, Thornhill &

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Bristow, 2015). Moreover, the choice of an approach is dependent on the type of paradigm and purpose of the study. In this regard, the quantitative approach was employed, because the study relies on the positivist paradigm and also the study's purpose was to examine the impact of Interfirm co-operation on firm performance.

Quantitative research approach/method is a type of approach in which quantitative techniques in the form of descriptive and inferential statistics are used to describe issues in the study (Creswell, 2014). This approach allows the study to collect and analyse data in quantitative terms in order to achieve its purpose. It is, therefore, suitable for examining the strength and magnitude of relationships likewise the effect or impact of a variable on another. Moreover, the approach ensures generalisations of the study's outcomes, since the views are more objective than being subjective (Creswell & Creswell, 2017).

The choice of a research design is dependent on the type of research method/approach employed by a study (Creswell, 2014). A research design has three major types/forms and they comprise exploratory design (qualitative study), explanatory/causal design (quantitative study) and descriptive design (mixed study) respectively (Creswell, 2014; Saunders et al., 2015). The study employed the explanatory/causal research design despite the availability of the other alternatives. This is because an explanatory design aims to establish cause and effect relationships between variables (Saunders et al., 2015) of which the study intends to achieve.

Additionally, the explanatory research design has both strength and weaknesses (Creswell, 2014; Creswell & Creswell, 2017). The major strengths of this design include the increase in understanding on a given subject,

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

flexibility of obtaining sources, better conclusions and generalisation of findings. However, this design comes with weaknesses such as obtaining biased information from respondents, findings could be affected by other uncontrolled variables and time consuming in ensuring a representative sample. In spite of these weaknesses and availability of the other designs, the explanatory design was more preferable due to the objectives of the study and the approach/method employed.

Study Area

The study was carried out within the confines of the Dormaa Municipality, in the Bono Region a newly created region of Ghana. Dormaa Municipality is one of the twenty-seven (27) administrative districts and also among the oldest districts within the Brong Ahafo region formerly (Ghana Statistical Service, 2016). However, as the population rose with associated development and expansion in basic infrastructure, the district attained the status of a municipality under the Local Government Act 1993 (Act 462). According to the Population and Housing Census (2010), the population of Dormaa municipality is 112,111 representing (4.9%) of the former Brong Ahafo region's total population. The capital of this municipality is Dormaa Ahenkro, which is located about 80 kilometres west of the regional capital, Sunyani. The municipality has a total land area of 1,210.28 kilometres which is about (3.1%) of the total land area of Brong Ahafo.

Additionally, the Dormaa Municipality is dominated by the Bono ethnic group constituting about (96%) despite the presence of other ethnic groups such as Anyins (2.4%), Northerners (1%) and the others (0.6%) (Dormaa Municipal Assembly, 2014). In view of this, Bono-Twi is the major

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

language spoken by its dwellers. The municipality is endowed with natural resources particularly rich soils, good climatic conditions, forest and timber species, mineral deposits and tourists' attraction sites. As such, the mainstay of the municipality's economy is agriculture which currently employs about (60%) of the economically active labour force. The municipality also has manufacturing and service sectors but they are on low scales. Therefore, businesses established in the municipality are dominated by Small and medium-sized Enterprises (SMEs) with specific activities such as agricultural, forestry and fishery work, service and sales, craft and related trade (Ghana Statistical Service, 2016).

Population

Population is the target group that the researcher is interested in gaining information and drawing conclusions (Leedy & Ormrod, 2010). The population of the study consists of SMEs in the Dormaa Central Municipality of Ghana. Small and medium-sized Enterprises (SMEs) are seen as businesses which are mostly independently owned and managed by an individual or group of individuals with relatively small number of employees, low market share, small amounts of capital and low sales volumes (Ifeakachukwu & Olasunkanmi, 2013). SMEs within this municipality are dominated by agricultural, manufacturing and service sectors and they are into specific economic activities such as agricultural, forestry and fishery works, service and sales, craft and related trade (Ghana Statistical Service, 2016). The elements of the population comprise manager/entrepreneurs because they make major business decisions.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Dormaa Municipality has a total of 1,555 businesses of which 216 are SMEs (Ghana Statistical Service, 2016). The population, therefore, comprised the 216 SMEs in the municipality. SMEs were chosen because they are primarily operated by an individual with small number of employees (if any) and as such, they struggle to compete with large or multi-national firms operating within the municipality and Brong Ahafo as a whole. In this regard, these SMEs clearly struggle to compete due to inadequate capital, unhealthy competitions, low market share and adequate resources to operate on large scales. According to Rosenbusch, et al., (2011) and Byaruhanga, (2012), these challenges could be attributed to poor or lack of Interfirm co-operation among SMEs. It is to note that, SMEs within this municipality provide employment, revenues to government and also a major source of livelihood to dwellers.

In a broader perspective, SMEs are regarded as fore-front economic developers because they are the main driving force behind job creation, poverty reduction, wealth creation, income distribution and help in the reduction in income discrepancies (Ntim, Evans & Anthony, 2014; Onuaguluchi, 2015) and as such, it is very vital to protect them and ensure their survival. This can be achieved when these SMEs, especially those in the Dormaa Municipality, are encouraged to embrace Interfirm co-operation in bid to combine their limited resources to enable them compete these with these larger firms. In view of this, the study's population consisted of SMEs in the Dormaa Municipality in order to obtain their responses to achieve this study's aim and, thus, assist them to overcome challenges of Interfirm co-operation and eventually improve their performance.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Sampling Procedure

Due to the elements in the population of the study, coupled with time constraint, it was impractical to collect data on the entire target population. It was, therefore, prudent to select a sample to represent the population from which conclusions can be drawn about the entire population as propounded by (Creswell, 2014). In this regard, the study sampled 140 SMEs from the target population of 216 SMEs, using Krejcie and Morgan's, (1970) sample determination table. This decision was informed by Hair, Black, Babin and Anderson (2010) assertion that, for a sample to be representative, it should be preferably more than one hundred (100).

In a bid to ensure a high degree of representativeness by providing the elements with equal chances of being selected, the simple random sampling technique was adopted despite the presence of other methods such as stratified, purposive and convenience sampling methods. This sampling procedure was chosen, because it is easy to use, considered a fair way of selecting members, gives every member an equal chance of being selected and it is the most straightforward probability sampling procedure as compared to the other sampling procedures (Creswell, 2014).

Data Collection Instrument

In this study, a primary data collection instrument, specifically a structured questionnaire, was used to collect data from the respondents. According to Saunder and Lewis (2012), a structured questionnaire comprises all methods of data collection in which each person is asked to respond to the same set of questions in a predetermined order. It is used in quantitative studies to solicit for primary data from respondents in bid to aid analysis.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Thus, due to the quantitative nature of the study's objectives, structured questionnaire is the most appropriate data collection instrument as compared to the others such as observation and interviews which are suitable for qualitative research.

It is to note that the structured questionnaire employed in the study was self-constructed after reviewing related literatures (Gulati et al., 2012; Hoffman et al., 2017; Najafian & Colabi, 2014; Tang, 2011; Pouwels & Koster, 2017). The questionnaire was divided into four (4) sections with Section 1 soliciting for demographic characteristics of respondents' in relation to sex, educational level, years of operation and current job position. Sections II-IV dealt with questions in relation to the objectives of the study. These questions were in line with variables employed in the study. These key variables of the study comprised Interfirm co-operation and firm performance.

