



Sudan University of Science and Technology
Çankırı Karatekin University-Turkey
College of Graduate Studies

**Impact of Entrepreneurial Orientation on Sustainable Competitive
Advantage: The Moderating Effect of Corporate Social
Responsibility**

A STUDY ON SUDANESE SERVICE SECTOR

أثر التوجه الريادي علي الميزة التنافسية المستدامة: الدور المعدل للمسؤولية
الإجتماعية للشركات

A Thesis Submitted in Partial Fulfillment of Requirements for the Degree
of Master of Science (M.Sc.) in Business Administration

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2019

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Declaration of Originality

(by Student)

I hereby confirm that this dissertation which I have submitted is my original work and written with my own words. Besides, I have not pursued or used unacceptable help of third parties to produce this work. Moreover, I have evidently referenced all sources used in this thesis and I have also used inverted commas for all text directly quoted from another source. Additionally, this thesis has never been submitted to another institution or for awarding another degree neither in Sudan nor outside Sudan and it has never been published anywhere else.

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This is to certify that this thesis entitled " **Impact of Entrepreneurial Orientation on Sustainable Competitive Advantage: The Moderating Effect of Corporate Social Responsibility** " A study on Sudanese service sector was carried out by the candidate under my supervision and guidance. The work incorporated in this thesis from other sources has been clearly acknowledged in the respective text of the thesis.

Date: January 2019

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

(قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ) .
سورة البقرة (32)

DEDICATION

This thesis is wholeheartedly dedicated to my **beloved parents**, who always have been my source of hope and inspiration; and who persistently supply me with moral, spiritual, emotional, and financial support.

This humble work dedicated to my former manager at work, Mr. **Hayder Abdelrazig** who was not only a great leader but also a compassionate father. From him, I learned that wisdom and calmness are the ultimate source of peace for both mind and heart. He taught me to lead by example, not by words.

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LIST OF ABBRIVIATIONS

GDP	Gross Domestic Product
EO	Entrepreneurial Orientation
SCA	Sustainable Competitive Advantage
CSR	Corporate Social Responsibility
RBV	Resource Based View
DCT	Dynamic Capability Theory
CMB	Common Method Bias
VIF	Variance Inflation Factor
GM	General Manager
CA	Cronbach's alpha
CR	Composite Reliability
AVE	Average Variance Extracted
HTMT	Heterotrait- Monotrait Ratio
R²	R Square - Coefficient of Determination
Q²	Predictive Relevance
IV	Independent Variable
DV	Dependent Variable
MV	Moderator Variable
SEM	Structural Equation Model
PLS	Partial Least Squares
SPSS	Statistical Package for Social Science

المستخلص

هدفت الدراسة الحالية إلى إختبار أثر التوجه الريادي في الميزة التنافسية المستدامة، بالإضافة إلى قياس الدور المعدل للمسؤولية الإجتماعية الإستباقية والدفاعية للشركات في العلاقة بين التوجه الريادي والميزة التنافسية المستدامة. لتحقيق أهداف البحث تم تبني المنهج الوصفي التحليلي، حيث إستخدمت هذه الدراسة الإستبيان كأداة لجمع البيانات من عينة غير إحصائية ملائمة بلغ حجمها (175) مفردة أخذت من المؤسسات الخدمية العاملة بالسودان. لغرض تحليل البيانات إستخدمت هذه الدراسة طريقة النمذجة بالمعادلات البنائية من خلال برنامج سمارت بي إل إس (Smart PLS 3.0 الإصدار الثالث). أُجري التحليل على عدد (126) من الإستبانات التي (126) من الإصدار الثالث). كانت صالحة لذلك . كما تم إختبار الفرضيات المقترحة بإستخدام أسلوب تحليل المسار ، حيث أوضحت نتائج الدراسة أن إثنين فقط من أبعاد التوجه الريادي (الإستباقية ، الإبتكار) كان لديها تأثير إيجابي ذا دلالة إحصائية في الميزة التنافسية المستدامة، في حين أن الثلاثة أبعاد المتبقية للتوجه الريادي (المخاطرة، الإستقلالية، العدوانية التنافسية) كان لها تأثير سلبي في الميزة التنافسية أشارت النتائج أيضاً إلى أن للمسؤولية الإجتماعية الإستباقية والدفاعية كان لها تأثير . المستدامة إيجابي ذا دلالة إحصائية في العلاقة بين ثلاثة من أبعاد التوجه الريادي (الإبتكار ، المخاطرة ، والإستقلالية). في حين أن المسؤولية الإجتماعية الإستباقية والدفاعية للشركات كان لها تأثير سلبي في العلاقة بين البعدين المتبقين من التوجه الريادي (الإستباقية، العدوانية التنافسية). إذا أخذت هذه النتائج مجتمعة ، يمكن تلخيص ذلك في أن التوجه الريادي له تأثير إيجابي في الميزة التنافسية المستدامة، وكذلك المسؤولية الإجتماعية الإستباقية والدفاعية للشركات لها تأثير إيجابي في العلاقة بين التوجه الريادي والميزة التنافسية المستدامة. جميع هذه النتائج تمت مناقشتها في ضوء الدراسات السابقة. كما قدمت هذه النتائج العديد من التأثيرات النظرية والتطبيقية. بالإضافة إلى ذلك واجهت هذه الدراسة عدة محددات قدمت من خلالها توصيات للبحوث المستقبلية.

الكلمات المفتاحية: التوجه الريادي، الإبتكار، تحمل المخاطر، الإستقلالية، العدوانية التنافسية، الميزة التنافسية المستدامة، المسؤولية الإجتماعية الإستباقية والدفاعية، الشركات الخدمية.

Abstract

The purpose of this study was to investigate the influence of entrepreneurial orientation on sustainable competitive advantage. In addition, this study aimed to examine the moderating effect of proactive and reactive corporate social responsibility on the relationship between entrepreneurial orientation and sustainable competitive advantage. To achieve the research objectives, this study adopted the descriptive design. The survey was used to collect the data from a convenience sample of (175) among Sudanese service firms. This study employed structural equation modeling using Smart PLS 3.0 software to analyze (126) valid cases obtained from the study population. The path coefficient analysis was used to test the proposed hypotheses. The findings revealed that only two components of EO more precisely, innovativeness and proactiveness have a significant positive influence on SCA, whereas three components of EO, namely risk-taking, autonomy and competitive aggressiveness have a negative influence on SCA. The results also indicated that proactive and reactive CSR have a significant positive effect on the relationship between three components of EO (i.e., innovativeness, risk-taking and autonomy) and SCA. Whilst proactive and reactive CSR have a negative influence on the relationship between the remaining two components of EO (i.e., proactiveness, competitive aggressiveness). Jointly, the findings can be summarized in that EO has a positive influence on SCA. As well as proactive and reactive CSR have a positive effect on the relationship between EO and SCA. These findings were discussed in the light of previous literature. As a conclusion, the results offered useful implications to theory and practice. Additionally, this study acknowledged several limitations and presented insightful suggestions for future research.

Keywords: EO; Innovativeness; Proactiveness; Risk-taking; Autonomy; Competitive aggressiveness; SCA; Proactive and Reactive CSR; Service firms.

CHAPTER ONE

INTRODUCTION

CHAPTER ONE

INTRODUCTION

1.1 Introduction

In today's business reality, the fast-changing environment and globalization have led to an intense rivalry among firms. Hence, these forces are having a substantial influence on firms' abilities to compete for customers, revenue and market share (Dirisu et al.2013). However, many researchers and business experts might ask themselves a simple question: why do some companies succeed whereas others fail in the same environment? Consequently, there is numerous literature in strategic management attempted to answer this question. Although many authors provided different reasons for the success of firms, they have a unanimous conclusion that the reason for successful performance is possession of a sustained competitive advantage (Baraskova, 2010). Accordingly, it becomes an essential aim for business strategy to obtain and maintain a competitive advantage that sustains over a period of time (Nassir & Jianhong,2015).

Therefore, understanding the sources of competitive advantage has become a significant area of study in strategic management (Porter, 1995; and Barney, 1991). Even though studies on sustainable competitive advantage are abundant, there is no precise definition specified. Nonetheless, in reviewing the use of the term sustainable competitive advantage in the strategy literature, the common theme is a value creation (Nassir & Jianhong,2015). In other statements, firms may have a sustained competitive advantage, when they implement a strategy that creates value for them and that strategy is not being used by any of their rivals (Mahdi et al. 2019).

Similarly, scholars indicated that to create value in today's dynamic environment; firms are advised to pursue value-creation strategies. Thus, among the value creation strategies is the entrepreneurial orientation(EO) (Lumpkin & Dess,1996). The importance of entrepreneurial orientation is noticeable throughout the strategy. Therefore, EO has been identified as a critical factor for the success of firms. Moreover, previous studies have reported that higher levels of entrepreneurial orientation enable companies to exploit opportunities in a manner that distinguishes them from non-entrepreneurial companies (James et al. 2014). That is because EO represents a strategy-making process which affects the corporate behavior to tolerate high risks, create an independent working style, act proactively, promote the innovation, and outperform competitors (Lumpkin & Dess,1996).

On the other hand, over the past 20 years, corporate social responsibility (CSR) has gained increased consideration from both industries and researchers. As a result, various theories and strategies such as proactive and reactive CSR have been emerged to understand how CSR contributes to creating sustained competitive advantage. As CSR involves companies voluntarily choosing to improve their social and environmental standards, along with reducing their negative impacts on the environment (Militaru & Ionescu,2006). Therefore, firms have competing motives for engaging in socially responsible practices, from purely philanthropic to strategic considerations such as promoting a favorable corporate image and enhancing the corporate reputation. (Rim & M. A.,2017).

Based on the above discussion, this study attempts to examine the influence of entrepreneurial orientation on sustainable competitive advantage in the existence of proactive and reactive CSR as a moderating variable.

1.2 Statement of the Problem

Based on the literature review, several knowledge gaps have been identified to be addressed in the current study. These gaps are presented as follows:

First, the debate continues in the literature about the potential sources of SCA. Most studies in this field focused on creating the value of sustainable competitive advantage through the strategic management tools (e.g., Black,2005; Baraskova,2010; and Supriyadi,2017). However, few authors addressed others factors such as entrepreneurial orientation. For this reason, the current study seeks to examine the relationship between entrepreneurial orientation and sustainable competitive advantage.

Second, although prior studies have addressed the direct influence of entrepreneurial orientation on sustainable competitive advantage (e.g., Dalvi & Ahangaran, 2014; and Wiklund, 2015), these studies overlooked introducing a third variable to measure the indirect effect of EO on SCA. Moreover, prior studies have reported a positive relationship between entrepreneurial orientation and firm performance (e.g., Covin & Slevin, 1986; and Wiklund & Shepherd, 2003). On the contrary, there are some studies have found a negative relationship between EO and performance (e.g., Lumpkin & Dess, 2001; Zahra, 1991). For these reasons, this study proposes a moderator variable to explain the lack of consistency among the findings of previous studies. Another motive for selecting a moderator variable is that scholars argue that the positive influence of EO on performance is probably contingent on moderator variables (Rauch et al. 2004). Consequently, the prior literature has examined several external moderators (e.g., Zahra & Covin,1995). Nevertheless, the previous studies have ignored the recommendation of Lumpkin & Dess (1996) for conducting research that investigates internal variable as moderator (Rauch et al.2004). Therefore, this study introduces proactive and reactive CSR as a variable internal to firms. The view of CSR as an internal resource is expressed in numerous studies (e.g., McWilliams & Siegel,

2001; and McWilliams et al. 2006). Additionally, the moderator is selected according to Baron & Kenny (1986) who stated that the strength and form of a relationship between two variables might depend on the value of a moderating variable. Therefore, the present study proposes the moderating effect of proactive and reactive CSR. This choice of the moderator is consistent with Filho et al. (2010); and Groza et al. (2011) who proposed examining CSR as moderator. In addition to Gang (2015) who reviewed CSR literature and presented proactive and reactive strategies as a new managerial approach to CSR.

Third, most studies in the field of EO adopt Miller's (1983) definition of an entrepreneurial firm and generalize it to EO. Miller (1983: p. 771) defined an entrepreneurial firm as *"one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations, beating competitors to the punch."* Consequently, based on this definition, scholars have frequently studied three core dimensions for EO, namely innovativeness, proactiveness and risk-taking, whereas, the present study adopts Lumpkin & Dess's (1996) definition of EO. According to Lumpkin & Dess's (1996, p. 136) EO is referred to as *"the methods, practices, and decision-making styles managers use to act entrepreneurially. Also, can be thought of as a type of strategic orientation as it captures how a firm intends to compete; accordingly, EO involves five components (i.e., innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy)." This study adopts the definition of Lumpkin & Dess (1996) in particular because many scholars supported the argument that a consistent classification of EO consists of five components, not three (Hughes & Morgan, 2007). Moreover, several authors have provided empirical support (i.e., reliability and validity) for adopting a multidimensional perspective with five components for EO (e.g., Stetz et al. 2000; Kreiser et al. 2002).*

Fourth, although the relationship between EO and performance has been broadly studied, the service sector as a research scope has not received much attention (Aaker & Day, 1986; Davidsson et al. 2006; and Soriano, 2008), whereas this study selects the service sector as a research setting.

Lastly, previous studies have revealed that certain components of EO may vary across countries (e.g., Knight, 1997; Thomas & Mueller, 2000). Besides, the dominant empirical examination of EO model has initially conducted in the context of North America (Rauch et al. 2004). For this reason, there is a need to conduct such a study in the underdeveloped countries, more precisely in Sudan.

1.3 Research Questions

Based on the research problem discussed above, this study attempts to answer the following questions:

Main Questions:

1. What is the influence of entrepreneurial orientation on sustainable competitive advantage?
2. What is the moderating effect of proactive and reactive CSR on the relationship between entrepreneurial orientation and sustainable competitive advantage?

Sub-questions:

1. To what extent entrepreneurial orientation is adopted among Sudanese service firms?
2. To what extent Sudanese service firms adopt proactive and reactive CSR?
3. What is the level of sustainable competitive advantage in Sudanese service firms?
4. What is the relationship between entrepreneurial orientation and sustainable competitive advantage?
5. What is the influence of the individual EO dimensions (i.e., innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness) on SCA?
6. What is the moderating effect of proactive and reactive CSR on the relationship between the individual EO dimensions (i.e., innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness) and SCA?
7. What is the possible effect of the initially proposed control variables on the relationship between the main study variables?
8. Are all five dimensions of the Lumpkin & Dess (1996) EO framework equally valuable to Sudanese service firms?
9. What are EO components which have the most influence on SCA?

1.4 Research Objectives

To find appropriate answers for proposed research questions, this study pursues the following objectives:

1. To examine the relationship between entrepreneurial orientation and sustainable competitive advantage.
2. To investigate the influence of entrepreneurial orientation on sustainable competitive advantage.

3. To examine the moderating effect of proactive and reactive CSR on the relationship between entrepreneurial orientation and sustainable competitive advantage.
4. To examine the influence of the individual EO dimensions (i.e., innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness) on SCA?
5. To investigate whether proactive and reactive CSR moderate the relationship between the individual EO dimensions (i.e., innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness) and SCA.
6. To examine whether the suggested control variables affect the relationship between the main variables of the study.
7. To measure the levels of EO, proactive and reactive CSR and SCA in Sudanese service firms.
8. To evaluate whether all EO dimensions are equally valuable to Sudanese service firms.
9. To determine which EO dimensions have the most influence on SCA.

1.5 Scope of the Study

This study is conducted on Sudanese service firms in particular for several reasons. First, the service sector nowadays has become a massive industry that grows rapidly despite the constant economic decline and dynamic environment in Sudan. This sector is a provider of service needed by the public such as telecommunication, banking, insurance, education, hospital, hotel...etc.

Second, the service sector in Sudan remains the largest contributor to the economic growth over the last few years. This sector contributes by 51.5% to the gross domestic product(GDP) (Central bank of Sudan- Annual report 2017). This enormous contribution may indicate that there is a rapid growth in the service sector which could be due to the adoption of strategic orientations so as confront the complex and fast-changing business environment in Sudan. Therefore, one can conclude that EO is likely adopted among service sector rather than other sectors.

Third, several studies specifically analyzed the service industry have already made a link between the service sector and entrepreneurship (e.g., Robert & Richard,1983; and

Tseng et al. 2008). These studies specified that the opportunities for entrepreneurial orientation within contemporary economies are concentrated predominantly within the service sector.

Finally, the unique characteristics of service firms also justify the examination of EO's impact in the service setting. As the service sector is characterized by the intangibility of its product, tailoring the service to individual preferences is a key factor in attracting and retaining customers. Therefore, it can be argued that EO components (i.e., innovativeness, proactiveness, autonomy...etc.) may increase the ability of firms to handle the complexity of responding to these different preferences. Another differentiating characteristic is the impossibility to store services. Hence, the production and consumption take place simultaneously. For this reason, synchronizing supply and demand becomes challenging and requires high flexibility from firms and their members. Consequently, this places extra emphasis on all factors related to the behavior, decisions, and attitudes of the organizational members (Habib & Victor, 1991). Accordingly, EO is at the heart of organizational behavior and decision-making processes which may strengthen the firms' ability to match the supply and demand of the service.

Regarding the time scope, this study is conducted from 2017 to 2019.

1.6 Significance of the Study

This study is expected to make substantial theoretical and practical contributions. The following subsections present the possible contributions of the current study:

1.6.1 Theoretical Contribution

Based on the statement of the problem, the importance of this study lies in addressing the following knowledge aspects:

1. This study is expected to contribute to the existing body of literature by offering an empirical examination to the proposed theoretical framework which in turn fill the knowledge gaps discussed in the problem statement.
2. One of the major possible contributions is the investigation of proactive and reactive CSR as a moderator to the relationship between EO and SCA, because previous studies constantly encouraged the use of moderating variable particularly variables that internal to firms.
3. This study may contribute to literature through supporting or disconfirming the findings of previous research regarding the unified value of all EO dimensions to firm performance.
4. This study is expected to add to the literature of SCA by offering empirical findings regarding the variables of present research which might explain the variance in SCA,

along with suggesting the possible factors not incorporated in the current study and which may also explain the remaining portion of the variance in SCA.

5. This study may offer clear insights into EO accumulating knowledge, by addressing the question of which EO dimensions have a higher influence on SCA in the service sector.
6. This study has the potential to provide valuable theoretical implications based on the expected empirical evidence.
7. This study may offer future researchers interesting opportunities based on the expected findings to address the gaps which the current study might fail to tackle. As well as to handle the possible limitations that the present study is likely to encounter.

1.6.2 Practical Contribution

This study is expected to provide several practical contributions to enhance the knowledge and performance of the managers in their business contexts, these contributions are as follows:

1. This study may provide managers and practitioners useful insights regarding the significance of entrepreneurial orientation as a strategic orientation for obtaining and maintaining a sustainable competitive advantage.
2. This study attempts to examine whether all EO components are valuable to the firm. Therefore, the findings may offer valuable suggestions to managers regarding what components of EO have a higher influence on sustainable competitive advantage.
3. This study is not only limited to identifying which EO components are valuable to firm but also delivers helpful advice to managers and practitioners concerning what is the best practices they need to follow in order to effectively implement these valuable components in search for sustainable competitive advantage.
4. This study attempts to clarify which EO components are currently adopted by Sudanese service firms, so as to offer crucial directions to manager in respect to whether what they are presently pursuing has an influence on sustainable competitive advantage.

5. This study introduces proactive and reactive CSR as a moderator to the relationship between EO and SCA. Therefore, managers might benefit from the expected empirical findings concerning the potential positive or negative moderation. As a result, managers will be informed with evidence whether to adopt proactive and reactive CSR while executing entrepreneurial orientation.
6. This study attempts to provide practical implications based on the findings of current endeavor, these expected implications may enlighten managers and practitioners to make better decisions when adopting EO. Moreover, the current study tries to measure the level of sustainable competitive advantage presently obtained by Sudanese service firms. Accordingly, managers will be aware of their current competitive positions and equipped to alter their practices to move to where they envision to have a sustainable competitive advantage.

1.7 Operationalization definitions of the Key Terms

This section presents the operational definitions of the study's variables, these definitions are adopted from previous literature and serve as a basis for the measurements of various variables of the current study. The following table 1.1 reveals the operationalization definition of these key terms.

Table 1.1

Operationalization Definitions of Key Terms

Terms	Definitions	Sources
Entrepreneurial Orientation(EO)	EO refers to "the strategy-making practices that firms use to identify and launch corporate ventures. It represents a frame of mind and a perspective about entrepreneurship that is reflected in a firms' ongoing processes and corporate culture." "EO components involve innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness. These components permeate the decision- making styles and practices of a firm's members."	Lumpkin & Dess (2005, p.147)
Innovativeness	is "a willingness to introduce newness through experimentation and creative processes aimed at developing new products and services, as well as new processes."	Lumpkin & Dess (2005, p.148)
Proactiveness	is "a forward-looking perspective which provides a firm the foresight to seize opportunities and anticipate the future demand".	Lumpkin & Dess (2005, p.148)

Risk-taking	"means making decisions and taking action without certain knowledge of probable outcomes; some risk-taking may also involve making substantial resource commitments in the process of venturing forward."	Lumpkin & Dess (2005, p.148)
Autonomy	"describes the authority and independence given to an individual or team within the firm to develop business concepts and visions and carry them through to completion."	Hughes & Morgan (2006, p.652)
Competitive Aggressiveness	is "an intense effort to outperform industry rivals. It is characterized by an aggressive response aimed at improving position or overcoming a threat in a competitive marketplace".	Lumpkin & Dess (2005, p.148)
Sustainable Competitive Advantage (SCA)	SCA is "a firm's capability to achieve a series of temporary advantages over time, in comparison to the main competitors, these sustained advantages involve R&D capability, managerial capability, profitability, etc.."	Chuanpeng Yu. et al. (2017, p.8)
Proactive CSR	Proactive Corporate Social Responsibility(CSR) is defined as "the company's integrity and ethical behavior which go beyond the country's laws and regulations; and acting proactively in order to support sustainable economic, social and environmental development."	Chang (2015,p.455)
Reactive CSR	Reactive Corporate Social Responsibility(CSR) " is defined as the company's integrity and ethical behavior that merely meet the country's laws and regulations."	Chang (2015,p.455)

1.8 Organization of the Study

This study consists of six chapters and organized in a sequential flow that is consistent with the generally accepted research process.

Chapter one presents the introductory part of the study establishing the context and background of the study. This chapter includes the introduction, statement of the problem, research questions, research objectives, scope of the study, the significance of the study, the operationalization of the key terms, and organization of the study.

Chapter two discusses the literature review for various variables and concepts of the study (i.e., EO, proactiveness, innovativeness, risk-taking, autonomy, competitive aggressiveness, SCA, proactive CSR, and reactive CSR). In addition, this chapter presents the syntheses of the relationship between these variables according to previous literature.

Chapter three presents the research underpinning theories, the theoretical framework, and research hypotheses.

Chapter four outlines the research methodology including the research paradigm, approach, method, and design. Additionally, this chapter describes the population of

study and sampling process. Furthermore, this chapter discusses scaling and measurements of the study and ends with clarifying the data analysis techniques.

Chapter five reveals the data analysis and findings. This chapter includes presenting survey response rate, descriptive statistics of both the responding firms' profile and respondents' profile, data preparation, and examination, descriptive statistics of study variables, correlation analysis, the validation of measurements model (internal consistency, indicators reliability, convergent validity, and discriminant validity). In addition, this chapter reveals the effect of proposed control variables on the main study variables. Moreover, this chapter presents the assessment of the structural model and reveals the hypotheses testing through (Collinearity assessment, Coefficient of determination, path coefficient, effect size f^2 , and Predictive Relevance Q^2).

The last chapter in this study is Chapter six which involves recapitulation of study findings, discussion of findings, the summary of major study findings. As well as this chapter presents the practical and theoretical implication of current research findings. Moreover, this chapter discusses the limitations encountered in the study and provides suggestions for future research. The chapter ends with offering a conclusion for the whole research.

CHAPTER TWO

LITERATURE REVIEW

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2.0 Chapter Overview

This chapter presents the review and summary of related literature. Subsequently, this chapter provides a conceptual background for the various research variables (i.e., EO, SCA, and proactive and reactive CSR. Besides, presenting the relationship between these variables based on the prior literature.

2.1 Entrepreneurial Orientation(EO)

Previous studies have reported that EO has its origins in the literature of the strategy-making process (e.g., Mintzberg, 1973). The strategy-making process combines analysis, planning, decision-making, mission, organizational culture, and corporate value (Rauch, et al.,2009). Consequently, EO is considered as a strategic orientation which directs the way firm can identify and seize the opportunities (Wiklund & Shepherd,2003). A considerable amount of literature has investigated the notion of EO. This literature referred to EO as a mindset which drives the firm to pursue new venture and execute a set of entrepreneurial activities. (Rauch, et al.2009). Given of all that has been mentioned so far, one may conclude that a conceptual and empirical unanimity has begun to emerge regarding the reality of EO. As a result, the measures of EO have been elaborated and broadly applied. In addition, many literature has examined the relationship between EO and other variables. Therefore, EO is regarded as one of few aspects of entrepreneurship where a cumulative body of knowledge is continually developing. Nevertheless, the debate about entrepreneurial orientation is still remaining particularly regarding its relationship to performance and sustained competitive advantage (Maroofi, 2017).

The following subsections address the definition of entrepreneurial orientation, components of entrepreneurial orientation, and approaches to entrepreneurial orientation.

2.1.1 Definition of Entrepreneurial Orientation

EO has been extensively examined in the literature on strategic management. Throughout this literature, entrepreneurship was described as a new entry into markets by introducing new products, starting a new business or take part in the globalization, while the process by which firms enter a new market has been defined as an entrepreneurial orientation (EO). Furthermore, recent evidence suggests that EO represents the process side of entrepreneurship and therefore encompasses the decision-making style, practices, and process used by managers to implement

entrepreneurial activities. Accordingly, entrepreneurial firms adopt new technologies, undertake ventures with high risk, and successfully seize the market opportunities (Lumpkin & Dess, 2005).

Table 2.1 Summarizes the definitions of EO which evolved across the previous literature from the early 1970s up to date. (Covin & Wales, 2012).

Table 2.1: Definition of Entrepreneurial Orientation

1	Mintzberg (1973)	Firms with entrepreneurial orientation, pursue strategy-making process which is characterized by the active search for new business opportunity.
2	Miller and Friesen (1983)	When firms implement the entrepreneurial model, they constantly innovate and take a substantial risk in their processes and products.
3	Miller (1983)	An entrepreneurial firm is distinguished by its regular innovation, proactive actions, high-risk tolerance, and aggressive competitive behavior.
4	Merz and Sauber (1995)	A firm is referred to as non-entrepreneurial when its top management is highly conservative in making decisions which involve risk-taking. Thus, this firm is known as a risk-averse, non-innovative and extremely reactive. EO reflect the willingness to take risks, innovate, and have a high degree of proactiveness.
5	Lumpkin and Dess (1996)	Entrepreneurial firms have a readiness to innovate, propensity to take risks, encouragement of autonomous behavior and aggressive actions towards competitors.
6	Zahra and Neubaum (1998)	EO involves taking proactive strategic actions, executing radical innovation and engaging in a risky venture with uncertain outcomes.
7	Voss et al. (2005)	EO represents firm-level entrepreneurship which involves arrangements to engage in entrepreneurial behavior such as proactiveness, innovativeness, risk-taking, autonomy, and competitive aggressiveness which may cause a positive change in firms or marketplace.
8	Cools, et al. (2008)	EO is a strategy used by top management to engage in proactiveness, risk-taking, and innovation.

Table 2.1 (continued...)

9	Pearce et al. (2010)	EO is a distinguished yet related set of behaviors characterized by proactiveness, innovativeness, risk-taking, competitive aggressiveness and autonomy.
10	James, et al. (2014)	EO represents the firm-level entrepreneurship which involves proactiveness, innovativeness, risk-taking competitive aggressiveness and autonomy.
11	Helen, et al.(2015)	EO is a strategic orientation directs the way a firm is organized to identify and seizes market opportunity.
12	Jogaratnam,(2016)	Entrepreneurial orientation represents the way firm operate rather than what they do.
13	Mthanti & Ojah (2017)	Entrepreneurial orientation defines how entrepreneurship implements new entry into a market.
14	Covin& William (2018)	EO points to the organizational characteristics, focusing on how firms can be entrepreneurial. EO involves risk-taking, innovativeness, and proactiveness

Source: Summarized from Covin &Wales (2012); and Student's work,2019.

Based on the above table 2.1, Entrepreneurial orientation can be summarized in that it represents corporate-level entrepreneurship which the process used by firms use to enter a new market. In addition, EO permeates the decision-making, executive mindset, and strategy.

2.1.2 The Components of Entrepreneurial Orientation

On the one hand, the dominant view in literature advocated by Miller (1983) considers an entrepreneurial firm as a firm that employs strategic orientation to engage in product-market innovation, takes proactive actions and undertakes risky ventures, and outperform the competitors. In this sense, EO involves three components, namely innovativeness, proactiveness, and risk-taking (Stam & Elfring, 2008). On the other hand, drawing on the definition of Miller's (1983), Lumpkin & Dess (1996) describe EO as the processes, practices and decision-making activities that lead a firm to successful entry to a new competitive market. Accordingly, EO encloses five dimensions, more precisely, innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy. Therefore, they identified competitive aggressiveness and autonomy as additional essential components of EO construct.

Lumpkin and Dess (1996) added these two additional dimensions based on the argument that entrepreneurial firms should be mindful about the surrounding environment because it offers exciting opportunities and imposes hindering threats, and therefore the external environment may increase or decrease their success in the market. Nonetheless, the proactiveness component of EO involves only responding to opportunities but is not likely to react to threats particularly the competitive actions (Miller,1983). For that reason, competitive aggressiveness was added to occupy the position of confronting the threats (Rauch et al. 2005). Similarly, Burgelman (1983) and Hart (1992), indicated that entrepreneurial behavior is unusual and rather creative which happens as a result of the autonomous actions of corporate members. Consequently, autonomy is thought to be an essential element of the EO construct.

Another debatable issue in the literature regarding the dimensionality of EO is whether or not the dimensions of EO are independent or covary in a specific context. Although, some researchers have argued that EO construct is considered as a unidimensional concept (e.g., Covin, 1989); others have claimed that the dimensions of EO may occur in different combinations (e.g., Lumpkin & Dess, 2001). Nevertheless, many studies examined this issue have revealed that the dimensions of EO vary independently rather than covary (Kreiser et al., 2002; and Stetz et al. 2000).

The following table 2.2 lists the components of EO across the previous literature (Alsoltane, 2015; and Mthanti & Ojah,2017).

Table 2.2: The Components of Entrepreneurial Orientation

		Components of EO				
Author's Name		Innovativeness	Proactiveness	Risk-taking	Autonomy	Competitive Aggressiveness
NO						
1	Mintzberg, 1973	√	√	√		
2	Miller & Friesen, 1982	√		√		
3	Miller, 1983	√	√	√		
4	Cook, 1985	√	√	√		
5	Covin&Slevin, 1986	√	√	√		
6	Coven &Slevin, 1988	√	√	√		

Table 2.2 (continued...)

7	Covin&Slevin, 1989	√	√	√	
8	Crath& Gicberg,1990	√	√	√	
9	March, 1991	√	√	√	
10	Miles & Arnold, 1991	√	√	√	
11	Miles et al., 1993	√	√	√	
12	Zahra &Covin, 1995	√	√	√	
13	Matz& Sauer, 1945	√		√	
14	Lumpkin &Dess, 1996	√	√	√	√
15	Tan, 1996	√	√	√	
16	Knight 1997	√	√	√	
17	Bencherer& Maurer, 1997	√	√	√	
18	Dickson & Weaver, 1997	√	√	√	
19	Wiklund, 1998	√	√	√	
20	Wiklund, 1999	√	√	√	
21	Zahra et al., 1999	√	√	√	
22	Barringer&Bludorn, 1999	√	√	√	√ √
23	Dits&Prough, 2001	√	√	√	
24	Bruining& Wright, 2001	√	√	√	
25	Kemelgor, 2002	√	√	√	
26	Kreiser et al., 2002	√	√	√	
27	Lyer& Doucette, 2003	√	√	√	√ √
28	Salavou&Lioukus, 2003		√	√	
29	Wiklund& Shepherd,2003	√	√	√	
30	Lindsay, 2004	√	√	√	
31	Krauss et al., 2005	√	√	√	√ √
32	Aloulou&Fayolle, 2005	√	√	√	
33	Jantunen et al., 2005	√	√	√	
34	Jambulingam et al., 2005	√	√	√	√ √

35	Bhuiyan et al., 2005	√	√	√	√
36	Wiklund & Shepherd, 2005	√	√	√	
37	Fox, 2005	√	√	√	
38	Rory et al., 2005	√	√	√	
39	Mostafa, 2006	√	√	√	
40	Kropp et al., 2006	√			
41	Jogarathnom & Tse, 2006	√	√	√	
42	Walter et al., 2006	√	√	√	
43	Morris et al., 2006	√	√	√	
44	Clercq & Rius, 2007	√	√	√	√ √
45	Madsen, 2007	√	√	√	
46	Kuivalainen et al., 2007	√	√	√	
47	Hughes et al., 2007	√	√	√	
48	Frishammar & Horte, 2007	√	√	√	
49	Li et al., 2007	√	√	√	
50	Tang et al., 2007	√	√	√	
51	Nadi et al., 2007	√	√	√	

Table 2.2 (continued...)

52	Avlonitis & Falavou, 2007		√	√	
53	Hughes & Morgan, 2007	√	√	√	√ √
54	Ken et al., 2007	√	√	√	
55	Wu et al., 2008	√	√	√	
56	Wang, 2008	√	√	√	√
57	Rungan et al., 2008	√	√	√	√
58	Tang et al., 2008	√	√	√	
59	Bueno et al., 2008	√	√	√	
60	Moreno & Casillas, 2008	√	√	√	
61	Urban, 2008	√	√	√	
62	Green et al., 2008	√	√	√	

63	Merlo & Auh, 2009	√	√	√		
64	Renko et al., 2009	√	√	√		
65	William, 2009	√	√	√		
66	Pearce et al., 2009	√	√	√		
67	Lumpkin et al., 2009	√	√	√	√	
68	Raueh et al., 2009	√	√	√		
69	Richard et al., 2009	√	√	√		
70	Tang & Rothenberg, 2009	√	√	√		
71	Stewart, 2009	√	√	√		
72	Fimsek et al., 2010	√	√	√		
73	Casillas & Moreno, 2010	√	√	√		
74	Kreiser et al., 2010	√	√	√		
75	Tajeddini, 2010	√	√			
76	Clercq et al., 2010	√	√	√		
77	Gathungu & Aiko 2014	√	√	√		
78	Johan Wiklund 2015	√	√	√		
79	Hakala & Grichnik 2016	√	√	√		
80	Mthanti & Ojah 2017	√	√	√		
	Silvia & Francisco, 2018	√	√	√		
	Number of usages	79	77	79	9	9
	Percentage	98%	96%	98%	11%	11%

Source: Summarized from Alsoltane (2015); Mthanti & Ojah (2017) and Student's own work 2019.

Based on the above table 2.2, one can summarize that the most widely studied components of EO are those developed by Miller (1996), namely innovativeness, proactiveness, and risk-taking, whereas the operationalization of EO provided by Lumpkin & Dess (1996) (i.e., Autonomy and competitive aggressiveness) captured little attention in the prior literature.

The following subsections present the components of EO as discussed in the previous literature. These components are innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness.

2.1.2.1 Innovativeness

Innovativeness refers to the firm's efforts to create new opportunities and come up with unusual solutions. It involves creativity and experimentation that result in new products, new services, or improved technological processes. Although, innovativeness is one of the major components of an entrepreneurial strategy, the job of managing it can be quite challenging. As innovativeness requires firms to depart from existing technologies and practices to venture beyond the current state, therefore Inventions and new ideas need to be encouraged even when their benefits are unclear. Moreover, in today's changing environment, effectively producing, and exploiting innovations can be a vital cause for achieving a sustained competitive advantage (Lumpkin & Dess,2005).

Innovativeness comes in many different forms. First, technological innovativeness which involves the research and engineering efforts aimed at developing new products and processes. Second, product-market innovativeness which includes the market research, product design, and innovations in promotional efforts. Lastly, administrative innovativeness which refers to the uniqueness in management systems, leadership styles, and organizational structure (Covin, & Miles,1999). Another classification of innovativeness was based on the market and technological innovation. According to these two dimensions, innovation is divided into four categories, namely incremental, disruptive, architectural, and radical innovation. As for incremental innovation, companies use the existing technology to increase the customers' value within the existing market. Incremental innovation happens when the companies update features and designs of the product. The second form is disruptive innovation which includes introducing new technology or new processes to the current market. This new technology is often expensive and difficult to imitate. Architectural innovation encompasses applying the current technology in new markets. This innovation is proved to be effective in attracting new customers as long as the firm can understand the marketplace. Finally, radical innovation involves introducing revolutionary technology that creates new markets. In view of all that has been mentioned so far, innovativeness can be a source of significant progress to firms.

On the contrary, there are also major pitfalls for companies investing in innovation. Although the expenditure on R&D aims to explore new products or processes, it can be a waste of resources if the effort fails to produce the desired results. Another threat is related to the competitive climate, even if a firm innovates products or successfully spread on a technological process, rivals may develop a similar innovation and use it in a more profitable manner (Barney,1991). Additionally, the R&D and other innovative efforts are often among the first to be reduced during an economic downturn.

In conclusion, while innovativeness is at the heart of corporate success, it also involves serious risks because the investments in innovations may not always pay off. Nevertheless, the successful development and implementation of innovations can create a sustained competitive advantage (Kim,1997). In reviewing the literature, Hitt et al. (2003) highlighted the role of innovation in achieving a firm's superior performance. Although empirical evidence proved that introducing innovative product and processes has a higher influence on firm performance (Lumpkin & Dess 1996; Zahra & Garvis 2000), the effect of innovativeness on the firm's performance in the existing literature is still questionable (Massa & Testa 2008).

2.1.2.2 Proactiveness

Proactiveness reflects the effort exerted by firms to seize new opportunities. Hence, proactive firms follow the shifting trends in the market, identify the future needs of customers, and foresee the alterations in demand which can lead to new business opportunities. Proactiveness involves recognizing the change and reacting to it ahead of the rivals. Therefore, proactive firms have strategic managers who are future-oriented and always in search for new opportunities for growth. Such a forward-looking orientation causes a firm to have advantages of being a first mover (Evans & Wurster,2000).

The first mover commonly has several advantages include being a pioneer over the industry which may results in high profitability because competitors may not be able to engage in a price war with the first-mover firm. An additional benefit is that the first mover holds a recognized brand in the market. Moreover, these advantages last until the first-mover firm reaches the maturity phase in the industry's life cycle (Lieberman & Montgomery,1988).

However, first-mover firms are not always successful because the customers of firms which introduce unique products prefer not to be wholly committed to buying untested products. Therefore, first-mover firms need to seek an evolution, not a revolution. Additionally, some firms attempt to have a first-mover advantage before they are ready for that.

Despite, these warnings, companies which are first movers are always in a better position to obtain a sustained competitive advantage (Moore, G. A. 1999). Another approach used by firms to act proactively involves introducing new products or technology ahead of the rivals. The reason for this new approach is that being an industry leader does not always result in competitive advantages. Therefore, firms need to perform careful monitoring to the environment and conduct extensive research prior to formulating and implementing a proactive strategy (Wurster &T. S, 2000).

2.1.2.3 Risk-taking

Risk-taking represents the willingness of firms to undertake a risky venture with high uncertainty of the expected outcomes. In other words, firms act boldly regardless of the consequences. Therefore, to be successful by means of risk-taking, companies are required to attempt riskier alternatives even if it sacrifices by leaving off the product or methods that have succeeded in the past, committing a large portion of the resource, taking a high level of debts, introducing a new product, entering a new market, and investing in revolutionized technology. (Sitkin, et al. 1992). Firms whether they are innovative or proactive, they should act without certainty of the results and when formulating their strategies, they should know that business is always exposed to risk.

Companies and executive managers encounter three types of risk, namely, financial, business, and personal risk. First, financial risk requires firms to take huge loans to invest in the business in order to grow. Firms with this type of risk usually conduct a financial analysis to evaluate the tradeoff between risk and return. Second, business risk entails jeopardizing into the unknown without recognizing the probability of success. This is the risk related to entering unexamined markets or invest in unproven technologies. Finally, personal risks involve actions taken by the executive in favor of supporting a strategic decision. The executives who take such risks not only influence their whole firms but also have a significant effect on their own careers.

Notwithstanding that risk-taking involves favorable outcomes, yet it is not gambling. The best-managed firms investigate the consequences of various opportunities and create scenarios for likely outcomes. Their goal is to reduce the riskiness of business decision making. Therefore, there are two steps firms follow to strengthen their competitive position through risk-taking, these steps include researching and assessing risk factors to minimize uncertainty, in addition to using tried-and-true practices that have succeeded in other fields.

On the contrary, risk-taking by its nature involves potential dangers and pitfalls. Therefore, only carefully managed risk is likely to lead to competitive advantages, whereas actions which are taken without sufficient forethought, research, and planning may result in adverse outcomes (Coy & Vickers,2001). Thus, Strategic managers must always remain mindful of potential risks. Some scholar stated that successful entrepreneurial firms are not typically risk takers. Instead, they strive to minimize risk by performing careful analysis and proper planning. As a result, these firms avoid concentrating on risk and remain focused on the opportunity (Druker, 1985). In summary, firms which decide to grow through entrepreneurial orientation, they should be familiar with the fact that entrepreneurship always associated with what is new and uncertain (Lumpkin & Dess, 2005).

2.1.2.4 Autonomy

Autonomy is described as unconstrained behavior adopted by organization's members to formulate and effectively implement a business vision. Companies that support proactiveness, innovation, and risk-taking should also make an extra effort to

encourage the entrepreneurial orientation. There are several factors regarding creating autonomous workplace involves the physical work environment, work criteria, work objectives, performance evaluation, working hours, a flexible working schedule, and workload (Rahman, et al., 2016).

As the aim of autonomy is producing creative ideas and many of the best ideas for innovations come from bottom-up. However, in some firms, even the best ideas are not welcomed by top management. For that reason, organizations need to stimulate autonomous behavior from top-bottom and among employees. Moreover, every new idea should pass through two crucial stages, or it may never succeed. The first stage is the project definition where the idea is justified by whether it will be attractive in the marketplace and how it matches the firm's strategic objectives. The second stage is the project motivation where the idea is supported by executives who have experience with identical ventures. Afterward, the project will have its own structure and budget. However, for a project to succeed through the stages mentioned above, firms also need product champions who generate support and encouragement to carry the project through completion (Burgelman, 1983). Consequently, product champions play a central entrepreneurial role by inspiring others to take part in implementing the promising new ideas (Green, Brush, 1999).

Additionally, there are two methods that firms may utilize to support autonomy. First, using "skunkworks" to boost independent thoughts and actions. Skunkworks embodies a work environment that is physically separated from the firm's headquarter and free from normal routine job and work pressure. Skunkworks is mainly used to encourage brainstorming and creative thinking to come up with a new venture idea. Second, changing the organizational structure. For firms to remain competitive, their traditional organizational structure must be changed. The new structure should allow autonomous work unit and teams to engage in coordination and provide a creative solution by sharing the employees' tacit knowledge. (Pfeffer, 1998).

Contrariwise, creating self-directed work units and encouraging independent actions may have serious downsides that can jeopardize their effectiveness. Autonomous teams, for example, may lack coordination and continual support from top management. In addition, excessive decentralization has a strong potential to create inefficiencies, such as duplication of effort and wasting of resources on projects with questionable feasibility (Crocket & Galvin, 2001).

Therefore, to secure the success of the independent projects such as a skunkworks, the efforts should be measured and monitored. Therefore, these projects require having the patience and sufficient budget to tolerate the explorations of autonomous groups, in addition to exhibiting the strength necessary to restrain the efforts that are not resulting in positive outcomes. In summary, when autonomy is undertaken with a clear sense of purpose can be a major source for a sustained competitive advantage (Lumpkin & Dess, 2005).

To sum up, in reviewing the literature, many scholars (e.g., Prottas 2008; and Cogliser & Schneider 2009) indicated that when the firms have the autonomy, they will be motivated to act entrepreneurially and therefore reflect a positive impact on SCA. Nonetheless, some studies revealed a negative association between autonomy and firm performance (e.g., Hughes & Morgan 2007).

2.1.2.5 Competitive Aggressiveness

Competitive aggressiveness involves the aggressive efforts which are taken by a company to beat the industry rivals. Organizations pursuing an aggressive orientation are willing to fight competitors. The competitive firms may sacrifice their profitability to cut prices or spend aggressively to gain the market share (Ferrier & Grimm, 2001). Furthermore, for the sake of development and growth, competitive businesses are very assertive to leverage the outcomes of other entrepreneurial activities such as innovativeness or proactiveness. As well as, sometimes companies should be forceful to protect their competitive position as an industry leader.

Additionally, there are three choices by which aggressive firms enhance their entrepreneurial position. First, entering markets with drastically lower prices to increase market penetration (Rahman, et al., 2016). This practice causes fears to smaller firms because the large firms can afford to cut prices without being negatively affected. Second, copying the business practices and techniques of successful competitors, as long as the intellectual property laws do not protect the idea or practice, the imitation is legal. Third, producing pre-announcements for new products or technologies. This type of notification targeted not only potential customers but also competitors, this practice is performed to observe how competitors will react and

to discourage them from launching identical initiatives. In fact, sometimes the pre-announcements are made just to scare off the competitors. However, this action may have potential ethical implications (G. Dess, T. Lumpkin 2005).

On the other hand, competitive aggressiveness may not always lead to a competitive advantage. Some companies have severely damaged their reputations by being overly aggressive. Also, competitive aggressiveness strategy might not be appropriate for businesses which have limited resources; these companies cannot compete in a market with a maximum level of economies of scale (Rahman et al. 2016). Therefore, firms should use a reasonable strategy for competitive aggressiveness, by this mode, firms can exploit the opportunities and over the long run sustain their competitive advantage if they aim to surpass, not destroy their rivals (Lumpkin & Dess, 2005).

2.1.3 Approaches to Entrepreneurial Orientation

Prior literature identified three domains which have contributed to the theoretical development of EO, namely, economic, social psychology, and strategic management (Dess et al., 2007).

First, EO from the economic perspective focuses on the economic outcomes of undertaking a new venture. The studies which dealt with the economic approach have examined the effect of EO on the firm's growth or profitability. Furthermore, the economic approach has enabled measuring EO at different level including global, regional, national and corporate level.

Second, the social psychology approach focuses on the individual qualities of the entrepreneur, rather than the firm. A large stream of literature has examined entrepreneurial traits such as the relationship between the entrepreneur's risk-taking propensity and competitive aggressiveness and outcomes of other variables (Rauch et al. 2009).

Third, entrepreneurial orientation from a strategic management perspective. This approach emphasizes the role of the entrepreneur in achieving the business's strategic objectives through entrepreneurial decision making. There are some studies have examined the influence of entrepreneurial decision-making on the tendency to risk-taking and market new entry (Kroeger & James,2007). In conclusion, these approaches offer unique perspectives to entrepreneurial behavior at the corporate-level and individual-level (James, et al.,2014).

2.2 Sustainable Competitive Advantage (SCA)

SCA has its root in the early literature on the competition. In 1965 Alderson documented that companies must have unique attributes in order to differentiate themselves from competitors in the customers' eyes. Subsequently, Hamel & Prahalad (1989) indicated that firms should learn how to create unique advantages that may put them ahead of competitors. In addition, Hall (1980) and Henderson (1983) reinforced that organizations if they want to survive they need to possess unique advantages that set them apart from competitors.

In summary, these arguments serve as a basis for the notion of SCA (Hoffman, 2000). Consequently, a body of literature has emerged to describe the idea of SCA and its sources. Besides, addressing the potential strategies and sources to achieve SCA. Therefore, several studies have contributed to the literature related to SCA. Table 2.3 presents a summary of the literature's contribution to the concept of SCA (Hoffman,2000).

Table 2.3

The contribution of literature to the Development of SCA Concept

No.	Authors	Article Title	Contribution
1	Alderson (1965)	The search for differential advantage	Suggested four strategies to secure differential advantage these strategies include segmentation, selective appeals, transaction, and differentiation
2	Hall (1980)	Survival strategies in a hostile environment	Indicated that successful firms pursue either the lowest price or most differential position
3	Henderson (1983)	The Anatomy of competition	Advocated that firms gain a unique advantage when reacting faster than competitors.
4	Porter (1985)	Competitive advantage: creating and sustaining superior performance	Presented the notion of the value chain as an effective tool to analyze the sources of SCA.
5	Coyne (1986)	Sustainable competitive advantage: what it is, what it is not	Introduced the idea of capability gaps and explains the conditions for the existence of SCA.
6	Day and Wensley (1988)	Assessing advantage: a framework for diagnosing competitive superiority	stated that customers and competitors should be taken into consideration. Clarified that superior skills and resources are the potential sources for competitive advantage

7	Hamel and Prahalad (1989)	Strategic intent	Suggested that should learn how to create new advantages rather than searching for SCA.
8	Hamel and Prahalad (1990)	Core competence of the corporation	Pointed out that SCA comes as a result from owning core competencies. Therefore firms should integrate resources into competencies to quickly adapt to changing opportunities
9	Barney 1991	Firm resources and sustained competitive advantage.	Specified four conditions for SCA. More precisely, valuable, rareness, difficult to imitate, and non-substitutable.

Table 2.2 (continued...)

10	Bharadwaj et al. (1993)	Sustainable competitive advantage in service industries: a conceptual model and research propositions	Examined SCA in the service context. Indicated that SCA does not exist only if it is not recognized by the customers.
11	Day & Nedungadi (1994)	Managerial representation of competitive advantage	Claimed that SCA depends on the firm's orientation (competitor-oriented vs. customer oriented).
12	Hant and Morgan(1995)	The comparative advantage theory of competition	Proposed that a competitive advantage in resources can be translated into a competitive advantage in the marketplace.
13	Oliver (1997)	Sustainable competitive advantage: combining institutional and RBV.	Suggested that both resource capital and institutional capital are crucial to SCA.
14	Srivastava et al. (1998)	Market-Based Assets and shareholder value: a framework for analysis.	Divided the market-based assets into two major types: intellectual assets and relational asset. These assets are intangible and may be leveraged to achieve SCA as long as they can add unique value to the customers.
15	Hoffman 2000	An examination of the sustainable competitive	Provided a detailed description of potential sources of SCA, offered a conceptual definition for SCA, and

advantage concept: past, present, and future research.

discussed how SCA is linked to other concepts in the strategy field.

16	David and Aaker 2001	Managing Assets and Skills: The Key to a Sustainable Competitive Advantage	If firms strive to achieve SCA they need to possess unique assets and skills
17	Dehnin and Stratopoulos (2002)	Determinants of a sustainable competitive advantage due to an IT-enabled strategy	Revealed that managerial IT skills have a positive influence on SCA, and the competitor's knowledge of competitive advantage has a negative influence on SCA.
18	Aker, et al. (2005)	Determinants of SCA	Argued that building a competitive advantage is determined by some correlated factors. Skills and assets are crucial among these factors.
19	Mangold (2006)	Creating Sustainable Competitive Advantage by applying design thinking to management problems	Explain how companies can create a sustainable competitive advantage in even more global and highly complex and competitive market structures.

Table 2.3 (continued...)

20	Berdine and Parrish (2008)	Measuring the Competitive Advantage	Proposed three strategies that distinguish the products a firm from others. These strategies include research and development, marketing, and customer service.
21	H. Ramadan 2010	The influence of organizational culture on sustainable competitive advantage	Specified three types of sources for SCA, namely organizational resources, human resources, and physical resources. Therefore, the organizational culture is made of both organizational resources and human resources
22	Miron & Sobolevski (2011)	Corporate social responsibility and the sustainable competitive advantage	Revealed that to gain SCA firm should be committed to CSR which result in gaining the partners" and the public's trust and recognition.

23	Dalvi&Ahangaran. (2014)	The Effects of Entrepreneurship and Sustainable Competitive Advantage.	Discovered that some firms used constant innovation and gained SCA.
24	Geon& Jaw. (2015)	Effective resources utilization to achieve SCA	Proposed that SCA depends on stakeholders collaboration in achieving effective optimization of resources.
25	Yu, et al. (2017)	Knowledge Creation Process and Sustainable Competitive Advantage: the Role of Technological Innovation Capabilities	Indicated that the knowledge creation process can only influence SCA through the mediating role of technological innovation capabilities.
26	Mahdi, et al., (2018)	Knowledge management processes and sustainable competitive advantage:	Suggested that acquiring knowledge and utilizing it an effective way is the only way to gain a sustainable competitive advantage (SCA)
27	Erik & Takala,(2019)	Resource optimization and sustainable competitive advantage	Pointed out that SCA depends largely on pursuing an effective strategy. Consequently, an effective strategy requires high resource allocation.

Source: Hoffman,2000; Student's work 2019

Based on the above table 2.3, it is clear that sustainable competitive advantage has been comprehensively studied. Although the prior researchers provided diverse contribution regarding the concept of SCA, they all had a common argument that SCA is only achieved by possessing a unique set of resources and through pursuing a strategy which not presently used by competitors.

The following subsections show the definition of SCA and sources of SCA as discussed in previous literature.

2.2.1 The Definition of Sustainable Competitive Advantage

The notion of SCA had appeared in 1984 when Day (1984) proposed different types of strategies that may enable firms to sustain the competitive advantage. However, the definite term of SCA surfaced in 1985, when Porter (1985) introduced the types of competitive strategies (low-cost or differentiation) which can be used by firms to achieve SCA.

Surprisingly, no formal conceptual definition was presented by Porter in his argument. Nonetheless, Barney (1991, p. 102) has come close to a formal definition

by providing the following: "A firm is said to have a sustained competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy".

Based on this definition, SCA is also defined as the sustained benefits result from implementing a unique value-creating strategy, which is not concurrently being implemented by present or potential competitors. Besides, competitors' inability to duplicate the advantages of this unique strategy (Hoffman,2000).

Likewise, a recent definition of SCA is that SCA represents the capability of the firm to accomplish a sequence of temporary advantages over time. Consequently, six indicators were developed to measure certain performance in comparison to competitors. The comparison of this performance covers numerous aspects more precisely, R&D, managerial capability, and profitability (Chuanpeng et al. 2017).

Notwithstanding that sustained competitive advantage is the most widely used term in strategic management, it was not accurately operationalized (Hao Ma, 2000). Therefore, the current study sometimes refers to SCA as a type of performance; drawing on the structural approach (Porter, 1985) and the resource-based view (Barney, 1991). As these are two predominant perspectives in the strategic management which address the sustainable competitive advantage. Nevertheless, these perspectives never differentiate competitive advantage from performance, in fact, the two terms are treated as interchangeable variables (Hao Ma, 2000).

In summary, despite, there is no concrete operational definition which all authors agree upon. However, the components of the various definitions mentioned above come together to reflect that SCA is obtained through implementing a value-creating strategy which is not being implemented by the rivals. Moreover, the advantages of this strategy should be sustained over a certain period of time.

2.2.2 Sources of Sustainable Competitive Advantage

There is a large stream of literature which has contributed to determining the sources of SCA. Coyne (1986) specified the capability gaps as sources of SCA. In other words, firms can achieve SCA when they create several gaps over competitors. These gaps involve business system gaps, managerial quality gaps, technology gaps, position gaps, and regulatory and legal gaps.

Day & Wensley (1988) identified two categorical sources for SCA, namely superior skills and superior resources. Superior skills are the unique capabilities of employees that distinguish them from the employees of competing firms. Superior resources represent the tangible capabilities which are possessed by firms (Hoffman, 2000).

Barney (1991) contributed to the discussion by indicating that not all resources have the potential of SCA. Therefore, sustainable competitive advantage is achieved when resources have four criteria, namely rareness, value, difficult to be imitated, and inability to be substituted.

Hunt & Morgan (1995) proposed a set of resources if firms integrate them can form unique competencies. These resources include financial, physical, legal, human, organizational, informational and relational resources. However, the emphasis is on the intangible resources rather than tangible ones. Hence market-based capability is formed by the intellectual and relational resources (Hoffman,2000).

In conclusion, regardless of the type of business, firms may achieve SCA by uniquely integrating the skills and resources. Therefore, firms should concentrate on learning how to harmonize all employees' efforts and combine all tangible and intangible resources to create core competencies that result in a sustained competitive advantage.

2.3 Corporate Social Responsibility (CSR)

CSR is not a new phenomenon, as the discussion of CSR issues has emerged during the 1950s (Moura & Padgett, 2011). However, CSR is considered one of the fast-growing field. As well as, companies, stakeholders, and advocates are engaging in CSR initiative in increasing numbers. Organizations that change their perception regarding CSR's role in business by integrating CSR practices into their strategy may have a competitive advantage over their rivals (Yilmaz, 2008). The similarity surrounds the definition of CSR. As Kotler & Lee (2005), defined CSR as a commitment towards improving the society's well-being through performing discretionary business practices. Additionally, CSR is defined as a firm's ongoing commitment to perform ethically, take part in the economic development, promote the quality of life of the human resources and their families, and contribute to the development of the local community and society as a whole. (WBCSD, 2008).

Collectively, these studies outline the critical role of CSR, hence, business today has gone beyond maximizing the profits to be concerned about the issue of sustainability, reducing environmental impacts, defending against ethical compromises, establishing more transparent governance, maximizing the contribution to society and being more accountable to stakeholders (Frimpong et al.2014).

The following subsections present the discussion of previous literature regarding types of CSR, strategies of CSR, and proactive and reactive CSR.

2.3.1 Types of Corporate Social Responsibility

Carroll (1979) classifies CSR into four types: economic responsibility, legal responsibility, ethical responsibility, and discretionary responsibility. First, economic responsibility means that a company can provide a return on investment to

shareholders, create jobs and fair pay for workers, promote technological innovation and develop new products. Second, legal responsibility results from legal compliance. As society expects companies to operate within the framework of legal requirements. Third, ethical responsibility is expected by societal members, but it is not necessarily arranged by law. Finally, discretionary responsibility is defined as the free choice of companies to perform charitable activities or provide philanthropic contributions aimed at giving back to society. These philanthropic initiatives are beyond the expectation of societal members (Carroll, 1979).

In view of all that has been mentioned so far, CSR can be a valuable source for sustained competitive advantage. CSR-committed companies attempt to satisfy all the stakeholders and meet the market expectation. Moreover, addressing corruption, environmental management, and human rights.

2.3.2 Strategies of Corporate Social Responsibility

According to Fang et al., (2010), CSR strategies are based on both value perspective (maintaining or creating value) and strategic orientation (influencing or responding to a stakeholder’s demands). Accordingly, four strategies were proposed to include reactive, accommodative, defensive, and proactive strategy. First, reactive strategy refers to the engagement of firm in responding to the demands of stakeholders. Second, the accommodative strategy not only signifies the appropriate response to stakeholder demands but also suppresses these demands. Third, the defensive strategy is the preventive allocation of related resources to adapt to the possible changes in the demands of the stakeholders, through predictions gathered from scanning the environment. Lastly, proactive strategy represents a firm's use of its own influence to shape the stakeholder’s demands and become the pioneer of the industry (Fang et al., 2009). Table 2.4 illustrates the content of the four types of CSR strategies according to strategy orientation and value perspective (Fang et al., 2009).

Table 2.4

Strategies of Corporate Social Responsibility

Strategy orientation		Value perspective	
Response		Maintain value	
1. Reactive		reactive strategy responds only to specific demands. (e.g., adhere to standards of the green supply chain by developing effective pollution prevention procedures.	
2. Defensive		A defensive strategy involves doing what may be legally required in the future.	
Influence		Create value	
3. Accommodative		An accommodative strategy involves using outside influence to change the demands of stakeholders.	

4. Proactive Proactive Strategy involves creating and satisfying stakeholders' needs and being an industry leader

Source: Summarized from Fang et al., 2009

Based on the above table 2.4, one can conclude that a new CSR paradigm has emerged according to the categorization scheme developed in CSR literature (Gange, 2015), Therefore, this study addresses CSR strategies more precisely, proactive and reactive CSR.

2.3.3 Reactive Corporate Social Responsibility

Reactive CSR is defined as *"the company's integrity and ethical behavior that merely meet the country's laws and regulations"* (Chang, 2015,p.455). Firm's reactive behavior only complies with the regulations and stakeholder requirements. Therefore, it is not possible for reactive companies to introduce new initiatives ahead of competitors (Groza et al., 2011). Consequently, reactive companies hold the concept of doing only what is required of by law and nothing more. These firms concerned about maximizing the profits rather than performing socially responsible activities. They follow the law to avoid encountering any legal action against them (Kanobi & Breann, 2018). Nonetheless, no one can indicate that reactive CSR firms are not committed to CSR.

2.3.4 Proactive Corporate Social Responsibility

Proactive CSR is defined as *"the firm's integrity and ethical behavior which go beyond the laws and regulations in order to support sustainable economic and contribute to social and environmental development"* (Chang, 2015,p.455). Another definition is that proactive CSR represents a situation where a company goes beyond the compliance and engages in actions that offer social benefits (McWilliams et al., 2006). Proactive behavior enables firms to act ahead of competitors, decrease cost, and seize opportunities, to lead the market. If firms are willing to engage in CSR, they can implement green differentiation strategies and therefore, reshape the competitive rules to obtain sustained competitive advantages (Porter & Linde, 1995). To summarize, proactive companies locate ethics as a key part of their mission statement, avoid causing any harm to the environment, offer high quality of work life to employees, and donate a portion of their profit to charitable initiatives. (Kanobi& Breann, 2018).

2.4 The Relationship Between Entrepreneurial Orientation and SCA

There is a considerable amount of literature that has examined the relationship between EO and sustained competitive advantage (e.g., Dalvi, Ahangran, 2014, Lameis, 2014). As well as, the theoretical arguments of previous research corresponded in that EO involves newness, responsiveness, and a degree of boldness, therefore, firms may benefit from such orientation (Lumpkin & Dess, 1996). Companies operating in a changing environment and shortened product and business life cycle, may not be able to secure the future profit from the current operation. Hence, organizations need to seek new opportunities by adopting EO (Miller & Friesen, 1982). When companies employ EO, frequently innovate and boldly take risks in their product-market strategies (Miller & Friesen, 1982). Moreover, entrepreneurial companies exert efforts to anticipate demand and aggressively introduce new products. As a result, these firms often enjoy high-level of performance (Ireland, et al. 2003). Moreover, according to Barney (1991), the creation of competitive advantage depends on the implementation of a value-creating strategy that is not simultaneously implemented by rivals. Accordingly, EO is considered as a strategy-making process which aims to create value for the entrepreneurial firm (Lumpkin & Dess, 1996).

2.5 The Relationship Between Proactive and Reactive CSR and SCA

Prior literature has discussed both empirically and conceptually the relationship between CSR and SCA (e.g., Dumitru, et al., 2011; Sami, et al. 2014). Companies launching CSR programs and initiatives can create substantial benefits concerning reputation, revenues, and employee engagement. Moreover, CSR contributes to building valuable partnerships (Pearce & Doh, 2005). Mahon (2002) indicated that CSR strategies can create competitive advantages if appropriately used properly, pointing out that there is a positive association between strategic social responsibility actions and competitive advantage. Furthermore, researchers in strategic management considered the reputation to be a potential creator of competitive advantage. According to Mahon (2002), corporate reputation plays a vital role in increasing the purchase of products and services.

Consequently, CSR is a powerful tool that enhances the reputation which in turn create a sustained competitive advantage. Additionally, Filho et al., (2015) stated that CSR currently represents a source of competitive advantage. Furthermore, according to Barney (1996), sustained competitive advantage can be achieved through a group of internal resources. These resources must meet four criteria, namely being rare, valuable, inimitable and non-substitutable. Thus, these four criteria are applicable to CSR because CSR involves a group of intangible resources, such as good corporate governance, efficient execution of innovative social projects and ethical management in business. Therefore, CSR can be a differentiating source of competitive advantage (Husted & Allen, 2001).

2.6 The Moderating Effect of Proactive and Reactive CSR

There have been many previous studies on the EO field reported a positive influence of EO on firm performance (e.g., Covin & Slevin, 1986; Wiklund & Shepherd, 2003). Nonetheless, other studies conveyed a negative relationship (e.g., Lumpkin & Dess, 2001; Zahra, 1991). Accordingly, to understand differences in findings across the previous studies, this study proposes proactive and reactive CSR as an internal moderating variable. The emphasis on CSR as an internal resource is evident in several prior studies (e.g., McWilliams & Siegel, 2001; McWilliams et al., 2006). Therefore, accepting that CSR is an internal resource and aligning that with the definition of SCA which was developed by Barney (1991), one can conclude that in order to create competitive advantage, CSR strategies must fulfill four conditions namely, value, rareness, inability to imitate, and non-substitutability. In conclusion, based on the above-mentioned, this study suggests that CSR strategies could be considered as a factor which may strengthen or diminish the relationship between EO and SCA (Filho et al. 2015).

2.7 Chapter Summary

This chapter presented a summary of the literature review for various variables of the study, including o EO, SCA, and proactive & reactive CSR. Additionally, this chapter revealed the relationship exists among these variables based on the prior literature. The next chapter presents the research underpinning theories, theoretical framework and hypotheses development.

CHAPTER THREE

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

CHAPTER THREE

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

3.0 Chapter Overview

This chapter presents the theoretical framework which illustrates the relationship between the variables of the study. In addition, the research underpinning theories are discussed prior to the theoretical framework. As well as, this chapter addresses the development of hypotheses based on the previous literature and the proposed theoretical framework.

3.1 Research Underpinning Theories

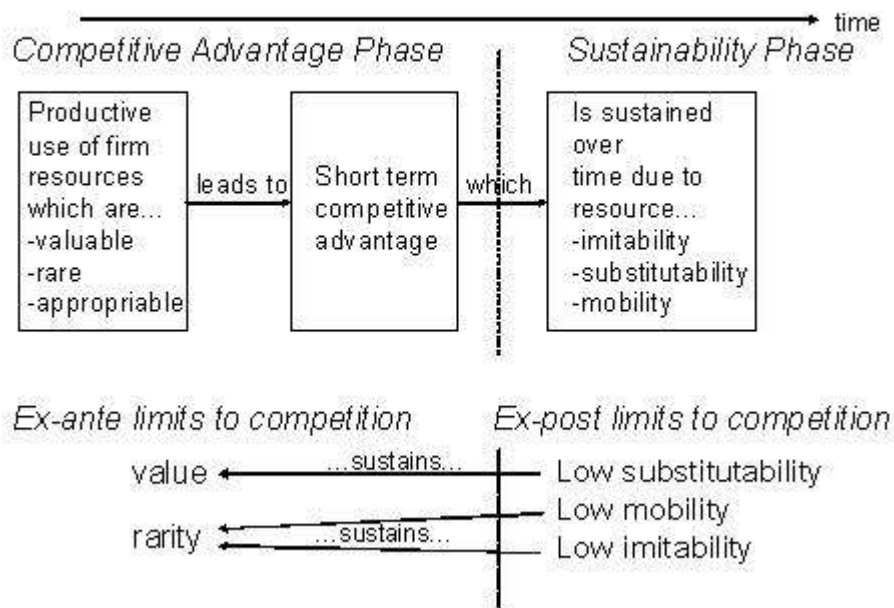
Cooper and Schindler (2011) indicated that the central role of the theory in research is that it helps guide the researcher. In the social sciences, theory usually suggests a set of statements to explain the relationship between variables of the research. Moreover, it predicts future concurrences. Accordingly, one could easily conclude that a theory is primarily concerned with explaining; and focusing on determining cause-and-effect relationships. Moreover, it helps the researcher summaries any previous information and guides the future course of action. Therefore, based on the research objectives, variables, and prior literature, this research is underpinned by Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT).

The following subsections present a brief discussion of both the resource-based view and dynamic capabilities theory as they relate to variables of the study.

3.1.1 Resource-Based View (RBV)

Resource-Based View (RBV) of the firm is one of the most widely accepted theories of management (Barney, 1991). The RBV claims that companies possess resources, a subset of which enable them to achieve a competitive advantage. Resources that are valuable and rare can lead to the creation of competitive advantage. Moreover, that advantage can be sustained over a longer period to the extent that the firm can protect it against resource imitation, transfer, or substitution (Barney, J. B. 1986). The following figure 3.1 illustrates the (RBV) theory of the firm (Wade & Hulland, 2004).

Figure 1
The Resource-based View Over Time



Source: Wade & Hulland, 2004

Based on figure 3.1 above, it can be seen that competitive advantage(CA) is gained when the firm utilizes the resources that are valuable, rare and appropriate to the firm's strategy, whereas sustainable competitive advantage(SCA) is obtained when the competitive advantage is sustained over a period of time. Furthermore, the resources should meet the criteria of inimitability, immobility, and non-substitutability.

3.1.2 Dynamic Capabilities Theory (DCT)

Teece et al. (1997) define dynamic capabilities as the ability to build, integrate and reconfigure both internal and external competencies in order to address rapidly changing environments. The concept of dynamic capabilities emerged from the critical shortcomings of the resource-based view of the firm. The RBV has been criticized for ignoring surrounding factors and only assuming that they simply exist. Moreover, RBV overlooked considerations such as how resources are developed, how they are integrated within the firm and how they are used. Contrariwise, dynamic capabilities theory attempts to bridge these gaps by adopting a process approach which involves acting as a defense between firm resources and the changing business environment. Therefore, dynamic resources help a firm adjust its resource mix and thereby maintain

the sustainability of the competitive advantage, which otherwise might be quickly taken away (Teece et al., 1997; Teece, 2007).

In summary, while the RBV highlights the selection of suitable resources, dynamic capabilities theory emphasizes the development and renewal of resources. In other words, these theories seem to complement one another (Barney & David Teece, 1991).

3.2 The Research Underpinning Theories and Research Variables

The following subsections present the relationship between the research underpinning theories (i.e., RBV and DCT) and the research independent variables (i.e., EO, proactive and reactive CSR) in relation to the research dependent variable (i.e., sustained competitive advantage).

3.2.1 The RBV Theory and Entrepreneurial Orientation

The RBV considers the internal resources and capabilities of a firm as valuable and therefore represent sources for competitive advantage (Barney,1991). Resources are the factors owned by the firm and capabilities are the firm's capacity to deploy those resources. The RBV assumes that organizational resources are composed of tangible and intangible assets that a firm uses to develop and implement strategies aimed at achieving sustained competitive advantage (Barney,1991). Strategic management theorists have argued that physical, human, and organizational resources can result in improved performance and drive the achievement of sustainable competitive advantage (Jogarathnam,2018). In this light, intangible organizational resources and capabilities such as entrepreneurial orientation (EO) if effectively exploited, may facilitate the development of sustained competitive advantage (Lonial and Carter,2015).

3.2.2 Dynamic Capabilities Theory and Entrepreneurial Orientation

Being an extension of the RBV of the firm, the dynamic capabilities theory captures the dynamic nature of resources and capabilities which is especially vital for achieving competitive advantage in a fast-changing environment (Barreto, 2010). From this viewpoint, EO can be expressed as an embedded higher-order dynamic capability that helps a firm to identify opportunities in the market, act in response to these

opportunities and reconfigure tangible capabilities to maintain competitiveness and improve firm performance (Teece, 2007).

3.2.3 RBV Theory and Proactive& Reactive CSR

The RBV has been enormously accepted as a theory that explains the sources of sustainable competitive advantage and clarifies how to identify these sources. These resources characterized as valuable, rare, inimitable, and non-substitutable (Barney, 1991). Over the past 20 years, several studies have been conducted regarding identifying certain resources with these attributes (e.g., Hart, 1995; and Barney, 1995). Accordingly, Husted & Allen (2001) indicated that CSR embodied several intangible resources and capabilities such as effective corporate governance, successful implementation of social and environmental projects, and enhancement of corporate reputation. Consequently, McWilliams and Siegel (2001) identified CSR actions and strategies as RBV resources.

3.2.4 Dynamic Capabilities Theory and Proactive& Reactive CSR

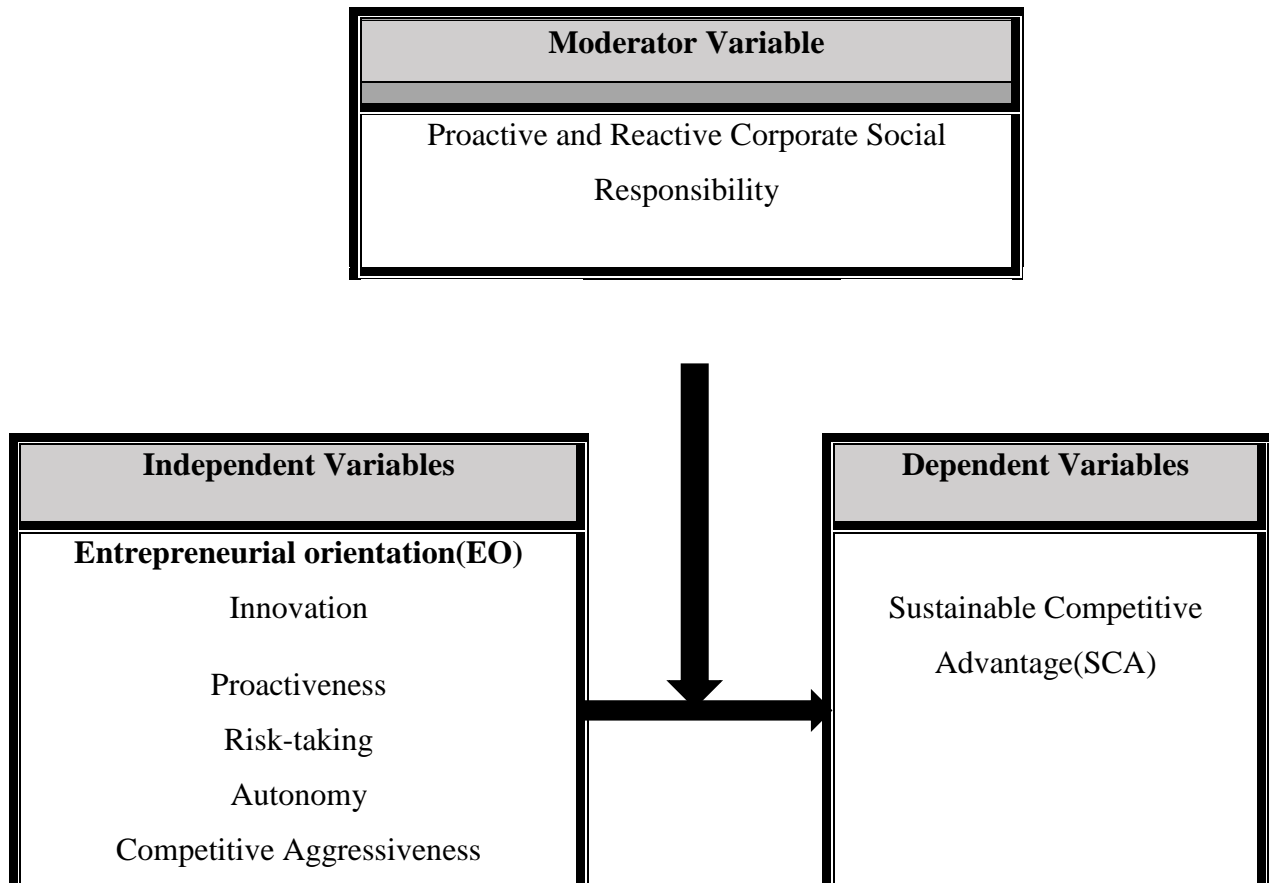
CSR can be seen as a dynamic capability because it affects the resource base of a firm threatened by a rapidly-changing environment. As this dynamic capability is spread over a whole firm, CSR strategies influence corporate reputation and core parts of a firm's processes; for instance, procurement, product development, choice of suppliers and business partnership (Lattemann et al.2009). Therefore, CSR strategies alter the processes in a firm as well as the resources configuration. Also, CSR shapes the market requirements. CSR is mainly viewed as dynamic capability because CSR initiatives are based on the experience of early projects which have been improved over time. Accordingly, CSR strategies affect the resource base of the firm, and thus it contributes to generating a sustained competitive advantage. Furthermore, a company can rely on several dynamic capabilities, and CSR considered as a major one of those capabilities (Kupke et al., 2007).

Based on the theoretical base presented and discussed above, the below figure 3.2 shows the research theoretical framework which illustrates the relationship between

the independent variable (Entrepreneurial Orientation) and the dependent variable (Sustainable Competitive Advantage). In addition to the moderator variable (Proactive and Reactive CSR).

Figure 3.2

Research Theoretical Framework



Source: Student's work 2019

3.3 Research Hypotheses

Drawing on the theoretical framework illustrated above and based on the prior literature, this study formulates two main hypotheses along with several sub-hypotheses. These research hypotheses are developed and presented as follows:

3.3.1 H1. Entrepreneurial Orientation (EO) has a positive influence on Sustainable Competitive Advantage (SCA)

There are several studies which reported a positive relationship between entrepreneurial orientation and sustainable competitive advantage (e.g., Dalvi, Ahangran, 2014, Lameis, 2014). In addition, when considering SCA as a similar construct to firm performance drawing on the argument of Porter (1986) and Barney (1991), many literature expressed the positive association between entrepreneurial orientation and firm performance (e.g., Covin & Slevin, 1986; Wiklund & Shepherd, 2003). Moreover, the theoretical discussion supports the above empirical findings, as the positive role of EO in a firm has been primarily explained by the theories of RBV and dynamic capabilities (DC). Within the RBV framework, EO may be reflected on as a unique intangible resource or a higher- order of organizational capability. As EO is valuable for identifying and seizing new opportunities through its proactiveness component. Furthermore, EO cannot be easily imitated or substituted (Lonial and Carter, 2015). For these reasons, EO can serve as a unique source for superior firm performance and sustainable competitive advantage (Wiklund and Shepherd, 2011).

3.3.1.1 H1.1 Innovativeness has a positive influence on SCA

Innovativeness represents an outcome of creativity, experimentation, and R&D. Innovation is the only source for product and processes development, through producing unique solutions to a firm's problem and customers' need (Hurley & Hult, 1998). Firms that put more emphasis on innovativeness can enter into a new market or introduce a new product to the existing markets (Cho, Pucik, 2005). As such, innovativeness serves as a means to differentiate a firm from its competitors. Brüdel and Preisendörfer (2000) identified innovation to be the most critical predictor of firms' sustainable competitive advantage. In reference to the prior literature, many researchers have indicated the positive influence of innovation on competitive advantage and firm performance (e.g., Hughes & Morgan, 2006; and Gatignon & Xuereb, 1997).

3.3.1.2 H1.2 Proactiveness has a Positive influence on SCA

Proactiveness pertains to a forward-looking vision where firms proactively anticipate opportunities to introduce new or improved products. Proactiveness requires monitoring the changes in the environment and altering the firm's current strategies. The ultimate objective of proactiveness is to create a first-mover advantage in the short run and shape the competition of the market in the long term (Lumpkin & Dess, 1996). Additionally, the significance of proactiveness has been noted particularly in the dynamic environment (Lumpkin & Dess, 2007). As proactiveness help firms to exploit the opportunities emerging from the dynamic environment. Therefore, proactiveness put the firm ahead of competitors (Davis, 2007). The previous studies have reported that proactiveness is associated with high performance (e.g., Day & Wensley, 1988; Lumpkin & Dess, 2001; and Krause et al., 2005). Besides, there are some studies have found that proactiveness has a positive influence on SCA (e.g., Kuratko, 2002; and Coven, 1999).

3.3.1.3 H1.3 Risk-Taking has a positive influence on SCA

Risk-taking embodies a willingness to allocate a substantial amount of resources to execute projects and provide solutions that involve a great deal of uncertainty regarding the expected outcomes (Lumpkin & Dess, 1996). Firms which are risk-takers typically tolerate one among to potential scenarios, the first one is tolerating the risk of failure and the second scenario is facing the risk of missing an opportunity (Dickson & Giglierano, 1986). Consequently, without a proper degree of risk-taking, firms will be unable to introduce innovative products or promptly react to changes in market trends. Therefore, risk-taking has been connected to the speed of strategic decisions, and both have been associated with superior firm performance (Eisenhardt, 1989). As well as, there is a large stream of literature supporting the positive relationship between EO and firm performance (e.g., Wang and Yen (2012); and Kollman (2014).