Interfirm co-operation refers to a voluntary arrangement between firms in regard to sharing, exchange and co-development of technologies, products or services (Temel, Mention & Torkkeli, 2013). Also, firm performance is defined as the ability of a firm to meet expected standards in its operations, increase market share, increase sales margin, improve facility, increase profitability and drastically reduce waste through capacity and efficiency optimisation (Aremu & Adeyemi, 2011). These definitions were chosen, because they provide clear and in-depth explanations of the variables. These variables were measured on a 5-point measurement scale with 1 representing least agreement and 5 representing highest agreement. This 5-point scale allowed the use of both descriptive and inferential statistics on the variables in order to achieve the study's objectives (Creswell, 2014).

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

In view of this, Section II dealt with questions in a bid to answer the first objective on the types of interfirm co-operation among SMEs in the Dormaa Central Municipality. As such, respondents were asked to rate their level of agreement on the types of Interfirm co-operation available to them. Additionally, Section III was geared towards achieving objective two in relation to the impact of Interfirm co-operation and firm performance. This section was also in two sub-sections (A and B), with A containing questions on interfirm co-operation, whereas B contains questions on firm performance. Finally, Section IV contained questions on the third objective in regard to challenges of Interfirm co-operation. This was geared towards soliciting for data in a bid to answer the third research objective of the study. These set of questions on the structured questionnaire were prompted by literatures reviewed (Kongmangla & Takahashi, 2009; Oyelaran-Oyeyinka, 2001).

Validity and Reliability

Validity and reliability indicate how best the instrument used in the study best measures the parameters it is meant to measure (Creswell, 2014). They measure accuracy in terms of results attained in the study. Validity, for instance, is the extent to which a research instrument (questionnaire) measures what it intends to measure. In other words, validity is the extent to which a selected tool measures its intended research objectives (Berkowitz, Caner & Fang, 2012). In the context of this study, validity strategies such as face validity and content validity were undertaken to validate and refine the content of the questionnaire. Face validity is the degree to which a test subjectively appears to measure the variables or constructs it is expected to measure (Bernard, 2017). To address face validity, peers with adequate knowledge in

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

the research field reviewed the questionnaire in order to identify and make appropriate corrections.

Also, content validity refers to the extent to which a measure represents every single element/item of a construct in a study (Bernard, 2017). It is usually qualitative in nature and it was achieved by asking four (4) experienced data analysts to go through the questionnaire before it was administered to the respondents. The data analysts' responses were in relation to relevancy comprising not relevant, somewhat relevant, quite relevant, and highly relevant. In view of this, many items/constructs on the questionnaire were manipulated and reconstructed with minor language adjustments to enhance clarity and to be assured that the instrument is entirely applicable. This is an indication that all efforts were taken to ensure the validity of the structured questionnaire in order to obtain required data for analysis and generalisations.

Furthermore, reliability refers to the extent to which the application of a scale produces consistent results if repeated measures are taken (Sekaran & Bougie, 2016). It can be achieved when keeping results at a consistent level despite changing of time and place (Best & Kahn, 2016). Bowling added that reliability ensures that the study fulfils its expected purpose and also ensures that the results obtained from the study are not influenced by possible extraneous variables. In the context of the study, internal consistency as a type of reliability test was conducted. Internal consistency comprises testing the homogeneity that assesses the extent to which personal items are inter-correlated and the extent to which they correlate with overall scale findings (Polit & Beck, 2008).

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Internal consistency reliability is performed by using Cronbach's alpha (α) test, and it is done to determine the reliability of items in the questionnaire. According to Best and Kahn (2016), the value of Cronbach's alpha ranges from 0 to 1. It is worthy to note that the closer the value of α to 1, the better its reliability. Also, they added that, an alpha (α) threshold of 0.5 was acceptable for basic research, as suggested by Nunnally in 1978 (Santos, 1999). However, Santos (1999) adjusted the value to 0.7 as acceptable, and this has been supported and currently recommended by scholars (Creswell, 2014; Creswell & Creswell, 2017; Hair et al., 2010; Saunders et al., 2015).

Ethical Considerations

Patten and Newhart (2017) state the main rules of data collection as voluntary participation, right to privacy, anonymity and confidentiality. In relation to voluntary participation, none of the respondents were involved in the data collection exercise against their free will. This was achieved by informing the respondents to voluntarily participate in the exercise and, thus, none of them was forced to participate. Also, right to privacy was achieved by allowing the respondents to fill the questionnaire on their own, but leave unclear statements unanswered for further explanations through their own convenient medium.

Additionally, the issue of anonymity was achieved by not allowing respondents to indicate their names on the questionnaire. Also, respondents were assured that none of their names would be leaked to the public domain or used for any purpose in the study. Moreover, the issue of confidentially was achieved by assuring respondents that all information provided would be kept confidential and, thus, none of them would be used for purposes other than

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

this study. They were also assured that none of the information provided would be used against them nor found in the public domain. In view of these, all ethical rules/considerations were met in the study.

Data Collection Procedures

To ensure easy data collection exercise, an introduction letter was sent to the manager/entrepreneurs of the various SMEs in the Dormaa Municipality, Ghana to basically seek permission and co-operation to carry out the data collection exercise. After obtaining permission from the respondents, questionnaires were distributed in person to them. Maximum and timely response rate was ensured by using a period of three (3) weeks (15 working days) for the collection exercise. The exercise begun on 13th of August, 2018 and ended successfully on the 2nd of September, 2018. The exercise was mostly carried out during the respondents' break periods (12:30pm-1:30pm). This period was the most convenient for the respondents.

The exercise was personally carried out with the help of two (2) well trained and motivated National Service Personnel. These two (2) assistants had maximum control over each question item to assist the respondents whenever called upon. Some difficulties encountered during the exercise included unfavourable time periods of the respondents due to busy work activities, fear of information leakages despite assurances and unwillingness of some of them to fully participate, because they considered these exercises as time wasting and unprofitable.

Data Processing and Analysis

After gathering sufficient data from respondents, the data were rigorously scrutinised to ensure that any error arising from incomplete and

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

wrongly answered questionnaires were eliminated or minimised drastically. The error-free data were then carefully coded and edited to avoid missing values (if any). After these, the data were entered and processed, using Statistical Package for Service Solution (SPSS) software version 22 and the results obtained were displayed in tables. Moreover, statistical tools such as descriptive and inferential tools were used to analyse the data. The descriptive statistical tools comprised frequencies, and percentages, while the inferential statistical tool consisted of Relative Importance Index and Multinomial Logistics Regession.

Relative importance index was employed when assessing the forms, effects and challenges of interfirm co-operation. The respondents were asked to rate the various statements to indicate the extent to which they agree to the statements on the questionnaire, based on a five-point Likert scale from 1 - 5, where 1 represented least agreement and five represented highest agreement. In the analysis of the extent of their agreement to the various statements, in order to ascertain their level of experience with interfirm co-operation, Relative Importance Index (RII) was used. Individual frequencies were multiplied by their corresponding values of factors under each rank of 1-5. The sum was divided by the product of the total number of respondents and the highest figure or integer on the five-point Likert-type scale (5) (Fugar and Agyakwah-Baah, 2010; Nkyi, 2012). For a five-point response item, RII produces a value ranging from 0.2 – 1.0 (Badu *et al*., 2013). In the calculation of the Relative Importance Index (RII), the formula below was used (Badu et al., 2013):

$$\text{RII} = \frac{\sum W}{A*N}$$

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Where, W: weighting given to each statement by the respondents, ranging from 1 – 5,

A: Higher response integer (5)

N: Number of respondents

Chapter Summary

This chapter discussed the research methods employed to achieve the purpose of this study. The chapter therefore discussed the key elements of research methods comprising approach, design, study area, population, sampling procedure, data collection instrument, data collection procedures, data processing and analysis employed in the study. Precisely, the study used the quantitative research approach and adopted the explanatory research design. Moreover, the chapter revealed that both descriptive and inferential statistical tools such as percentages and frequencies, relative importance index and multinomial logistics regression were used to analyse the data processed by SPSS (v.22) in bid to answer the research questions of the study. It is to note that, the assumptions underlying the use of statistical tools were also presented.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter presents the findings and discussions from the analysis of the data gathered from the respondents of the study. The chapter entails the preliminary analysis which presented information on the socio-demographic characteristics of the respondents, and further analysis which analysed the major responses from the respondents to address the research questions. Furthermore, discussions were made, connecting the findings to the discoveries of other researchers as reviewed in the study.

Preliminary Analysis

This section briefly expounds the background of respondents. It is crucial because, the background of the respondents will help generate confidence in the reliability of data collected; and eventually the findings of the study. Accordingly, it is always important to have a fair idea of the respondents so as to situate the responses within context. Fundamentally, the data collected from the respondents was arranged into categories and analyzed using descriptive statistics tools such as frequency distribution tables (frequency tables). This was done in order to give a visual impression to the study and for quick interpretation of the data.

Socio-Demographic Characteristics of Respondents

This section analyses the specific socio-demographic characteristics of the respondents in relation to sex, age, education level, number of years worked and job position. The results are reported in Table 1.0.

Table 1.0 uncovered that 62 respondents representing 44.3% were male whereas the remaining 55.7% (78) respondents were female. This

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

informed that a good number of the owners and managers of firms within the Dormaa Municipality were females.

Consequently, it was discovered from Table 1.0 that the a higher number of the respondents representing 111 (79.3%) were Owners of the firms. Whereas the remaining 29 (20.7%) respondents were managers. This inferred with respect to their positions, the respondents were knowledgeable of the form of their business operations and therefore had understanding of the relevance of inter form cooperation to their business activities. This contributed to gathering accurate data relevant to the study.

Furthermore, it was unveiled from Table 1.0 that 60 respondents representing 42.7% were between the ages of 31 – 40 years. Consequently, 52 representing 37.1% of the respondents were between the ages of 41 – 50 years. Others respondents representing 21(15%) and 7(8.6%) of the respondents were 51 - 60 and 20 - 30 years respectfully as shown on the Table 4.0. This suggested that most of the owners and managers of the firms were of the active population.

Again, it was observed that 49 respondents accounting 35% were tertiary graduates, 36 respondents representing 25.7% were primary school leavers, 20% (28) respondents were secondary school leavers. However, the remaining 10% (14) and 9.3% (13) of the respondents had non former education and no education respectfully as shown on the Table 1.0. This implied that most of the respondents were highly educated and understood the context of the study.

Also, it was uncovered from Table 1.0 that 53 respondents representing 37.9% had sixteen (16) and more years of working experience.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Many respondents accounting 42(30%) had five (5) to ten (10) years working experience in their various enterprises. Others representing 37 (26.4%) had 11 – 15 years of working experience while the remaining 8(5.7%) had less than five (5) year working experience as seen from the Table 4.0. This inferred that the majority of the respondents had good years of working experience and therefore stood the best position to clearly relay relevant experience necessary to addressing the impact of various forms of inter firm cooperation on the performance of small and medium scale enterprises.

Table 1.0: Socio-demographic Characteristics of Respondents

VARIABLES	FREQUENCY	PERCENTAGE (%)
Gender		
Male	62	44.3
Female	78	55.7
Age		
20 – 30 years	7	5.0
31 – 40 years	60	42.9
41 – 50 years	52	37.1
51 – 60 years	21	15.0
Education Background		
No Education	13	9.3
Non-Formal	14	10.0
Primary	36	25.7
Secondary	28	20.0
Tertiary	49	35.0
Job Position		
Owner	111	79.3
Manager	29	20.7
Number of years worked		
Less than 5 years	8	5.7
5 – 10 years	42	30.0
11 – 15 years	37	26.4
16 years and above	53	37.9

Source: Field survey, Tsorme (2019)

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Further Analysis

This section of the analysis and findings gives detailed explanation of the specific objectives under which this study was carried out. Multinomial Logistics Regression and Relative Importance Index (RII) were used to draw inferences from the data in order to achieve the purpose of the study.

Forms/Types of Interfirm Co-operation

This section presented the results and discussions on the first research objective in relation to the various forms/types of Interfirm co-operation among SMEs within the Dormaa Municipality. The results are displayed in Table 2.0

It was discovered that many responses representing 76 and 70 respectfully voted a highest agreement to Cluster as a form of interfirm co-operation engaged by small and medium scale enterprises in the Dorman Municipality, only one (1) responses voted a least agreement. The total response computed a Relative Importance Index (RII) of 0.891 and ranked 1st among the other variables. Similarly, many of the responses accounted 42 and 78 higher agreements respectfully that joint venture was another form of interfirm co-operation engaged by small and medium scale enterprises in the municipality whereas 12 and 6 responses indicated a moderate and least agreement respectfully and computed RII of 0.863 which ranked 2nd among other forms. In addition, Network was indicated as a key form of interfirm co-operation among the small and medium scale enterprises which presented RII of 0.814 and was ranked 3rd of other forms. Furthermore, Joint purchase was agreed upon as another form of interfirm co-operation and had the RII to 0.794 and was ranked 4th of other forms of co-operation among the enterprises in the

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

municipality. Nevertheless, other forms of cooperation which were identified among the small and medium scale enterprises in the Dormaa Municipality included strategic partnership, inter firm linkages and subcontract which computed RII of 0.791 each, and 0.669 and were ranked 5th and 6th respectfully as seen from Table 2.0.

Clearly, the findings inferred that the major forms of interfirm co-operation among the small and medium scale enterprises in the Dormaa Municipality in Ghana were Cluster, Joint Ventures, Network, and Joint Purchase as shown from the ranking by Table 2.0. These discoveries confirmed the studies by Hoffman et al. (2017) that "the major forms of Interfirm co-operation included networking and clusters". Also, another study by Kim et al. (2015) on Interfirm co-operation in Korea revealed that, "the major strategies used included networking". Similarly, Tang (2011) found networking as the most used Interfirm co-operation technique adopted by internationalized SMEs in China. This implies that, a number of the internationalized SMEs have created links with other firms in order to share resources and remain competitive. Also the study of Temmink (2016) confirmed that, "the forms of Interfirm organisational team co-operation comprised joint marketing, joint purchases, capacity sharing, strategic alliance, subcontracting, Interfirm linkages, Public Private Partnerships (PPP), franchise and joint ventures".

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Table 2.0: Forms/Types of Interfirm Co-operation among SMEs (Relative Importance Index Analysis)

	Rating					∑W	RII	Ranks
VARIABLES	1	2	3	4	5			
Cluster	1	1	1	76	70	624	0.891	1ST
Network	0	2	17	90	31	570	0.814	3RD
Strategic Partnership	6	1	38	67	28	554	0.791	5TH
Subcontract	13	19	42	39	27	468	0.669	6TH
Inter Firm Linkages	0	3	33	71	33	554	0.791	5TH
Joint Venture	6	2	12	42	78	604	0.863	2ND
Joint Purchase	5	5	25	59	46	556	0.794	4TH

Source: Field Survey, Tsorme (2019)

Impact of Interfirm Co-operation on SMEs Performance

This section discussed the results on the second research objective in relation to the impact of Interfirm co-operation on performance of SMEs within the Dormaa Metropolis. To achieve this, inferential statistical tools, specifically relative importance index and multinomial logistics regression, were employed to assess the relationship between firm performance and the various forms of interfirm cooperation. The results were presented in Table 3.0 and 4.2 respectfully.