3.3.1.4 H1.4 Autonomy has a positive influence on SCA

Autonomy provides a sense of independence to organization members in order to exercise creativity and come up with new ideas for product and process innovation (Lumpkin & Dess, 1996). Therefore, autonomy requires the establishment of the empowerment policies, openness of communication, provision of unlimited access to information, and broad authority to think without intervention (Spreitzer, 1995). Such autonomy inspires employees to take part in entrepreneurial activities. Therefore, autonomy represents a critical factor for firms' competitive advantage because all the entrepreneurial activities are undertaken by employees. Consequently, the preceding literature supports this theoretical discussion, as several studies reported a positive relationship between entrepreneurial orientation and firm performance (e.g., Coulthard 2007; and Schneider 2009)

3.3.1.5 H1.5 Competitive Aggressiveness has a positive influence on SCA

Competitive aggressiveness pertains to the strength of a firm's endeavor to beat the industry competition (Lumpkin & Dess, 2001). Competitive aggressiveness entails taking deliberate competitive actions or aggressive reactive engagements. Consequently, firms that are highly aggressive view competitors as enemies that must be defeated. However, competitive aggressiveness encourages endless competitors and environmental assessment in order to evaluate the firm's strengths and competitors' weaknesses to take advantage of them and exploit opportunities. The aggressive firms benefit from leveraging adaptive strengths to outperform competitors in the market rather than adopting inactive stance to competition. The firms rely on offensive behavior as opposed to defensive one when engaging in competition. Thus, these firms will be in a better position to gain and maintain a competitive advantage over their rivals (Lumpkin & Dess, 2001). Accordingly, prior literature on competitive dynamics underlined the positive effect of competitive aggressiveness on firm performance (e.g., Sonja Muhonen, 2017; and Antonio, 2015).

3.3.2 H2. The Proactive and Reactive CSR Moderate the Relationship Between EO and SCA

A number of previous studies have investigated several moderator variables on the relationship between entrepreneurial orientation and firm performance (e.g., Zahra

& Covin,1995). Also, preceding literature on CSR has reported a positive relationship between CSR and SCA (e.g., Dumitru et al.2011; Sami, et al.2014). Consequently, a firm's ability to achieve a sustained competitive advantage relies on RBV theory of corporate social performance. A fundamental argument behind this theory is that the different types of CSR strategies are not created equal. Therefore, only those CSR-based strategies which are difficult to imitate by competitors are associated with superior performance (Hillman & Keim,2001). However, CSR strategies aligned with entrepreneurial orientation can be a useful source for sustainable competitive advantage (Fang et al.2010).

3.3.2.1 H2.1 The Relationship between EO and SCA is stronger when Proactive CSR is Higher

Proactive CSR entails acting in advance to future demands and requirements of stockholders. Therefore, socially proactive firms attempt to figure out how to contribute instead of being reactive (Steege, 2008). Therefore, customers trust the proactive firms for their ethical behavior which exceeds the requirements of the law (Oliver, 1991). Thus, firms can create value to both investing and non-investing stakeholders and occupy an advantageous position in the market compared with competitors (Griffin, 2012). Accordingly, the integration of proactive CSR and EO is expected to result in a sustained competitive advantage. Thereupon, the following sub-hypotheses were formulated:

- H2.1.1 The Relationship between innovativeness and SCA is stronger when Proactive CSR is higher
- H2.1.2 The Relationship between proactiveness and SCA is stronger when Proactive CSR is higher
- H2.1.3 The Relationship between Risk-taking and SCA is stronger when Proactive CSR is higher
- H2.1.4 The Relationship between Autonomy and SCA is stronger when Proactive CSR is higher
- H2.1.5 The Relationship between Competitive Aggressiveness and SCA is Stronger when Proactive CSR is higher

3.3.2.2 H2.2 The Relationship Between EO and SCA is Stronger when Reactive CSR is higher

Reactive CSR seeks to comply with regulations and adapt to stakeholders' requests. Firms with reactive CSR respond to changes in the environment and react to competitors' challenges. Moreover, the association of reactive CSR practices with the entrepreneurial activities is more likely to produce favorable results for firms. Furthermore, based on the value perspective, reactive CSR contributes to maintaining a sustained competitive advantage (Baum & Wally, 2003). Accordingly, several sub-hypotheses were formulated as follows:

- H2.2.1 The Relationship between Innovation and SCA is stronger when Reactive CSR is higher
- H2.2.2 The Relationship between Proactiveness and SCA is stronger when Reactive CSR is higher
- H2.2.3 The Relationship between Risk-Taking and SCA is stronger when Reactive CSR is higher
- H2.2.4 The Relationship between Autonomy and SCA is stronger when Reactive CSR is higher
- H2.2.5 The Relationship between Competitive Aggressiveness and SCA is stronger when Reactive CSR is higher

Table 3.1 below shows a summary of the proposed hypotheses as follows:

Table 3.1

Summary of Research Hypotheses

H1 Entrepreneurial Orientation (EO) has a positive influence on Sustainable Competitive Advantage (SCA)

H.1.1 Innovation has a positive influence on SCA

H.1.2 Proactiveness has a positive influence on SCA

H.1.2 Risk-Taking has a positive influence on SCA

H.1.3 Autonomy has a positive influence on SCA

H1.4 Competitive aggressiveness has a positive influence on SCA

H2 Proactive and Reactive CSR Moderate the Relationship Between EO and SCA

H2.1 The Relationship between EO And SCA is Stronger when Reactive CSR is higher

H2.1.1 The Relationship between Proactiveness and SCA is Stronger when Proactive CSR is higher

H2.1.2 The Relationship Between Risk-Taking and SCA is Stronger When Proactive CSR is higher

H2.1.3 The Relationship Between And SCA is Stronger when Proactive CSR is higher

H2.1.4 The Relationship Between Autonomy and SCA is Stronger when Proactive CSR is higher

H2.1.5 The Relationship Between Competitive Aggressiveness And SCA is Stronger When Proactive CSR is higher

H2.2 **The Relationship between EO and SCA is Stronger when Reactive CSR is Higher**

H2.2.1 The Relationship between Innovation and SCA is Stronger when Reactive CSR is higher

H2.2.2 The Relationship between Proactiveness and SCA is Stronger when Reactive CSR is higher

H2.2.3 The Relationship between Risk-taking and SCA is Stronger when Reactive CSR is higher

H2.2.4 The Relationship between Autonomy and SCA is Stronger when Reactive CSR is higher

H2.2.5 The Relationship between Competitive Aggressiveness and SCA is Stronger when Reactive CSR is higher

3.4 Control Variables

Research scholars indicate that a study without measuring control variable effect on proposed relationships is likely to produce misleading findings and reach an incorrect conclusion (Ringle et al.2013; Hair et al. 2012). For this reason, this study primarily proposes five control variables to examine their influence on the hypothesized relationship. These control variables include industry type, firm size, firm age, firm ownership and number of competitors. The proposition of these control variables is consistent with prior literature, as Lumpkin & Dess (1996) reported that the environment and firm characteristics might affect a firm's performance regardless of its strategic orientation. Moreover, industry type, firm size, and firm age were controlled in examining the relationship between knowledge-based resources, entrepreneurial orientation and firm performance (e.g., Wiklund & Shepherd 2003). The effect of ownership on performance was supported by Mahmood & Hussein (2014). As well as, the effect of competition as a control variable on performance was addressed in prior literature (e.g., Nickell, 2006).

3.5 Chapter Summary

This chapter presented the research underpinning theories namely, RBV and DCT; then both theories were linked to EO and proactive and reactive CSR. Besides, the theoretical framework was illustrated, along with the development of research hypotheses based on the previous literature. The next chapter discusses the research methodology including the research paradigm, approach, method and research design. Additionally, the following chapter addresses the study population, sample, measures and scaling and data analysis techniques.

CHAPTER FOUR
RESEARCH METHODOLOGY

CHAPTER FOUR

RESEARCH METHODOLOGY

4.0 Chapter Overview

This chapter outlines the research paradigm, research approach, research methodology, and research design. Also, this chapter presents the study population, sampling, instrument of data collection, validation of the questionnaire, administration of the instrument, data analysis techniques and the ethical consideration of the study.

4.1 Research Paradigm

A paradigm is best described as a holistic system of thinking or a philosophical framework (Collis & Hussey, 2009). Additionally, a paradigm represents a set of beliefs by which actions are guided. Therefore, paradigms play a vital role in the research (Guba, 1990). Accordingly, based on the research purpose, this study adopts the positivist philosophy; because the positivism attempts to understand and predict as well as positivism associated with the objectivity (Livesey, 2011). Therefore, positivism is more appropriate to quantitative methods (Smith, 2002). Consequently, this study employs quantitative methods to gather data that can be easily converted into measurable numerical evidence.

4.2 Research Approach

Trochim (2006) specifies two approaches for reasoning in research, namely inductive and deductive approach. He refers to induction as a process of moving to general from the specific. In contrast, deduction involves moving to specific from the general. Accordingly, the induction is based on observation and experience, whereas deduction is based on the established rules and theories. Creswell (2007) indicated that when researchers use the deductive approach, they start from the top to down, in other words, they move from theory to hypotheses, and then collect data and perform the data analysis in order to support or contradict the theory. Furthermore, studies commonly use one of two methods, either quantitative which is associated with the deductive approach or qualitative which fits the inductive approach (Soiferman, 2010).

Accordingly, based on the overall research objective, this study adopts the deductive approach which aims at testing the theory and hypotheses at hand. Moreover, the deductive approach is typically linked to quantitative research.

4.3 Research Methodology

The research methodology represents an overall plan of the research which specifies the process of research including the hypotheses formulation, the methods of data collection, analysis techniques, and interpretation. There are three research methods which are qualitative, quantitative and mixed methods. The qualitative method

associated with using open-ended questions, while the quantitative method connected with closed-ended questions (Creswell,2007).

Therefore, based on the research objective, philosophy, and approach, this study employs the quantitative methodology because it aims at testing the theory by examining the relationship between defined variables. Consequently, this study uses the survey to collect the data based on closed-ended questions, then the collected data is converted into numerical data which is analyzed to reach findings and draw a conclusion (Creswell, 2012). Moreover, quantitative method is generally associated with the positivist paradigm.

4.4 Research Design

A research design is a functional plan of the research. Therefore, the research design guides the researcher in formulating a theoretical framework, selecting appropriate data collection method, and serve as a basis for interpretation (Bless & Kagee,2006). Therefore, based on the research objective and methodology, this study adopts an analytical descriptive design. The reason for this choice is that the descriptive design not only provides an accurate description of the phenomenon under the study but also analyzes the numerically converted data to reach the findings and draw a conclusion. Consequently, based on the research design, this study utilizes the survey as a tool for data collection because it best serves to answer the questions and fits the purpose of the study. The questionnaire is used to collect the data from a sample which is considered to be representative to all the population (Nworgu,1991).

4.5 Population of the Study

The population of the study refers to all elements such as individuals, corporations, or events which fulfill the criteria of the sample included in the study (Burns & Grove,1993). Accordingly, the population of this study embodies Sudanese service sector including companies operating in several industries such as (Banking, insurance, hotel, airlines, telecommunication, stock exchange, exchange, education, hospital, and others).

4.6 Sample of the Study

Sampling represents the process by which a sample is selected, while a sample refers to the small portion selected from a population in order to conduct a study on it and then generalize the findings to the entire population. (Cooper & Schindler, 2011).

Therefore, based on the research objective and target population this study adopts the convenience sampling method which is a non- probability sampling technique. This choice is justified by lacking a proper sampling frame representing all elements of the population from which a sample is drawn. Besides, the research constraints regarding cost and time.

Consequently, a convenient sample of 175 elements was selected from the population. This sample size is identified according to the amount of variability in the population, cost and time constraints and the unit of analysis. Furthermore, according to Uma Sekaran (2003), the recommended sample size for a given population of 270 is nearly 159 subject. Moreover, interestingly, Roscoe (1975) proposes that a sample size larger than 30 and less than 500 is appropriate for most research (Uma Sekaran, 2010). Additionally, the sample size was calculated via a statistical equation processed by a computer-based sample size calculator (i.e., Raosoft). The equation of the software proposed by Yamane (1967) who provides a simplified formula to calculate sample sizes. This formula was used to calculate the sample size. A 95% confidence level and $P=.5$ are assumed for the equation.

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

While "n" is the sample size, "N" is the population size, and "e" is the level of precision. Accordingly, this formula is applied to this research's sample size, and the calculation result generated as follows:

$$n = \frac{268}{1 + 268(e.05)^2} = 159$$

4.7 Data Collection

The following subsections discuss the source of data, the instrument of data collection, scaling, measurements, validation of the survey, pilot test and administration of the final questionnaires.

4.7.1 Sources of Data Collection

Based on the research objectives, this study utilizes both primary and secondary data. Primary data has been collected through the survey, whereas secondary data has been gathered from the existing knowledge pertaining to previous research, peer-reviewed articles published in leading journals and relevant scholarly books.

4.7.2 Instrument of Data Collection

According to the research design, the survey was chosen as a data collection instrument. A questionnaire is a form designed to gather from the sample (Burns & Grove 1993). There are several reasons for using the questionnaire. First, a questionnaire results in a high response rate because the questionnaires are distributed to respondents and are collected personally by the researcher. Second, a questionnaire requires less time and energy to administer. Finally, the questionnaire has less opportunity for bias because it is presented in a consistent manner and all the items in

the questionnaire are closed-ended which makes it easier to compare the responses to the questions.

4.7.2.1 Questionnaire Design

Wilkinson & Birmingham (2003) indicated that in the process of designing the questionnaire it is easy to overlook mistakes and ambiguities in questions. Therefore, the design of the questionnaire affects the response rate, the reliability, and validity of the collected data.

Consequently, according to Asker & Day (2001), the questionnaire design entails writing a covering letter to accompany the three main section of the questionnaire. This covering letter explains the purpose of the research, and it contains essential information for the completion of the questionnaire. In addition, the questionnaire consists of three sections, namely A, B, and C, along with instruction guidelines to guide the respondents as to tick the chosen response in each section. First, section A contains the firms' profile pertaining to the type of business, firm size, firm age, firm ownership and number of competitors. Second, section B aimed at specifying the opinion of the respondents about the data of study which include EO, SCA and proactive and reactive CSR. Third, section C covers the respondents' profile, namely the gender, age, education level, job title and years of experience. The information in section B and C helps the researcher in interpreting the findings.

4.7.2.2 Measurements of Variables

All items used to measure the variables were gauged on five points Likert scale ranging from strongly disagree (5) to strongly agree (1). The five-point scale was used for several reasons. First, using a five-point Likert scale enables the comparison of the reliability coefficient with others research (Saleh & Ryan,1991). Second, using a 5 - point Likert- scale reduces the frustration level of respondents and increases the response rate (Buttle,1996).

Regarding the measurements, all items were sourced from previous studies with making some modification following the pre-tests. The following subsections present the measurements of the study's variable including the independent variable (i.e., entrepreneurial orientation), the dependent variable (i.e., Sustained competitive advantage), and the moderator variable (i.e., Proactive and Reactive CSR).

4.7.2.2.1 Entrepreneurial Orientation

EO represents the process aspect of entrepreneurship and involves the decision-making style, practices, and process used by managers to implement entrepreneurial activities. Hence, entrepreneurial firms adopt new technologies, undertake ventures with high risk, and successfully seize the market opportunities (Lumpkin & Dess, 2005). Accordingly, this study adopts the work of Lumpkin & Dess (2005) as a guide in developing the measurements. Lumpkin & Dess (1996) proposes that EO is a multidimensional

variable involves five dimensions (i.e., Innovativeness, proactiveness, risk-taking, autonomy and competitive aggressiveness).

4.7.2.2.1.1 Innovativeness

Innovativeness refers to the firm’s efforts to create new opportunities and come up with unusual solutions. It involves creativity and experimentation that result in new products, new services, or improved technological processes (Lumpkin & Dess,2005). Innovativeness is measured by five items which were sourced from the work of Lumpkin & Dess (2005). These items are shown in the following table 4.1.

Table 4.1
Measurements of Innovativeness

Innovativeness		
Our firmDess&Lumpkin 2005
1	encourages and stimulates technological innovation	
2	encourages and stimulates product-market innovation	
3	stimulates creativity and experimentation	
4	properly invests in new technology, R&D, and continuous improvement	
5	Innovates services which are hard for competitors to successfully imitate	

4.7.2.2.1.2 Proactiveness

Proactiveness reflects the effort exerted by firms to seize new opportunities. Therefore, proactive firms follow the shifting trends in the market, identify the future needs of customers, and foresee the alterations in demand which can lead to new business opportunities. (Lumpkin & Dess,2005). The measures of proactiveness were derived from the work of Lumpkin & Dess, (2005). Table 4.2 below shows the four items of proactiveness.

Table 4.2
Measurements of Proactiveness

Proactiveness	Source
Our firm.....	
1 Initiates actions which competitors then respond to	

- 2 Is very often the first business to introduce new products/service
- 3 Is the first to introduce administrative and operational technology
- 4 Has a strong tendency to be ahead of competitors in introducing novel products

G. Dess &
Lumpkin
2005

4.7.2.2.1.3 Risk-taking

Risk-taking represents the willingness of firms to undertake a risky venture with the uncertainty of the expected outcomes. (Lumpkin & Dess 2005). The risk-taking was measured with six items, two items were sourced from Lumpkin & Dess (2005), and four items were sourced from Taiseer (2015) who had a similar operational definition. The following table 4.3 presents the items of risk-taking.

Table 4.3
Measurements of Risk-taking

Risk-taking		Source
Our firm		Taiseer 2015
1	Is willing to adopt new high-risk ideas	
2	Spends huge amounts of money on product innovation	
3	encourages a proper level of business and financial risk-taking	
4	encourages employees to take calculated risks with new ideas	G. Dess & Lumpkin 2005
5	carefully manages risks and avoids taking actions without sufficient planning	
6	enhances its competitive risk position by assessing risk factors in order to minimize uncertainty	

4.7.2.2.1.4 Autonomy

Autonomy is described as unconstrained behavior adopted by organization's members to formulate and successfully implement a business vision. (Hughes & Morgan (2006). The autonomy measures were developed from Dess & Lumpkin (2005), with some items from Hughes & Morgan (2006). Table 4.4 below depicts the five items of Autonomy.

Table 4.4

Measurements of Autonomy

Autonomy		Source
1	Employees are permitted to act and think without interference	Hughes & Morgan (2006)
2	Employees are given freedom to communicate without interference	
3	Employees are given freedom and independence to decide on their own how to go about doing their work.	
4	Employees are given authority and responsibility to act alone	Dess & Lumpkin (2005)
5	Employees have access to all vital information	

4.7.2.2.1.5 Competitive Aggressiveness

Competitive aggressiveness involves the aggressive efforts which are taken by the firm to beat the industry competitors (Lumpkin & Dess 2005). Competitive aggressiveness measures were based on those used by Hughes & Morgan (2006). The six items of competitive aggressiveness are shown in the following table 4.5.

Table 4.5
Measurements of Competitive Aggressiveness

Competitive aggressiveness		Source
Our firm		G.Dess& Lumpkin 2005
1	enhance its competitive position by entering markets with drastically lower prices	
2	enhance its competitive position by copying the business practices or techniques of successful competitors	
3	Avoids acting overly aggressive which leads to erosion of firm reputation and retaliation by competitors	
4	maneuvers competitors from time to time	Hughes& Morgan 2006
5	In general, our business takes a bold or aggressive approach when competing	
6	makes timely announcements of new products or technologies	

4.7.2.2.2 Sustainable Competitive Advantage

Sustainable Competitive Advantage (SCA) represents the capability of the firm to accomplish a sequence of temporary advantages over time. Consequently, six items were developed to measure certain performance in comparison to competitors. The comparison of this performance covers numerous aspects more precisely, R&D, managerial capability, profitability, etc... (Chuanpeng et al.2017). Table 4.6 below presents the six items of sustainable competitive advantage.

Table 4.6

Measurement of Sustainable Competitive Advantage (SCA)

Statement		Source
1	The quality of service that my firm offers is better than that of the competitor's services	Yu et al. (2017)
2	My firm is capable of R&D than the competitors	
3	My firm has better managerial capability than the competitors	
4	My firm's profitability is better	
5	The corporate image of my firm is better than that of the competitors	
6	The competitors are difficult to take place of my firm competitive advantage	

4.7.2.2.3.1 Proactive CSR

Proactive CSR is defined as the ethical behavior of the firm that exceeds the requirements of the law. Also, proactive CSR entails proactively supporting the development of society and the environment. Moreover, contributing to the sustainability of the economy (Chang 2015). Proactive CSR is considered as a moderator, and its measurements were adopted from the previous work of Chang, (2015). Table 4.7 below reveals the four items of proactive CSR.

Table 4.7

Statement		Source
Proactive CSR		

1	The company's integrity and ethical behavior go beyond the country's laws and regulations	Chang (2015)
2	The company's employees are required to provide full and accurate information to all customers	
3	The company carries out public activities actively	
4	The company encourages managers and employees to participate in corporate citizenship activities within their local communities	

Measurements of Proactive CSR

4.7.2.2.3.2 Reactive CSR

Reactive CSR is referred to as the ethical behavior of the firm which only meets the law's requirements (Chang, 2015). The measurements of reactive CSR as a moderator variable were adopted from the previous work of Chang (2015), with one item from Groza, (2011) who had a similar operational definition. Table 4.8 below shows the six items of reactive CSR.

Table 4.8

Measurement of Reactive CSR

	Reactive CSR	Source
1	The company carries out public activities to meet social expectations reactively	Chang, (2015)
2	The company complies with environmental regulations reactively	
3	The company responds to customers' requests reactively	
4	The company provides products that at least meet minimal legal requirements	
5	The company's employees provide full information to all customers reactively	
6	The company meets the expectations of the stakeholders	Groza, (2011)

4.7.2.3 Questionnaire Validation

The questionnaire of this study was exposed for both face and content validity. Face validity concerned with assuring that the measures appear superficially valid (Burney,1994). In regards to the face validity, copies of the questionnaire and copies of the research plan were given to some academicians at the college of business Studies-Sudan university for science and technology. The validators have carefully reviewed the measurements to ascertain the appropriateness and adequacy of the instrument. Accordingly, some modifications were made by the validators and then were taken into consideration in the pre-test of the questionnaire. The detailed table of the questionnaire validators is presented in Appendix B.4.

4.7.2.4 Pre-testing of the Questionnaire

The pre-test aims to identify defects in the instrument of data collection by implementing a trail administration for the survey. According to Polit & Hungler, (1995), when the questionnaire is used, it is necessary to determine whether questions are clear to respondents and whether they understand what is required from them. Accordingly, the questionnaire has been pre-tested on a sample of 30 respondents representing various service industries. In order to test the reliability, Cronbach alpha coefficients were calculated for each variable and gauged with the satisfying level of reliability with alpha coefficients of 0.70. The following table 4.8 presents Cronbach alpha coefficients for the study's variables.

Table 4.9
Pretest of the questionnaire: Reliability Result

Reliability Statistics		
Scale	No. of items	Cronbach's Alpha
EO-Innovation	5	0.723
EO-Risk-taking	4	.524
EO- proactiveness	4	.611
EO-Autonomy	5	.740
EO-Competitive	4	.450
Sustainable Competitive Advantage	6	.779
Proactive and Reactive CSR	8	.638

Based on the reliability result, after the pre-test, the ambiguity of some items has been detected. Consequently, the measurements have been modified by adding some more items and paraphrasing some questions. Afterward, the final modified questionnaire was used for collecting the data.

4.7.2.5 Administration of Final Questionnaire

The final draft of the questionnaires was administered directly to the target sample of the study. (175) copies of the questionnaire have been distributed to respondents and later (145) questionnaires were retrieved with a response rate of (82%).

4.8 Data Analysis Techniques

Based on the research objectives and for the purpose of analyzing the data and testing the hypotheses, several statistical techniques were applied using (PLS-SEM) through a computer-based tool (i.e., Smart PLS 3.0). This study utilizes PLS Model (Smart PLS) rather than CB-SEM Model (AMOS) for several reasons. First, according to Kline (2011), the typical sample size in studies where SEM is used is about 200 cases, whereas the sample size in this study is 175 cases. Second, in a situation where a complex model exists, PLS models can be suitable with limited sample sizes, while CB-SEM models might not fit. Finally, one of the main advantages of PLS-SEM over CB-SEM is that PLS-SEM can handle numerous independent variables at the same time, even when these display multicollinearity (Hair et al. 2011). Moreover, the PLS-SEM approach is useful when it comes to predictions and explanations of target constructs (Hair et al. 2014). Accordingly, this study uses Smart-PLS 3.0 software for data analysis, as well as, SPSS 24.0 particularly for data examination and descriptive statistics.

The following subsections present the numerous statistical techniques used to analyze the survey data as follows:

4.8.1 Descriptive Statistics

For the purpose of describing both the responding firms and respondents, frequency and percentage were used. As well as, this study uses descriptive statistics, namely means, standard deviation, maximum and minimum to describe the variables of the study.

4.8.2 Evaluating Measurement Model

This study uses a reflective measurement model. Therefore, according to prior studies, the validation of a reflective measurement model can be established by testing its internal consistency, indicator reliability, convergent validity and discriminant validity (Lewis, Templeton, & Byrd, 2005).

4.8.2.1 Internal Consistency

To evaluate internal consistency, this study uses Composite Reliability (CR). Although traditionally, internal consistency is evaluated through Cronbach's Alpha (CA), in PLS, internal consistency is measured using CR because CR considers that items have different loading. However, this study decides to use both CR and CA. Since CA also provides somehow accurate estimation of internal consistency, therefore, CR will be used as a higher pound and CA as a lower pound for internal consistency. Accordingly, for the establishment of internal consistency, composite reliability should be higher than 0.70, and Cronbach Alpha as a lower bound should be 0.65-0.70 (Hair et al.2017).

4.8.2.2 Indicator reliability

The purpose of measuring Indicator reliability is to evaluate the extent to which a variable is consistent with what it intends to measure. The outer loadings of items should be higher than 0.70. The items with outer loadings between 0.40 and 0.70 should be considered for removal only if the deletion leads to an increase in composite reliability (Hair et al.2017).

4.8.2.3 Convergent Validity

Convergent validity takes two measures that are supposed to be measuring the same variable and shows that they are related to measuring the same variable. (Urbach & Ahleman, 2010). In PLS convergent validity can be evaluated using the value of average variance extracted (AVE). According to Hair et al. (2017), sufficient convergent validity is achieved when the average variance extracted (AVE) value of a variable is higher than 0.5.

4.8.2.4 Discriminant Validity

Discriminant validity tests whether the measurements that are not supposed to be related are actually unrelated. In other words, discriminant validity evaluates whether indicators do not measure something else (Urbach & Ahlemann, 2010). According to Henseler et al., (2015) to measure discriminant validity in PLS, Heterotrait-Monotrait ratio (HTMT) of the correlations should be examined (Hair et al.2017). HTMT is measured as a criterion value which has to be lower than (0.85). As well as, HTMT is measured as a statistical test, and in this case HTMT inference should be with upper internal confidence (<1). Consequently, the fulfillment of the criteria discussed above results in the establishment of discriminant validity (Henseler, et al., 2015).

4.8.3 Correlation Analysis

Correlation measures the strength and direction of a linear relationship between two variables. In addition, correlation is used to detect collinearity among variables of the study. The values of correlation coefficient vary from -1 to $+1$. Hence, exactly $(+1)$ indicates a perfect positive linear relationship and exactly (-1) indicates a negative relationship, whereas (0) Indicates no linear relationship. Subsequently, correlation of 0.30, 0.50 and 0.70 indicate a weak, moderate and strong relationship between variables, respectively. (Clarke-Pearson et al.1988).

4.8.4 Evaluating Structural Model

This phase of analysis is conducted after confirming the validity and reliability of the measurements. The aim of evaluating the structural model is to test the proposed hypotheses. Consequently, five stages are followed to assess the structural model, namely collinearity assessment, the significance of the path coefficients, the coefficient of determination or R^2 value, the f^2 effect size and the predictive relevance Q^2 (Hair,2017). These statistical techniques are discussed in the following chapter.

4.8.4 Multigroup Analysis

Multigroup is a type of moderator analysis where the moderator variable is categorical and is anticipated to potentially affect the relationships between the focal variables of the study. Therefore, Multigroup analysis allows testing whether differences between

group-specific path coefficients are statistically significant. (Hair,2017). As this study proposes several control variables more precisely, Industry type, firm size, firm age, firm ownership, and the number of competitors. Consequently, Multigroup analysis is used in this study to test the differences between these groups and to examine their influence on the main variables of the study.

4.9 Research Ethical Considerations

Conducting research requires not only expertise and skills but also honesty and integrity to acknowledge and protect the rights of others. Therefore, there has to be some basic ethics adopted in any research. Accordingly, in this study, the researcher adheres to ethics by keeping the collected answers strictly confidential. Moreover, the researcher acknowledges the previous literature's work by carefully making references and citations to any quotation, paraphrasing, and summary borrowed from others' work. Additionally, the dishonest conduct in research includes manipulation of data (Brink 1996). Therefore, the researcher tried to avoid any form of dishonesty by providing the dataset to an independent statistician who independently analyzes the data and produces the results to avoid any subjective collaboration.

4.10 Chapter Summary

This chapter covered the research methodology including the research paradigm, approaches, method, and research design. Along with, discussing the study population, sampling, measurements, and the instrument of data collection. Also, this chapter addresses the ethical consideration of research. The next chapter presents the data analysis and findings.

CHAPTER FIVE

DATA ANALYSIS AND FINDINGS

CHAPTER FIVE

DATA ANALYSIS AND FINDINGS

5.0 Chapter Overview

This chapter presents the data analysis and the empirical findings of the study. Consequently, it contains four sections. The first section displays the response rate, data preparation, and descriptive statistics of the target sample. The second section presents the assessment of measurements' validity and reliability. The third section covers the correlation and descriptive statistics of all study's variables. The last section discusses the validation of the structural model and the hypotheses testing.

5.1 Response Rate

Table 5.1 below shows the response rate of the survey. While (175) copies of the questionnaire were distributed to a sample of Sudanese service firms located in Khartoum, (145) questionnaires were retrieved with a response rate of (82%). During the data preparation (19) cases were found to be invalid. Therefore, (126) cases were valid to the analysis. The response rate in this study is considered above the acceptable rate according to Baruch, Y & Holtom, B.C. (2008), the average level of response rate is 52.7 percent in social science.

Table 5.1 Survey Response Rate

Questionnaires	Number	Percent
Distributed	175	%100
Retrieved	145	%82
Unrecalled	15	%8
Excluded	19	%11
Usable	126	%72

5.2 Data Preparation

This section discusses the data preparation process which involves data coding and data examination.

5.2.1 Data Coding

Coding encompasses categorizing the answers to limited groups by assigning numbers to the responses. This process is necessary for efficient analysis. For instance, instead of writing the gender as male or female this variable coded as 1 for male and 2 for female. In the same way, a Likert scale coded as: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree and 5 = strongly agree. This coding is crucial for the analysis as nearly all statistical software understand the numbers easily. For this reason, a codebook contains each variable in the study was produced. Refer to the codebook in Appendix (C1)

5.2.2 Data Examination

Data examination focuses on inspecting the data characteristics, detecting the error and treating the missing responses. This step is necessary to ensure that the data is complete and valid before starting the analysis. Consequently, several steps were taken to validate the data, namely checking the missing data, data normality, common method bias, suspicious response pattern, and outlier loading.

5.2.2.1 Missing Data

When using survey in most of the cases, it occurs that either the respondents forget to answers some questions or their answers are inadequately entered into the analysis software. Hair et al. (2017) stated that when the amount of missing data on a questionnaire exceeds (15%), the observation should be removed from the data set. Accordingly, in this study, the missing value analysis was conducted to clean the data. As a result, the proportion of missing values was less than (10%). Therefore, these missing responses were substituted with a neutral value (generally mean value for the variable) (Hair et al. 2010). See SPSS Output in Appendix(C2).

5.2.2.2 Data Normality

This study uses normality tests to determine whether the data is normally distributed. The value of skewness and kurtosis was between (-1 and 2). Therefore, the dataset is normally distributed; according to George & Mallery (2010), the values for

asymmetry and kurtosis between (-2 and 2) are considered acceptable in order to prove normal distribution. Refer to SPSS Output in Appendix(C2).

5.2.2.3 Common Method Bias

Common method bias (CMB) is a sort of bias happens when there is a variance in the responses caused by the instrument of measurement (MacKenzie, & Podsakoff, 2003). The common method bias (CMB) is examined through collinearity assessment. The variance inflation factor (VIF) should be less than the (3.3) (Hair et al. 2017). In this study, the (VIF) value for all variables was lower than (3). Accordingly, the common method bias is not a contaminant of the research results. See SmartPLS output in Appendix (C3).

5.2.2.4 Suspicious Response Pattern

Suspicious response pattern happens when a respondent marks the same response for a high proportion of the questions, also known as straight lining (Hair et al.2017). In this study, the responses were both inspected visually and through analyzing the standard deviation of the responses per respondent. As a result, two suspicious responses were identified. Therefore, suspicious responses are not severe problem in the dataset of this study. See SPSS Output in Appendix(C4).

5.2.2.5 Outlier Loading

An outlier is an extreme response to particular questions. The outliers can result either from data collection or the entry errors (Hair et al.2017). In this study, insignificant outliers where identified and removed. Refer to SPSS Output in Appendix(C5).

5.3 Firms and Respondents Profile

This section presents the profile of the firms which are the target sample and the unit of analysis. The second half of the section describes the respondents' profile. The respondents represent individuals responding on behalf of their firms.

5.3.1 Firms Profile

Table 5.2 shows the description of the responding firms in five demographic factors namely, (the type of industry, firm size, firm age, firm ownership, and the number of competitors). From the analysis results, it is apparent that the banking industry represent the largest portion of the sample with (30.2%), followed by, insurance (14.3%), telecommunication (1.6%), education (15.1%), airline (5.6%), hotel (14.3%), exchange (3.2%), stock exchange (7.9%) and hospital (7.9%).

The firm size was measured by the numbers of employees working at a particular firm. The result shows that the size of the responding firm ranges between large and small firm. Hence, the largest portion of the sample attributed to firms having more than 150 employees (45.2%), followed by firms with less than 50 employees (36.5%), firms with 51-100 employees (13.5%), and firm with 101-150 employees (4.8%).

Regarding the firm age, almost three-quarters of the sample were firms that incorporated for more than 20 years with (72%), whereas, nearly one-third represented by firms 11-20 (32%). The remaining sample involved firms have been established for less than 5 (9%) and 5-10 (8%), respectively.

In terms of firm ownership, the majority of the responding firms were wholly Sudanese-owned (93%). Foreign-owned firms represent (17.5%) and (9.5%) of firms were joint ventures.

As for the number of competitors, almost above half of the responding firms (57.1%) were competing with more than (15) rivals, followed by firms having (11-15) (18.3%). While firms with (1-5) rivals represented (15.1%) and firms facing the competition of (6-10) were the least portion with (9.5%). See the full SPSS output in Appendix (C6).

Table 5.2
Descriptive Statistic of Firms' Profile

Variables	Categories	Frequency	Percent
Type of Industry	Banking	38	30.2
	Insurance	18	14.3
	Telecommunication	2	1.6
	Education	19	15.1
	Airline	7	5.6
	Hotel	18	14.3
	Exchange	4	3.2
	Stock exchange	10	7.9

	Hospital	10	7.9
Firm Size (Number of Employees)	Less than 50	46	36.5
	51-100	17	13.5
	101-150	6	4.8
	More than 150	57	45.2

Table 5.2 (Continued)

Firm Age	Less than 5	15	11.9
	5-10	8	6.3
	11-20	32	25.4
	More than 20	71	56.3
Firm Ownership	Sudanese-owned	93	73.8
	Joint venture	11	8.7
	Foreign-owned	22	17.5
Number of Competitors	1-5	19	15.1
	6-10	12	9.5
	11-15	23	18.3
	More than 15	72	57.1

5.3.2 Respondents Profile

As can be seen from the table below, the respondents were described in five demographic factors including (Gender, age, job title, qualification, and experience). In regards to gender, almost two-thirds of the respondents were male (61.1%), while (38.1%) of respondents were female.

Surprisingly, nearly two-fifths of the respondents their age was between (20-30) years old, with (39.7%). One-third of the respondents, their age laid between (31-40) with (23%). Nearly one-third were between (41-50) and (51-60) both were (17.5%). The least portion (2.4%) was for the age group more than (60 years old).

Concerning the job title, unexpectedly, three-quarters of the respondents were found to be holding job position other than GM, deputy GM and head of departments (60.3%). Among the respondents (6.3%) were deputy GM, while GM's represent only (4.8) and heads of department (28.6%). Even though the survey was administered directly to the firms' top management, however, it seems that the questionnaires were filled out by the employees.

Regarding qualification, above half of the respondents were holding a bachelor's degree (56.3%), respondents with master's degree were roughly one-third (34.9%), and Ph.D. holders were (4.8%).

Finally, regarding the years of experience, consistent with job title and age, half of the respondents were having less than (10) years of experience (53.2%). Respondents with more than 20 years of experience were roughly one-third (28.6%) and respondents with 10-20 years' experience were (18.3%). See also the full SPSS output in Appendix (C7).

Table 5.3
Descriptive Statistics of Respondents' Profile

Variables	Categories	Frequency	Percent
Gender	Male	77	61.1
	Female	48	38.1
Age	20-30	50	39.7
	31-40	29	23.0
	41-50	22	17.5
	51-60	22	17.5
	more than 60	3	2.4
Job Title	General manager	6	4.8
	Deputy GM	8	6.3
	Head of department	36	28.6
	Other	76	60.3
Qualification	High school	5	4.0
	Bachelor degree	71	56.3
	master degree	44	34.9
	Ph.D.	6	4.8
Experience	less than 10	67	53.2
	10-20	23	18.3
	more than 20	36	28.6

5.4 Measurement Model Assessment

Based on prior literature, the validation of the reflective measurement model can be established by testing its internal consistency, indicator reliability, convergent validity and discriminant validity (Boudreau, & Gefen, 2004). Accordingly, the following subsections present the results of testing the internal consistency, indicator reliability, convergent validity, and discriminant validity.

5.4.1 Internal Consistency

Conventionally, the internal consistency is evaluated by Cronbach's alpha (CA). However, within Smart PLS, internal consistency is measured using composite

reliability (CR). Although both CA and CR measure the same thing (internal consistency), CR takes into account that indicators have different loadings (Hair et al.2017). Nonetheless, a measurement model has satisfactory internal consistency when the composite reliability (CR) of each variable exceeds the value of (0.7) as upper bound and Cronbach's alpha(CA) a little below (0.7) as the lower bound (Hair et al.2017).

Table 5.4 shows that the CR value of each construct ranges from (0.814 to 0.870) and this is above the recommended value. In regards to CA as a lower bound, the values range from (0.658 to 0.815) which are also considered a satisfactory level of internal consistency. See also the SmartPLS output in Appendix (C8).

Table 5.4 Constructs' Internal Reliability

Constructs	Composite Reliability(CR)	Cronbach's Alpha(CA)
Sustainable Competitive Advantage	0.824	0.715
Innovation	0.847	0.760
Proactiveness	0.814	0.658
Risk-taking	0.828	0.690
Autonomy	0.870	0.815
Competitive Aggressiveness	0.845	0.756
Proactive CSR	0.844	0.755
Reactive CSR	0.851	0.769

Note: CR >0.70 CA>0.65

5.4.2 Indicator Reliability

The indicator reliability is measured by examining the items outer loadings. A measurement model is said to have a satisfactory indicator reliability when each item's loading is at least (0.7).

The results obtained from the analysis show that most items loadings exceed (0.70); ranging from a lower bound of (0.705) to an upper bound of (0.846). Consequently, the measurements have demonstrated a sufficient level of indicator reliability. However, there were some items with outer loading between (0.4 and 0.7). Therefore, these items have been removed. More precisely the deleted indicators

include, (2) items belong to SCA construct, (1) item from Autonomy, (1) item from both Innovation and proactive, (2) items from Reactive CSR, (3) items from Risk-taking and (2) items out of Competitive aggressiveness variable. Nevertheless, the deletion of items led to an increase in the value of composite reliability and AVE.