How Interfirm Co-operation Has Improved Business Performance (Relative Importance Index Analysis)

The study revealed in Table 3.0 the effects of the engagements of the small and medium scale enterprises in the various forms of interfirm co-operation as respondents depicted. It could be observed that Improved in Profit Level showed the highest RII of 0.904 and was ranked 1st among other level of improvement in the firms' performance. This could be confirmed that quite a number of the respondents showing their highest agreement to that effect.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Subsequently, Improved in Output Level presented RII of 0.879 and was ranked 2nd. Also, it was observed that small and medium scale enterprises in the Dormaa Municipality have gained new customers through interfirm co-operation which computed RII of 0.876 and ranked 3rd of the effects of interfirm co-operation on SMEs performance. Furthermore, the study discovered an Improved sales margin in the firms' performance which accounted RII of 0.866 and was ranked 4th of the effects of the interfirm co-operation among others such as Innovation in Business, Strong Market Competition, gaining of new market, and satisfaction of customers and suppliers which ranked 5th (0.863), 6th (0.849), 7th (0.846) and 8th (0.590) respectfully as seen from Table 3.0.

This inferred that, the involvement of the small and medium scale enterprises in one or more of the various forms of interfirm co-operation affected the performance of the firms particularly in the areas of productivity, acquisition of new market and customers, increase in sales margin which largely led to the improvement in profit level as shown by the results in Table 3.0. These outcomes confirmed the findings of a study conducted by Kongmanila and Takahashi (2009) which found that, "co-operation among garment firms and distant suppliers influence firm performance. They concluded that, performance of garment firms is highly dependent on the strengths of co-operation with others".

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Table 3.0: Improvement in Firm Performance (Relative Importance Index Analysis)

Ranks	Rating					∑W		RII
VARIABLES	1	2	3	4	5			
Improved Sales Margin	0	1	3	85	51	606	0.866	4TH
Improved Profit Level	0	2	3	55	80	633	0.904	1ST
Gained New Customers	1	0	7	69	63	613	0.876	3RD
Customer & Supplier Satisfaction	0	55	43	36	6	413	0.590	8TH
Gained New Market	2	0	3	54	73	592	0.846	7TH
Innovativeness in Business	1	1	13	63	62	604	0.863	5TH
Strong Market Competition	1	2	14	68	55	594	0.849	6TH
Improved Output Level	1	2	6	63	68	615	0.879	2ND

Source: Field Survey, Tsorme (2019)

Relationship between Firm Performance and Forms of Interfirm Co-operation (Multinomial Logistics Regression Analysis)

The study further assessed the relationship between the forms of interfirm cooperation and the various level of performance of small and medium scale enterprises in the Dormaa Municipality.

Table 4.0 uncovered from 33.6% (47) respondents that Profit Level was the highest performance which was used as the reference category with Performance as the dependent variable. The least performance was observed to be market competition representing 5(3.6%) of the respondents. Also, Cluster was the highest engaged form of interfirm co-operation which comprised of 46 (32.9%), whereas the least engaged cooperation were subcontract, inter firm linkages and joint purchase which accounted 7 (5%) each respectfully of the respondents, where interfirm co-operation was the independent variable in the multinomial logistics regression analysis.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Table 4.0: Case Processing Summary

Cases		N	Marginal Percentage
Performance	Profit Levl	47	33.6%
	Sales Margin	12	8.6%
	New Customers	17	12.1%
	Satisfaction	10	7.1%
	New Market	7	5.0%
	Innovation	7	5.0%
	Market Competition	5	3.6%
	Output Level	35	25.0%
Forms Of Interfirm Cooperation	Cluster	46	32.9%
	Network	22	15.7%
	Strategic Partnership	9	6.4%
	Subcontract	7	5.0%
	Interfrim Linkage	7	5.0%
	Joint venture	42	30.0%
	Joint Purchase	7	5.0%
Valid		140	100.0%
Missing		0	
Total		140	
Subpopulation		7	

Source: Field Survey, Tsorme (2019)

Table 4.1 presents an overall measure of the model whether any of the coefficients are statistically significant. The “Final” row presents information on whether all the coefficients of the model are zero. It could be observed that the sig. value equal to 0.308, which is greater than the p value = 0.05, means that the full model does not statistically significantly predicts the dependent variable better than the “intercept only” model alone. This infers that most of the coefficients of the model are zero or not statistically significant.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Table 4.1 Model Fitting Information

	Model Fitting Criteria	Likelihood Ratio Tests		
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	125.108			
Final	79.048	46.059	42	.308

Source: Field Survey, Tsorme (2019)

Table 4.2 presents the coefficients of the model which is known as the parameter estimates. It could be observed that most of the coefficients thus the "B" column had significant values more than 0.05, therefore most of the coefficients are not statistically significant as discussed earlier in Table 4.1 and so, discussions are limited to models with significant coefficients. The reference category was set at Profit Level.

It was observed that most of the coefficients were significant at the Sales Margin row. It could be deduced that a one-unit increase involvement in the Cluster co-operation associated with a 15.339 increase in the relative log odds of sales margin versus profit level. This was highly significant at a p value of 0.0001. Also, a one unit increase involvement in Network co-operation is expected to yield a 14.764 increase in the relative log odds of Sales margin relative to profit level, holding all other variables in the model constant at a significant level of 0.0001. Again, a one unit increase in the engagement of Inter Firm Linkages co-operation associated with 15.745 increase in the relative log odds of sales margin versus profit level at a significant level of 0.0001 as seen from Table 4.2. These implied that the

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

engagement of small and medium scale enterprises in the Cluster, Network and Inter Firm Linkage co-operation affected their sales margin relative to profit level hence there is a positive relationship among cluster, network, inter firm linkages and performance of firms with respect to an increase to their sales margin relative profit level. These finding however contradicted a study by Hoetoro, (2014) that "Interfirm linkages within small industrial clusters were less effective as compared to business strategies when affecting a firm's performance". Nevertheless, Gutierrez-Martinez et al.'s (2015) confirmed in their study that, "co-operation with suppliers, business associations and other IT firms are positively associated with firm performances in Mexico". This implies that, IT firms that cooperate are more successful than their independent counterparts in Mexico.

Furthermore, Table 4.2 uncovered that only one coefficient was significant at the Satisfaction row. It was deduced that a one unit increase in involvement of the cluster co-operation associated with a 2.890 decrease in the relative log odds of supplier and customer satisfaction versus profit level, holding all variables in the model constant at a significant level of 0.044. This suggested that there was an inverse relationship between cluster cooperation and the supplier and customer Satisfaction performance of SMEs relative to profit level.

Subsequently, among the coefficients in the New Market performance row, it was discovered that a one unit increase in involvement of cluster co-operation associated with a 3.584 decrease in the relative log odds of new market relative to profit level performance at a significant level of 0.025. This inferred that SMEs involvement in the cluster cooperation inversely affected

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

acquisition of new market relative to increased profit level holding all other variables in the model constant. Connectively, the inverse relationship among customer and supplier satisfaction with acquisition of new market relative to profit level of firm performances and cluster co-operation confirmed the finding of Hoetoro, (2014) that small industrial clusters were less effective as compared to business strategies when affecting a firm's performance.