Table 5.5 The Outer Loading of Indicators

Constructs	Items	Outer Loading	Mean	Std. Dev.
Sustainable Competitive Advantage	AdvantageQ2	0.746	1.93	0.671
	AdvantageQ3	0.731	1.921	0.7548
	AdvantageQ5	0.724	1.873	0.7265
	AdvantageQ6	0.735	1.96	0.731
Autonomy	AutonomyQ1	0.755	1.91	0.727
	AutonomyQ2	0.722	1.83	0.682
	AutonomyQ3	0.807	1.96	0.638
	AutonomyQ4	0.792	1.88	0.688
	AutonomyQ5	0.707	1.92	0.722
Innovation	InnovQ1	0.744	1.65	0.673
	InnovQ3	0.768	1.84	0.731
	InnovQ4	0.743	1.94	0.735
	InnovQ5	0.790	1.86	0.756
Proactiveness	ProactQ2	0.705	1.85	0.682
	ProactQ3	0.842	1.98	0.710
	ProactQ4	0.759	1.754	0.6534
Reactive CSR	ReactCSRQ1	0.707	1.960	0.6248
	ReactCSRQ4	0.781	1.78	0.656
	ReactCSRQ5	0.846	1.730	0.6860
	ReactCSRQ6	0.731	1.810	0.6895
Risk-taking	RiskQ3	0.783	2.000	0.6325
	RiskQ5	0.816	1.81	0.629
	RiskQ6	0.754	1.93	0.671
Competitive Aggressive	agressiveQ3	0.742	2.07	0.706
	agressiveQ4	0.766	2.00	0.738
	agressiveQ5	0.794	2.040	0.6974
	agressiveQ6	0.736	1.98	0.681
Proactive CSR	proCSRQ1	0.796	1.905	0.6503
	proCSRQ2	0.743	1.85	0.682
	proCSRQ3	0.719	1.98	0.710
	proCSRQ4	0.776	1.754	0.6534

Note: Outer loading >70

5.4.3 Convergent Validity

The convergent validity refers to the degree to which individual items measure a particular variable converging in comparison to items measuring different variables (Urbach & Ahlemann, 2010). The measurement model's convergent validity in this study is assessed by examining its average variance extracted (AVE). Convergent validity is established when the value of the average variance extracted (AVE) is at least (0.5) (Hair et al.2017). Table 5.2 displays that all variables have AVE value ranging from (0.539 to 0.616) which exceeded the recommended value. Therefore, this result shows that the measurement model has demonstrated an adequate convergent validity. See also SmartPLS output(C9).

Table 5.6 AVE Value

Constructs	Average Variance Extracted (AVE)
Aggressiveness	0.577
Autonomy	0.574
Innovation	0.580
Proactive CSR	0.576
Proactiveness	0.594
Reactive CSR	0.590
Risk-taking	0.616
Sustainable Competitive Advantage	0.539

Note: AVE>.05

5.4.4 Discriminant Validity

Discriminant validity is used to ensure that the measures are different from one another. As appose to convergent validity, discriminant validity assesses whether the items do not unintentionally measure something else (Urbach & Ahlemann, 2010). Henseler et at., (2015) conducted research that critically examined the performance of cross-loadings and the Fornell-Larcker criterion for discriminant validity assessment. They found that neither approach reliably detects discriminant validity. As a remedy, Henseler et al. (2015) propose a new approach to assess discriminant validity in variance-based SEM. This new approach entails assessing the heterotrait-monotrait ratio (HTMT) of the correlations (Hair et al.2017).

Measuring discriminant validity using HTMT involves two steps, namely examining discriminant validity as a criterion and as a statistical test. First, assessing

HTMT as a criterion involves comparing it to a predetermined value. If HTMT's value is greater than (0.85), one can conclude that there is a lack of discriminant validity. Second, using the HTMT as statistical test (which is referred to as HTMT inference). In this case when upper interval confidence (<1); which indicates that the two constructs are empirically different. Then discriminant validity is considered established (Henseler et al. 2015).

Table 5.7 Shows the result of HTMT criterion. The result indicates that the maximum HTMT value is (0.83) and this is below conservative critical HTMT value (0.85) Therefore, one can conclude that the discriminant validity has been established. See also SmartPLS output (C9).

Table 5.7 Heterotrait- Monotrait Ratio (HTMT)

	Aggressiveness	Autonomy	Innovation	Proactive CSR	Proactiveness	Reactive CSR	Risk-taking
Aggressiveness							
Autonomy	0.530						
Innovation	0.682	0.608					
Proactive CSR	0.546	0.485	0.656				
Proactiveness	0.480	0.372	0.554	0.463			
Reactive CSR	0.534	0.527	0.720	0.830	0.499		
Risk taking	0.781	0.544	0.823	0.764	0.616	0.746	
SCA	0.546	0.454	0.627	0.511	0.757	0.590	0.598

Note: HTMT Raito < 0.85

Table 5.8 below presents HTMT inference analysis. The result indicates that the upper confidence interval limit is below value (1.0). Therefore, HTMT inference confirms that all HTMT values are significantly different from (0.1). As a result, discriminant validity has been established.

Table 5.8 HTMT inference

	Upper confidence interval
Aggressiveness -> SCA	0.294
Autonomy -> SCA	0.261

Innovation -> SCA	0.366
Proactive CSR -> SCA	0.212
Proactiveness -> SCA	0.478
Reactive CSR -> SCA	0.318
Risk-taking -> SCA	0.218

Note: HTMT inference < 1.0

5.4.5 Summary of the Assessment of Measurements

Table 5.9 summarizes the results of the reflective measurement model assessment. As can be seen, all model evaluation criteria have been met, providing support for the measures' reliability and validity.

Table 5.9 Summary of Reliability and Validity

Latent variables	Internal consistency reliability		Convergent validity	Discriminant Validity
	Composite Reliability	Cronbach's Alpha	AVE	HTMT
	>0.70	0.60-0.70	>0.50	Confidence interval doesn't include 1
SCA	0.824	0.715	0.539	Yes
Innovation	0.847	0.760	0.580	Yes
Proactiveness	0.814	0.658	0.594	Yes
Risk-Taking	0.828	0.690	0.616	Yes
Autonomy	0.870	0.815	0.574	Yes
Co. Aggressiveness	0.845	0.756	0.577	Yes
Proactive CSR	0.844	0.755	0.576	Yes
Reactive CSR	0.851	0.769	0.590	Yes

Note: CR>0.70 CA>60 AVE>5 HTMT<1

5.5 Descriptive Statistics of Variables

Table 5.10 below depicts the result of the descriptive analysis. The mean, standard deviation, minimum value and maximum value of each variable were measured using SPSS.24.0. The descriptive statistics show that Sudanese service firms give more attention to competitive aggressiveness (mean=2.02, Standard deviation=

0.706), followed by risk-taking (mean=1.91, standard deviation=0.644). proactiveness scores (mean=1.9, standard deviation = 0.682). Autonomy scores (mean=1.9, standard deviation=0.691). innovation acquires least scores (mean=1.82, standard deviation=0.724). With regards to proactive and reactive CSR, Sudanese service firms have a little or no concern given to proactive CSR and reactive CSR (mean=1.9, standard deviation, 0.674), (mean=1.82; standard deviation=0.664), respectively. Concerning sustainable competitive advantage, it appears that Sudanese service firms have below average level of SCA (mean=1.92, standard deviation= 1.92). See also SPSS output in Appendix(C10).

Table 5.10
The Descriptive Statistics for All Indicators.

Variables	Mean	Standard Deviation
Innovation	1.82	0.724
Proactiveness	1.9	0.682
Risk taking	1.91	0.644
Autonomy	1.9	0.691
Aggressiveness	2.02	0.706
Proactive CSR	1.9	0.674
Reactive CSR	1.82	0.664
Sustainable competitive advantage	1.92	0.721

Note: 5-point Likert scale ranging from strongly disagree=1, straggly agree= 5.

5.6 Correlation Analysis

Table 5.11 below shows the correlation matrix involving all variables of the study. Pearson's correlation coefficient aims to preliminary measure the association between variables of the study. The correlation analysis provides information about the magnitude of correlation, as well as the direction of the relationship. Furthermore, inspecting the multicollinearity among variables. As shown in table 5.11 there is no correlation closer to 1.0 or near 0.9. Therefore, there is no high inter-association among the independent variables in the dataset of the study.

Table 5.11 also exhibits that the correlation between all the independent variables and sustainable competitive advantage are positive and medium. More precisely, the correlation between competitive aggressiveness and SCA= (0.410), autonomy and SCA= (0.352), innovation and SCA= (0.476), Proactiveness and SCA

=0.524), risk-taking and SCA= (0.424), proactive and reactive CSR and SCA= (0.379), (0.448), respectively.

Table 5.11 Person Correlation Coefficient for All Variables

	Aggressiveness	Autonomy	Innovation	Proactive CSR	Proactiveness	Reactive CSR	Risk taking	SCA
Aggressiveness	1.000							
Autonomy	0.415	1.000						
Innovation	0.520	0.476	1.000					
Proactive CSR	0.413	0.389	0.490	1.000				
Proactiveness	0.337	0.271	0.386	0.330	1.000			
Reactive CSR	0.419	0.424	0.549	0.640	0.361	1.000		
Risk taking	0.565	0.404	0.591	0.559	0.410	0.534	1.000	
Sustainable Competitive Advantage	0.410	0.352	0.476	0.379	0.524	0.448	0.424	1.000

Note: Multicollinearity <1

As correlation analysis in table 5.11 above confirms the presence of the positive relationship between variables, the next step is to assess the structural model and test the proposed hypotheses through path coefficient analysis.

5.7 Assessment of Structural Model

After it has been confirmed that the construct measures are reliable and valid, the next stage discusses the assessment of the structural model results. This assessment involves examining the influence of independent variables on the dependent variable to determine whether the hypotheses proposed are supported by the data (Urbach & Ahlemann, 2010).

Note that goodness-of-fit measures used in CB-SEM are not completely transferrable to PLS-SEM. However, recent research has brought forward various model fit criteria (Hair et al.2017). Instead of assessing goodness-of-fit, the model is assessed in terms of how well it predicts the dependent variables (Hair et al. 2014). The

Omain criteria for assessing the structural model in PLS-SEM are as follows: (step 1) the Collinearity assessment, (Step 2) significance of the path coefficients, (Step 3) the level of the R^2 values, (Step 4) the f^2 effect size and (Step 5) the predictive relevance Q^2 (Hair,2017).

5.7.1 Collinearity Assessment

Collinearity is evaluated by examining each set of items in the structural model for collinearity. Each variable's tolerance (VIF) value should be lower than (5); Otherwise, variables are eliminated or merged into a single variable (Hair et al. 2017). As can be seen in table 5.12 below, all VIF values are clearly below the threshold of (5.0). As a result, collinearity among variables is not a serious concern in the structural model.

Table 5.12 VIF Values in the Structural Model

Constructs	Sustainable Competitive Advantage
Aggressiveness	1.658
Autonomy	1.423
Innovation	1.964
Proactive CSR	1.94
Proactiveness	1.281
Reactive CSR	2.025
Risk-taking	2.090

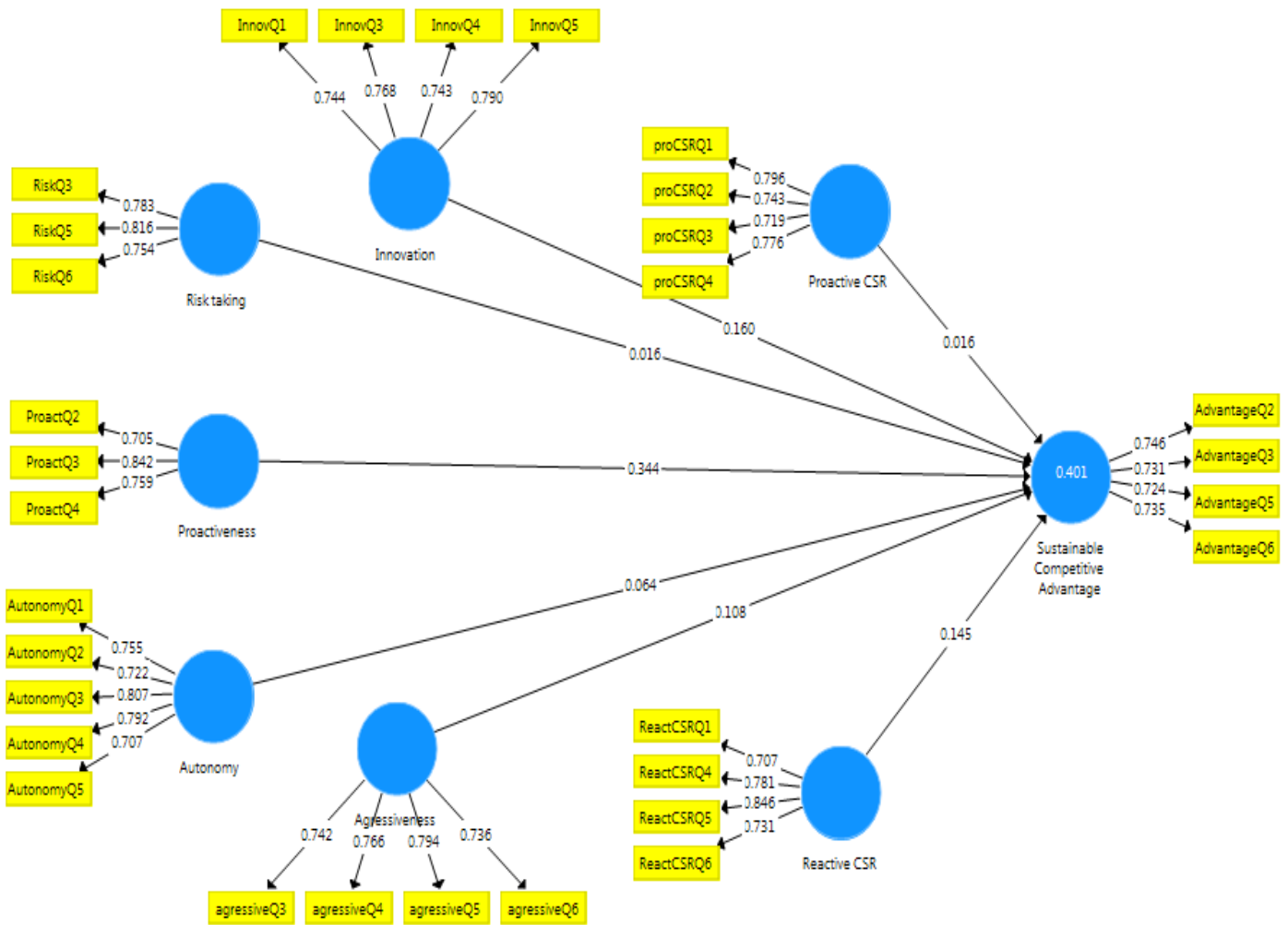
Note: VIF <5.0

5.7.2 Coefficient of Determination (R2 Value)

The R^2 value refers to the amount of variation in the dependent variables which is explained by the independent variables. Therefore, a larger R^2 value increases the predictive ability of the structural model. According to Hair et al. (2017), in general, R^2 values of (0.75, 0.50, or 0.25) for the dependent variable can be reported as respectively substantial, moderate, and weak.

Based on figure 5.1 below, innovation, proactiveness, risk-taking, autonomy, competitive aggressiveness and proactive and reactive CSR are able to explain (40.1%) of the variance in Sustainable competitive advantage (SCA). As a result, the R2 values of Sustainable competitive advantage (0.401) can be considered moderate.

Concerning the relative importance of all the independent variables to



Sustainable Competitive Advantage, proactiveness is the most important variable (0.344), followed by innovation (0.160), proactive CSR (0.145), competitive aggressiveness (0.108), autonomy (0.064), risk-taking (0.016) and reactive CSR (0.16). See also the full SmartPLS output (C11).

Figure 5.1: Model's Coefficient of Determination (R2)

5.7.3 Path Coefficient

In the structural model, each path connecting two latent variables represents a hypothesis. Based on the assessment of the path coefficient, each hypothesis can be accepted or rejected.

5.7.4 Hypotheses Testing

This section presents the findings of the proposed hypotheses. In order to validate the structural model and test the hypotheses. Based on previous studies the path coefficients should exceed (0.100) to account for a particular impact within the model with T- Statistics value (> 1.96) and at the significant level (0.05) (Hair et al. 2014). The following three subsections involve testing the influence of EO on SCA, examining the moderator and discussing the control variables, respectively.

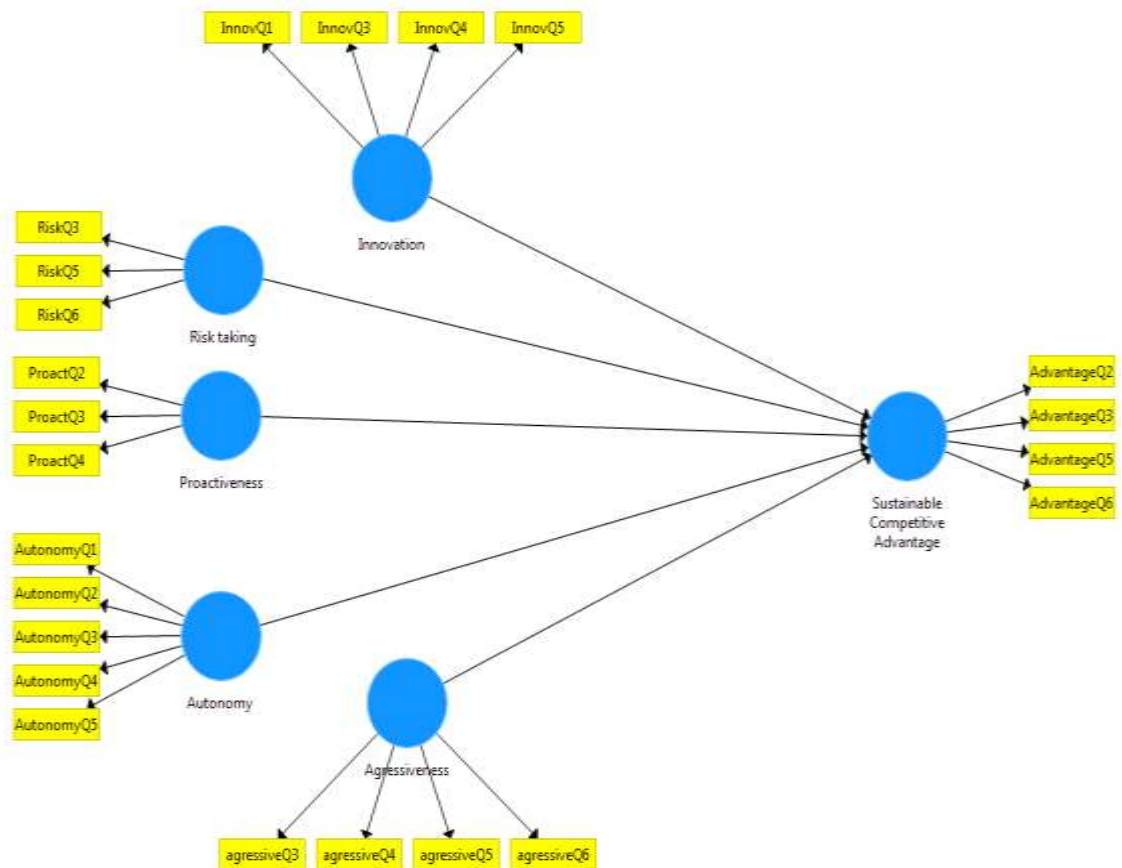
5.7.4.1 Entrepreneurial Orientation and Sustainable Competitive Advantage

This subsection addresses result of the influence of EO including five dimensions (i.e., Innovation, Proactiveness, Risk-taking, Autonomy and competitive aggressiveness) on sustainable competitive advantage (unidimensional). Figure 5.2 illustrates the proposed hypotheses.

Figure 5.2: H.1 The Influence of EO On SCA

Based on **figure 5.3** below, innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness as independent variables are able to explain (38.8%) of the variance in Sustainable competitive advantage (SCA). With regards to sustainable competitive advantage, it can be seen that among the five independent variables, proactiveness has the strongest total effect on SCA (0.359), followed by innovation (0.204), aggressiveness (0.117), autonomy (0.087), and risk-taking (0.056).

Figure 5.3: The Result of H1 (EO--> SCA)



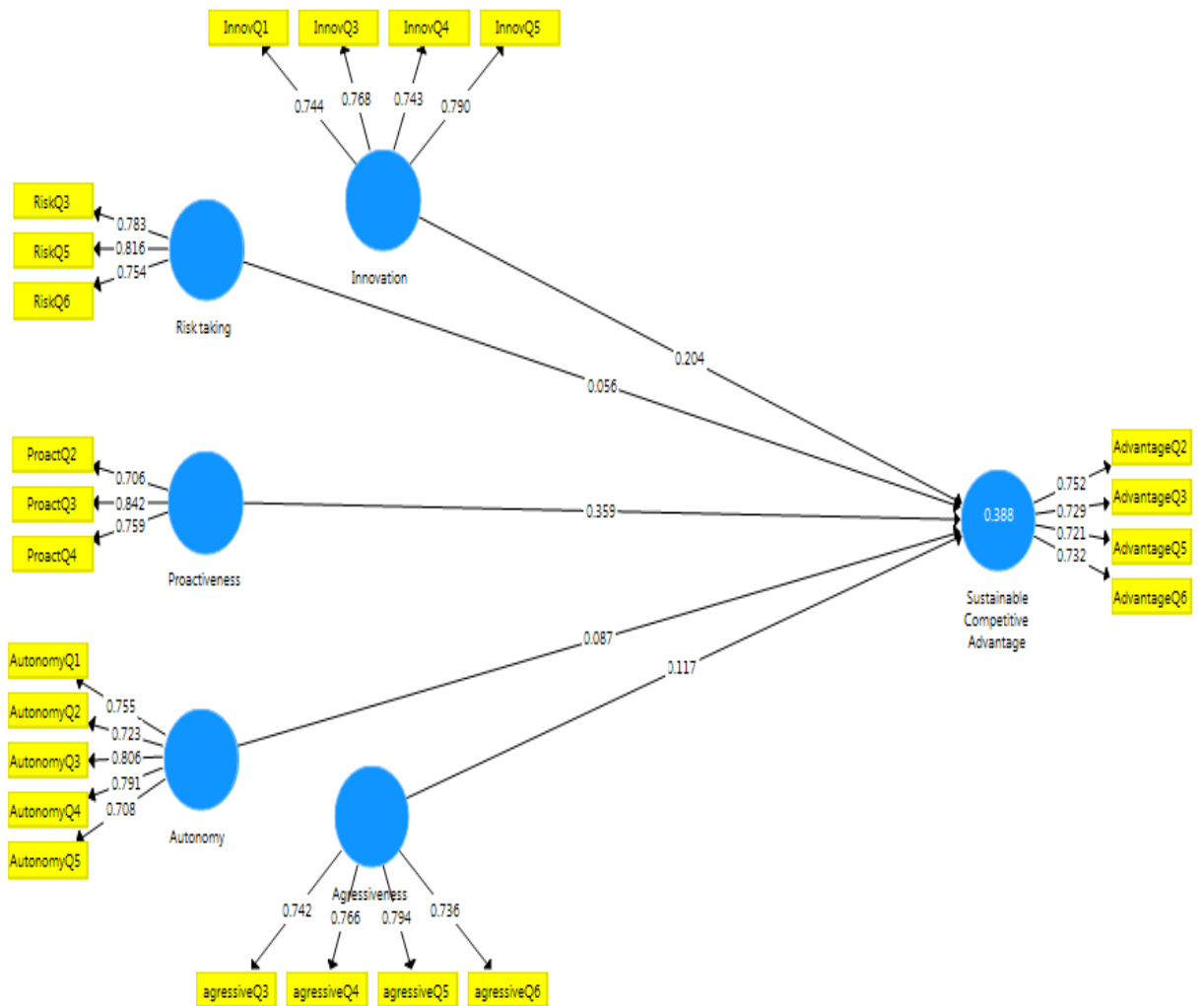


Table 5.13 below provides a summary of the path coefficient estimates, T-values, P-values. It can be seen from the table that all criteria come to the same outcome for the significance of path coefficients.

Table 5.13 Path Coefficients, T- Statistics, Significant Level for All Hypothesized Paths

Hypothesis	Path coefficient	T Statistics	P-values	Significance (p<0.05)
Aggressiveness -> SCA	0.117	1.102	0.271	No
Autonomy -> SCA	0.087	0.945	0.345	No

Innovation -> SCA	0.204	2.189	0.029	Yes
Proactiveness -> SCA	0.359	4.392	0.000	Yes
Risk taking -> SCA	0.056	0.547	0.585	No

Note : Path > 0.1 T > 1.96 P-value < 0.05

Based on table 5.13 above and Smart PLS output in the appendix(C12) the hypotheses results are summarized as follows:

5.7.4.1.1 Innovation and Sustainable Competitive Advantage

The analysis shows that sustainable competitive advantage is influenced by innovation. As a result, the hypothesis H.1.1 is supported (i.e., Innovation has a positive influence on SCA) ($\beta=0.204$, $T= 2.189$, $P= 0.029$).

5.7.4.1.2 Proactiveness and Sustainable Competitive Advantage

From the analysis, sustainable competitive advantage is influenced by proactiveness. As a consequence, the hypothesis H.1.2 is supported (i.e., proactiveness has a positive influence on SCA) ($\beta=0.359$, $T= 4.392$, $P= 0.000$).

5.7.4.1.3 Risk-taking and Innovation and Sustainable Competitive Advantage

Based on the analysis, Sustainable Competitive Advantage is not positively influenced by risk-taking, therefore, the hypothesis H.1.3 is not supported (i.e., Risk-taking has a negative influence on SCA) ($\beta=0.056$, $T= 0.547$, $P= 0.585$).

5.7.4.1.4 Autonomy and Sustainable Competitive Advantage

The analysis shows that sustainable competitive advantage is not positively influenced by autonomy. Accordingly, the hypothesis H.1.4 is not supported (i.e., Autonomy has a negative influence on SCA) ($\beta=0.087$, $T= 0.945$, $P= 0.345$).

5.7.4.1.5 Competitive Aggressiveness and Sustainable Competitive Advantage

The result displays that sustainable competitive advantage is not positively influenced by competitive aggressiveness. Therefore, the hypothesis H.1.5 is not supported (i.e., Competitive aggressiveness has a negative influence on SCA) ($\beta=0.117$, $T= 1.102$, $P= 0.271$).

5.8 Effect Size f2

The effect size f2 allows assessing the independent variables' contribution to the dependent variable's R2 value. F2 values of (0.02, 0.15, and 0.35) indicate that an independent variable has small, medium, or substantial effect on a dependent variable.

Table 5.14 below shows the f2 values for the dependent variable (represented by the columns) and corresponding independent variables (represented by the rows). The result shows that proactiveness has a medium effect size of (0.154) on sustainable competitive advantage. Innovation has a small effect on sustainable competitive advantage (0.022). On the contrary, aggressiveness (0.012), autonomy (0.005), risk-taking (0), proactive CSR (0) and reactive CSR (0.017) have no effect on sustainable competitive advantage. See also SmartPLS in Appendix (C13).

Table 5.14 f2 Effect Sizes

Constructs	SCA	Effect Size
Aggressiveness	0.012	Has no effect
Autonomy	0.005	Has no effect
Innovation	0.022	Small
Proactive CSR	0	Has no effect
Proactiveness	0.154	Medium
Reactive CSR	0.017	Has no effect
Risk-taking	0	Has no effect

Note: 0.02=Small 0.15=Medium and Large= 0.35

5.9 The Predictive Relevance (Q2 Value) of the Path Model

When a PLS path model displays a predictive relevance, it accurately predicts data not used in the model estimation. In the structural model, Q2 value greater than zero for a specific reflective dependent variable indicates the path model's predictive relevance for particular independent variables (Hair et al.2017).

Table 5.15 shows the sum of the squared observations, SSE the sum of the squared prediction errors, and the last column Q2 value (1 – SSE/SSO) which is interpreted to judge the model's predictive relevance concerning the dependent variable. As can be seen, the Q2 value of the dependent variable is considerably above

zero, more precisely = (0.188). This result provides explicit support for the model's predictive relevance.

Table 5.15 Q² Values

Constructs	SSO	SSE	Q² (=1-SSE/SSO)
Aggressiveness	504	504	
Autonomy	630	630	
Innovation	504	504	
Proactive CSR	504	504	
Proactiveness	378	378	
Reactive CSR	504	504	
Risk-taking	378	378	
Sustainable Competitive Advantage	504	409.316	0.188

Note: Q² > Zero

5.10 Moderating Effect

The moderation refers to a situation in which the relationship between two variables is not consistent but is contingent on a third variable. The moderator changes the strength or even the direction of a relationship between two variables in the model. The moderating effect was performed using the two-stage approach. According to Hair et al. (2017), If the independent variables are measured reflectively, and the objective of the analysis is to determine whether or not the moderator has a significant effect on the relationship between the variables, if this is the case, the two-stage approach is preferred. Accordingly, this study follows three steps in testing the moderating effect.

The first step involves testing the size of the moderating in order to assess whether the interaction path(M*IV) has a positive effect on (DV). Along with, assessing the simple direct effect of (IV) on (DV). Jointly, these results would assess the relationship according to the three stances which are:

- The relationship between (DV) and (IV) for an average level of the moderator (Status quo of the path value).
- The relationship between (DV) and (IV) for higher levels of the moderator, increases by the size of the interaction term (value of direct effect path + value of interaction path).

- The relationship between (DV) and (IV) for lower levels of the moderator, decreases by the size of the interaction term (value of direct effect path - value of interaction path).

The second step entails assessing whether the interaction term is significant by looking at P-value (>0.05) for the path linking the interaction term ($M*IV$) and (DV). This result somewhat would differ from the direct effect path (IV) (>0.05) due to the random nature of the bootstrapping process (Hair et. al., 2017).

According to Hair et al. (2017) understanding the interpretation of moderation results is often quite challenging. For this reason, a graphical illustration of results is used to support the understanding and draw the conclusions. Consequently, a common way to illustrate the results of a moderation analysis is by using the simple slope plot which is introduced in the third step.

The third step includes drawing the conclusion of moderating effect through simple slope plot proposed by Dawson and Richter (2006). This simple slope plot combines the path values of (IV- \rightarrow DV), moderator (M- \rightarrow DV) and the interaction path ($M*IV\rightarrow$ DV). Therefore, the simple slope plot summarizes the confirmation or disconfirmation of the proposed hypothesis.

Note that the steps mentioned above are followed in testing all the moderating effects. The first hypothesis result is interpreted in details to pave the way for summarizing the remaining results.

5.10.0 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between EO and SCA

This second main hypothesis involves two sub-hypotheses. First, the moderating effect of proactive CSR on the relationship between EO (i.e., Innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness) and SCA. Second, the moderating effect of reactive CSR on the relationship between EO (i.e., Innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness) and SCA.

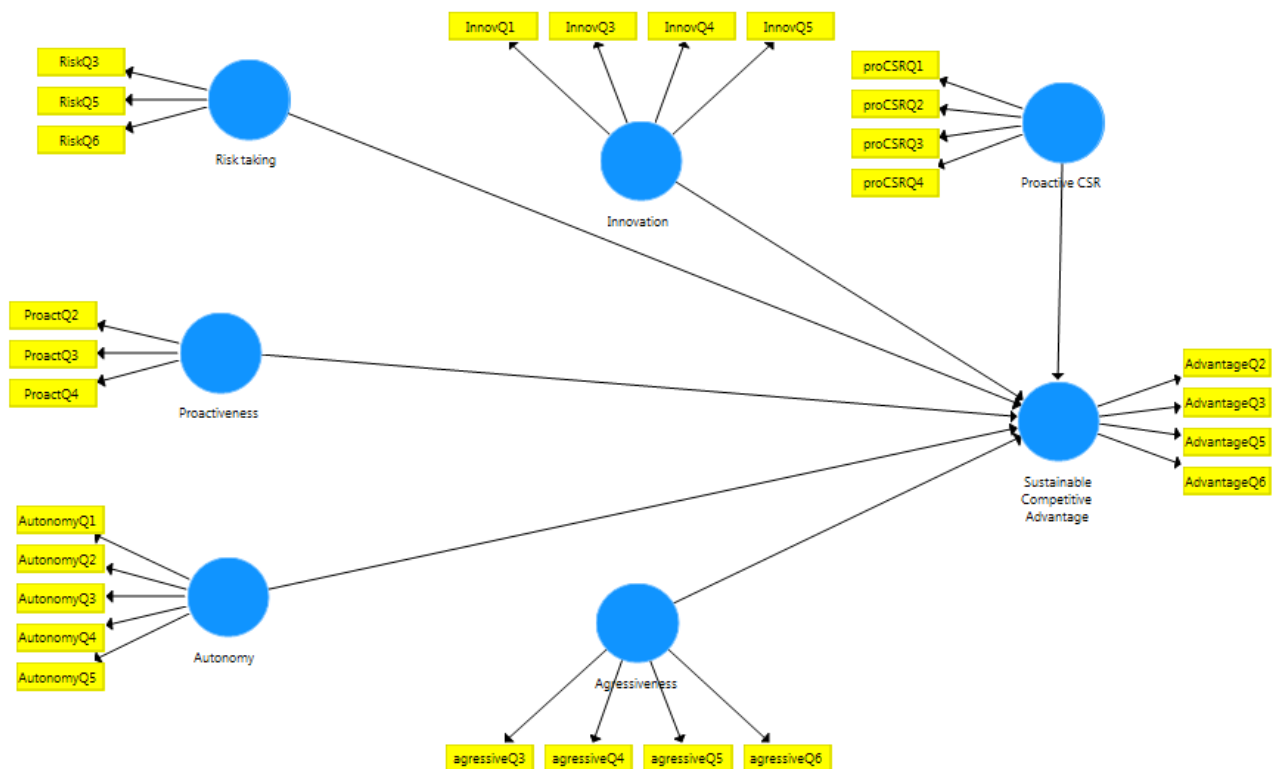
5.10.1 The Moderating Effect of *Proactive CSR* On the Relationship Between EO and SCA

This subsection addresses the result of the moderating effect of proactive CSR on the relationship between EO (Innovation, proactiveness, risk-taking, autonomy and competitive aggressiveness) and sustainable competitive advantage (unidimensional).

Figure 5.4: H.2.1 The Moderating Effect of Proactive CSR

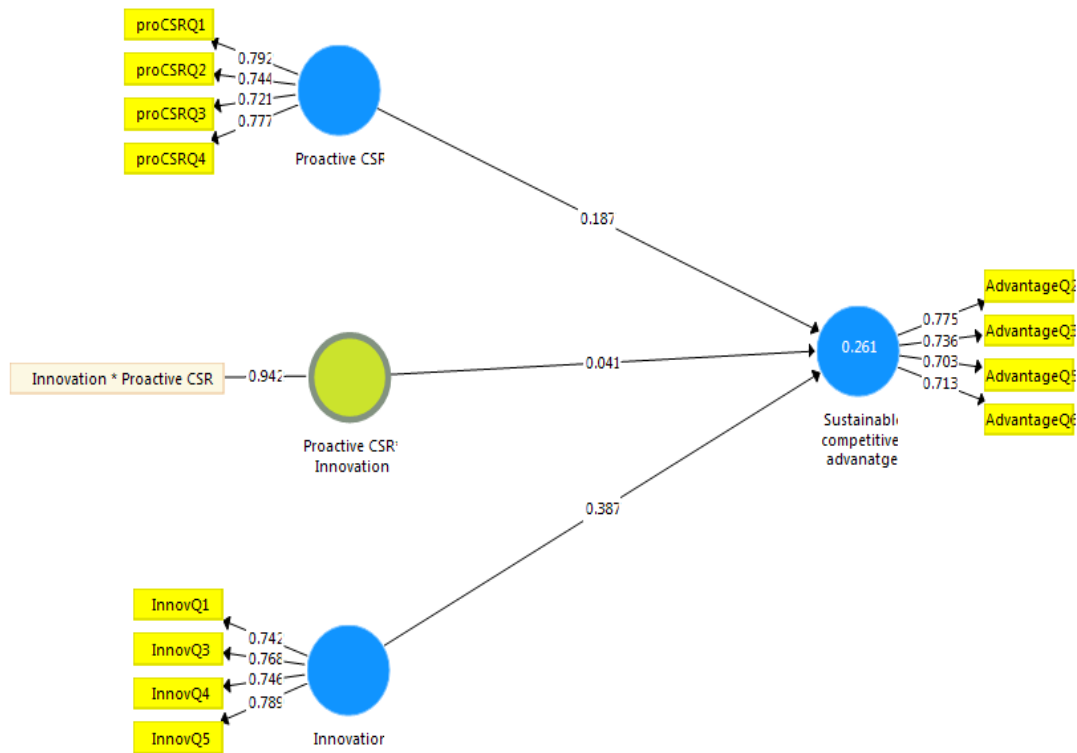
5.10.1.1 The Moderating Effect of Proactive CSR on Innovation->SCA

Based on figure 5.5 below, innovation and proactive CSR can explain (26.1%) of the variance in Sustainable competitive advantage (SCA). Regarding the size of the moderating effect as shown in figure 5.5, the interaction term has a positive effect on SCA = (0.041), whereas the simple effect of innovation on SCA = (0.387). Jointly, these results suggest that the relationship between innovation and SCA = (0.387), for an average level of proactive CSR. For higher levels of Proactive CSR, the relationship between innovation and SCA increases by the size of the interaction term (0.387 +



0.041 = 0.428). On the contrary, for lower levels of proactive CSR, the relationship between innovation and SCA becomes (0.467 - 0.071 = 0.396).

Figure 5.5 The Result of H.2.1.1 (Innovation* Proactive CSR -> SCA)



Based on table 5.16 below, to determine whether the interaction term is significant, the analysis reveals that P-value for the path linking the interaction term and SCA = **(0.633)**. However, this result differs from the direct effect path (path linking Innovation and SCA) = **(0.000)**. This variation is due to the bootstrapping randomness. Overall, these results provide clear support that proactive CSR has a significant positive effect on the relationship between innovation and SCA. Thus, the higher the innovation, the stronger the relationship between EO and SCA.

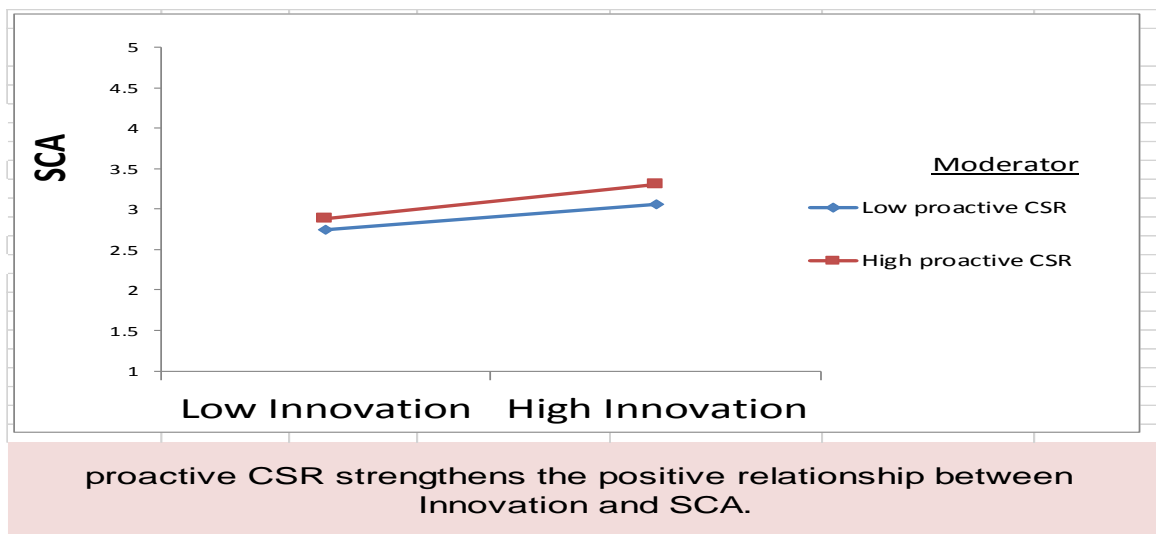
Table 5.16 Path Coefficients, Observed T- Statistics, Significant Level for H.2.1.1

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Innovation -> SCA	0.387	0.395	0.098	3.965	0.000
Proactive CSR -> SCA	0.187	0.200	0.107	1.751	0.081
Proactive CSR* Innovation -> SCA	0.041	0.034	0.086	0.477	0.633

Note : Path > 0.1 T > 1.96 P-value < 0.05

As portrayed in figure 5.6 below, the simple slope plot shows that the upper line represents a high level of the moderator variable (proactive CSR), while the lower line represents a low level of the moderator variable (proactive CSR). As a result of calculating the path values for all variables shown in the table 5.16 above, the simple slope plot reports that higher proactive CSR levels lead to a stronger relationship between innovation and SCA, while lower levels of proactive CSR lead to a weaker relationship between innovation and SCA.

Figure 5.6 Simple Slope Plot for H.2.1.1(Innovation*Proactive CSR->SCA)



5.10.1.2 The Moderating Effect of Proactive CSR on Proactiveness->SCA

Figure 5.7 below shows that proactiveness and proactive CSR can explain (33.2%) of the variance in Sustainable competitive advantage (SCA). As for the size of the moderating effect, the interaction term has a negative effect on SCA = (-0.104), whereas the simple effect of proactiveness on SCA = (0.430).

Figure 5.7: The Result of H.2.1.2 (Proactiveness*Proactive CSR ->SCA).

Based on table 5.17 below, the analysis reveals that the P-value for the path linking the interaction term and SCA= **(0.005)**. However, this result varies from the direct effect (path linking innovation and SCA) = **(0.000)**.



Table 5.17 Path Coefficients, T- Statistics, Significant Level for H.2.1.2

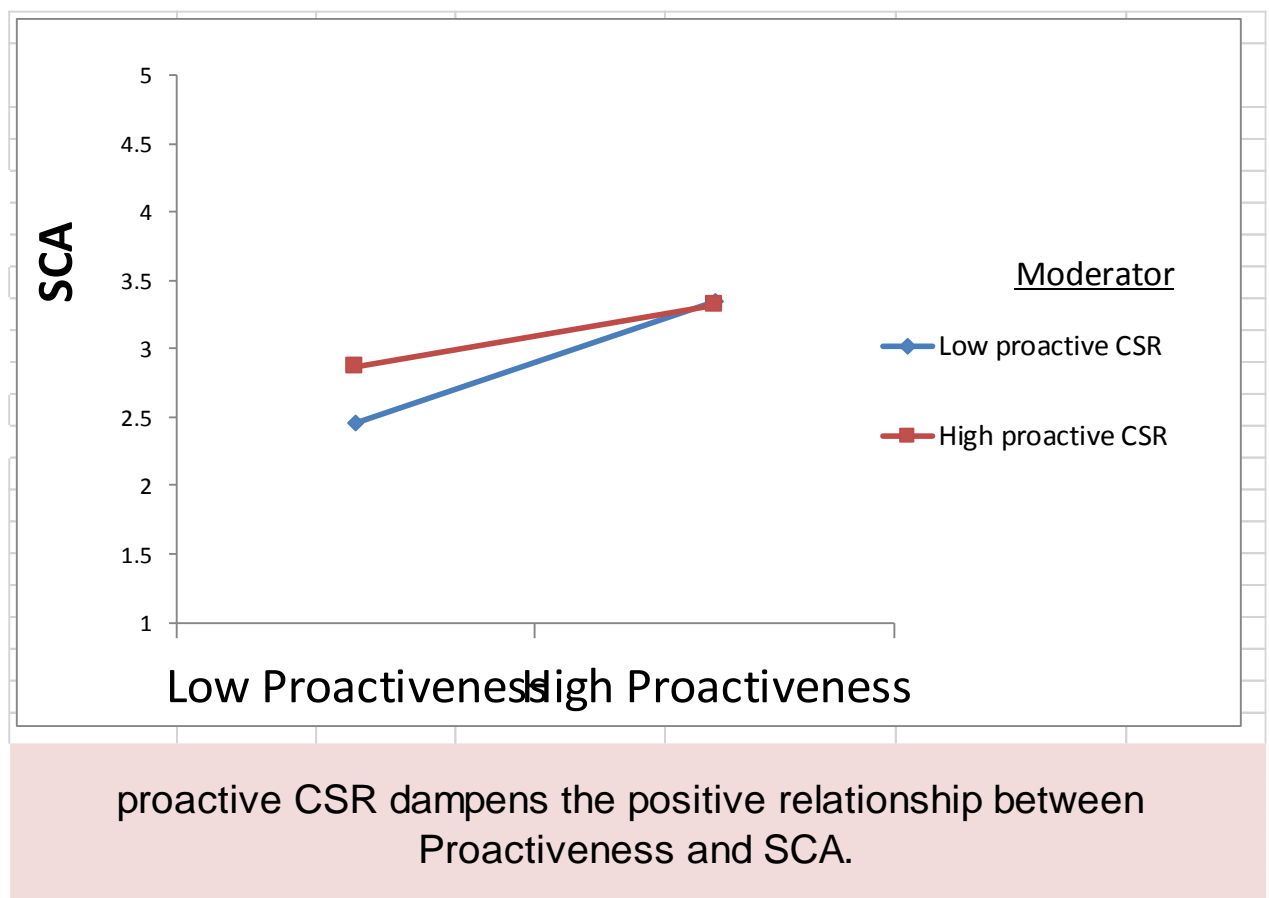
	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Proactive CSR* Proactiveness -> SCA	-0.104	-0.104	0.082	5.264	0.005

Proactive CSR -> SCA	0.258	0.267	0.087	2.954	0.003
Proactiveness -> SCA	0.430	0.434	0.074	5.805	0.000

Note : Path > 0.1 T > 1.96 P-value < 0.05

As described in figure 5.8 below, the simple slope plot shows that higher proactive CSR levels lead to a weaker relationship between proactiveness and SCA, while lower levels of proactive CSR lead to a stronger relationship between proactiveness and SCA.

Figure 5.8 Simple Slope Plot for H.2.1.2



5.10.1.3 The Moderating Effect of Proactive CSR on Risk-taking->SCA

Based on figure 5.9 below, risk-taking and proactive CSR can explain (23.6%) of the variance in Sustainable competitive advantage (SCA). With regards to the size of the moderating effect, as shown in figure 5.9, although the interaction term has a

negative effect on SCA= (-0.147), the simple effect of risk-taking on SCA is positive = (0.346).

Figure 5.9: The Result of H.2.1.3 (Risk-taking*Proactive CSR->SCA).

As shown in table 5.10 below, despite the fact that P-value for the path linking the interaction term and SCA = **(0.125)**, this result contrasts the direct effect (path linking risk-taking and SCA) = **(0.000)**.

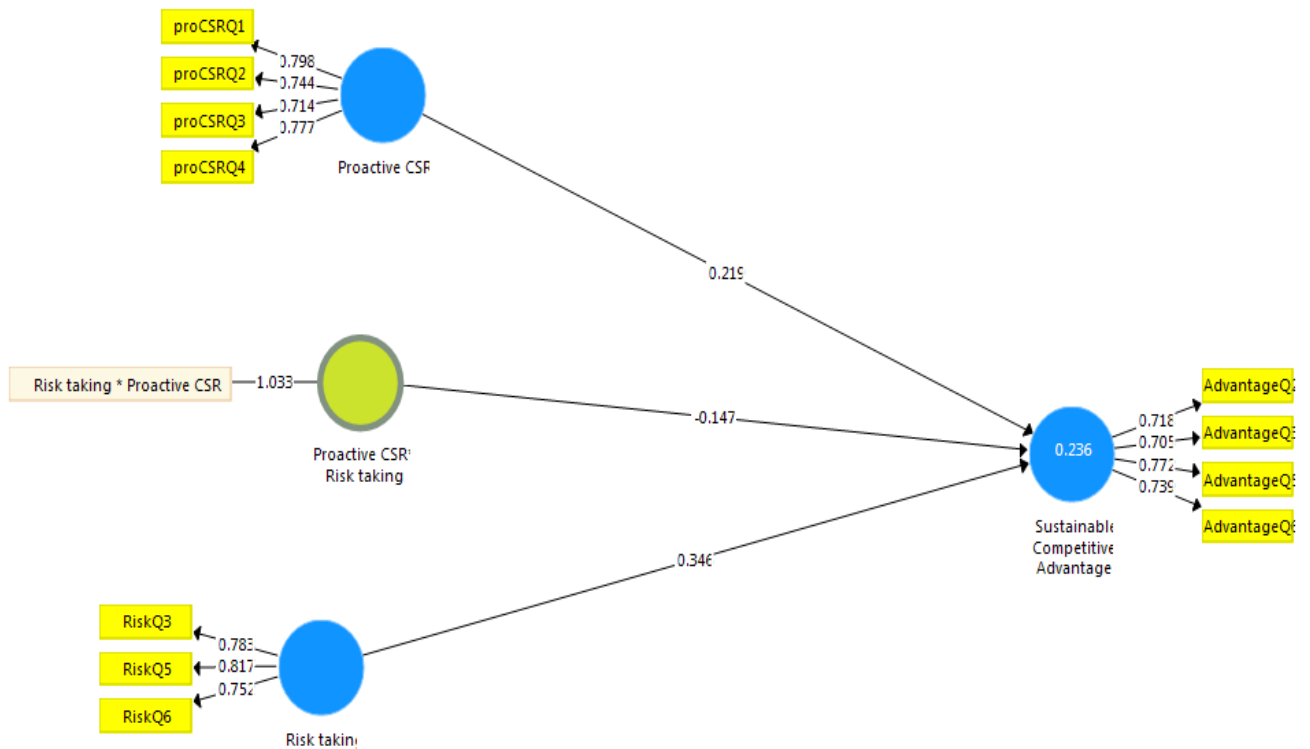


Table 5.18 Path Coefficients, T- Statistics, Significant Level for H.2.1.3

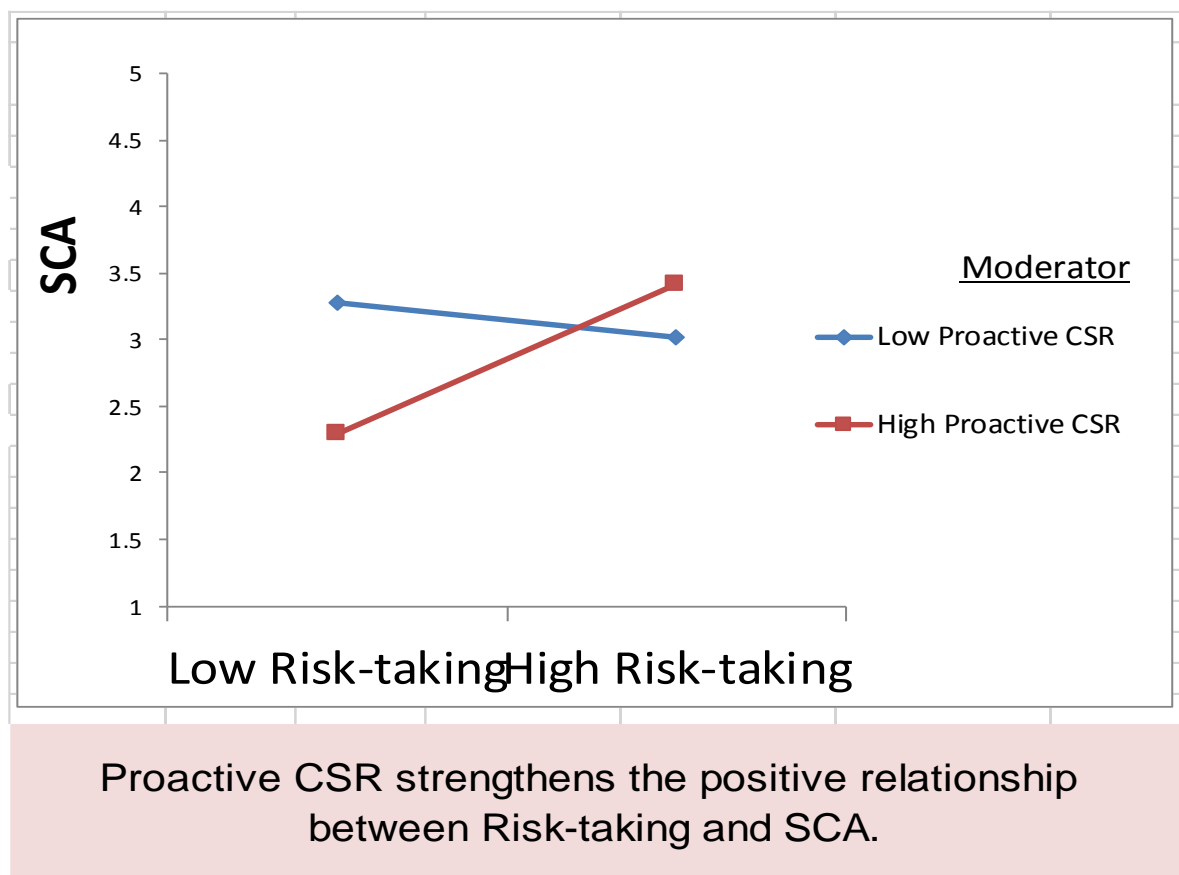
	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Proactive CSR -> SCA	0.219	0.245	0.097	2.263	0.024

Proactive CSR* Risk taking -> SCA	-0.147	-0.146	0.096	1.537	0.125
Risk taking -> SCA	0.346	0.350	0.090	3.854	0.000

Note : Path > 0.1 T > 1.96 P-value < 0.05

As presented in figure 5.10 below, the simple slope plot exhibits that the higher the proactive CSR, the stronger the relationship between risk-taking and SCA, whereas lower levels of proactive CSR lead to a weaker relationship between risk-taking and SCA.

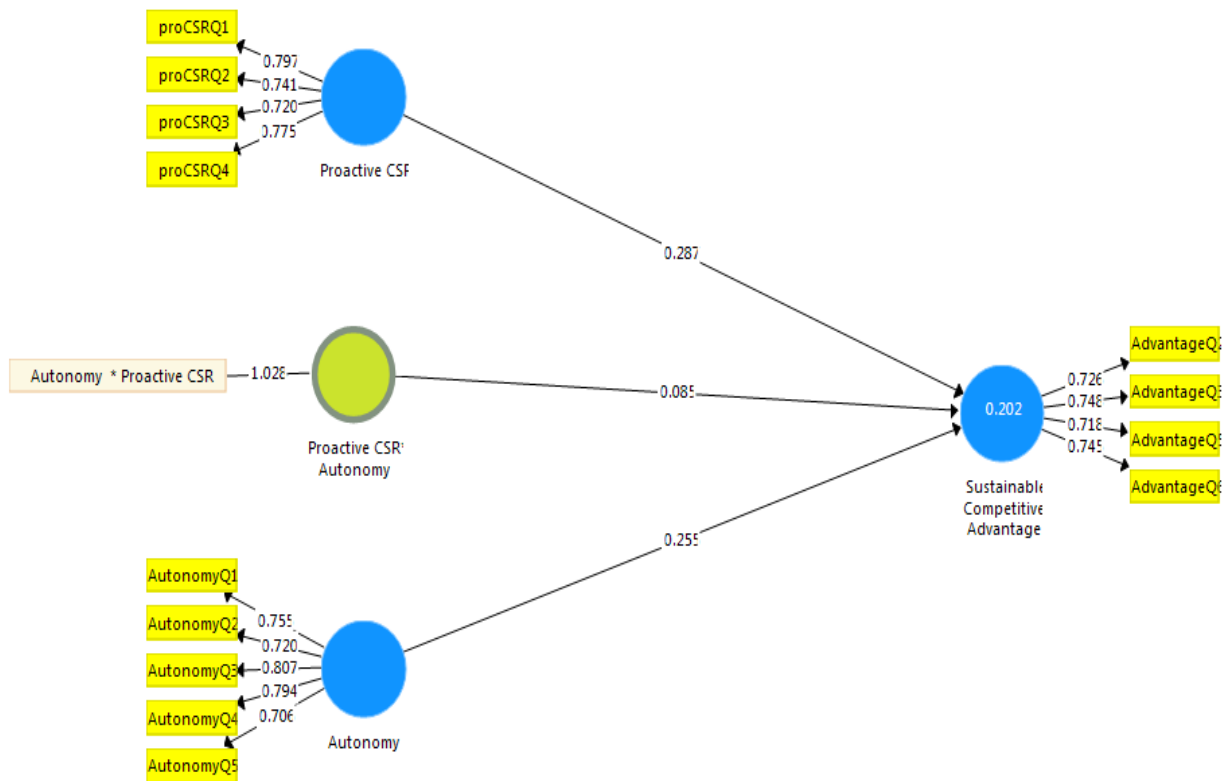
Figure 5.10: Simple Slope Plot for H.2.1.3



5.10.1.4 The Moderating Effect of Proactive CSR on Autonomy->SCA

Based on figure 5.11 below, autonomy and proactive CSR can explain (20.2%) of the variance in sustainable competitive advantage (SCA). As regards the size of the moderating effect, as shown in figure 5.11, the interaction term has a positive effect on SCA = (0.085), likewise, the simple effect of autonomy on SCA = (0.255).

Figure 5.11: The Result of H.2.1.4 (Autonomy*Proactive CSR ->SCA).



As presented in table 5.5 below, although, P-value for the path linking the interaction term and SCA = (**0.428**), this result is in opposition to the direct effect (path linking autonomy and SCA) for the path linking the interaction term and SCA. And = (**0.015**).

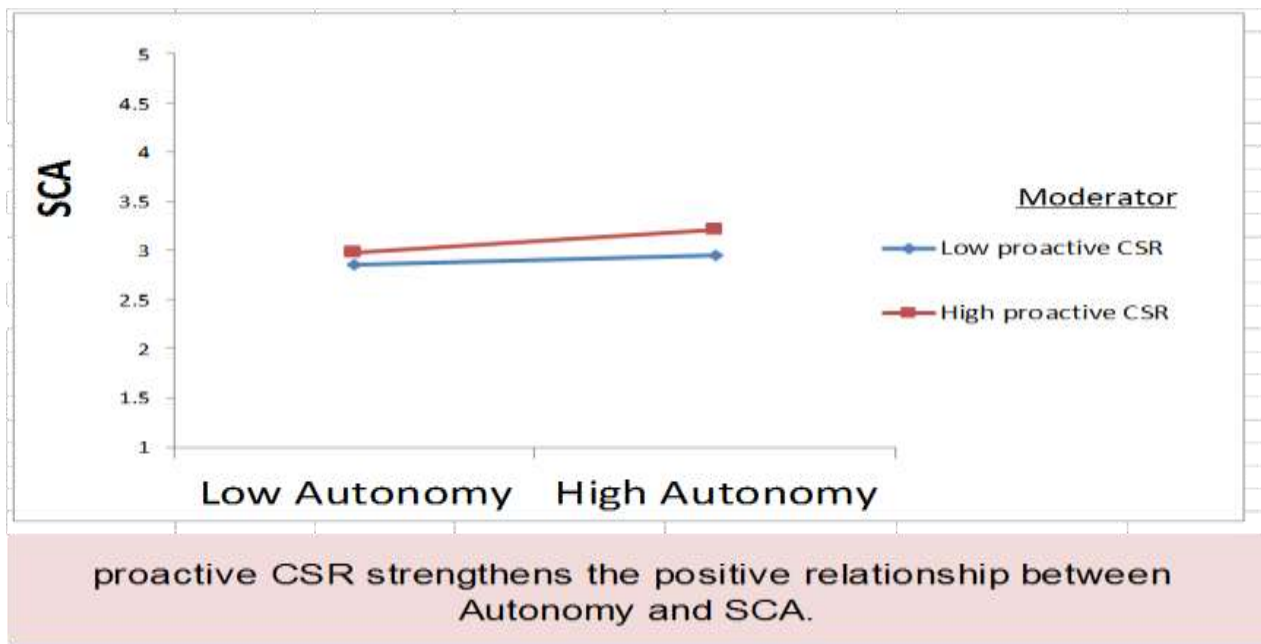
Table 5.19 Path Coefficients, T- Statistics, Significant Level for H.2.1.4

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Autonomy -> SCA	0.255	0.251	0.105	2.435	0.015
Proactive CSR -> SCA	0.287	0.315	0.095	3.010	0.003
Proactive CSR* Autonomy -> SCA	0.085	0.083	0.107	0.793	0.428

Note : Path > 0.1 T > 1.96 P-value < 0.05

As portrayed in figure 5.12 the simple slope plot reveals that higher levels of proactive CSR lead to a stronger relationship between autonomy and SCA; conversely, lower levels of proactive CSR lead to a weaker relationship between autonomy and SCA.

Figure 5.12: Simple Slope Plot for H.2.1.4



5.10.1.5 The Moderating Effect of Proactive CSR on Competitive Aggressiveness - >SCA

As can be seen in figure 5.13, competitive aggressiveness and proactive CSR are able to explain (23.9%) of the variance in Sustainable competitive advantage (SCA). Although, the interaction term has a negative effect on SCA= (-0.120), the simple effect of competitive aggressiveness on SCA is positive = (0.299).

Figure 5.13: The Result of H.2.1.4 (Competitive Aggressiveness*Proactive CSR ->SCA).

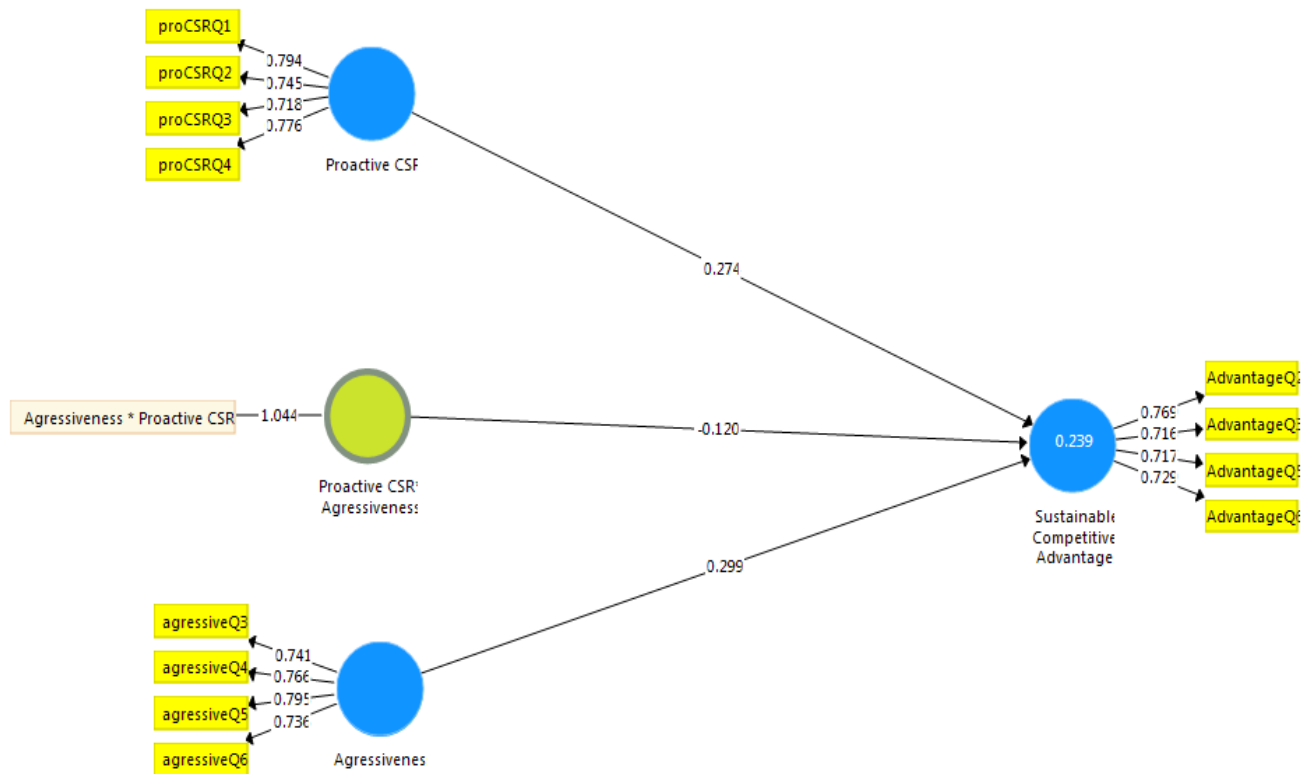


Table 5.19 describes that notwithstanding the P-value for the path linking the interaction term and SCA = (**0.240**). However, this result differs from the direct effect (path linking Competitive aggressiveness)= (**0.009**).

Table 5.20 Path Coefficients, T- Statistics, Significant Level for H.2.1.5

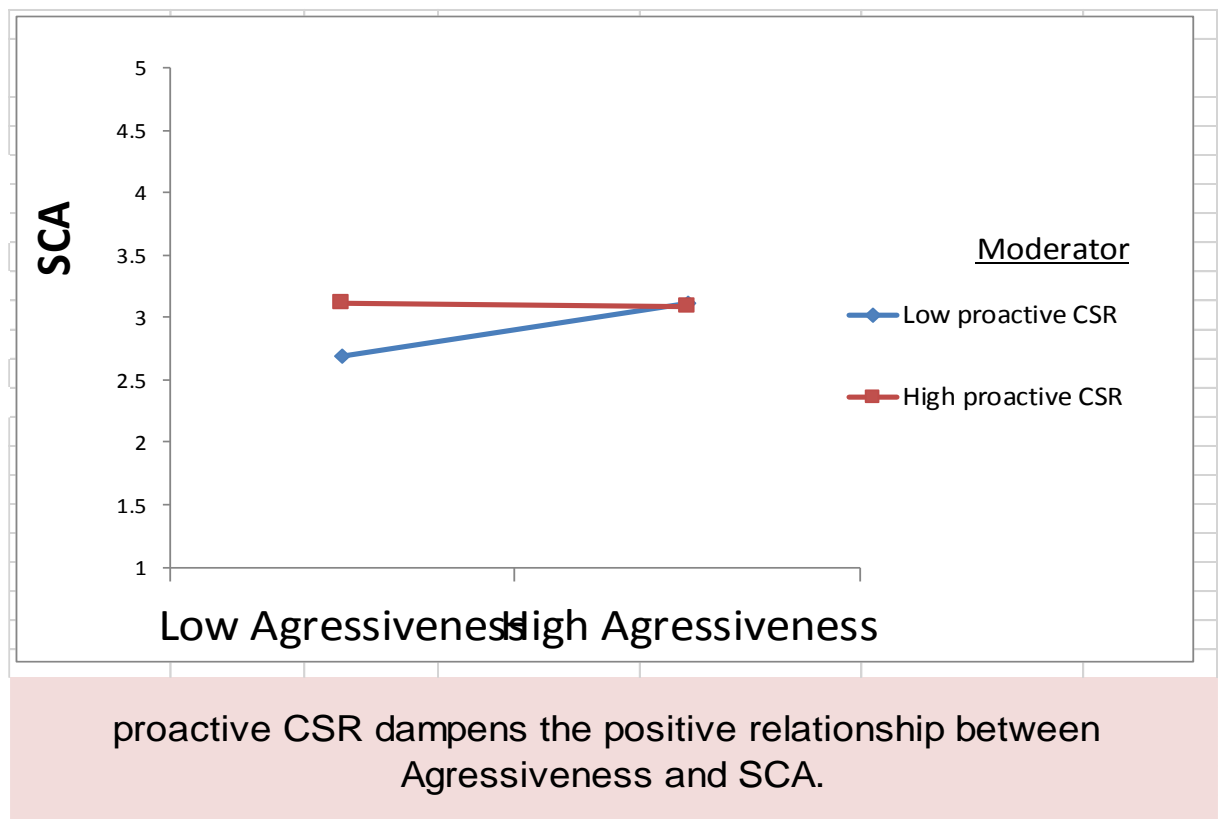
As illustrated in figure 5.14 below, the simple slope plot reveals that higher

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Aggressiveness -> SCA	0.299	0.296	0.115	2.614	0.009
Proactive CSR -> SCA	0.274	0.301	0.090	3.034	0.003
Proactive CSR* Aggressiveness -> SCA	-0.120	-0.122	0.102	1.177	0.240

Note : Path > 0.1 T > 1.96 P-value < 0.05

levels of proactive CSR lead to a weaker relationship between competitive aggressiveness and SCA, contrariwise, lower levels of proactive CSR lead to a stronger relationship between autonomy and SCA.

Figure 5.14: Simple Slope Plot for H.2.1.5



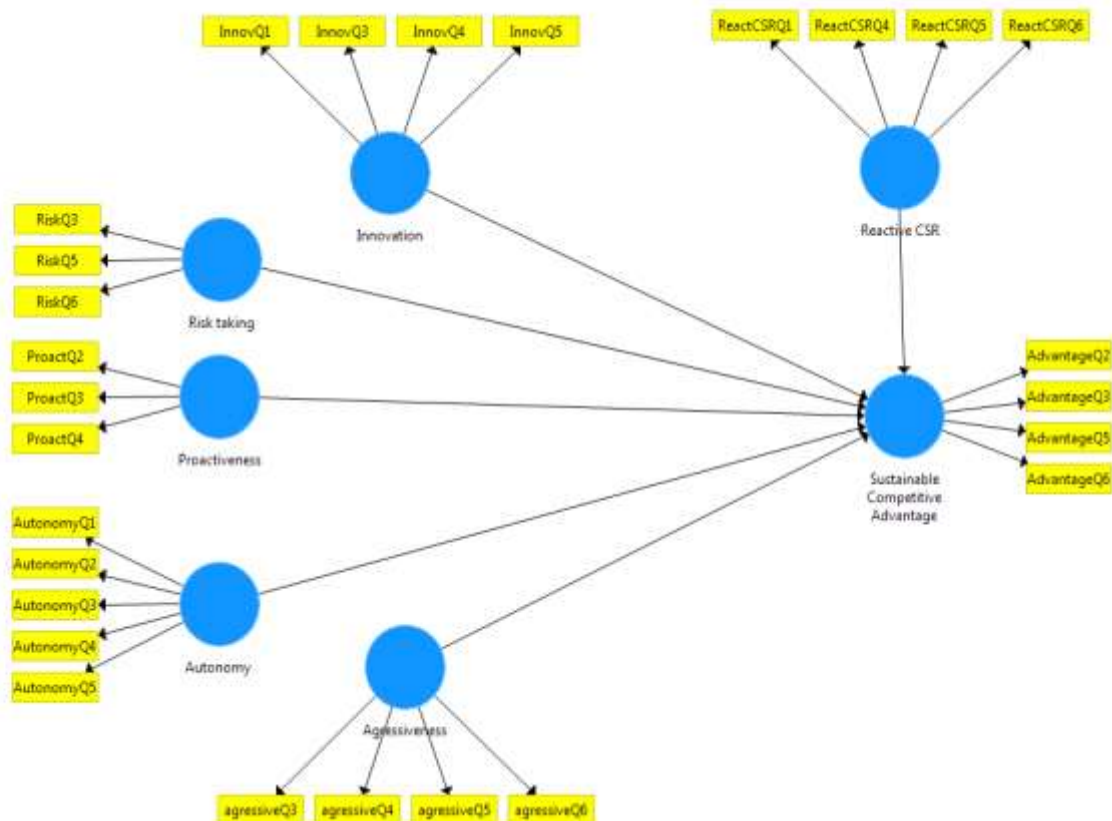
5.10.2 The Moderating Effect of Reactive CSR On the Relationship Between EO and SCA

This subsection addresses the results of the moderating effect of Reactive CSR on the relationship between EO (Innovation, proactiveness, risk-taking, autonomy and competitive aggressiveness) and sustainable competitive advantage(unidimensional).

Figure 5.15: H.2.2 The Moderating Effect of Reactive CSR

5.10.2.1 The Moderating Effect of Reactive CSR on Innovation->SCA

Figure 5.16 below shows that innovation and reactive CSR can explain



(28.2%) of the variance in Sustainable competitive advantage (SCA). Also figure 5.16 demonstrates the size of the moderating effect, as can be seen, that the interaction term has a positive effect on SCA $= (0.040)$, correspondingly, the simple effect of innovation on SCA $= (0.000)$.

Figure 5.16 The Result of H.2.1.1 (Innovation* Reactive CSR -> SCA)

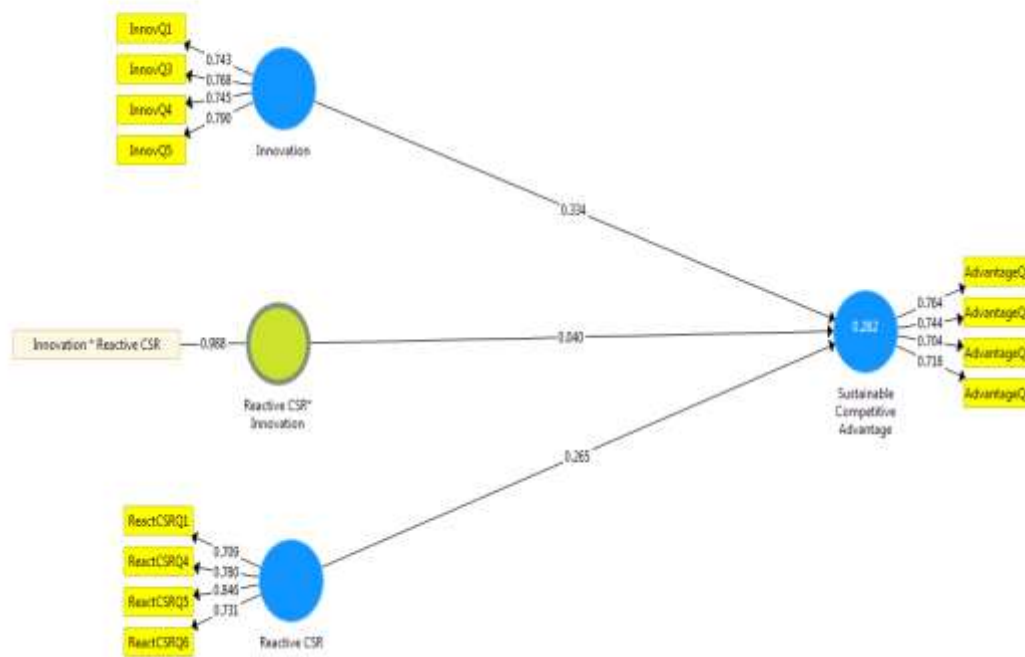


Table 5.20 Shows that though the P-value for the path linking the interaction term and SCA is **(0.605)**. However, this result diverges from the direct effect (path linking innovation and SCA) **(0.000)**.

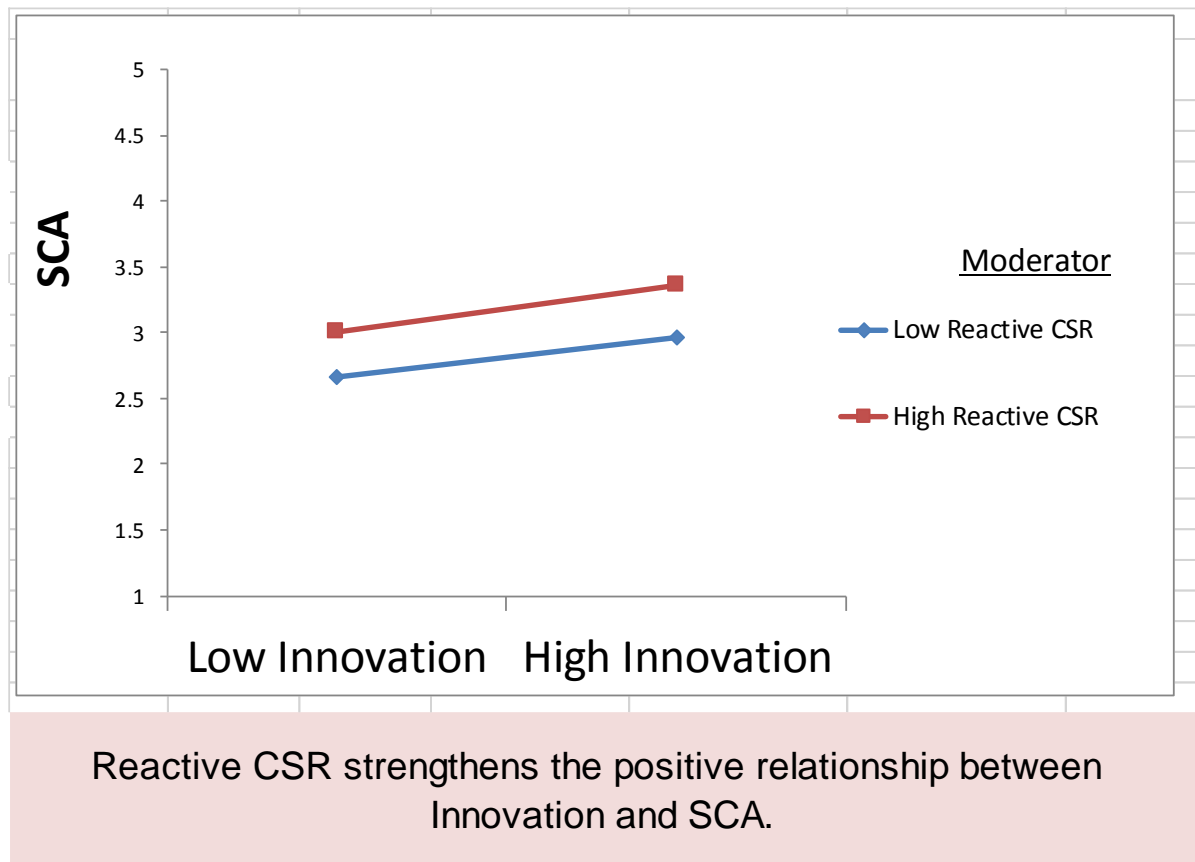
Table 5.21 Path Coefficients, T- Statistics, Significant Level for H.2.2.1

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Innovation -> SCA	0.334	0.342	0.089	3.742	0.000
Reactive CSR -> SCA	0.265	0.277	0.095	2.798	0.005
Reactive CSR* Innovation -> SCA	0.040	0.040	0.077	0.518	0.605

Note : Path > 0.1 T > 1.96 P-value < 0.05

As illustrated in figure 5.17 below, the simple slope plot shows that higher levels of reactive CSR result in a stronger relationship between innovation and SCA, contrariwise, lower levels of proactive CSR lead to a weaker relationship between innovation and SCA.

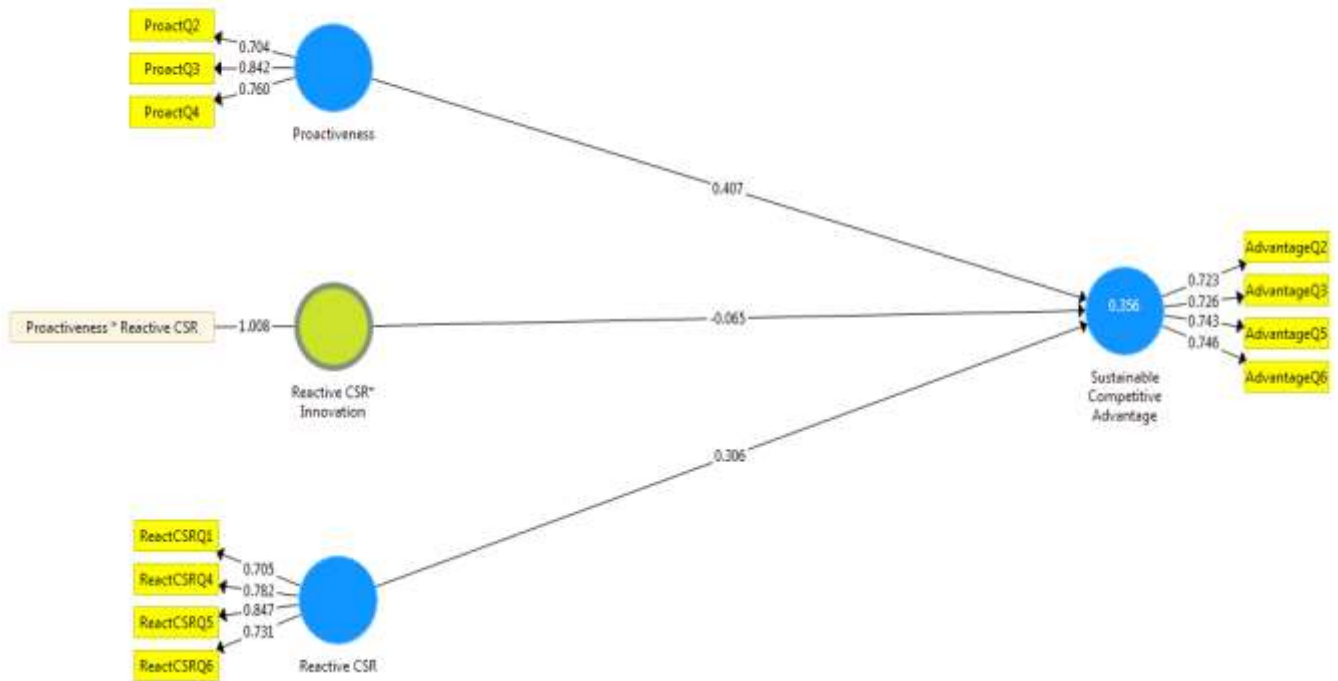
Figure 5.17 Simple Slope Plot for H.2.2.1



5.10.2.2 The Moderating Effect of Reactive CSR on Proactiveness->SCA

Figure 5.18 below shows that proactiveness and reactive CSR can explain (35.6%) of the variance in Sustainable competitive advantage (SCA). With regards to the size of the moderating effect, figure 5.18 shows that interaction term has a negative effect on SCA = (-0.065); however, the simple effect of proactiveness on SCA is positive = (0.407).

Figure 5.18: The Result of H.2.1.1 (Proactiveness* Reactive CSR -> SCA)



As exhibited in table 5.21 below, the analysis shows that P-value for the path linking the interaction term and SCA = **(0.323)**, whereas, the direct effect (path linking proactiveness and SCA) = **(0.000)**.