Table 4.2: Parameter Estimates

Performance/Co-operation		B	Std. Error	Wald	df	Sig.
Sales Margin	Intercept	-16.843	0.508	1101.424	1	0.0001
	Cluster	15.339	0.750	417.833	1	0.0001
	Network	14.764	1.176	157.658	1	0.0001
	Strategic Partnership	1.436	1108.334	0.000	1	0.999
	Subcontract	2.253	1473.076	0.000	1	0.999
	Inter Firm Linkages	15.745	1.261	155.822	1	0.0001
	Joint Venture	16.237	0.000		1	
	Joint Purchase	0			1	
New Customers	Intercept	0.000	1.414	0.000	1	1.000
	Cluster	-1.792	1.546	1.344	1	0.246
	Network	-0.981	1.568	0.391	1	0.532
	Strategic Partnership	-0.693	1.658	0.391	1	0.532
	Subcontract	0.693	1.871	0.137	1	0.676
	Inter Firm Linkages	-1.099	1.826	0.362	1	0.547
	Joint Venture	-1.012	1.530	0.437	1	0.508
	Joint Purchase	0			0	
Satisfaction	Intercept	0.693	1.225	0.320	1	0.571
	Cluster	-2.890	1.434	4.064	1	0.044
	Network	-16.153	804.670	0.000	1	0.984
	Strategic Partnership	-16.283	1214.119	0.000	1	0.989
	Subcontract	-0.693	1.871	0.137	1	0.711
	Inter Firm Linkages	-16.137	1303.228	0.000	1	0.990
	Joint Venture	-1.482	1.338	0.000	1	0.268
	Joint Purchase	0			0	
New Market	Intercept	0.693	1.225	0.320	1	0.571
	Cluster	-3.584	1.599	5.025	1	0.025
	Network	-16.510	961.764	0.000	1	0.986
	Strategic Partnership	-2.079	1.658	1.572	1	0.210
	Subcontract	-15.822	1928.710	0.000	1	0.993
	Inter Firm Linkages	-16.494	1557.655	0.000	1	0.992
	Joint Venture	-1.992	1.387	2.063	1	0.151
	Joint Purchase	0			0	

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Table 4.2 continue

Innovation	Intercept	-17.382	5950.317	0.000	1	0.998
	Cluster	15.591	5950.317	0.000	1	0.998
	Network	15.996	5950.317	0.000	1	0.998
	Strategic Partnership	1.436	6124.713	0.000	1	1.000
	Subcontract	2.253	6255.093	0.000	1	1.000
	Inter Firm Linkages	1.582	6150.817	0.000	1	1.000
	Joint Venture	15.678	5950.317	0.000	1	0.998
	Joint Purchase	0			0	
Market Competition	Intercept	-17.537	6427.076	0.000	1	0.998
	Cluster	15.339	6427.077	0.000	1	0.998
	Network	16.556	6427.076	0.000	1	0.988
	Strategic Partnership	1.436	6615.446	0.000	1	1.000
	Subcontract	17.537	6427.077	0.000	1	0.998
	Inter Firm Linkages	1.582	6643.642	0.000	1	1.000
	Joint Venture	2.148	6461.085	0.000	1	1.000
	Joint Purchase	0			0	
Output Level	Intercept	0.000	1.414	0.000	1	1.000
	Cluster	-0.325	1.460	0.050	1	0.824
	Network	-0.470	1.525	0.095	1	0.758
	Strategic Partnership	-0.693	1.658	0.175	1	0.676
	Subcontract	0.693	1.871	0.137	1	0.711
	Inter Firm Linkages	-0.405	1.683	0.053	1	0.810
	Joint Venture	0.000	1.477	0.000	1	1.000
	Joint Purchase	0			0	

a. The reference category is: Profit Levl

Source: Field Survey, Tsorme (2019)

Challenges of Interfirm Co-operation (Relative Importance Index Analysis)

This section discussed the results of the third research objective on the challenges associated with Interfirm co-operation. The analysis was done using descriptive tools specifically means and standard deviation displayed in Table 5.0.

It was unveiled in Table 5.0 the challenges that SMEs faced with respect to their involvement in the various forms of interfirm co-operation as their responses depicted. It was observed that the statement, Risk of losing operating capital displayed the highest RII and was ranked 1st (0.446).

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Afterward, the statement, Politics within groups reflected to be a worrying challenge to SMEs with their involvement in interfirm cooperation which presented RII of 0.440 and ranked 2nd among others. Also, cultural difference emerged the 3rd pressing challenge and computed RII of 0.407. Again, Poor communication was identified to be a prevailing challenge faced -by SMEs in their cooperation which accumulated RII of 0.404 and ranked 4th among others such as limited control on one's business, slow decision making process, incompatibility of operating system and lack of capacity which ranked 5th (400), 6th (0.391) and 7th (0.390) respectfully as seen from Table 5.0. However, trust issues was not much of challenge to respondents which accounted RII of 0.386 and was ranked 9th of the challenges as shown on Table 5.0 among other challenges. This implied that the key challenges SMEs were facing with their co-operation were risk of losing operating capital, politics within group, cultural difference, poor communication, and limited control on one's business. The findings further inferred that, despite the prevalence of these challenges within their cooperation, they were majorly not affecting their business operations since the relative importance index showed low statistics (0.386 – 0.446) among the challenges, among which majority of the respondents showed least agreements to their effects as shown from Table 5.0. However, the findings confirmed the study of Grimshaw, Rubery and Marchington (2010) that "risks as the major challenge facing management of organizations. Also, issues of trust and limited control over partners were also found to be other challenges of networking".

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Table 5.0: Challenges of Interfirm Co-operation (Relative Importance Index Analysis)

Ranks	Rating					∑W		RII
VARIABLES	1	2	3	4	5			
Risk of losing operating capital	48	25	55	11	1	312	0.446	1st
Cultural Difference	51	39	44	6	0	285	0.407	3rd
Limited control on one's business	56	35	42	7	0	280	0.400	5th
Trust Issues	63	37	34	4	2	265	0.386	9th
Poor Communication	53	39	40	8	0	283	0.404	4th
Mismatch of resources/objects	60	38	33	8	1	272	0.389	8th
Incompatibility of operating systems	58	40	34	7	1	273	0.390	7th
Slow decision making process	60	32	42	6	0	274	0.391	6th
Politics within the group	60	33	40	6	1	308	0.440	2nd
Lack of capacity	55	43	36	6	0	273	0.390	7th

Source: Field Survey, Tsorme (2019)

Chapter Summary

This section presented the results and discussion of the study's objectives. From the study, it was revealed that, the major forms of interfirm co-operation among the small and medium scale enterprises in the Dormaa Municipality in Ghana were Cluster, Joint Ventures, Network, and Joint Purchase. The chapter also revealed that, the involvement of the small and medium scale enterprises in one or more of the various forms of interfirm co-operation affected the performance of the firms particularly in the areas of productivity, acquisition of new market and customers, increase in sales margin which largely led to the improvement in profit level. It was shown that the key challenges SMEs were facing with their co-operation were risk of losing operating capital, politics within group, cultural difference, poor communication, and limited control on one's business. In this light, the next chapter presents the summary, conclusions and recommendations of the study.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the summary of the main findings. Conclusions were drawn from the findings and recommendations for policy consideration and suggestions for further research.

The purpose of the study was to examine the impacts of Interfirm co-operation on performance of SMEs within the Dormaa Municipality, Ghana. Specific objectives included assessing the forms/types of Interfirm co-operation available to SMEs, examining the effects of Interfirm co-operation on performance of SMEs and analysing the challenges of Interfirm co-operation. Research questions such as what are the forms of interfirm co-operation available to SMEs and what are the challenges of interfirm co-operation guided the study.