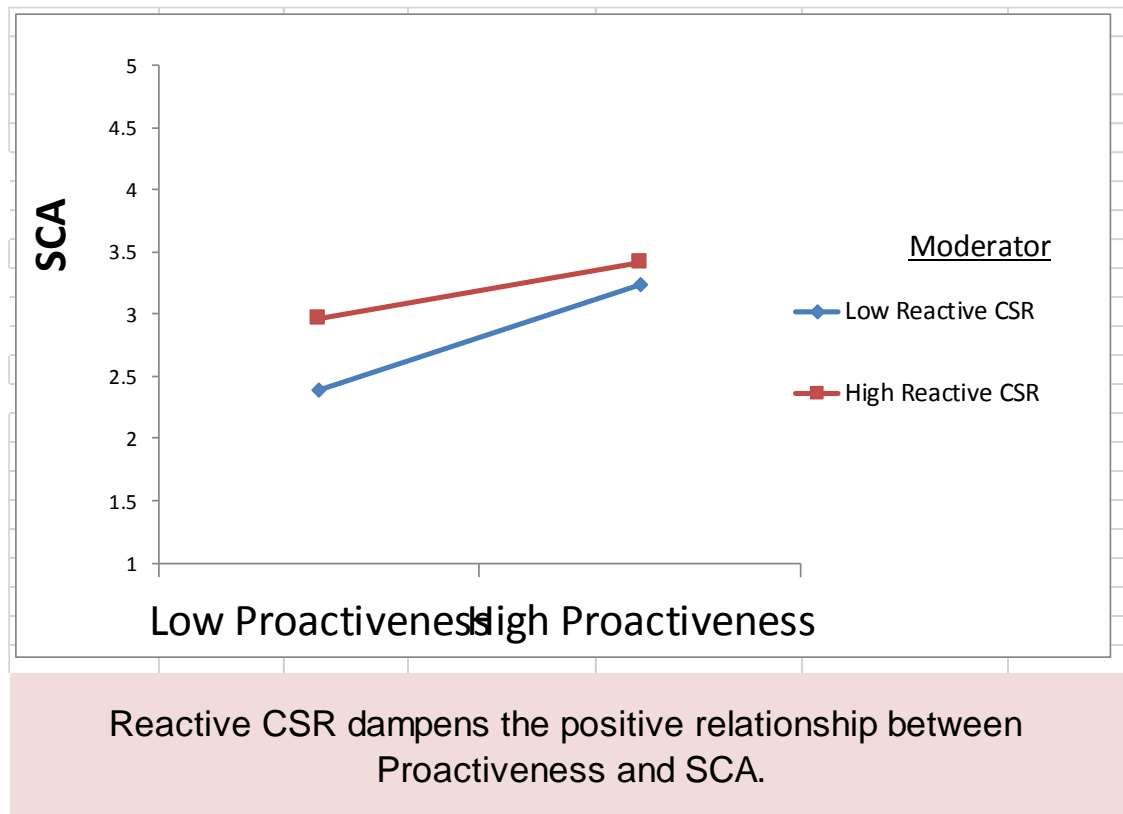
Table 5.22 Path Coefficients, T- Statistics, Significant Level for H.2.2.2

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Proactiveness -> SCA	0.407	0.415	0.065	6.214	0.000
Reactive CSR -> SCA	0.306	0.314	0.074	4.144	0.000
Reactive CSR* Proactiveness -> SCA	-0.065	-0.057	0.066	0.990	0.323

Note : Path > 0.1 T > 1.96 P-value < 0.05

As demonstrated in figure 5.19 below, the simple slope plot uncovers that higher levels of reactive CSR lead to a lower relationship between innovation and SCA, contrariwise, lower levels of proactive CSR lead to a stronger relationship between proactiveness and SCA.

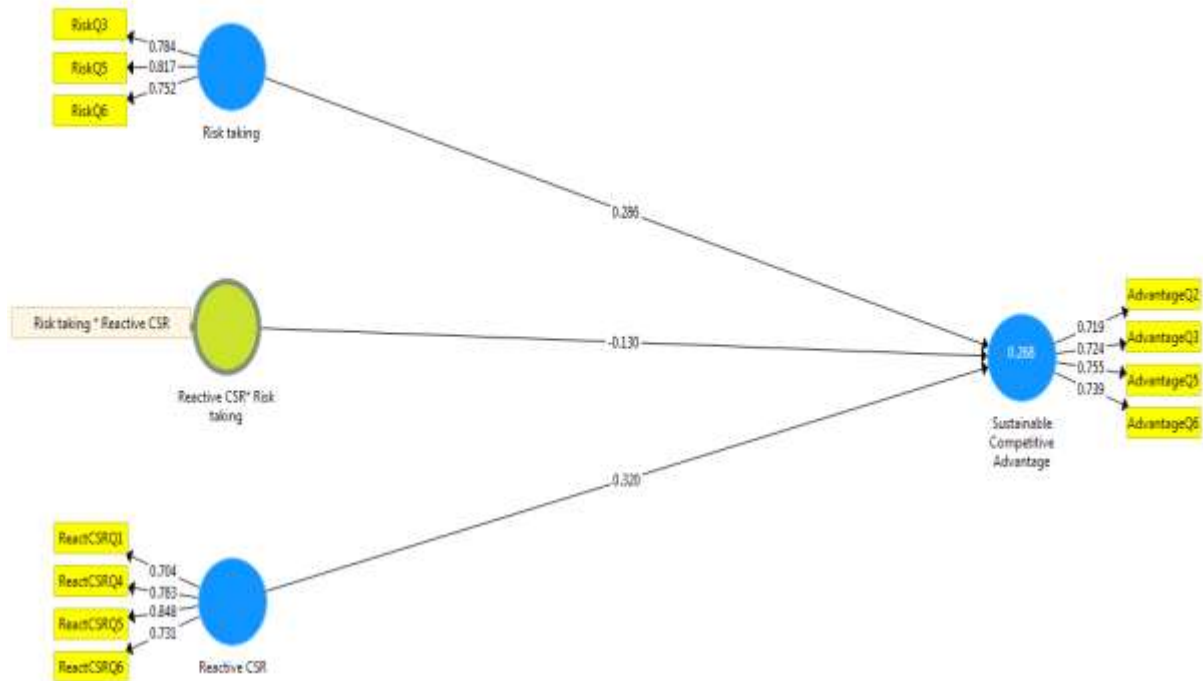
Figure 5.19 Simple Slope Plot for H.2.2.2



5.10.2.3 The Moderating Effect of Reactive CSR on Risk-taking->SCA

Based on figure 5.20 below, risk-taking and proactive CSR can to explain (26.8%) of the variance in Sustainable competitive advantage (SCA). Concerning the size of the moderating effect, as can be seen in figure 5.20, the interaction term has a negative effect on SCA (-0.130), whereas the simple effect of risk-taking on SCA is (0.286).

Figure 5.20 The Result of H.2.2.3 (Risk-taking* Reactive CSR -> SCA)



As exhibited in table 5.22 below, the analysis shows that although P-value for the path linking the interaction term and SCA = **(0.080)**, the direct effect (path linking risk-taking and SCA) = **(0.001)**.

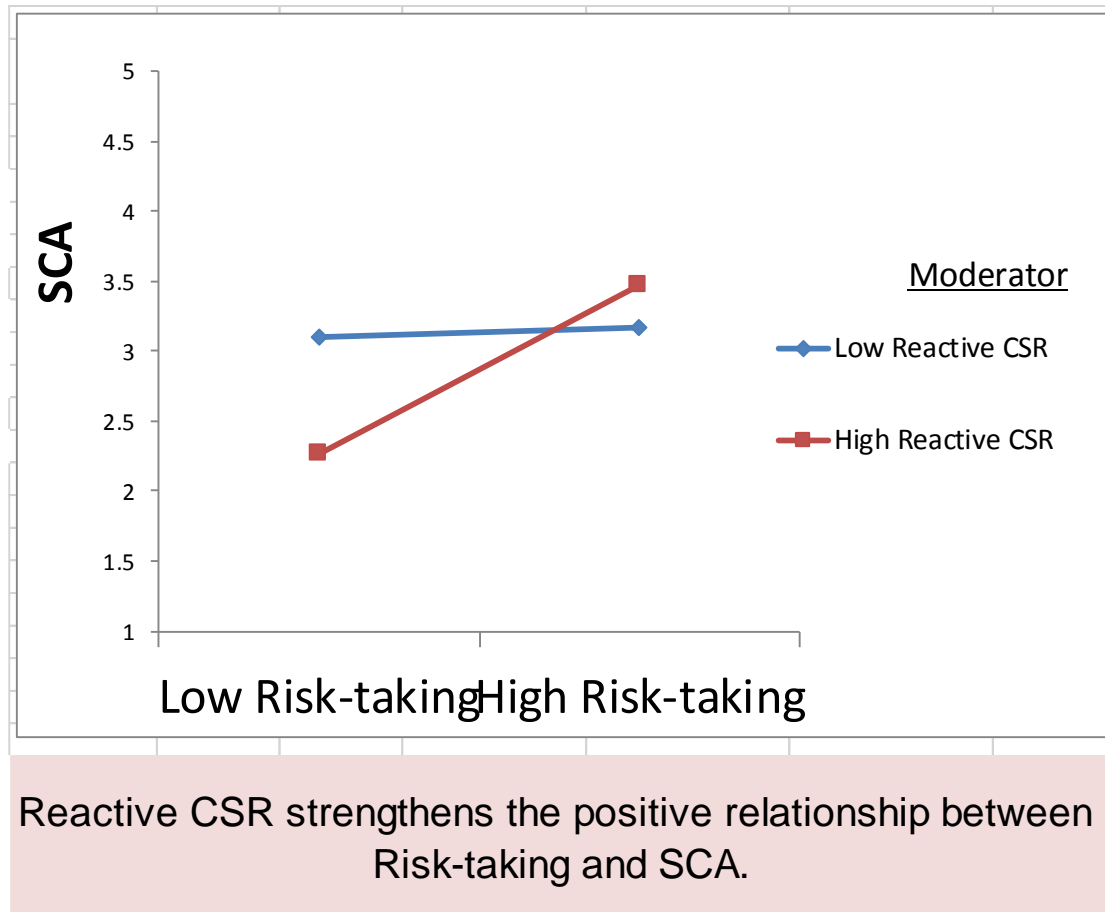
Table 5.23 Path Coefficients, T- Statistics, Significant Level for H.2.2.3

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Reactive CSR -> SCA	0.320	0.334	0.086	3.745	0.000
Reactive CSR* Risk taking -> SCA	-0.130	-0.123	0.074	1.755	0.080
Risk taking -> SCA	0.286	0.301	0.085	3.374	0.001

Note : Path > 0.1 T > 1.96 P-value < 0.05

As illustrated in figure 5.21 below, the simple slope plot reveals that higher levels of reactive CSR lead to a stronger relationship between risk-taking and SCA, in reverse, lower levels of proactive CSR lead to a weaker relationship between risk-taking and SCA.

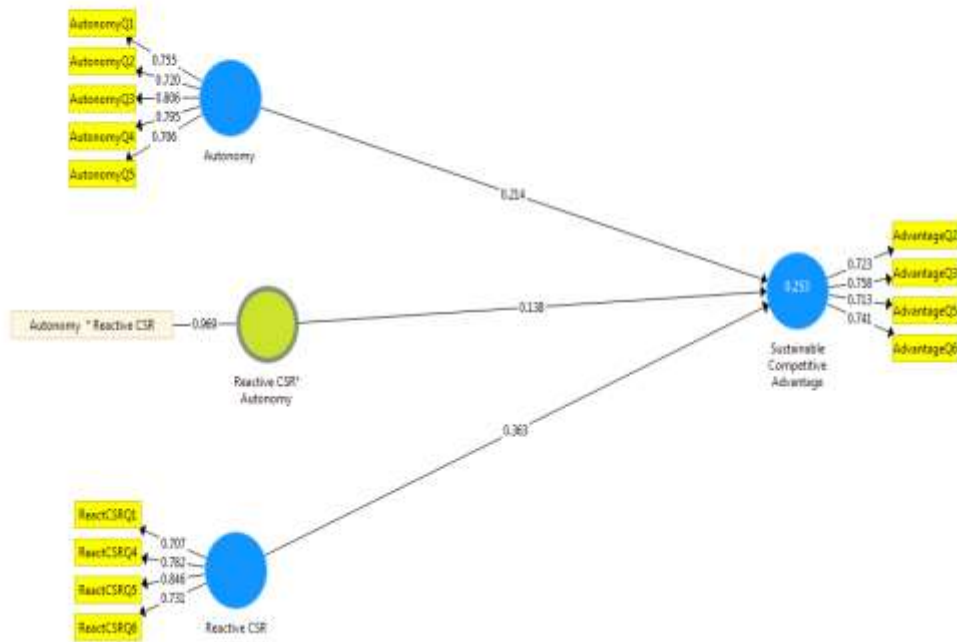
Figure 5.21 Simple Slope Plot for H.2.2.3



5.10.2.4 The Moderating Effect of Reactive CSR on Autonomy->SCA

Figure 5.22 below shows that autonomy and reactive CSR are able to explain (25.3%) of the variance in Sustainable competitive advantage (SCA). Figure 5.22 also shows that the interaction term has a positive effect on SCA (0.138); similarly, the simple effect of autonomy on SCA is (0.214).

Figure 5.22: The Result of H.2.2.4 (Autonomy* Reactive CSR -> SCA)



Based on table 5.23 below, the analysis shows that although P-value for the path linking the interaction term and SCA = (**0.189**), the direct effect (path linking autonomy and SCA) = (**0.022**).

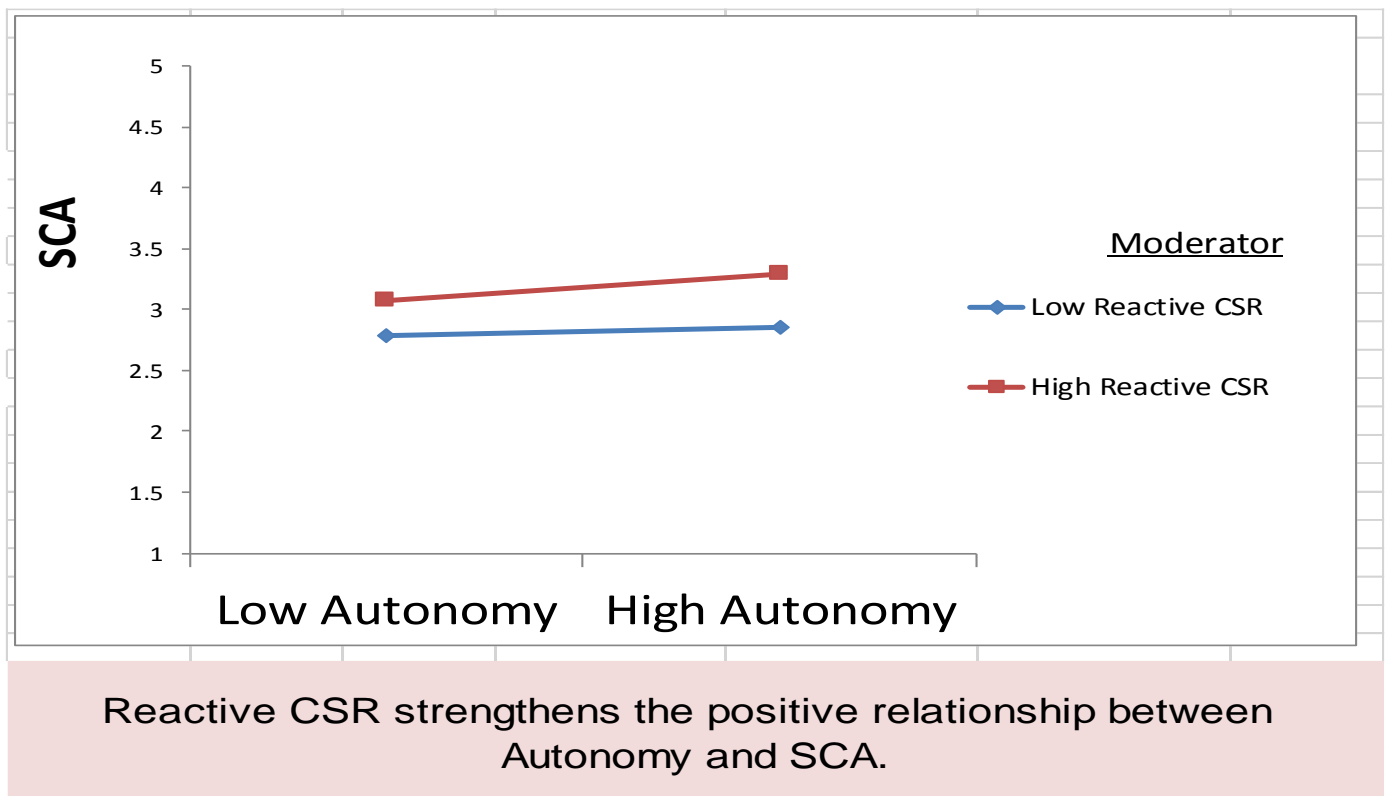
Table 5.24 Path Coefficients, T- Statistics, Significant Level for H.2.2.4

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P-values
Autonomy -> SCA	0.214	0.227	0.093	2.296	0.022
Reactive CSR -> SCA	0.363	0.379	0.085	4.293	0.000
Reactive CSR* Autonomy -> SCA	0.138	0.140	0.105	1.316	0.189

Note : Path > 0.1 T > 1.96 P-value < 0.05

As clarified in figure 5.23 below, the simple slope plot reveals that higher levels of reactive CSR lead to a stronger relationship between autonomy and SCA, reversely, lower levels of proactive CSR lead to a weaker relationship between autonomy and SCA.

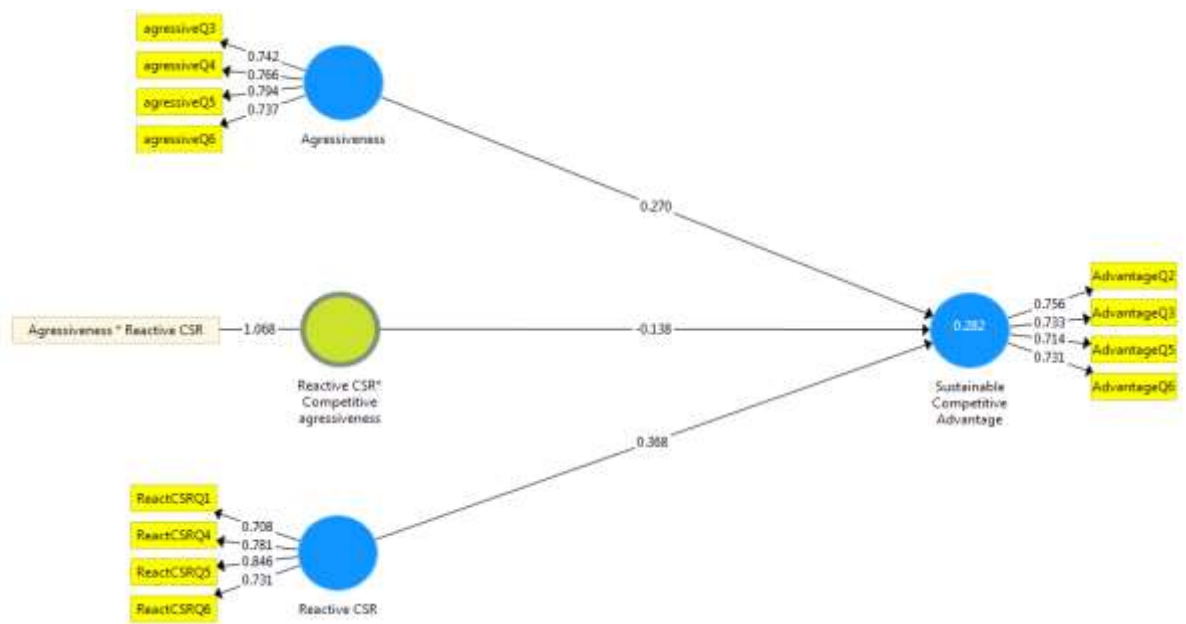
Figure 5.23 Simple Slope Plot for H.2.2.4



5.10.2.5 The Moderating Effect of Reactive CSR on Competitive Aggressiveness->SCA

Based on figure 5.24 below, competitive aggressiveness and reactive can explain (28.2%) of the variance in Sustainable competitive advantage (SCA). Regarding the size of the moderating effect, as can be seen in figure 5.24, the interaction term has a negative effect on SCA = (-0.138), though the simple effect of competitive aggressiveness on SCA = (0.270).

Figure 5.24 The Result of H.2.2.5 (Competitive Aggressiveness* Reactive CSR -> SCA)



Based on table 5.24 below, the analysis shows that although P-value for the path linking the interaction term and SCA = **(0.135)**., the direct effect (path linking competitive aggressiveness and SCA) = **(0.008)**.

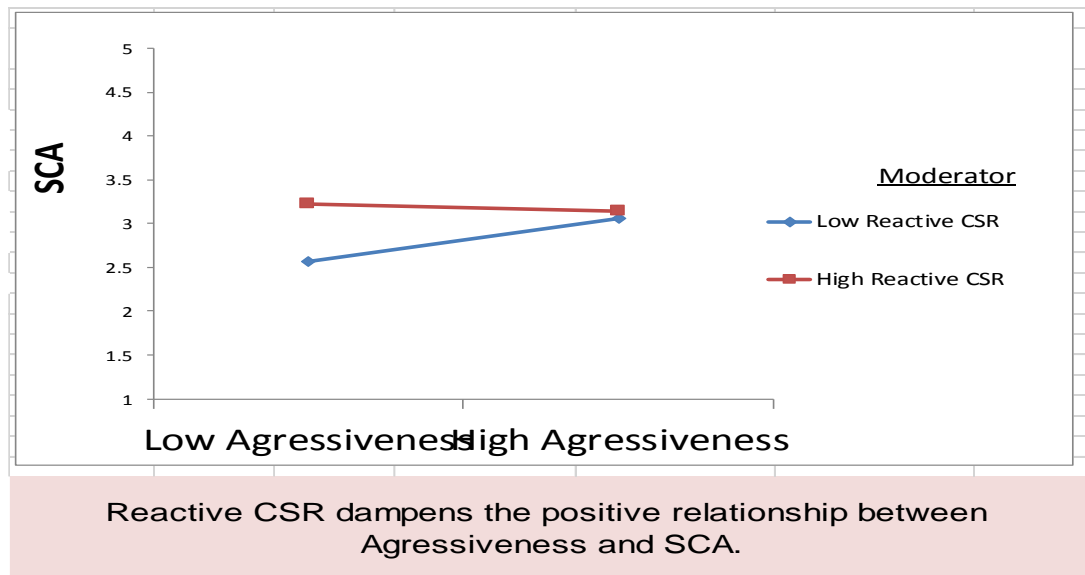
Table 5.25 Path Coefficients, Observed T- Statistics, Significant Level for H.2.2.5

	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-values
Agressiveness -> SCA	0.270	0.273	0.101	2.676	0.008
Reactive CSR -> SCA	0.368	0.382	0.077	4.775	0.000
Reactive CSR* Competitive aggressiveness -> SCA	-0.138	-0.134	0.092	1.497	0.135

Note : Path > 0.1 T > 1.96 P-value < 0.05

As simplified in figure 5.25 below, the simple slope plot illustrates that higher levels of reactive CSR lead to a weaker relationship between competitive aggressiveness and SCA, reciprocally, lower levels of proactive CSR lead to a stronger relationship between autonomy and SCA.

Figure 5.25 Simple Slope Plot for H.2.2.5



5.11 Effect of Control Variables

Smart PLS generally analyzes the full dataset with an implied assumption that the data is collected from a single homogeneous population. This assumption is often unrealistic because firms, for example, are different in their characteristics. Therefore, ignoring the heterogeneity of the sample can be a threat to PLS-SEM findings, and it can lead to a misleading conclusion (Hair et al. 2012). For this reason, it is essential to identify and assess heterogeneity in the data, in order to reach a better assessment of the hypothesized relationship between the focal variables (Hair et al. 2017). Accordingly, this study proposed five control variables (i.e., Type of industry, firm size, firm age, firm ownership and number of competitors). Hair et al. (2017), provided a specific analysis approach, namely Multigroup analysis which identifies whether there are significant differences across multiple groups.

Based on the Multigroup analysis, the results revealed that the proposed control variables do not affect the main variables; due to the small sample size of these groups in the study. In other words, the relationship between EO and SCA has not changed when control variables were introduced. Therefore, these control variables were not incorporated into the main hypotheses. However, minor differences between certain groups were identified regarding the statistically significant influence of innovation and proactiveness on sustainable competitive advantage. See SmartPLS output in Appendix C.13. the following subsection reports the differences among the groups in regards to the current findings.

5.11.1 Type of industry

The effect of proactiveness on sustainable competitive advantage is much stronger in group 1 (Banking) = 0.45 than in group 4 (Education) = 0.344. However, the other groups (insurance (2), telecommunication (3), Airlines (5), hotel (6), exchange (7) stock exchange (8), and hospital (9) were not considered by Multigroup analysis due to their small sample portion. See SmartPLS output in Appendix C.13.1

5.11.2 Firm Size

The effect of proactiveness on SCA is greater in group 1 (Less than 50 employees) = 0.537 than in group 4 (More than 150 employees) = 0.170. However, group 2 (51-100) and group 3 (101-150) were not considered by Multigroup analysis due to their small sample portion. See SmartPLS output in Appendix C.13.2

5.11.3 Firm age

The effect of proactiveness on sustainable competitive advantage is higher in Group 4 (More than 20) = 0.296 than in group 3 (11-20). However, group 1 (Less than 5) and group 2 (5-10) were excluded by Multigroup analysis due to their small sample portion. See SmartPLS output in Appendix C.13.3

5.11.4 Firm Ownership

The effect of innovation on sustainable competitive advantage is much stronger in Group 3 (Foreign-owned) = 0.678 than in group 1 (Sudanese owned) = 0.051. However, group 2 (joint venture – local and foreign firm) was not counted by Multigroup analysis due to its small sample portion. See SmartPLS output in Appendix C.13.4

5.11.5 Competition (Number of competitors)

The effect of proactiveness on sustainable competitive advantage is slightly higher in group 4 (More than 15 rivals) = 0.477 than in group 3 (11-15 rivals) = -0.422 and group 1 (1-5) = 0.152. However, group 2 (6-10) was excluded by Multigroup analysis due to its small sample portion. See SmartPLS output in Appendix C.13.5.

5.12 Summary of Results

The table below presents a summary of the hypotheses testing results as follows:

Table 5.26 Summary of the Hypotheses Testing

	Hypotheses statement		Result
H1	Entrepreneurial Orientation (EO) has a positive influence on Sustainable Competitive Advantage (SCA)		Partially Supported
	H.1.1	Innovation has a positive influence on SCA	Supported
	H.1.2	Proactiveness has a positive influence on SCA	Supported
	H.1.3	Risk-taking has a positive influence on SCA	Not Supported
	H.1.4	Autonomy has a positive influence on SCA	Not Supported
	H1.5	Competitive aggressiveness has a positive influence on SCA	Not Supported
H2	The proactive and reactive CSR moderate the relationship between EO and SCA		Partially Supported
H2.1	The relationship between EO and SCA is stronger when reactive CSR is higher		Partially Supported
	H2.1.1	The Relationship between Innovation and SCA is stronger when Proactive CSR is higher	Supported
	H2.1.2	The Relationship between Proactiveness and SCA is stronger when Proactive CSR is higher	Not Supported
	H2.1.3	The Relationship between Risk-taking and SCA is stronger when Proactive CSR is higher	Supported
	H2.1.4	The Relationship between Autonomy and SCA is stronger when Proactive CSR is higher	Supported
	H2.1.5	The Relationship between Competitive Aggressiveness and SCA is stronger when Proactive CSR is higher	Not Supported
H2.2	The relationship between EO and SCA is stronger when reactive CSR is higher		Partially Supported
	H2.2.1	The Relationship between Innovation and SCA is stronger when Reactive CSR is higher	Supported
	H2.2.2	The Relationship between Proactiveness and SCA is stronger when Reactive CSR is higher	Not Supported
	H2.2.3	The Relationship between Risk-taking and SCA is stronger when Reactive CSR is higher	Supported
	H2.2.4	The Relationship between Autonomy and SCA is stronger when Reactive CSR is higher	Supported

	H2.2.5	The Relationship between Competitive Aggressiveness and SCA is stronger when Reactive CSR is higher	Not Supported
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5.12 Chapter Summary

This chapter covered the analysis of collected data. After the response rate has been clarified, both the responding firms' profile and respondents' profile have been described. The analysis process started with data preparation and examination. The second phase of the analysis presented the analysis of measurements model involving the reliability and validity of measurements. Additionally, this chapter showed the descriptive statistics of all variables along with revealing the bivariate correlation. The last phase of the analysis presented the validation of the structural model by testing the proposed hypotheses. The next chapter presents the discussion of current findings based on previous studies and offers the research conclusion by addressing the implications of findings, limitation of the study and suggestion for future research.

CHAPTER SIX

DISCUSSION AND CONCLUSION

CHAPTER SIX

DISCUSSION AND CONCLUSION

6.0 Chapter Overview

This chapter presents the discussion of findings and the conclusion of the research. This chapter involves seven sections. The first three sections reveal the recapitulation of the study and present the discussion of findings in light of previous literature, as well as summarize the major findings of the study, consecutively. The remaining four sections address the practical and theoretical implications of the findings, report the study limitations, provide suggestions for future research and finally draw a conclusion for the entire research.

6.1 Recapitulation of the Study Findings

This study was undertaken to examine the influence of entrepreneurial orientation on Sustainable competitive advantage. In addition, this study set out to investigate the moderating effect of proactive and reactive CSR on the relationship between EO and SCA.

The target population of this study was chosen to be the Sudanese service sector for the vital role it plays in the economy, despite the constant deterioration of the economic environment in Sudan.

To achieve the research objectives, four questions were formulated as follows:

1. What is the influence of entrepreneurial orientation on sustainable competitive advantage?
2. What is the moderating effect of proactive and reactive CSR on the relationship between EO and SCA?
3. What is the influence of individual EO dimensions (i.e., innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness) on SCA?
4. What is the moderating effect of proactive and reactive CSR on the relationship between individual EO dimensions (i.e., innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness) and SCA?

The literature review served as a foundation to identify the variables of the study. As for EO, five components were identified (i.e., innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness), whereas Sustainable competitive advantage developed as a unidimensional variable. Likewise, proactive and reactive CSR were measured with items from prior studies.

As regards the methodology, this study adopted a quantitative method and employed a descriptive design. Consequently, to collect the data, this study used a cross-sectional design and (175) surveys were distributed to a convenience sample represented by firms' top-management. The response rate was (82%) which counted as a high rate for the purpose of this study.

Prior to the analysis phase, the data preparations were undertaken. Starting with the coding of the survey dataset. Afterward, the data examination was conducted. As a result, the missing data was inconsiderable and was therefore substituted with its mean value. The data also was free from the common method bias. As well as, suspicious response bias was limited in the data. Moreover, very few outliers were identified and removed.

The descriptive analysis provided an overview of the responding firms. The banking industry was the most portion of the sample, followed by insurance, telecommunication, education, airline, hotel, exchange, stock exchange, and hospital, respectively. Regarding the firms' size, the largest sample percent was for firms (more than 150 employees), followed by firms with (less than 50 employees), firms with (51-100) and firm with (101-150) employees. The firm age included a large sample of firms group (more than 20 years), followed by firms (11-20), firms (5-10) and firms (less than 5). In terms of the firms' ownership, Sudanese owned firm has the largest share, followed by foreign-owned firms and joint venture firms. As regards the number of competitors, the large quota of the sample was for firms group (more than 15), followed by firms group (11-15), firms group (1-5) and firms group (6-10), respectively.

The first phase of the analysis in this study was to assess the measurement model by evaluating reliability (the internal consistency, indicator reliability) and validity (convergent validity and discriminant validity). The internal consistency was measured through composite reliability(CR) and Cronbach's alpha (CA), where all the constructs demonstrated a satisfactory level of internal consistency. The indicator reliability is evaluated by assessing the items outer loadings, most items had satisfactory indicator reliability. However, some items were deleted to increase the reliability. Concerning the validity, the convergent validity measured using the average variance extracted (AVE), whereas discriminant validity assessed through HTMT value. Both analysis tools confirmed that the measurement validity had been established.

After validating the measurement model, the descriptive analysis for all variables of the study was conducted. The mean and standard deviation revealed that among the dimension of EO, Sudanese service firms concentrate more on the competitive aggressiveness, followed by risk-taking, proactiveness, autonomy, and innovation, successively. While Sudanese service firms enjoy below average level of Sustainable competitive advantage, they have little or no concern about proactive and reactive CSR.

The correlation analysis revealed a positive relationship between the proposed hypotheses. More precisely, the component of EO namely, innovation, proactiveness,

risk-taking, autonomy and competitive aggressive were positively correlated with SCA. Also, proactive and reactive CSR were positively correlated with CSA.

To determine the effect of control variables, Multigroup analysis was conducted. However, due to the small size sample of the various groups, there was no significant effect of control variables on the vocal variables of the study. Nonetheless, minor differences were detected and discussed after testing the hypotheses.

The structural model was validated through the collinearity assessment. The result showed that collinearity was not detected among independent variables. The coefficient of determination (R²) analysis indicated that the five EO components explain nearly above one-third of the variance in sustainable competitive advantage.

Concerning the hypotheses testing, the result of path coefficient analysis indicated that entrepreneurial orientation influences sustainable competitive advantage. More precisely, two components of EO had a significant positive influence on SCA. Innovation and proactiveness had a significant positive influence on SCA, on the other hand, risk-taking, autonomy, and competitive aggressiveness had no positive influence on SCA. With regards to the effect size, proactiveness had a medium effect on SCA, followed by innovation which had a small effect on SCA, whereas, risk-taking, autonomy, and competitive aggressiveness had no effect on SCA. The second hypothesis result revealed that both proactive and reactive CSR moderate the relationship between EO and SCA. To be precise, proactive and reactive CSR strengthen the relationship between three components of EO (innovation, risk-taking, autonomy) and SCA. In contrast, proactive and reactive CSR dampen the relationship between the other two components of EO (proactiveness, competitive advantage) and SCA.

Multigroup analysis revealed that the positive influence of proactiveness and innovation on SCA differs among the sample groups (firms' characteristics). As a result, the positive influence of proactiveness on SCA was higher in the banking industry than other industries, and was higher in the small firm rather than large firm. Also was higher in old age firms than in young age firms. As well as, the positive effect was higher in the firms having many rivals than in firms with few competitors. On the other hand, the effect of innovation was stronger in foreign-owned firms than in Sudanese owned and joint venture.

6.2 Discussion of Findings

This section presents the discussion of the findings in lights of related empirical evidence and theoretical background of prior literature. The following subsections come as a result of pursuing the research objectives and responding to research questions which were stated in the first chapter of this study. Therefore, the discussion addresses the influence of entrepreneurial orientation on sustainable competitive advantage. As well as, covers the moderating effect of proactive and reactive CSR on the relationship between EO and SCA.

6.2.1 The Influence of Entrepreneurial Orientation on Sustainable Competitive Advantage

In response to the first research question, the findings reveal that two components of EO, namely proactiveness and innovation have a significant positive influence on sustainable competitive advantage, whereas, risk-taking, autonomy, and competitive aggressiveness were found to have no negative influence on SCA.

This result comes as no surprise because it was not expected to find all EO components are always positively associated with SCA. This finding is typically consistent with the results of Matsuno et al. (2002); and Hughes and Morgan (2006) who indicated that uniform pursuit of all EO dimensions does not generate consistent gains in business performance. As well as, Weaver (2002), found that innovativeness and proactiveness have a positive influence on sustainable competitive advantage.

This result may be explained by the fact that not all EO dimensions are necessarily equally valuable or desirable to achieve superior business performance in different contexts (Lumpkin & Dess, 1996). In other words, EO is not universally beneficial for business under all circumstances. Accordingly, it can be concluded that higher level of proactiveness and innovativeness can lead to higher level of SCA in the Sudanese service sector.

The following subsections present the influence of the individual dimensions of EO on SCA. The findings offer interesting insight; while some findings agree with prior literature, inconsistency was also found. Therefore, these subsections provide a more detailed discussion of the main result.

6.2.1.1 The Influence of Proactiveness on Sustainable Competitive Advantage

The findings indicate that proactiveness has a significant positive influence on sustainable competitive advantage. In line with this finding, many prior studies have also found that proactiveness positively influences firm superior performance (e.g., Lumpkin & Dess, 2001; Krause et al. 2005). Additionally, Kuratko, (2002); and Coven, (1999) found that proactiveness has a positive influence on competitive advantage.

The explanation of this result supported by the conceptual argument that firms which take hold of initiatives and act on opportunities in the marketplace would be able to shape the future demand (Miller, 1978; and Venkatraman, 1989). Moreover, proactive firms continuously scan the environment and act in advance of the change. As a result, these firms are not only able to understand the customers' changing needs but rather they may shape the customers' need and wants, and better serve them rather than being reactive to the external forces. For that reason, proactiveness is indisputably valuable in securing firms' sustainable competitive advantage.

6.2.1.2 The Influence of Innovation on Sustainable Competitive Advantage

The results indicate that innovation has a significant positive influence on sustainable competitive advantage. Similarly, there has been an extensive amount of literature supporting the positive correlation between innovation and SCA, as well as innovation and performance (e.g., Hughes and Morgan, 2006; Gatignon and Xuereb, 1997).

A possible explanation for this result could be that innovativeness contributes to competitive advantage by encouraging the firm's learning activities and creating a work environment where creative thinking is highly promoted (Calantone, 2002). As a consequence, the implementation of novel ideas can result in new products, new operation methods, new supply sources or new approach to manage the business. Accordingly, innovation is a unique source for achieving sustainable competitive advantage.

6.2.1.3 The Influence of Risk-taking on Sustainable Competitive Advantage

The results revealed that risk-taking has no significant positive influence on sustainable competitive advantage. Although this finding is similar to results of Kraus et al., (2012); and Lechner (2014) who reported that risk-taking has a negative influence on firm performance. However, these findings contradict the results of [Wang and Yen \(2012\)](#); and [Kollman \(2014\)](#), who found that risk-taking has a positive association with firm performance.

The rational explanation of the inconsistency in findings is that result could be justified from the perspective of contingency theory and strategic fit concept which suggest that firms are expected to achieve superior performance when they are able to meet the requirements of the business environment (Venkataraman and Camillus, 1984). Moreover, the observed characteristics of the firms under study might contribute to the contradiction among findings. Another possible explanation of the current findings is supported by the theoretical standpoint which claims that the danger is inherently existing in the risk-taking, and therefore, if the risk is not cautiously managed, it will negatively affect the firm ability to gain competitive advantage. Likewise, taking risks without proper planning and calculation of consequences would turn to be a serious pitfall on firms.

6.2.1.4 The Influence of Autonomy on Sustainable Competitive Advantage

Surprisingly, the findings revealed that autonomy has a negative influence on sustainable competitive advantage. This result contradicts some prior studies (e.g., Coulthard 2007; Schneider 2009) who found that autonomy is positively associated with firm performance, as employees are always motivated to act entrepreneurially. However, the current finding supports the result of Hughes & Morgan (2007) who indicated that autonomy has a negative effect on performance.

The explanation of this discrepancy could be attributed to the dissimilarity in management styles, firm size, firm ownership, as well as, the extent of centralization or the level of delegation in firms (Lumpkin and Dess 1996). Another possible

explanation for the current result also might be that autonomy presupposes that employees should act independently and they are free to choose the way by which tasks are accomplished. This practice may have drawbacks, such as lack of coordination and uncontrolled decentralization; which in turn lead to work inefficiencies and wastage of resources. Therefore, extremely autonomous behavior may hinder the firms' ability to pursue a sustainable competitive advantage.

6.2.1.5 The Influence of Competitive Aggressiveness on Sustainable Competitive Advantage

The findings show that competitive aggressiveness has a negative influence on sustainable competitive advantage. This result is in line with Lumpkin & Dess (2001) who reported a negative relationship between competitive aggressiveness and sales growth and profitability. As well as, this finding supports the result of Hughes & Morgan (2007) who found a negative influence of competitive aggressiveness on firm performance.

One possible explanation for this result is that excessive competitive aggressiveness may damage the firms' reputation. Further, it might lead to a lawsuit against the firms which in turn harms the positioning of the firms' image (Lumpkin & Dess,2005). Moreover, competitive aggressiveness requires constant price-cutting and heavy spending on marketing which may affect the profitability of the firms. Another possible explanation is that firms' aggressiveness decreases their chance of being involved in collaborative business efforts such as alliances and joint venture; and collaboration is crucial for success because no single firm has the business knowledge and resources needed to enter a new market or develop new products. Thus, taking competitive actions would put an end to opportunities for future collaboration. Accordingly, one can conclude that too much competitive aggressiveness can undermine firms' sustainable competitive advantage.

6.2.2 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between EO and SCA

As a response to the second research question, the findings indicate that proactive and reactive CSR strengthen the relationship between three components of EO (i.e., proactiveness, risk-taking, autonomy) and sustainable competitive advantage. Unexpectedly proactive and reactive CSR dampen the relationship between the remaining two components EO (i.e., autonomy, risk-taking) and sustainable competitive advantage. Collectively, these findings are in line with several prior studies (e.g., Frese & Hoorn,2002; and Wiklund & Shepherd, 2003) who reported that the relationship between EO and performance is contingent upon knowledge-based resources.

The explanation of these findings could be, on the one hand, firms with higher level of entrepreneurial orientation can identify and seize opportunities in a manner that differentiates them from non-entrepreneurial ones (Covin,2006). On the other hand, CSR strategies reinforce firms' reputation, which implicitly leads to an increase in

sales and market share, and therefore result in gaining competitive advantage. Although CSR actions may affect firms' economic performance in the short run, these actions, in the long run, may promote the firms' internal and external competitive capacity (James & Dennis,2014).

Note that the findings reveal no differences between proactive and reactive CSR in moderating EO-SCA relationship. Therefore, the discussion will cover both proactive and reactive CSR as one construct. However, this contradicts Chang et al. (2014) as well as the generally accepted knowledge. Since proactive CSR requires the firms' integrity and ethical behavior to exceed the requirements of law and regulations, whereas, reactive CSR involves the fulfillment of the country laws and regulations reactively. This contradictory result may be attributed to the fact that Sudanese firms pay no attention to neither proactive nor reactive CSR as reported in the descriptive analysis. It is therefore difficult to distinguish between two concepts that do not even exist in practice.

The following subsections discuss the detailed findings of the effect of proactive and reactive CSR on the relationship between entrepreneurial orientation components (i.e., proactiveness, innovation, risk-taking, autonomy, and competitive aggressiveness) and sustainable competitive advantage.

6.2.2.1 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between Proactiveness and SCA

Contrary to expectations, the findings reveal that proactive and reactive CSR dampen the relationship between proactiveness and SCA. The current results contradict the theoretical argumentation that proactiveness implicitly creates first mover advantage which entails being industry pioneer, first to enter a new market and recognized brand identity. CSR strategies, in turn, are expected to not only respond to stakeholder demands but also shape their future demand. Such practices, therefore, support the proactiveness and enhance the brand identity of firms (Fang et al. 2009).

Although it is difficult to explain this result, this finding could be related to the potential downsides of CSR. A major CSR drawback has been recently discussed is that the customers believe that firms engaging in CSR often tend to charge higher and unfair prices to cover CSR related expenses. Furthermore, gain above-average profit, while using CSR as an excuse. Consequently, the customers' perception indicates that firms engage in CSR, not for genuine reasons or charitable intentions. Accordingly, this false perception may hold back the customers' response to the proactiveness efforts. As customers' perception not only affects consumer behavior but also influence the profitability of the business and business performance at large (Margaret,2015). Therefore, one can conclude that the linkage of proactiveness and CSR strategies may not result in a sustained competitive advantage.

6.2.2.2 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between Innovation and SCA

The results figure out that proactive and reactive CSR strengthen the relationship between innovation and SCA. This finding is in line with the stream theoretical perspective which indicates that successful innovation relies on proactive and reactive CSR (Chang et al.2014) therefore, CSR and innovation are the basis of business success. A possible explanation could be that when firms adopt CSR strategies, they will tackle social and environmental issues such as social justices, poverty, and climate change. Thus, the brands which will succeed will be the ones that view these challenges as opportunities for innovation rather than threats to be reduced. Therefore, the interaction between CSR strategy and innovation will form the practice of social entrepreneurship which in turn act as the change agent for society, taking advantage of opportunities that other miss, inventing new products and creating solutions to make the society a better place. Such efforts will positively contribute to achieving sustained competitive advantage (Rexhepi et al.2013).

6.2.2.3 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between Risk-taking and SCA

Interestingly, the findings discover that proactive and reactive CSR strengthen the relationship between risk-taking and SCA. Although risk-taking had no direct effect on SCA, the current result shows that the relationship between risk-taking and SCA is strengthened when the firms engage in CSR strategies. This result is in line with Harjoto & Lakshmana (2016) who found that CSR act as a control device to reduce deviations from optimal risk-taking. Therefore, CSR decreases excessive risk-taking and reduces excessive risk avoidance.

A possible explanation may be that CSR maintains a proper balance between the interests of the various stakeholders (Mishra and Modi, 2013). Excessive risk avoidance makes the firms less attractive to shareholders and potential investors; also limits their availability of funds for future growth. Therefore, CSR increases the corporate risk-taking by directing the investment to projects that better serve the interests of multiple stakeholders. For instance, customers want products that have better safety features and are friendly to the environment. Hence, firms may engage in CSR through increasing R&D expenditure. Such an effort enhances firms' reputation and increases firms' market share. As a consequence, linking CSR strategies with the risk-taking result in satisfying both investing stockholder (i.e., shareholder) and non-investing stockholder (i.e., customer, employee, society, and environment). Based on this argument, one can conclude that the interaction of CSR strategies and risk-taking positively influences sustainable competitive advantage.

6.2.2.4 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between Autonomy and SCA

Remarkably, the findings reveal that proactive and reactive CSR strengthen the relationship between autonomy and SCA. Though autonomy appeared to have no direct influence on SCA as discussed earlier, the current result is consistent with a wide range of literature (e.g., Aguilera et al. 2007; Bhattacharya et al. 2008) who

indicated CSR practices increase the employees' identification, citizenship behavior, engagement, and commitment to the firms. On the other side, Chaudhary (2017) advocated that employees' commitment and engagement are becoming vital in obtaining a sustainable competitive advantage.

Accordingly, there are several possible explanations for the current result. Firstly, when employees perceive their firm is doing the right thing, employees are more likely to do the right things too. Therefore, if firms implement best practices in CSR strategies, employees will engage in cooperative behaviors towards their teammates and employer. As a result, this promotes organizational citizenship behavior and improve employee relations. Secondly, employees will have a greater sense of identification with their firm, when they feel that their firm is environmentally sensitive and socially responsible. Finally, when employees are engaged in CSR initiatives, this increases their intention to stay with the current employer. Furthermore, reinforcing their commitment so that employees are ready to sacrifice for the firm's success.

To put it differently, the influence of employees' autonomy on firm's SCA is contingent upon the practice of CSR strategies. As CSR enables employees not only to have autonomous behavior but also develop organizational citizenship behavior, engagement, and commitment to the firm. These variables according to RBV perspective are considered rare, valuable, inimitable and non-substitutable. For that reason, one can summarize that the interaction between autonomy and CSR strategies result in sustainable competitive advantage.

6.2.2.5 The Moderating Effect of Proactive and Reactive CSR on the Relationship Between Competitive Aggressiveness and SCA

The findings show that proactive and reactive CSR weaken the relationship between competitive aggressiveness and SCA. Likewise, the direct effect of competitive aggressiveness was negative on SCA as discussed before. The current findings support the conceptual discussion of Hyytine & Konttinen, (2011) who stated that the linkage of CSR practices and competitiveness is complicated. Further, several scholars (e.g., Berens & Rekom, 2007) suggested that CSR activities have a negative impact on firm performance.

One possible explanation for the current finding is that according to private costs theory, firms engage in CSR activities may provide benefits to some stakeholders. However, the amount of the investment on those CSR activities is not likely to be covered by advantages of CSR. Therefore, CSR initiatives threaten a firm's objective of profit maximization and negatively affect the financial performance (Cai et al. 2012). On the other hand, competitive aggressiveness requires drastic price-cutting to confront price war with rivals and produce services and technologies that are superior to those of competitors (Loikkanen & Hyytine, 2011). Given these extreme stances of massive investment on CSR and the requirements of competitive aggressiveness, it can be summed up that the interaction between CSR strategies and competitive aggressiveness does not yield sustainable competitive advantage.

6.2.3 The Control Variables

As discussed before (refer to chapter5), the firms' characteristics turned to have no effect on the main variable of the study. Nevertheless, the findings revealed that there are differences in the current result among the multi-groups of firms' characteristics. Consequently, this section provides discussion for the differences among (industry type, firm size, firm age, firm ownership and number of competitors), in relation to the positive influence of proactiveness and innovation on sustainable competitive advantage.

Concerning, the firm size, the findings reveal that the effect of proactiveness on sustainable competitive advantage is much stronger in group 1 (Banking), than in group 4 (Education). This result confirms the prior studies (e.g., Shergill & Sarkaria,1999). A possible explanation for this result is that proactiveness is mandatory in the banking industry due to the increased competition, the changing environment, increased customer awareness and technology development.

Regarding firm size, the effect of proactiveness on SCA is higher in group 1(Less than 50 employees) than in group4 (More than 150 employees). This result is consistent with the prior studies (e.g., Hui et al.2013; Doğan, 2013; Mule et al. 2015; and Sellers & Alampi-Sottini,2018). This result may be explained by the fact that small firms are more flexible than larger ones. Hence, they are better able to adapt to the changes in the market conditions. Since small firms are closer to their customers, they are in a better position to hear feedback and observe changing preferences. Therefore, small-sized firms are more proactive than large firms.

As for firm age, the effect of proactiveness on sustainable competitive advantage is higher in Group4 (More than20) than in group 3 (11-20). This result resonates with previous literature (e.g., Alexander et al.,2017; and Cucculelli, 2017). It seems possible that these results are due to the fact that old age firms have a wide variety of resources and capabilities emerged over time. Therefore, they are in a better position to seek and exploit the opportunities faster than young age firms.

Regarding firm ownership, the effect of innovation on sustainable competitive advantage is much stronger in Group 3(Foreign-owned) than in group 1 (Sudanese owned). This result agrees with prior literature (e.g., Mahmood & Hussein,2014). Foreign-owned firms enjoy a high level of innovation. As these firms use more capital intensive technology, hire highly qualified employees and pursue cutting-edge strategies with perspectives of visionary leadership.

With regards to competition (Number of competitors), The effect of proactiveness on sustainable competitive advantage is slightly higher in group 4 (More than 15 rivals) than in group 3 (11-15 rivals). This result is in line with preceding studies (e.g., Nickell, 2006). A possible explanation for this result is that firms operating in an intense competition have higher levels of innovation which affect their sustainable

competitive advantage. That is because competition imposes pressure on cost, quality and drives innovation to win the market.

6.3 Summary of the Key Findings

Drawing on the discussion mentioned above, the major findings of this study can be restated as follows:

1. Sudanese service firms adopt a low level of entrepreneurial orientation. Since, EO components namely, innovation, proactiveness, risk-taking, autonomy were adopted at a low level, whilst competitive aggressiveness was adopted at below average level. A possible explanation includes but not limited to lack of managerial, financial and technical capacity coupled with hindering organizational culture; not to mention the external forces such as continuous economic decline.
2. Sudanese service firms pay no attention to proactive and reactive CSR; This result could be due to the profit wise view of firms and the absence of governmental regulations in CSR.
3. Sudanese service firms have a low level of sustainable competitive advantage. According to the assumption stated earlier in this research. Low level of sustained competitive advantage comes as a product of the low level of entrepreneurial orientation and total absence of the engagement in CSR strategies.
4. Two components of entrepreneurial orientation namely, proactiveness and innovation have a positive influence on sustainable competitive advantage.
5. Three components of entrepreneurial orientation including risk-taking, autonomy, and competitive aggressiveness have a negative influence on sustainable competitive advantage.
6. Proactive and reactive CSR strengthen the relationship between three components of EO (i.e., innovation, risk-taking, and autonomy) and sustainable competitive advantage.
7. Proactive and reactive CSR dampen the relationship between two components of EO (i.e., Proactiveness and competitive aggressiveness).

6.5 Implications of the Study

This section discusses the impacts which the findings might have on theory and practice. Consequently, the first subsection presents the theoretical implications while the second subsection demonstrates the practical implications.

6.4.1 Theoretical Implications

The findings of this study provide several implications for the existing knowledge including the following:

First, the current findings add to a growing body of literature on EO; by providing an empirical examination of the framework linking the relationship between EO and SCA; in the existence of proactive and reactive CSR as a moderator.

Second, this study makes a unique contribution to the literature by examining the moderating impact of both proactive and reactive CSR on the relationship between EO and SCA; providing response to prior studies' call for examining factors internal to firms as a moderator to EO-SCA relationship (Rauch et al.2004) (refer to chapter1).

Third, the findings reveal that not all EO dimensions are equally valuable to firms; because two of EO dimensions (i.e., innovation and proactiveness) appeared to have a significant impact on SCA. In contrast, the remaining three components (i.e., risk-taking, autonomy, and competitive aggressiveness) were found to have a negative influence on SCA. Accordingly, the current findings confirm the results of prior literature which indicate that certain EO dimensions may vary across countries (e.g., Knight, 1997; Thomas & Mueller, 2000).

Fourth, the result of coefficient of determination indicates that more than half of the variance in SCA remains unexplained. This result reinforces the criticism of the RBV theory (e.g., Teece, 2007) that it overlooks other factors surrounding resources and limits the competitive advantage to the mere existence of internal resources and capabilities.

Fifth, the empirical findings in this study provide a different understanding of EO in service industries. As among the dimensions of the EO, innovation, and proactiveness, respectively, turned out to be the most influential components in obtaining a sustainable competitive advantage. Meanwhile, most Sudanese service firms were giving the bulk of their attention to competitive aggressiveness which had no positive impact on SCA.

Sixth, this study shed lights on the significance of the moderating role of proactive and reactive CSR. Although the results of descriptive statistics showed that responding firms do not give attention to proactive and reactive CSR, the findings emphasized that both proactive and reactive CSR strengthen the relationship between EO and SCA. More precisely, in moderating risk-taking and autonomy which had no direct impact on SCA.

Seventh, the results indicate that the impact of innovation and proactiveness on SCA varies according to the characteristics of the company (i.e., Industry type, firm size,

age, competition, and firm ownership. Therefore, these factors should be taken into consideration when conducting a study on EO in a different context.

Finally, the results of this study provide comprehensive insight and directions to future studies which in turn contribute to tackling the limitations of the current study and offer a clear interpretation for the relationship between existing variables through the mechanism of mediation variables.

6.4.2 Practical Implications

The findings of this study have important implications for service firm, managers and practitioners, these implications entail the following:

First, this study provides valuable insights to practitioners in understanding the importance of entrepreneurial orientation and its components as an effective strategy for securing SCA in the service sector. As the findings suggest that components of entrepreneurial orientation, namely innovativeness and proactiveness are crucial to note because the results indicate their positive influence on SCA.

Second, the findings of this study warn the firms' managers from pursuing a blind implementation of all EO dimensions because this is not an effective way to gain SCA. Such an attempt leads to inefficient optimization of resources. Firms, therefore, need to allocate their resources to serve the innovation and proactiveness. On the contrary, firms must avoid taking risks without thorough planning and calculation. As well as, firms need to recognize that excessive competitive aggressiveness may harm the corporate reputation and cause negative impacts on firms' SCA. Likewise, companies should not always provide absolute discretion to employees. This suggestion does not mean a return to the bureaucratic approach; nonetheless, the current findings place caution on the implementation of EO dimensions altogether.

Third, the results indicate that among the EO dimensions, proactiveness has the highest impact on the sustained competitive advantage. Therefore, managers need to review their current practices to ensure that their firms are highly proactive. Moreover, firms should continually scan the environment and monitor the rapidly changing trends; in order to identify and exploit the opportunities, as well as to neutralize threats that may weaken the company's ability to obtain SCA.

Fourth, a further implication of the findings is that managers should give special attention to innovativeness because it was found to be the second EO component which has a positive influence on SCA. Managers, therefore, need to encourage creative initiatives and motivate employees to enhance their problem-solving skills, along with introducing novel ideas. As well as, an effective adoption and execution of innovative activities require significant investment in human capital. Therefore, managers should consider offering cutting-edge training to develop employees to effectively perform these activities.

Fifth, the results show that firms are obsessed with competitive aggressiveness and responding to competitive threats. However, for firms to succeed more concern

should be directed towards exploring new product-market opportunities and utilizing the firm's resource base in an attempt to take advantage of these opportunities. That is because competitive aggressiveness appeared to have no impact on SCA.

Sixth, even though autonomy and risk-taking turned out to have no direct effect on SCA. Nonetheless, introducing proactive and reactive CSR as a moderator resulted in changing the course of the relationship to be strengthened and positive. Consequently, managers need to integrate CSR strategies into their business strategies. Contrariwise, managers should be mindful in aligning CSR strategies with proactiveness because the findings surprisingly indicate that both proactive and reactive CSR weaken the positive relationship between proactiveness and SCA. Another implication of this result is that firms should avoid the disadvantages of CSR by looking for ways to convince customers that CSR efforts are genuine and entirely honest and not only excuses to charge unfair price as perceived by customers. In doing that, firms should utilize their public relation campaigns and other marketing strategies.

Seventh, the results reveal that the impact of proactiveness on SCA is stronger in the small-sized firm than in large-sized ones. This result may be due to the small-sized firms' ability to cope with the changes in the environment quickly. Therefore, managers of large firms need to reduce the complexity of their organizational structure and speed up the process of decision making to become more flexible in responding to the opportunities and threats posed by the business environment.

Eighth, the findings suggest that managers should devote themselves to focus on long-term performance measures. Similarly, they have to abandon the concentration on short-term ones. The essence of strategic management then should be the development of EO and the execution of CSR strategies; and this requires auditing and benchmarking the current activities and leveraging assets and resources which serve as a foundation for SCA.

Lastly, at the government level, the findings of this study inform and demand the policymakers to review their existing policies and activate their monitoring mechanism to ensure the fulfillment of CSR requirements because the results revealed that firms have a little or even no attention to neither proactive and reactive CSR.

6.5 Limitations of the Study

As with all studies, this research has several limitations need to be borne in mind while interpreting the findings. These limitations include the following:

Firstly, the major limitation of this study appears to be the sample size. Although the sample size has met the statistical criteria with regards to validity and reliability, however, the small sample size in this study might be a threat to the generalizability of the results.

Secondly, even though the cross-sectional data used by this study is time efficient and cost-effective, nonetheless, it limits the ability to determine causality between the variables.

Thirdly, while the convenience sample chosen in this study was easy to access and not time-consuming, however, the possibility of bias always associated with it.

Fourthly, despite the fact that the survey was directly administered to top management of the responding firms, the descriptive statistics revealed that most of the respondents were people other than top management. This may impose some problems to the accuracy of the obtained data because non-managerial employees may not have the business knowledge and experience to fully understand the questions and respond accordingly.

Fifthly, this study encountered difficulties in finding a solid operational definition for SCA. The adopted definition was taken from recent research conducted by Yu et al. (2017) who developed SCA as unidimensional based on the conceptual definitions of SCA. Therefore, the measures used in this study might inadequately assess the construct of SCA. Moreover, this study sometimes uses firm performance and SCA interchangeably (refer to chapter2), However, using sustained competitive advantage as a unique construct unlike performance would result in an accurate conclusion.

Finally, as this study is conducted in the context of the service firms situated in Sudan, it is indefinite whether the findings are generalizable to firms in other sectors or other countries.

6.7 Suggestions for Future Research

Drawing on the findings and limitations mentioned above, this study offers several suggestions for future research as follows:

First, according to Denscombe (2000), in order to generalize the findings of a survey, the sample should be carefully selected to be representative to the population, it also needs to be in a reasonable size. Accordingly, future research with large sample size is likely to provide a higher degree of statistical significance.

Second, a longitudinal study is needed to further clarify the findings and provide an accurate understanding of the causal relationship between EO and SCA, as well as to examine whether the effect of different EO dimensions change over time as the corporation characteristics change. Furthermore, measuring the sustainability of competitive advantage also requires using old data.

Third, the results of the coefficient of determination (R^2) reported that the dimensions of EO (i.e., innovation, proactiveness, risk-taking, autonomy, and competitive aggressiveness) explain only below half of the variation in SCA. Thus, the current study failed to explain a large portion of the variance in SCA. For that reason, there is abundant room for further research to determine the other variables which complete the explanation of the variance in SCA. Along with considering what factors increase or diminish the EO-SCA relationship, such as organizational culture and emotional intelligence as suggested by Goleman (1998). In the same way, Although, this study examined moderator variables (i.e., proactive and reactive CSR). However, it is

crucial to combine environmental factors such as market growth, technological and market turbulence as moderators.

Fourth, further research should be conducted to investigate whether EO indirectly affects SCA through mediation mechanisms such as market orientation or brand orientation (e.g., Bhuian et al. 2005; and Matsuno et al.2002).

Fifth, this study applies a five-point Likert scale ranging from 1 to 5 to measure the variables. Future studies can apply a seven-point Likert scale to measure the variables and compare the findings with this study to test the significance of the variability of the data.

Lastly, future research should be devoted to developing SCA as a multi-dimensional construct, in addition to differentiating SCA construct from the performance; in order to reach a more accurate result and a better conclusion. Similarly, this study also adopted subjective measures for SCA. Although prior research has established that subjective measures of performance match the objective measures, however, future research may use objective measures which imply more accurate findings.

6.7 Research Conclusion

This study attempted to achieve two main objectives. The first aim of the present study was to investigate the influence of entrepreneurial orientation on sustainable competitive advantage. The second aim of this study was to examine the moderating effect of proactive and reactive CSR on the relationship between entrepreneurial orientation and sustainable competitive advantage.

This study was conducted on a valid a sample of (126) Sudanese service firms. The variables of the study were developed based on theoretical and empirical evidence from previous literature. All variables of the study demonstrated a satisfactory level of validity and reliability.

Returning to the questions posed at the beginning of this study, it is now possible to state that according to the empirical findings, Sudanese service firms can obtain a sustainable competitive advantage through adopting entrepreneurial orientation more precisely, two components of EO (i.e., proactiveness and innovation). On the contrary, the remaining three components of EO (i.e., risk-taking, autonomy, and competitive aggressiveness) seem to provide no value to Sudanese service firms. In addition, the empirical findings revealed that when Sudanese service firms engage in proactive and reactive CSR, the influence of innovation, risk-taking, and autonomy on SCA will be positive. In contrast, the influence of proactiveness and competitive aggressiveness on SCA will be negative. Taking these findings collectively, one can conclude that Sudanese service firms need to implement entrepreneurial orientation and engage in proactive and reactive CSR to obtain a sustainable competitive advantage and secure their predominant role played in the economy.

In conclusion, the originality of this study lies in the implications it provides to theory and practice. Additionally, as a remedy for current limitations, future research may benefit from suggestions provided as well as might replicate the study to validate the current findings.

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APPENDICSE

APPENDICES

APPENDIX A.1: SUMMARY OF LITERATURE REVIEW

APPENDIX B: QUESTIONNAIRE

Appendix B.2: Questionnaire (English)

Appendix B.2: Questionnaire (Arabic)

Appendix B.3: Validation Letter

Appendix B.4: Validator's Names

Appendix C: Output of SPSS 24.0 and Smart PLS 3.0

Appendix C.1: Coding Book

Appendix C.2: Data Normality (Skewness and Kurtosis)

Appendix C.3: Common Method Bias (CMB)

Appendix C.4: Suspicious Response Pattern

Appendix C.5: Outlier Loading

Appendix C.6: Responding Firm Profile

Appendix C.7: Respondent Profile

Appendix C.8: Construct Reliability

Appendix C.9: Construct Validity

Appendix C.10: Descriptive Statistics of All Variables

Appendix C.11: Model's Coefficient of Determination (R²)

Appendix C.12: Model's Path Coefficients

Appendix C.13: Model's Effect Size

Appendix C.13: Multigroup Analysis:

Appendix C.13.1: Multigroup Analysis (Type of Industry)

Appendix C.13.2: Multigroup Analysis (Firm Size)

Appendix C.13.3: Multigroup Analysis (Firm Age)

Appendix C.13.4: Multigroup Analysis (Firm Ownership)

Appendix C.13.5: Multigroup Analysis (Number of Competitor

	Author &date	Title of study	IV	DV	Others	Methodology	Result	Limitation	Suggestions for future research
1	Supriyadi, 2017	Analysis effect of resources and dynamic capabilities to sustainable competitive advantage and its implications to the firm performance	Resources and dynamic capabilities	Firm performance	Sustainable competitive advantage(Mediator)	Descriptive study	Resources affect sustainable competitive advantage Dynamic capabilities affect sustainable competitive advantage sustainable competitive advantage affects the company's performance.	Study adopted a cross-sectional design.	Future studies may use longitudinal design.
2	Chuanpeng et al.,2017	Knowledge Creation Process and Sustainable Competitive Advantage: The Role of Technological Innovation Capabilities	Knowledge Creation Process	Sustainable Competitive Advantage	Sustainable Competitive Advantage(Mediator)	Descriptive study	The results indicate that the knowledge creation process does not have a significant direct effect on sustainable competitive advantage. Rather, the knowledge creation process can only influence the sustainable competitive advantage through the mediating effect of technological innovation capabilities.	The usage of convenience sample of manufacturing firms in the Pearl river Delta region of China was used, which limited the generalizability of the findings.	Future studies should investigate larger samples to further generalize their findings.
3	Albahussain et al.,2014	The Prediction of Corporate Social Responsibility Impact on Competitive Advantage	Corporate Social Responsibility	Competitive Advantage	-	Descriptive study	The results showed that CS, therefore, affects the CA	Study adopted a cross-sectional design.	using a longitudinal design might help to elucidate the findings further, particularly to see whether the effect of different.
4	Dumitru et al.,2014	Corporate social responsibility and SCA	Corporate social responsibility	SCA	-	Descriptive study	CSR positively affects SCA	Study adopted a cross-sectional design.	Future studies may use longitudinal

5	Galina ,Karina and Tatiana 2016	Entrepreneurial orientation and firm performance in different environmental settings	Entrepreneurial orientation	firm performance	Environmental hostility(moderator)	Descriptive study	Entrepreneurial orientation has a positive impact on firm performance	1) data on entrepreneurial orientation and firm performance were collected at one point in time 2)study was conducted in Finland and European part of Russia.	1)study from long run perspective 2) study in different environment context.
6	Helen ,Hirvonin 2015	The impact of entrepreneurial orientation on B2B branding and business growth	entrepreneurial orientation	B2B branding and business growth	-	Descriptive study	entrepreneurial orientation has a positive effect on business growth in emerging markets,	1) study included data from one emerging market and one developed Market.	1) studies should be conducted using data from several countries.
7	Kamariah Ismail and others 2015	Entrepreneurial Intention, Entrepreneurial Orientation of Faculty and Students towards Commercialization of research	Entrepreneurial Intention,Entrepreneurial Orientation	Commercialization of research	-	Descriptive study	entrepreneurial orientation of faculty and students is having more influence towards	The study is limited to only one university.	Including more universities and increasing the sample may show different results.
8	Albahussain et al.,2014	The Prediction of Corporate Social Responsibility Impact on	Corporate Social Responsibility	Competitive Advantage		Descriptive study	The results showed that CS, therefore, affects the CA	Study adopted a cross-sectional design.	Future studies may use longitudinal design.
9	Dumitru et al.,2014	Corporate social responsibility and the sustainable Competitive advantage	Corporate social responsibility	Sustainable Competitive advantage		Descriptive study	CSR positively affects sustainable competitive advantage.	Study adopted a cross-sectional design.	Future studies may use longitudinal design.

10	Keith, George and pavols 2014	SME entrepreneurial orientation and international performance, the moderating role of strategic alliances	entrepreneurial orientation	entrepreneurial orientation	Strategic alliance as a moderator	Descriptive study	Firms with higher EO also have higher international performance	1) the study was conducted in USA and UK only so it's doubtful that the findings are generalizable to firms from other countries, 2) European union definition of SME was only used in this study	1) Conducting this study in others countries 2) using others definitions of SME.
11	Frimpong et al.,2014	The management of corporate social responsibility for competitive advantage	The management of corporate social responsibility	Competitive advantage	-	Descriptive study	It was also seen that most of the CSR practices of Bosomtwe Rural bank are directed to development of education and community development. It was also identified that major advantage that Bosomtwe Rural Bank enjoys from CSR is enhancement of corporate reputation and relations with key stakeholders.	The case study ws limited to one bank, therefore, result cannot be generalized to the population.	Future study may consider larger sample.
12	Tortugas and Hecker 2012	Proactive CSR: the Role of its Economic, Social and Environmental Dimensions on the Association between Capabilities and Performance	Capabilities	Financial performance	Proactive CSR	Descriptive study	proactive CSR can provide significant scope for enhancing financial performance	difficulties in generalizing results, from sample to population to other sectors/industries and from Australia to other economies.	Future studies may examine different setting.

13	Baraskova,2010	strategic positioning and sustainable competitive advantage and their interrelation	Strategic positioning	sustainable competitive advantage	-	Descriptive study	The concepts of SCA and SP are interchanging	The findings are based solely on the case analysis of three unique beverage companies.	To generalize conclusions, the research of other companies in food industry on possession of SCA and their positioning strategies is needed.
14	Ramadan,2010	The influence of organizational culture on Sustainable competitive advantage	organizational culture	Sustainable competitive advantage	-	-	There is evidence of a relationship between the organizational culture variables and the competitive advantage Outcomes. The results are both strong and statistically significant.	Study adopted a cross-sectional design.	Future studies may use longitudinal design.
15	Mathew and Robert 2007	Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth	entrepreneurial orientation	business performance	-	Descriptive study	Only proactiveness and innovativeness have a positive influence on business performance while risk-taking.	Study adopted a cross-sectional design	using a longitudinal design might help to elucidate the findings further, particularly to see whether the effect of different.
16	Covin and green 2006	Strategic Process Effects on the Entrepreneurial Orientation–Sales Growth Rate Relationship	Entrepreneurial Orientation	Sales Growth Rate	Strategic Process (Moderator)	Descriptive study	there is a positive effect of EO on sales growth rate.	the dependent variable employed in this research—firm sales growth rate and it doesn't mean efficiency in generating revenue.	Examination of additional strategic attributes as potential moderators of the EO performance relationship.

17	ORLANDO and others 2004	Cultural Diversity in Management, Firm Performance, and the Moderating Role of Entrepreneurial Orientation Dimensions	Cultural Diversity	Firm Performance	Entrepreneurial Orientation Dimensions	Descriptive study	Innovativeness positively and risk taking negatively moderate the relation between IV and DV.	Using of a single industry which is financial sector.	Research in other industry in other nation
18	WIKLUND and SHEPHERD 2003	Knowledge-based resources ,Entrepreneurial Orientation ,and the performance of small and medium-sized businesses	Knowledge-based resources	performance of small and medium-sized businesses	,Entrepreneurial Orientation	Descriptive study	findings suggest that knowledge-based resources (applicable to discovery and exploitation of opportunities) are positively related to firm performance.	from a factor analysis that the items loaded on one common factor	development of valid measures of different types of knowledge-based resources applicable to entrepreneurship
19	Dehning, Stratopoulo,2002	Determinants of a sustainable competitive advantage due to an IT-enabled strategy.	Information technology	sustainable competitive advantage	-	Descriptive study	findings show that managerial IT skills are positively related to sustainability, and competitor's knowledge of competitive advantage is negatively related to sustainability. There was no support for technical IT skills or IT infrastructure as a source of sustainable competitive advantage.	One of the limitations of this study is the use of the Computer World Premier 100 dataset. Another issue with the data is that it is now almost 10 years old.	Another avenue for future research is the relation between duration and competitive environments.

20	Lumpkin And Gregory 2001	Linking two dimensions of entrepreneurial orientation to firm performance : the moderating role environment and industry life cycle	Two dimension of EO Proactiveness and competitive aggressiveness .	Firm performance	environment and industry life cycle	Descriptive study	study has found that two of the dimensions of EO tend to vary independently of each other, and that their effect on performance is contingent on moderating variables	study has only investigated the independence of the proactiveness and competitive aggressiveness dimensions and their contingent relationships to performance.	explore the same questions in the context of other EO dimensions such as risk taking and innovativeness.
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Appendix B.2: Questionnaire (Arabic)



بسم الله الرحمن الرحيم
جامعة السودان للعلوم والتكنولوجيا
كلية الدراسات العليا
ماجستير العلوم في ادارة الاعمال



إستبانة بحث لتكملة متطلبات نيل درجة ماجستير العلوم في ادارة الاعمال بعنوان :

أثر التوجه الريادى في الميزة التنافسية المستدامة: المسؤولية الاجتماعية الاستباقية والدفاعية كمتغير معدل

Entrepreneurial Orientation and Sustainable Competitive Advantage: The Moderating Effect of Proactive and Reactive Corporate Social

إعداد الدارس :

عامر الجبلى احمد محمد

المشرف:

د.صديق بلل ابراهيم

يناير 2019م

بسم الله الرحمن الرحيم

السيد المدير...../المحترم ،،

السلام عليكم ورحمة الله تعالى وبركاته ،،،

نرجو من سيادتكم التكرم بمنحنا بعض الدقائق من وقتكم الثمين لاستكمال هذه الاستبانة المتعلقة باجراء بحث تكميلي لنيل درجة ماجستير العلوم في ادارة الاعمال بعنوان : (أثر التوجه الريادي على الميزة التنافسية المستدامة : في ظل المسؤولية الاجتماعية الاستباقية والدفاعية كمتغير معدل) بالتطبيق علي عينة من المؤسسات الخدمية بولاية الخرطوم، ونؤكد لكم ان هذ البيانات التي ستزودننا بها ستكون لأغراض البحث العلمى فقط وستعامل بسرية تامة .

مع وافر الشكر والتقدير لتعاونكم المثمر فى تعزيز البحث العلمى ،،،

عامر الجيلى احمد محمد

0919268822

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اسم الدارس

رقم الهاتف

الايمل

الجزء الاول : معلومات عن المؤسسة

(تحت الاجابة التى تناسب اجابتك ✓ فضلاً ضع علامة)

1 - طبعة الخدمة المقدمة:

طيران

تعليمية

اتصالات

تأمين

مصرفية

مستشفيات

اوراق مالية

صرافة

فنادق

اخرى أذكرها

2 - حجم المؤسسة (عدد الموظفين بالمؤسسة):

اقل من 50 من 51 الى 100 من 101 الى 150 اكثر من 150

3- عمر المؤسسة

اقل من 5 سنوات من 5-10 سنوات من 11-20 سنة اكثر من 20

4 – ملكية المؤسسة :

سودانية بالكامل اجنبية بالكامل مشتركة

5 – عدد المنافسين:

من 1- 5 من 6 الى 10 من 11 الى 15 اكثر من 15 منافس

الجزء الثانى : البيانات المتعلقة بالدراسة

المحور الاول

المستجيب الكريم : العبارات فى الجدول ادناه تتعلق بقياس التوجه الريادى الذى يتكون من الابعاد التالية (الابتكار ، تحمل المخاطرة ، المبادرة ، الاستقلالية)

الرجاء وضع علامة (√) على الاجابة التي تراها مناسبة وتعبر عن وجهة نظرك

أبعاد وعبارات المتغير المستقل
اوافق بشدة اوافق بشدة
لا اوافق بشدة لا اوافق بشدة

Entrepreneurial Orientation التوجه الريادى

Innovation الابتكار

مؤسستنا تشجع الابتكار فى التكنولوجيا

مؤسستنا تشجع الابتكار في المنتجات	2
مؤسستنا تحفز الابداع وتجريب كل ما هو جديد	3
مؤسستنا تستثمر في البحوث والتطوير	4
مؤسستنا تمتلك خدمات مبتكرة يصعب على المنافسين تقليدها	5

Risk-taking تحمل المخاطرة

مخاطر عالية ذات جديدة افكار لتبني مؤسستنا لديها استعداد	1
المنتجات في الابتكار على طائفة مبالغ مؤسستنا تنفق	2
مؤسستنا تشجع تحمل مستوى مناسب من المخاطر المالية	3
مؤسستنا تتجنب اتخاذ اي قرار دون تخطيط	4
مؤسستنا تعمل على تقييم عوامل المخاطر	5
مؤسستنا تشجع العاملين على حساب المخاطر عند تبني الافكار الجديدة	6

Proactiveness المبادرة

مؤسستنا تقوم بمبادرات تثير ردود افعال المنافسين لها	1
مؤسستنا كثيرا ما تكون الاولى في تقديم المنتجات الجديدة	2
مؤسستنا كثيرا ما تكون الاولى في تبني تكنولوجيا حديثة	3
مؤسستنا تسعى نحو ان تكون رائدة في تقديم الافكار الجديدة	4

Autonomy الاستقلالية

مؤسستنا تسمح للموظفين بالتفكير والعمل دون تدخل	1
مؤسستنا تعطي الموظفين حرية في التواصل مع بعضهم دون تدخل	2
مؤسستنا تسمح للموظفين بتغيير طريقة ادائهم للمهام	3
مؤسستنا تمنح الموظفين السلطة والمسؤولية لاداء العمل بمفردهم	4
مؤسستنا تسمح للموظفين بمعرفة جميع المعلومات المهمة	5

Competitive aggressiveness الهجومية التنافسية

مؤسستنا تعزز مركزها التنافسي بتقديم خدمات بأقل تكلفة	1
مؤسستنا تعزز مركزها التنافسي عن طريق تقليد ممارسات المنافسين	2
مؤسستنا تقوم بمناورة المنافسين من وقت لآخر	3
مؤسستنا تقوم بالإعلانات المضادة لمنتجات المنافسين	4
مؤسستنا تتجنب التنافس بالشكل المفرط	5
مؤسستنا بشكل عام تتخذ اسلوب هجومى عندما تنافس	6

المحور الثانى

المستجيب الكريم : العبارات فى الجدول ادناه تتعلق بقياس الميزة التنافسية المستدامة

أبعاد وعبارات المتغير التابع	وافق	وافق	محايد	لا	لاوافق
	بشدة			وافق	بشدة
Sustainable competitive advantage الميزة التنافسية المستدامة					
1	جودة الخدمات التى تقدمها مؤسستنا افضل من الخدمات التى يقدمها المنافسون				
2	مؤسستنا لديها قدرات عالية فى البحوث والتطوير اكثر من المنافسين				
3	مؤسستنا لديها قدرات ادارية افضل من المنافسين				
4	ربحية مؤسستنا افضل من ربحية المنافسين				
5	الصورة الذهنية لمؤسستنا افضل من المنافسين				
6	يصعب على المنافسين تقليد ميزة مؤسستنا التنافسية				

المحور الثالث

المستجيب الكريم : العبارات فى الجدول ادناه تتعلق بقياس المسؤولية الاجتماعية الاستباقية والدفاعية

أبعاد وعبارات المتغير المعدل	وافق	وافق	محايد	لا	لاوافق
	بشدة			وافق	بشدة
Proactive & Reactive CSR المسؤولية الاجتماعية الاستباقية والدفاعية					
المسؤولية الاجتماعية الاستباقية					
1	مؤسستنا فيها النزاهة والسلوك الاخلاقى يفوقان القوانين واللوائح				
2	مؤسستنا تقدم معلومات دقيقة لكل العملاء بشكل مسبق				
3	مؤسستنا تبادر بتنفيذ الانشطة والمشروعات الاجتماعية				
4	مؤسستنا تشجع العاملين على المشاركة فى أنشطة المسؤولية الاجتماعية				
المسؤولية الاجتماعية الدفاعية					
1	مؤسستنا تنفذ الانشطة والمشاريع الاجتماعية تلبية لمتطلباتها الاجتماعية				
2	مؤسستنا تلتزم بالوفاء بمتطلباتها تجاه البيئة				
3	مؤسستنا تقدم الخدمات التى تفى بالحد الادنى لمتطلباتها القانونية				

مؤسستنا تستجيب لمتطلبات العملاء بشأن الخدمة المقدمة

4

مؤسستنا توفر معلومات دقيقة عندما يطلبها العملاء

5

مؤسستنا تقوم بالوفاء بتوقعات جميع اصحاب المصلحة

6

الجزء الثالث : المعلومات الشخصية

(تحت الاجابة التي تناسب اجابتك ✓ ضع علامة)

1. النوع

انثى ذكر

2. العمر

30-20 سنة 40-31 سنة 50-41 سنة 60-51 سنة اكثر من 60 سنة

3. الوظيفة

مدير عام نائب مدير عام مدير ادارة اخرى اذكرها

4. المؤهل العلمى

دون الجامعى جامعى فوق الجامعى اخرى اذكرها

5. سنوات الخبرة

اقل من 10 سنوات من 10-20 سنة اكثر من 20 سنة

*المستجيب الكريم اذا وددت الحصول علي نسخة من نتائج هذه الدراسة نرجو امدادنا بالمعلومات الاتية:-

	رقم الهاتف
	البريد الالكتروني

Appendix B.2: Questionnaire (English)



Sudan University of science and technology
College of graduate studies

Dear respondent:

I am currently undertaking a research project under titled: **Entrepreneurial Orientation and Sustainable Competitive Advantage: The Moderating Effect of Proactive and Reactive Corporate Social Responsibility**. A study on the Sudanese service sector.