The study employed the quantitative research approach and the explanatory research design due to its purpose. The structured questionnaire, a primary collection instrument, was used to gather data from one hundred and forty (140) respondents achieving a response rate of (100%). These respondents were randomly sampled from a target population of two hundred and sixteen (216) owner/managers of SMEs within the Dormaa Municipality. The data obtained were processed, using SPSS version 22 and analysed using descriptive and inferential statistical techniques such as frequencies, percentages, relative importance index and multinomial logistics regression analysis. The results were then presented in tables in Chapter four and summarized below.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Summary of Findings

The analysis of the study presented the following findings;

- The more than half of the SMEs in Dormaa Municipality representing 55.7% were owned or managed by females.
- A number of the respondents were of the active working class within the ages of 31 – 50 years where most of them accounting 35% (49) were tertiary graduates, where only 10% of the respondents had non former education.
- Also, the responses showed from the ranking that forms of interfirm co-operation that existed mostly included Cluster, Network, Joint venture and Joint purchase among others such as interfirm linkages, subcontracts and strategic partnership, where Cluster emerged as the first ranked co-operation as seen from Table 2.0.
- Again, findings ranked that interfirm co-operation affected the performance of SMEs in key areas such as profit level, output level, acquisition of new market, and sales margin among others such as new market, customer and supplier satisfaction and innovation where profit level immerged the ranked improved performance as seen from Table 3.0 which accounted 33.6% (47) of the respondents' results in Table 4.0.
- It was found that there was a positive relation between cluster, network, inter firm linkages and sales margin respectfully where a one unit increased involvement in these cooperation associated with a 15.339, 14.764 and 15.745 increased performance in sales margin relative to profit performance respectfully.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

- Also, there was an inverse relationship among cluster co-operation and satisfaction and acquisition of new market performances where a one unit increased involvement in cluster co-operation associated with a 2.890 and 3.584 decrease performance in customer and supplier satisfaction and acquisition of new market respectfully.
- The study identified that various challenges associated with interfirm co-operation included risk of losing operating capital, politics among groups, cultural differences, poor communication and limited control over one's business where risk of losing operating capital ranked as first (1^{st}) challenge. However, it was found that trust issues was not much of a challenge and ranked 9^{th} of all challenges as seen from Table 5.0

Conclusions

Based on the findings of the study, the following conclusions were drawn;

The main forms of interfirm co-operation available to small and medium scale enterprises in the Dormaa Municipality of Ghana were Cluster, Network, Joint Venture and Joint Purchase where the two commonly engaged among these were Cluster and Joint Venture co-operation.

Interfirm co-operation positively affected the performance of small and medium scale enterprises in Dormaa Municipality keenly in areas such as improving their profit level, increasing output level, increasing their sales margin, and acquiring new market where consistent involvement in Network, Cluster and Inter Firm Linkage co-operation related to an increase in sales margin and profit level.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

The prevailing challenges of interfirm cooperation among the small and medium scale enterprises in the Dormaa Municipality of Ghana were risk of losing operating capital, politics among groups, cultural differences, poor communication and limited control over one's business.

Recommendations

On the strength of the research findings and conclusions made, the following recommendations were hereby made. It is recommended that Small and medium-sized Enterprises (SMEs) within the Dormaa Municipality should continuously integrate with other firms through clustering, networking and joint venturing. Through these strategies, SMEs will be able to exchange resources, ideas, share risks and information, which will help them enhance their performance and, invariably, survive unhealthy competition.

Secondly, owner/managers of SMEs should view Interfirm co-operation as a vital part of their firms' core business functions. This is because Interfirm co-operation was found to have positive impact on firms' performances. As such, these owner/managers should incorporate Interfirm co-operation strategies as part of their strategic business plans, in order to help them establish policies geared towards enhancing their capabilities and performances.

Finally, the study recommended that owner/managers of SMEs should embrace risk-related issues associated with Interfirm co-operation. From the study's finding, risk was seen as inevitable and, thus, a major challenge of Interfirm co-operation. As such, embracing risk will ensure that owner/managers can establish appropriate measures and strategies to identify,

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

assess, analyse, treat, monitor and control risk-related issues associated with Interfirm co-operation.

Suggestions for Further Research

This study focused on the establishing the effects of Interfirm co-operation on SMEs' performances. The study was specifically carried out with focus on owner/managers of SMEs within the Dormaa Municipality, Ghana. As such, further research can consider conducting a broad-based research by focusing on all SMEs in Ghana. This will ensure better generalisation of findings in relation to Interfirm co-operation and performance of SMEs in the country. Therefore, the study suggests a broad-based research titled, "impact of Interfirm co-operation on performances of Small and medium-sized Enterprises in Ghana".

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

REFERENCES

Aguinis, H. (2009). *Performance management*. Upper Saddle River, NJ: Pearson Prentice Hall.

Amoako, I. O., & Lyon, F. (2014). 'We don't deal with courts': Co-operation and alternative institutions shaping exporting relationships of small and medium-sized enterprises in Ghana. *International Small Business Journal, 32*(2), 117-139.

Aremu, M. A., & Adeyemi, S. L. (2011). Small and medium-sized enterprises as a survival strategy for employment generation in Nigeria. *Journal of sustainable development, 4*(1), 200.

Armstrong, M., & Taylor, S. (2014). *Armstrong's handbook of human resource management practice*. United Kingdom, London. Kogan Page Publishers.

Baiden, B. K., & Price, A. D. (2011). The effect of integration on project delivery team effectiveness. *International Journal of Project Management, 29(2), 129-136.*

Barney, J. B. (2012). Purchasing, supply chain management and sustained competitive advantage: The relevance of resource-based theory. *Journal of supply chain management, 48*(2), 3-6.

Berkowitz, D., Caner, M., & Fang, Y. (2012). The validity of instruments revisited. *Journal of Econometrics, 166*(2), 255-266.

Bernard, H. R. (2017). *Research methods in anthropology: Qualitative and quantitative approaches*. New York, Lanham. Rowman & Littlefield.

Best, J. W., & Kahn, J. V. (2016). Descriptive studies: Assessment, Evaluation and, Research; *Research in education*. India. Pearson Education.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Brown, T. A. (2014). *Confirmatory factor analysis for applied research (2nd Ed.)*. New York. Guilford Publications.

Byaruhanga, I. (2012). *Credit terms, credit accessibility and performance of agricultural cooperatives in Rwanda*. Unpublished doctoral dissertation, Rwanda.

Cao, M., & Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. *Journal of Operations Management, 29*(3), 163-180.

Carrington, P. J., Scott, J., & Wasserman, S. (2005). *Models and methods in social network analysis* (Vol. 28). New York, Cambridge. Cambridge University Press.

Creswell, J. W. (2014). *A concise introduction to mixed methods research (1st Ed.)*. California, Thousand Oaks. Sage Publications.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach (5th Ed.)*. California. Sage publications.

De Clercq, D., Thongpapanl, N., & Dimov, D. (2011). The moderating role of organizational context on the relationship between innovation and firm performance. *IEEE Transactions on Engineering Management, 58*(3), 431-444.

Engelen, A., Gupta, V., Strenger, L., & Brettel, M. (2015). Entrepreneurial orientation, firm performance, and the moderating role of transformational leadership behaviours. *Journal of Management, 41*(4), 1069-1097.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Fine, B. (2002). *Social capital versus social theory (Vol. 1)*. London. Routledge.

Grimshaw, D., Rubery, J., & Marchington, M. (2010). Managing people across hospital networks in the UK: Multiple employers and the shaping of HRM. *Human Resource Management Journal, 20*(4), 407-423.

Gulati, R., Wohlgezogen, F., & Zhelyazkov, P. (2012). The two facets of collaboration: Co-operation and coordination in strategic alliances. *Academy of Management Annals, 6*(1), 531-583.

Gutiérrez-Martínez, I., Duhamel, F., Luna-Reyes, L. F., Picazo-Vela, S., & Huerta-Carvajal, M. I. (2015). The role of joint actions in the performance of IT clusters in Mexico. *Competitiveness Review, 25*(2), 156-178.

Gyau, A., & Spiller, A. (2008). The impact of supply chain governance structures on the Interfirm relationship performance in agribusiness. *Zemedelska Ekonomika-Praha-, 54*(4), 176.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis (7th Ed.)*. London. Pearson Education.

Hanna, V., & Walsh, K. (2008). Interfirm co-operation among small manufacturing firms. *International Small Business Journal, 26*(3), 299-321.

Hoetoro, A. (2014). Co-operation and competition among clustered MSEs in East Java. *Gadjah Mada International Journal of Business, 16*(3)21-36.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Hoffmann, V. E., Belussi, F., Martínez-Fernández, M. T., & Reyes Jr, E. (2017). United we stand, divided we fall? Clustered firms' relationships after the 2008 crisis. *Entrepreneurship and Regional Development, 29*(7-8), 735-758.

Huggins, R. (2010). Forms of network resource: Knowledge access and the role of inter-Firm networks. *International Journal of Management Reviews, 12*(3), 335-352.

Ifeakachukwu, N. P., & Olasunkanmi, O. I. (2013). The impact of banks loan to SMEs on manufacturing output in Nigeria. *Journal of Social and Development Sciences, 4*(5), 212-217.

Inmyxai, S., & Takahashi, Y. (2009). Entrepreneurs as decisive human resources and business performance for the Lao SMEs. *Chinese Business Review, 8*(7), 29.

Jabar, J., Othman, N. A., & Idris, M. A. (2011). Enhancing organizational performance through strategic technology alliances: A Study on Malaysian manufacturers. *International Journal of Innovation, Management and Technology, 2*(6), 506.

Jenssen, J. I., & Nybakk, E. (2013). Inter-organizational networks and innovation in small, knowledge-intensive firms: A literature review. *International Journal of innovation management, 17*(2), 13-58.

Kale, P., & Singh, H. (2009). Managing strategic alliances: what do we know now, and where do we go from here? *The Academy of Management Perspectives*, 45-62.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Kim, K. T., Lee, J. S., & Kang, N. (2015). Empirical study on Interfirm diffusion and firms' performance for Win-Win growth culture in supply chain. *Journal of Information Technology Applications & Management, 22*(1), 153-163.

Kim, M. J., Lee, J., & Park, J. Y. (2015). The effect of co-operation-strategy fit on the performance of subcontractors-focused on Samsung Electronics' subcontractors. *Journal of Economics, Business and Management, 3*(3), 36-53.

Kongmanila, X., & Takahashi, Y. (2009). Interfirm Co-operation and firm performance: An empirical study of the Lao garment industry cluster. *International Journal of Business and Management, 4*(5), 3.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement, 30*(3), 607-610.

Kuada, J. (2009). Gender, social networks, and entrepreneurship in Ghana. *Journal of African Business*, *10*(1), 85-103.

Laszlo, C., & Zhexembayeva, N. (2017). *Embedded sustainability: The next big competitive advantage (1st Ed.).* New York. Routledge.

Leedy, P. D., & Ormrod, J. E. (2010). *Practical research (9th Ed.).* New Jersey. Pearson Custom.

Liao, J., & Welsch, H. (2005). Roles of social capital in venture creation: Key dimensions and research implications. *Journal of Small Business Management, 43*(4), 345-362.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Lichtenthaler, U. (2008). Open innovation in practice: an analysis of strategic approaches to technology transactions. *IEEE Transactions on Engineering Management*, *55*(1), 148-157.

Lin, N. (1999). Building a network theory of social capital. *Connections, 22*(1), 28-51.

Lin, N. (2002). *Social capital: A theory of social structure and action (1st Ed.).* New York, Cambridge. Cambridge University Press.

Lin, N. (2008). A network theory of social capital. *The handbook of Social capital, 50*(1), 69.

Lin, N., & Erickson, B. H. (2010). *Social capital: An international research program (1st Ed.).* New York, Oxford. Oxford University Press.

Little, R. J., & Rubin, D. B. (2014). *Statistical analysis with missing data (2nd Ed.).* United States, Hoboken, 111 River Street. John Wiley & Sons.

Marchington, M., Hadjivassiliou, K., Martin, R., & Cox, A. (2011). *Employment relations across organizational boundaries. In the Future of Employment Relations* (pp. 47-66). London. Palgrave Macmillan.

Mahdavi, M., & Hesamamiri, R. (2014). Knowledge management reliability and its impact on organizational performance: An empirical study. *Program, 48*(2), 102-126.

Nadvi, K. (2007). Collective efficiency and international competitiveness in Pakistan. *Journal of Economic Geography 5*(4), 253-268.

Nafukho, F. M., Hairston, N., & Brooks, K. (2004). Human capital theory: Implications for human resource development. *Human Resource Development International, 7*(4), 545-551.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Najafian, M., & Colabi, A. M. (2014). Inter-organizational relationship and innovation: A review of literature. *Global Business and Management Research*, *6*(1), 52.

Narteh, B. (2008). Knowledge transfer in developed-developing country interfirm collaborations: A conceptual framework. *Journal of knowledge management*, *12*(1), 78-91.

Ntim, A. L., Evans, O., & Anthony, F. (2014). Accounting practices and control systems of small and medium size entities: A case study of Techiman municipality. *Journal of Finance and Accounting*, *2*(3), 30-40.

Onuaguluchi, I. (2015). Performances of small and medium-sized enterprises (SMEs) in Nigeria: A case of financial management. *The Business & Management Review*, *6*(2), 269.

Oyelaran-Oyeyinka, B. (2001). Networks and linkages in African manufacturing cluster: A Nigerian case study. *Networks*, 5.

Parnell, J. A., Long, Z., & Lester, D. (2015). Competitive strategy, capabilities and uncertainty in small and medium sized enterprises (SMEs) in China and the United States. *Management Decision*, *53*(2), 402-431.

Patten, M. L., & Newhart, M. (2017). *Understanding research methods: An overview of the essentials (10th Ed.).* New York. Taylor & Francis.

Polit, D. F., & Beck, C. T. (2008). *Nursing research: Generating and assessing evidence for nursing practice (8th Ed.).* Philadelphia. Lippincott Williams & Wilkins.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Pouwels, I., & Koster, F. (2017). Inter-organizational co-operation and organizational innovativeness. A comparative study. *International Journal of Innovation Science, 9*(2), 12-23.

Rahardjo, H., Idrus, M. S., Hadiwidjojo, D., & Aisjah, S. (2014). Factors that determines the success of corporate sustainability management. *Journal of Management Research, 5*(2), 1-17.

Ralston, P. M., Blackhurst, J., Cantor, D. E., & Crum, M. R. (2015). A structure–conduct–performance perspective of how strategic supply chain integration affects firm performance. *Journal of Supply Chain Management, 51*(2), 47-64.

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing, 26*(4), 441-457.

Saeidi, S. P., Sofian, S., Saeidi, P., & Saaeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research, 68*(2), 341-350.

Santos, J. R. A. (1999). Cronbach's alpha: A tool for assessing the reliability of scales. *Journal of Extension, 37*(2), 1-5.

Saunders, M. N., & Lewis, P. (2012). *Doing research in business management: An essential guide to planning your project (1st Ed.).* Canada. Pearson Education.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Saunders, M. N. K., Lewis, P., Thornhill, A., & Bristow, A. (2015). *Understanding Research Philosophies and Approaches: Research Methods for Business Students (7th Ed.)*. England, Harlow. Pearson Education.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach (7th Ed.)*. New Jersey. John Wiley & Sons.

Stuart, T. E. (2010). Inter-organizational alliances and the performance of firms: A study of growth and innovation rates in a high-technology industry. *Strategic Management Journal*, 791-811.

Sweetland, S. R. (1996). Human capital theory: Foundations of a field of inquiry. *Review of Educational Research, 66*(3), 341-359.

Tang, Y. K. (2011). The Influence of networking on the internationalization of SMEs: Evidence from internationalized Chinese firms. *International Small Business Journal, 29*(4), 374-398.

Temel, S., Mention, A. L., & Torkkeli, M. (2013). The impact of Co-operation on firms' innovation propensity in emerging economies. Journal of Technology Management & Innovation, 8(1), 54-64.

Temmink, J. (2016). The effect of Interfirm organisational team co-operation on collaborative innovation performance. *Journal of Management and Social science, 2*(1), 56-68.

Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: A resource-based view. *Strategic Management Journal, 31*(8), 892-902.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Tonn, B. E., Zambrano, P., & Moore, S. (2001). Community networks or networked communities? *Social Science Computer Review, 19*(2), 201-212.

Tomlinson, P. R. (2010). Co-operative ties and innovation: Some new evidence for UK manufacturing. *Research Policy, 39*(6), 762-775.

Tsai, K. H. (2009). Collaborative networks and product innovation performance: Toward a contingency perspective. *Research policy, 38*(5), 765-778.

Van de Vrande, V., De Jong, J. P., Vanhaverbeke, W., & De Rochemont, M. (2009). Open innovation in SMEs: Trends, motives and management challenges. *Technovation, 29*(6), 423-437.

Van der Gaag, M. P., & Snijders, T. A. (2004). Proposals for the measurement of individual social capital. *Creation and returns of social capital*, 199-218.

VanVoorhis, C. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in quantitative methods for psychology*, *3*(2), 43-50.

Vorhies, D. W., & Morgan, N. A. (2005). Benchmarking marketing capabilities for competitive advantage. *Journal of marketing, 69*(1), 80-94.

Zhang, Q. (2015). *Analysis study of Chinese SMEs financing challenges*. Doctoral dissertation, Massachusetts Institute of Technology, Massachusetts.

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

SCHOOL OF BUSINESS

CENTRE FOR ENTREPRENEURSHIP AND SMALL ENTERPRISE DEVELOPMENT (CESED)

RESEARCH QUESTIONNAIRE

INTRODUCTION

The researcher is a Masters Student at the University of Cape Coast, Cape Coast. The researcher is undertaking a study on the topic: "Impact of Interfirm co-operation on the performance of SMEs in the Dormaa Central Municipality of Ghana". this is a partial fulfilment of requirements for the award of a masters' degree. Responses provided for this academic purpose will be treated with extreme confidentiality.

Please this exercise will take few minutes of your time.

THANK YOU

INSTRUCTION: Please write or tick {√} where applicable

SECTION I: DEMOGRAPHIC INFORMATION OF RESPONDENTS

1. Sex distribution Male [ ] Female [ ]
2. Age of respondents in years …….
3. Educational level:

   No Education [ ] Non formal [ ] Primary [ ]

   Secondary [ ] Tertiary [ ] Other(please specify)……

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

4. How long have you been in business (years)?

   Less than 5 [ ] 6-10 [ ] 11-15 [ ] 16-above [ ]

5. Current job position

   Owner Manager [ ] Manager [ ] Non-Managerial []

SECTION II: FORMS OF INTERFIRM CO-OPERATION AMONG SMEs

On a scale of 1-5, please rate your level of agreement with the forms of Interfirm co-operation available to your firm. **With 1-least agreement and 5-highest agreement**

No.	Forms of Interfirm co-operation	1	2	3	4	5
1	**Cluster**: I belong to a group in this geographical area which works together					
2	**Network**: I belong to a network of firms in and out outside my location					
3	**Strategic Partnership**: I have a partnership with another firm which enables us to share resources, knowledge over a long-term period					
4	**Subcontract**: I assign part of my business' task/duties to another firm					
5	**Interfirm linkage**: I have a link with other firms that enables me to access resources and credits					
6	**Joint venture**: I am aware that some firms have been created by two or more parties and they come together to share risks, returns and governance					
7	**Joint Purchase**: I co-operate with other firm(s) to purchase products together					

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Kindly state any other forms of Interfirm co-operation you are aware of……

SECTION III(A): INTERFIRM CO-OPERATION

On a scale of 1-5, please rate your level of agreement to the following major activities you undertake in your co-operation. **With 1-least agreement and 5-highest agreement**

No.	Interfirm co-operation activities	1	2	3	4	5
	Clustering					
1	I belong to a group that shares resources					
2	I belong to a group which contributes to my technical know-how					
3	I belong to a group which shares trade contact, social contact and information					
4	I belong to a group that comes together to compete with large firms					
5	We are close to each so we facilitate production process					
	Networking					
6	I interact with other firms in different areas for information on marketing, new technology and/or relationships					
7	I receive supplies from other firms which are in different locations					
8	I have network of firms which receive my products/services after production					
9	I interact with other institutions such as universities, technology and development centres					
10	I interact and trade with other firms which belong to a network					

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

Strategic Partnership						
11	I have partners with whom I share knowledge and information					
12	I have agreed with my partners to assist each other over a long period of time					
13	I have agreed with my partners to undertake research and also to develop mutual benefits					
14	We jointly design and share production components and parts to help our individual production process					
15	We have agreed to jointly market our products/services to improve our performance					

SECTION III (B): FIRM PERFORMANCE

On a scale of 1-5, please rate your level of agreement with how Interfirm co-operation have improved your business performance. **With 1-least agreement and 5-highest agreement**

No.	Sustainable competitive advantage	1	2	3	4	5
1	I am able to improve on my profit level					
2	My sales margin has improved					
3	I have gained new customers for my products					
4	All my partners, suppliers, customers and business owners are satisfied with our co-operation					
5	I have gained new market for my product in different locations					
6	I am able to innovate in different areas of my firm					
7	I am able to compete strongly on the market					
8	My output levels have improved					

Digitized by Sam Jonah Library

© University of Cape Coast https://erl.ucc.edu.gh/jspui

SECTION IV: CHALLENGES OF INTERFIRM CO-OPERATION

On a scale of 1-5, please rate your level of agreement with the following challenges of Interfirm co-operation. With **1-least agreement and 5-highest agreement**.

No.	Challenges of Interfirm co-operation	1	2	3	4	5
1	I risk losing all my capital through co-operation					
2	Cultural differences are one of the major challenges of hindering smooth co-operation					
3	I have limited control over my business because of co-operation					
4	In my group, we find it difficult trusting each other					
5	We do not communicate more frequently in my which is a challenge					
6	In my group, there is mismatch of resources and/or objectives					
7	My operating systems are not compatible with those of my partners					
8	The decision-making processes in my group are poor and slow					
9	There is too much politics in my group					
10	There is lack of capacity to provide expected internal coordination					

THANK YOU FOR YOUR PARTICIPATION

Digitized by Sam Jonah Library