I would appreciate it very much if you could spend some time to answer this questionnaire. There will be no right or wrong answer. As well as would like to assure you that your response will be treated as "**Strictly Confidential**"; and will be used for academic purposes only.

Thank you very much for your help and cooperation

By: Aamir Elgaili Ahmed

Supervisor:

Dr.Siddig Balal Ibrahim

Sudan University for Science & Technology

Co-supervisor:

Dr. Ela Özkan

Çankırı Karatekin University

January 2019

Section A: Corporate profile

Please mark (√) in the box which best describes your response

1. Type of business

Banking	Insurance	Telecommunication	Hotel
Airline	Education	Stock exchange	Exchange
hospital	Other / mention it		

2. Number of employees (company size)

Less than 50	51-100	101-150	More than 150
--------------	--------	---------	---------------

3. company age

Less than 10	11-20	More than 20
--------------	-------	--------------

4. Ownership of company

Wholly Sudanese-Owned	Joint venture	Wholly Foreign-Owned
-----------------------	---------------	----------------------

5. Number of competitors

1-5	6-10	11-15	More than 15
-----	------	-------	--------------

Independent variable (IV): Entrepreneurial Orientation (EO)

This part is concerned with the entrepreneurial orientation involving (Innovation, risk-taking, proactiveness and autonomy). Please mark (√) in the box which best describes your response.

(1) Strongly disagree	(2) Disagree	(3) Neither agree nor disagree	(4) Agree	(5) Strongly agree
--------------------------	-----------------	-----------------------------------	--------------	-----------------------

Section B: Study Data

Statement		(1)	(2)	(3)	(4)	(5)
Innovativeness		Source				
Our firm		LUMPKIN & DESS 2005				
1	encourages and stimulates technological innovation					

2	encourages and stimulates product-market innovation	
3	stimulates creativity and experimentation	
4 2	properly invests in new technology, R&D, and continuous improvement	
5	Innovates services which is hard for competitors to successfully imitate	
Risk-taking		
Our firm		TAISEER FADUL 2015
1	Is willing to adopt new high-risk ideas	
2	Spends huge amounts of money on product innovation	
3	encourages a proper level of business and financial risk-taking	
4	encourages employees to take calculated risks with new ideas	
5	carefully manages risks and avoids taking actions without sufficient planning	LUMPKIN & DESS 2005
6	enhances its competitive risk position by assessing risk factors in order to minimize uncertainty	
Proactiveness		LUMPKIN & DESS 2005
Our firm		
1	Initiates actions which competitors then respond to	
2	Is very often the first business to introduce new products/service	
3	Is very often the first business to introduce administrative and operational technology	
4	Has a strong tendency to be ahead of competitors in introducing novel ideas or products	
Autonomy		Hughes & Morgan (2006)
1	Employees are permitted to act and think without interference	
2	Employees are given freedom to communicate without interference	
3	Employees are given freedom and independence to decide on their own how to go about doing their work	
4	Employees are given authority and responsibility to act alone	
5	Employees have access to all vital information	
Competitive aggressiveness		G. Dess & Lumpkin 2005
Our firm		

1	enhance its competitive position by entering markets with drastically lower prices		
2	enhance its competitive position by copying the business practices or techniques of successful competitors		
3	Avoids acting overly aggressive which leads to erosion of firm reputation and retaliation by competitors		
4	maneuvers competitors from time to time		
5	In general, our business takes a bold or aggressive approach when competing		Hughes & E. Morgan 2006
6	makes timely announcements of new products or technologies		

Dependent variable (DV): Sustained Competitive advantage		
This part is concerned with Sustained competitive advantage which is taken as a unidimensional variable		
Statement		Source
	The quality of service that my firm offers is better than that of the competitor's services	Yu& Zhang & Lin& Lin 2017
	My firm is capable of R&D than the competitors	
	My firm has better managerial capability than the competitors	
	My firm's profitability is better	
	The corporate image of my firm is better than that of the competitors	
	The competitors are difficult to take place of my firm competitive advantage	

Moderator variable: Proactive and Reactive corporate social responsibility		
This part is concerned with Proactive and reactive CSR. Please mark (√) in the box which best describes your response		
Statement		Source
	Proactive CSR	Ching-Hsun Chang , (2015)
1	the company's integrity and ethical behavior go beyond the country's laws and regulations	
2	the company's employees are required to provide full and accurate information to all customers	
3	the company carries out public activities actively	

4	the company encourages managers and employees participate in corporate citizenship activities within their local communities	
Reactive CSR		
	the company carries out public activities to meet social expectations reactively	Ching-Hsun Chang , (2015)
	the company complies with environmental regulations reactively	
	the company responds to customers' requests of services reactively	
	the company provides services that at least meet minimal legal requirements	
	the company's employees provide full information to all customers reactively	
	The company meets the expectations of stakeholders	Groza , (2011)

Section C: Personal Information

Please mark (√) in the box which best describes your response

1. Gender

Male	Female
------	--------

2. Age

20-30	31-40	41-50	51-60	More than 60
-------	-------	-------	-------	--------------

3. Job title

General manager	Deputy GM	Head of department	Others/mention it
-----------------	-----------	--------------------	-------------------

4. Level of education

High school	Bachelor degree	Master degree	Ph.D.	Others/mention it
-------------	-----------------	---------------	-------	-------------------

5. Years of experience

Less than 10	11-20	More than 21
--------------	-------	--------------

Thank you very much for your help and cooperation

If you want a copy of this research findings, please provide your contact information

E-mail	
Phone number	

Appendix B.3: Validation Letter



Sudan University of science and technology
College of graduate studies



Dear Dr....

Greetings,

I am currently conducting a research entitled “**The Moderating Role of Proactive and Reactive Corporate Social Responsibility in The Relationship Between Entrepreneurial Orientation and Sustainable Competitive Advantage**”

With your expertise, I am humbly asking your permission to validate the attached questionnaire using the attached rating tool.

I’m looking forward that my request would merit your positive response

(Please find the attached **research plan** to assure the consistency of research objective and measurement of research variables)

Thanks for your help and cooperation

Prepared by: Aamir Elgaili Ahmed

Scale	Interpretation	Description
5	Very high valid	The questionnaire is valid and can provide unbiased data for the investigation, allowing 0-5% error
4	High valid	High valid The questionnaire is valid and can provide unbiased data for the investigation, allowing 8-10% error
3	valid	The questionnaire is valid and can provide unbiased data for the investigation, allowing 11-15% error
2	Less valid	Less valid The questionnaire is valid and can provide unbiased data for the investigation, allowing 16-20% error
1	Not valid at all	The questionnaire is valid and can provide unbiased data for the investigation, allowing 21-25% error

Noted by: Dr. Siddig Balal Ibrahim

JUNE 2018

Questionnaire Validation

Direction: this tool asks for your evaluation of the questionnaire to be used in the data gathering for the investigation stated above, to establish its validity. You are requested to give your honest assessment using the criteria stated below; please check (√) only one from the selection.

**THE MODERATING ROLE OF PROACTIVE AND REACTIVE
CORPORATE SOCIAL RESPONSIBILITY IN THE RELATIONSHIP
BETWEEN ENTREPRENEURIAL ORIENTATION AND SUSTAINABLE
COMPETITIVE ADVANTAGE”**

No	Indicators	Rating				
		(1)	(2)	(3)	(4)	(5)
1	The indicators in the questionnaire consistently and accurately measure each variables of the investigation					
2	The questionnaire fits with the variables under investigation, thus measuring what it tends to measure					
3	the questionnaire has the capability to measure items of variables within a given time frame					

4	The questionnaire has the ability to distinguish the characteristics or the properties of differing attributes of the subjects under study					
5	The questionnaire has the ability to gather factual data, eliminating biases and subjectivity					
6	Quick and complete data can be generated by the questionnaire within the time frame allowed to obtain the data					
7	The questionnaire is framed in a clear, simple, in order to avoid risk of error					
8	The questionnaire is capable of generating data that will be of value and practical use to the factors concerned in the investigation					

Review, Comments, and Suggestion

Appendix B.4: Validator's Names

Names of the questionnaire's validators

	Names	Qualification level	Department
1	Siddig Balal	Associate professor	Marketing
2	Mohamed Hamad	Assistant professor	Banking and finance
3	Abdelsalam Adam	Assistant professor	Business administration
4	Maisoon Ali	Assistant professor	Marketing
5	Bushara Musa	Assistant professor	Secretary
6	Amina Abdelgadir	Assistant professor	Secretary

Appendix C: Output of SPSS 24.0 and Smart PLS 3.0

Appendix C.1: Coding Book

Variable instructions	SPSS Variable Name	Coding
Identification n°	ID	Number of each respondent
Business Type	Business	1= Banking 2=Insurance 3= Telecommunication 4= Education 5= Airline 6= Hotel 7=Exchange 8=Stock Exchange 9= Hospital 10= Others

Company Size	Size	1= Less than 50 2=51-100 3= 101-150 4=More than 150
Company age	Age	1= Less than 5 2=5-10 3= 11-20 4= More than 20
Company Ownership	Ownership	1= Sudanese Owned 2= Joint venture 3= Foreign Owned
Number of competitors	competitors	1= 1-5 2=6-10 3=11-15 4= More than 15
Respondent Gender	Gender	1= Male 2= Female
Respondent age	Age	1= 20-30 2= 31-40 3= 41-50 4= 51-60 5= more than 60
Respondent's job title	Job's title	1= General manager 2= Deputy GM 3= Head of department 4= other
Respondent Qualification	Qualification	1= High school 2= Bachelor degree 3= master degree 4= PhD 5= Other
Years of Experience	Experience	1= less than 10 2= 10-20 3= more than 20
All constructs	Q1, Q2,Q3,Q4,Q5	1= Strongly disagree 2= disagree 3= neither agree nor disagree 4= agree 5= strongly agree

Appendix C2 : Data Normality and Missing Data

	N		Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
	Valid	Missing				
Business Type	126	0	0.446	0.216	-1.142	0.428
Company Size	126	0	-0.082	0.216	-1.852	0.428
Company Age	126	0	-1.234	0.216	0.277	0.428
SMEAN(Ownership)	126	0	1.334	0.216	0.046	0.428
SMEAN(Competitors)	126	0	-1.028	0.216	-0.466	0.428
Respondent Gender	126	0	0.613	0.216	-1.188	0.428
Respondent Age	126	0	0.553	0.216	-0.980	0.428
Job Title	126	0	-1.528	0.216	1.819	0.428
Qualification	126	0	0.452	0.216	0.072	0.428
Experience	126	0	0.503	0.216	-1.509	0.428
InnovQ1	126	0	0.552	0.216	-0.718	0.428
InnovQ2	126	0	0.264	0.216	-1.049	0.428
InnovQ3	126	0	0.256	0.216	-1.087	0.428
InnovQ4	126	0	0.100	0.216	-1.127	0.428
InnovQ5	126	0	0.244	0.216	-1.207	0.428
RiskQ1	126	0	0.021	0.216	-0.154	0.428
RiskQ2	126	0	-0.051	0.216	-0.845	0.428
RiskQ3	126	0	0.000	0.216	-0.450	0.428
RiskQ4	126	0	0.397	0.216	-1.077	0.428
RiskQ5	126	0	0.167	0.216	-0.552	0.428
RiskQ6	126	0	0.084	0.216	-0.754	0.428
ProactiveQ1	126	0	0.095	0.216	-0.617	0.428
ProactiveQ2	126	0	0.198	0.216	-0.836	0.428
ProactiveQ3	126	0	0.034	0.216	-0.989	0.428
ProactiveQ4	126	0	0.299	0.216	-0.713	0.428
AutonomQ1	126	0	0.135	0.216	-1.083	0.428
AutonomQ2	126	0	0.234	0.216	-0.839	0.428
AutonomQ3	126	0	0.033	0.216	-0.498	0.428
AutonomQ4	126	0	0.159	0.216	-0.868	0.428
AutonomQ5	126	0	0.121	0.216	-1.059	0.428
AggressivenessQ1	126	0	0.144	0.216	-1.047	0.428
AggressivenessQ2	126	0	-0.097	0.216	-1.069	0.428
AggressivenessQ3	126	0	-0.102	0.216	-0.971	0.428
AggressivenessQ4	126	0	0.000	0.216	-1.145	0.428
AggressivenessQ5	126	0	-0.054	0.216	-0.917	0.428
AggressivenessQ6	126	0	0.020	0.216	-0.811	0.428
SCAQ1	126	0	0.231	0.216	-1.108	0.428
SCAQ2	126	0	0.084	0.216	-0.754	0.428
SCAQ3	126	0	0.133	0.216	-1.223	0.428
SCAQ4	126	0	0.100	0.216	-1.127	0.428
SCAQ5	126	0	0.199	0.216	-1.074	0.428

SCAQ6	126	0	0.062	0.216	-1.109	0.428
Pro CSRQ1	126	0	0.402	0.216	-0.915	0.428
Pro CSRQ2	126	0	0.365	0.216	-0.823	0.428
Pro CSRQ3	126	0	0.153	0.216	-0.908	0.428
Pro CSRQ4	126	0	0.223	0.216	-1.055	0.428
ReactQ1	126	0	0.027	0.216	-0.393	0.428
ReactQ2	126	0	0.122	0.216	-0.690	0.428
ReactQ3.	126	0	0.138	0.216	-0.678	0.428
ReactQ4	126	0	0.266	0.216	-0.717	0.428
ReactQ5	126	0	0.405	0.216	-0.837	0.428
ReactQ6	126	0	0.269	0.216	-0.877	0.428

Appendix C.3: Common Method Bias (CMB)

C.3.1 Outer VIF Values

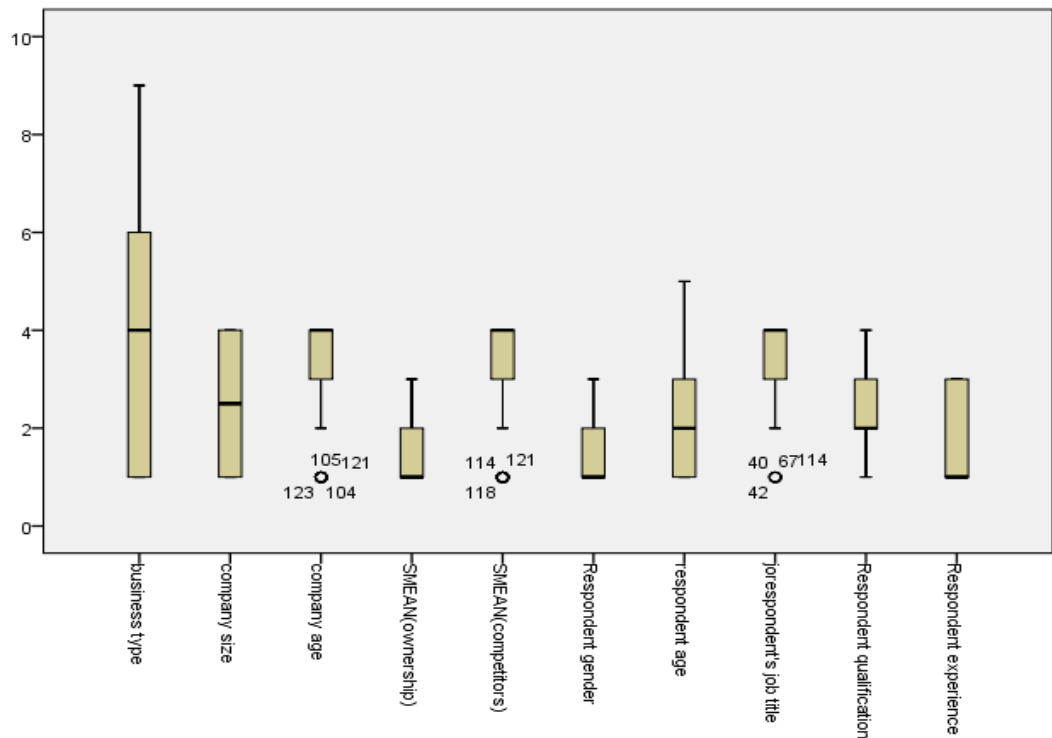
	VIF
AdvantageQ2	1.332
AdvantageQ3	1.345
AdvantageQ5	1.400
AdvantageQ6	1.440
AutonomyQ1	1.676
AutonomyQ2	1.659
AutonomyQ3	1.741
AutonomyQ4	1.794
AutonomyQ5	1.543
InnovQ1	1.462
InnovQ3	1.497
InnovQ4	1.479
InnovQ5	1.436
ProactQ2	1.209
ProactQ3	1.402
ProactQ4	1.317
ReactCSRQ1	1.246
ReactCSRQ4	1.677
ReactCSRQ5	1.923
ReactCSRQ6	1.533
RiskQ3	1.247
RiskQ5	1.507
RiskQ6	1.399
agressiveQ3	1.438
agressiveQ4	1.439
agressiveQ5	1.658
agressiveQ6	1.445
proCSRQ1	1.501
proCSRQ2	1.449
proCSRQ3	1.479
proCSRQ4	1.567

C3.2 Inner VIF Values

	Sustainable Competitive Advantage
Aggressiveness	1.658
Autonomy	1.423
Innovation	1.964
Proactive CSR	1.940
Proactiveness	1.281
Reactive CSR	2.025
Risk taking	2.090

Appendix C.4: Suspicious Response Pattern

Responses	Stand. Dev.
1	0.0
2	0.2
3	0.3
4	0.3
5	0.3
6	0.3
7	0.3
8	0.4
9	0.4
10	0.4
11	0.4
12	0.4
13-126	>0.5



Appendix C.5: Outlier Loading

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
business type	126	100.0%	0	0.0%	126	100.0%
company size	126	100.0%	0	0.0%	126	100.0%
company age	126	100.0%	0	0.0%	126	100.0%
SMEAN(ownership)	126	100.0%	0	0.0%	126	100.0%
SMEAN(competitors)	126	100.0%	0	0.0%	126	100.0%
Respondent gender	126	100.0%	0	0.0%	126	100.0%
respondent age	126	100.0%	0	0.0%	126	100.0%
jorespondent's job title	126	100.0%	0	0.0%	126	100.0%
Respondent qualification	126	100.0%	0	0.0%	126	100.0%
Respondent experience	126	100.0%	0	0.0%	126	100.0%

Appendix C.6 Descriptive Statistic for Firms' Profile

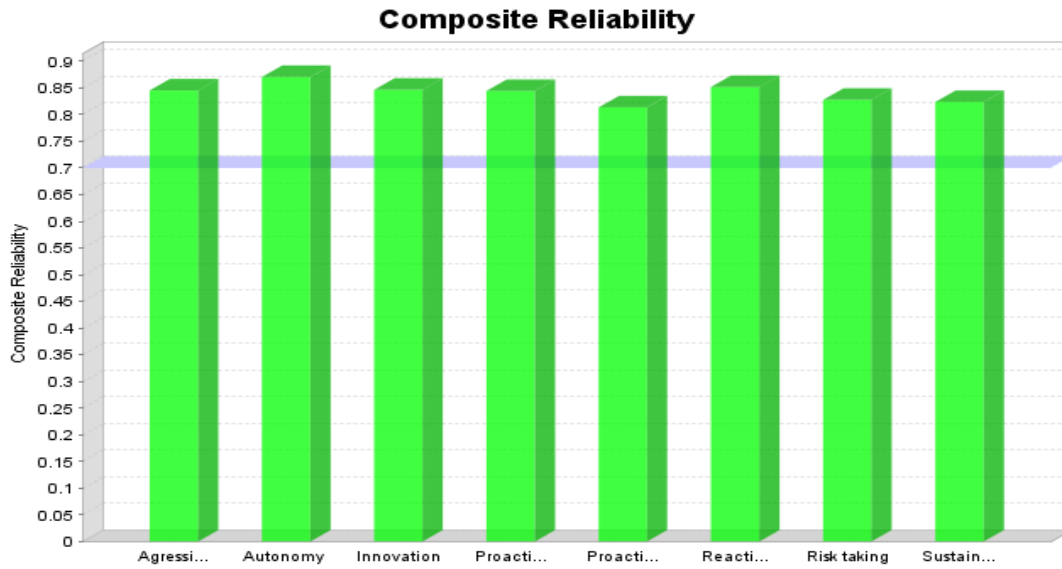
Type of industry					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Banking	38	30.2	30.2	30.2
	Insurance	18	14.3	14.3	44.4
	Telecommunication	2	1.6	1.6	46.0
	Education	19	15.1	15.1	61.1
	Airline	7	5.6	5.6	66.7
	Hotel	18	14.3	14.3	81.0
	exchange	4	3.2	3.2	84.1
	Stock exchange	10	7.9	7.9	92.1
	hospital	10	7.9	7.9	100.0
	Total	126	100.0	100.0	
Firm size (Number of Employees)					
Valid	Less than 50	46	36.5	36.5	36.5
	51-100	17	13.5	13.5	50.0
	101-150	6	4.8	4.8	54.8
	More than 150	57	45.2	45.2	100.0
	Total	126	100.0	100.0	
Firm age					
Valid	Less than 5	15	11.9	11.9	11.9
	5-10	8	6.3	6.3	18.3
	11-20	32	25.4	25.4	43.7
	More than 20	71	56.3	56.3	100.0
	Total	126	100.0	100.0	
Firm ownership					
Valid	Sudanese Owned	93	73.8	73.8	73.8
	Joint venture	11	8.7	8.7	82.5
	Foreign Owned	22	17.5	17.5	100.0
	Total	126	100.0	100.0	
Number of competitors					
Valid	1-5	19	15.1	15.1	15.1
	6-10	12	9.5	9.5	24.6
	11-15	23	18.3	18.3	42.9
	More than 15	72	57.1	57.1	100.0
	Total	126	100.0	100.0	

Appendix C.7 Descriptive Statistic for Respondents' Profile

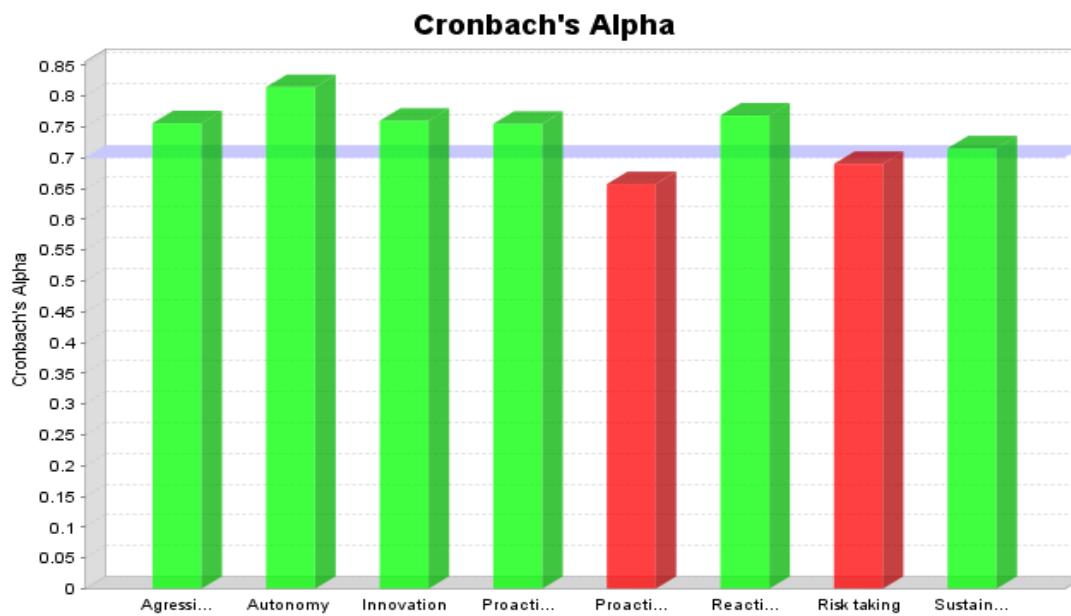
Respondent gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	77	61.1	61.1	61.1
	female	48	38.1	38.1	99.2
	Total	126	100.0	100.0	
respondent age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	50	39.7	39.7	39.7
	31-40	29	23.0	23.0	62.7
	41-50	22	17.5	17.5	80.2
	51-60	22	17.5	17.5	97.6
	more than 60	3	2.4	2.4	100.0
	Total	126	100.0	100.0	
respondent's job title					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	General manager	6	4.8	4.8	4.8
	Deputy GM	8	6.3	6.3	11.1
	Head of department	36	28.6	28.6	39.7
	other	76	60.3	60.3	100.0
	Total	126	100.0	100.0	
Respondent qualification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	5	4.0	4.0	4.0
	Bachelor degree	71	56.3	56.3	60.3
	master degree	44	34.9	34.9	95.2
	PhD	6	4.8	4.8	100.0
	Total	126	100.0	100.0	
Respondent experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 10	67	53.2	53.2	53.2
	10-20	23	18.3	18.3	71.4
	more than 20	36	28.6	28.6	100.0
	Total	126	100.0	100.0	

Appendix C.8 Variables Reliability

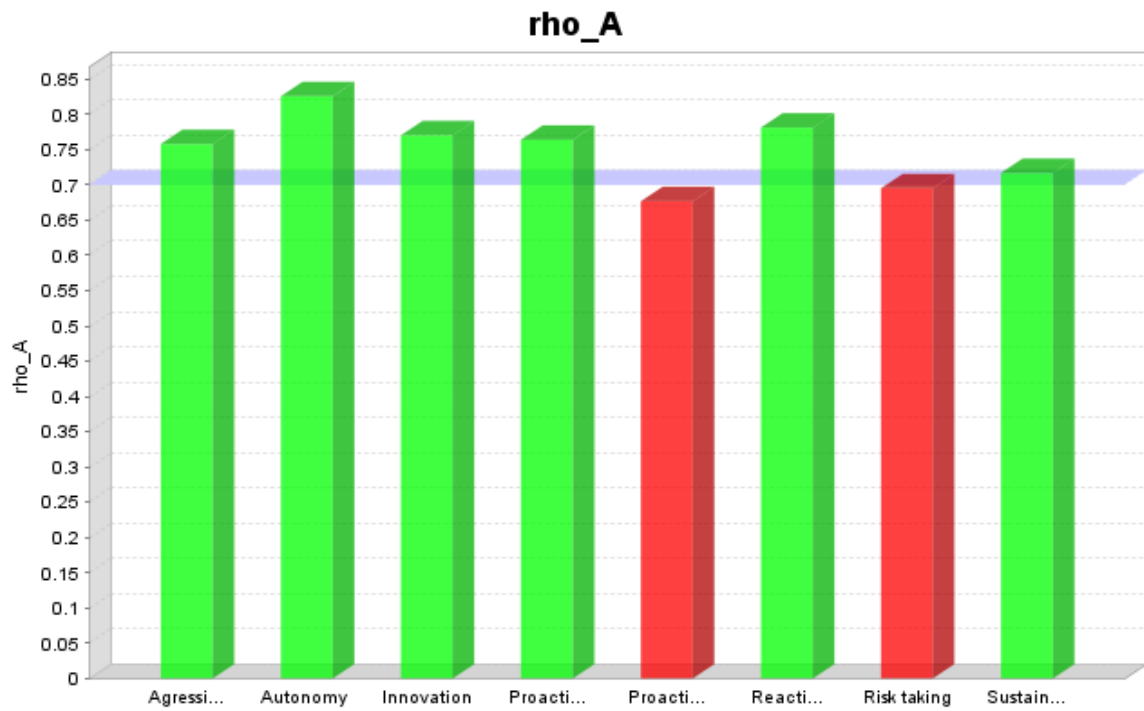
Appendix C.8.1 Composite Reliability



Appendix C.8.2 Cronbach's Alpha Reliability

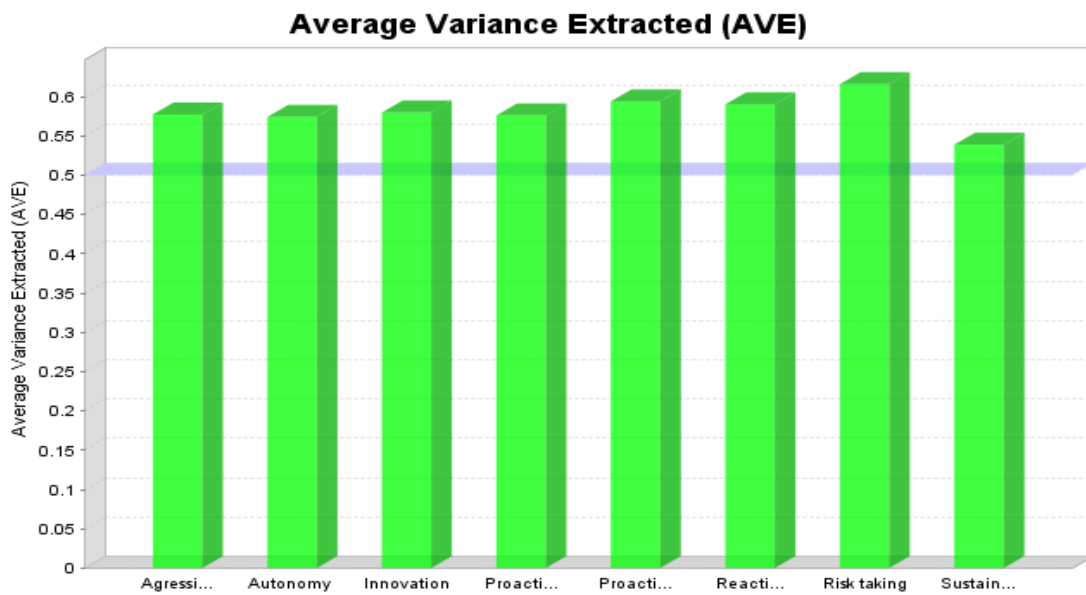


Appendix C.8.3 Rho_A Reliability Coefficient

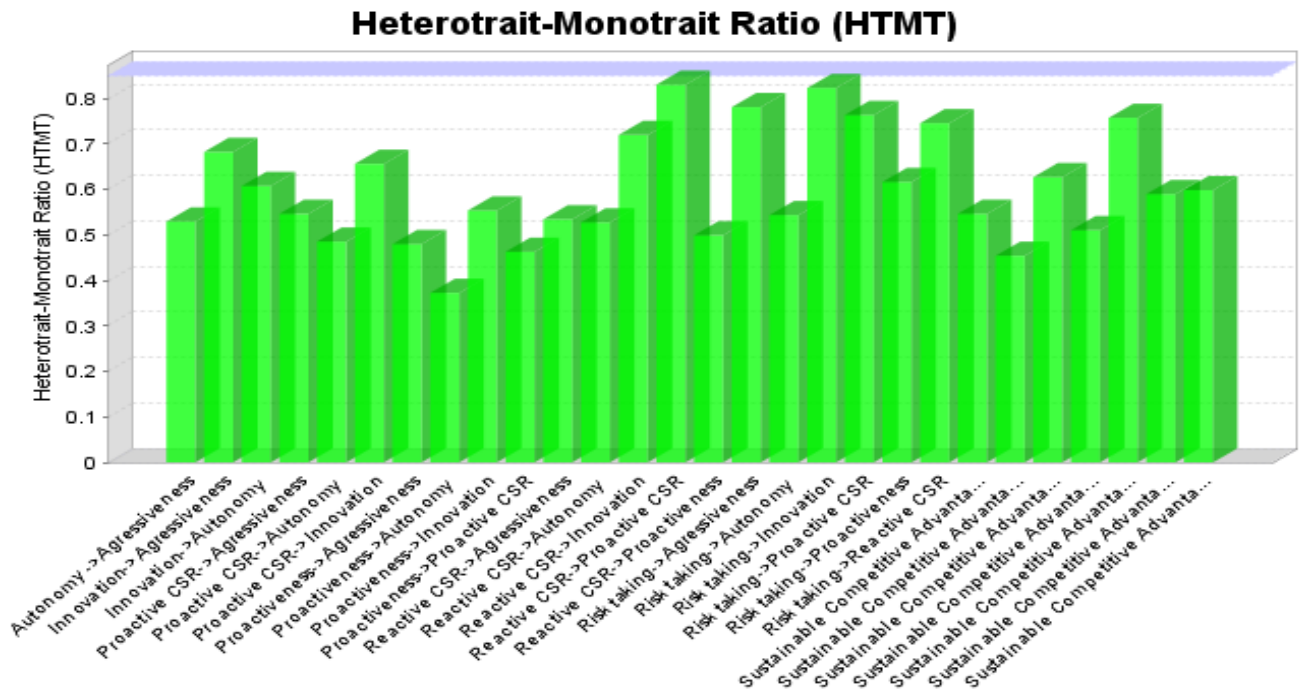


Appendix C.9: Variables Validity

Appendix C.9.1: Convergent Validity (AVE)



Appendix C.9.2: Discriminant Validity (HTMT)



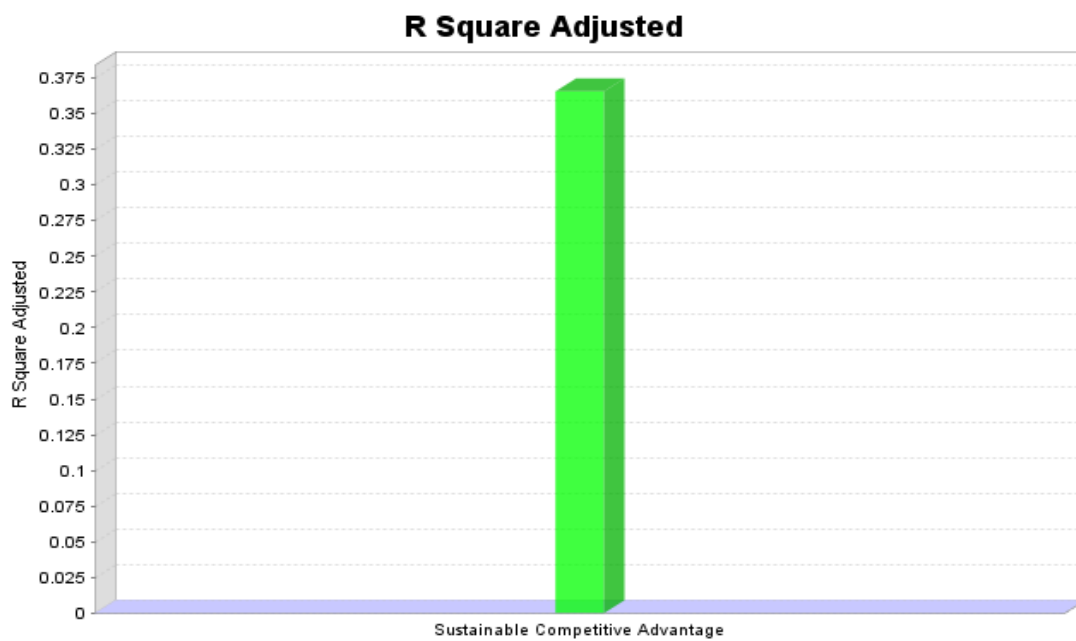
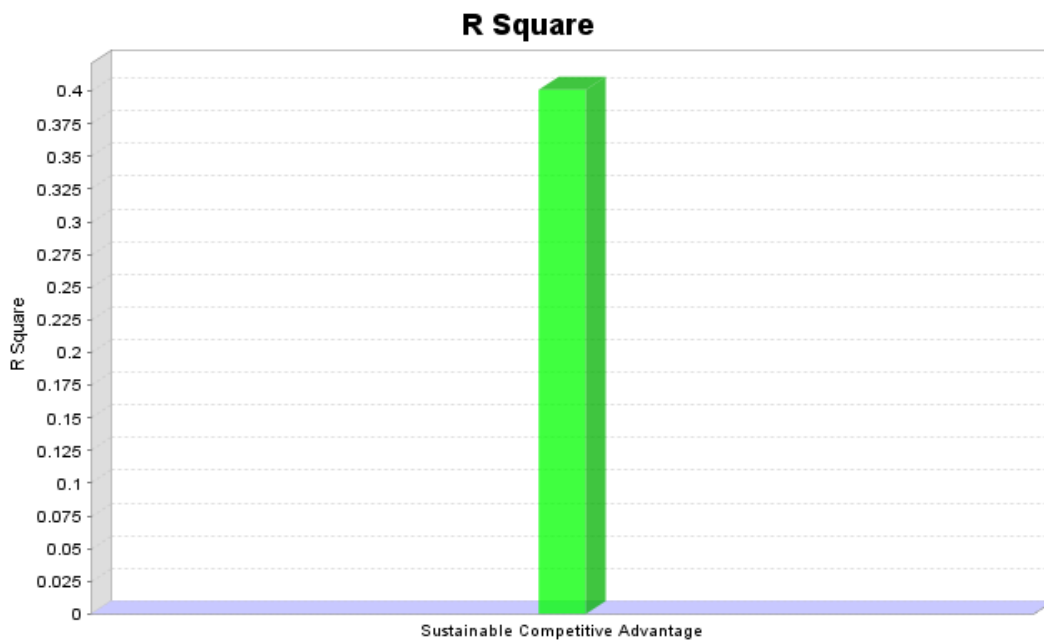
Appendix C.10: Descriptive Statistics of All Variables

	N	Mean	Std. Deviation	Minimum	Maximum
	Valid				
Innovation					
InnovQ1	126	1.65	0.673	1	3
InnovQ3	126	1.84	0.731	1	3
InnovQ4	126	1.94	0.735	1	3
InnovQ5	126	1.86	0.756	1	3
Risk taking					
RiskQ3	126	2.000	0.6325	1	3
RiskQ5	126	1.81	0.629	1	3
RiskQ6	126	1.93	0.671	1	3
Proactiveness					
ProactQ2	126	1.85	0.682	1	3
ProactQ3	126	1.98	0.710	1	3
ProactQ4	126	1.754	0.6534	1	3
Autonomy					
AutonomyQ1	126	1.91	0.727	1	3

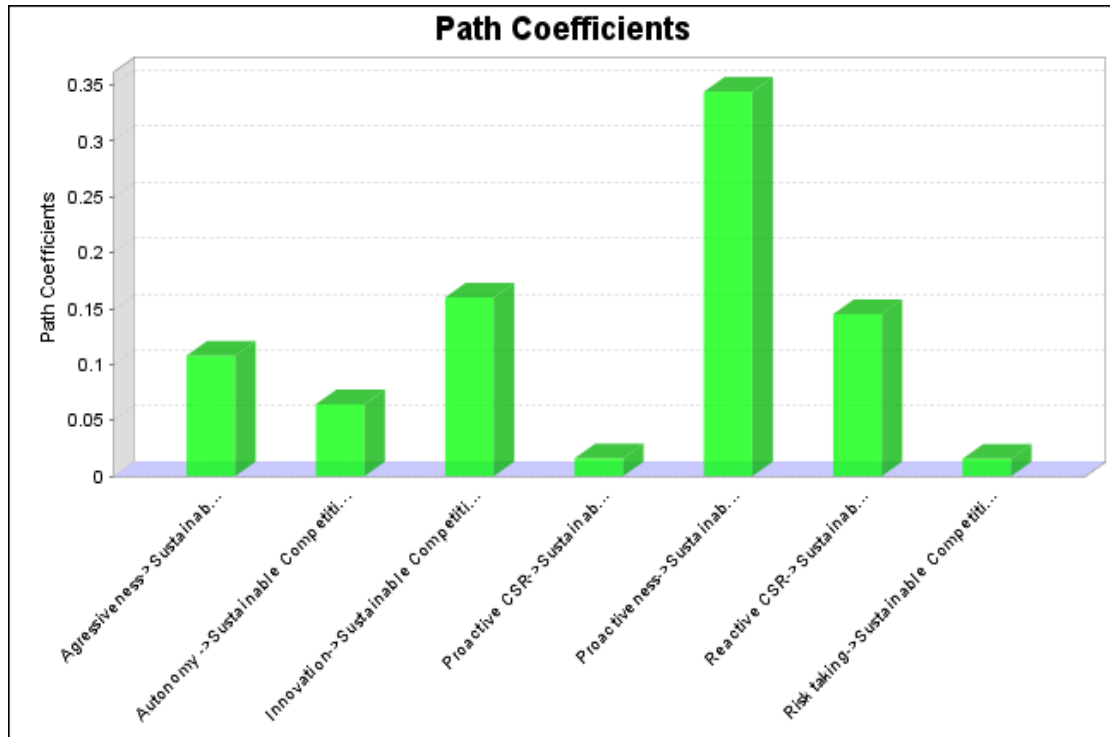
AutonomyQ2	126	1.83	0.682	1	3
AutonomyQ3	126	1.96	0.638	1	3
AutonomyQ4	126	1.88	0.688	1	3
AutonomyQ5	126	1.92	0.722	1	3
Aggressiveness					
agressiveQ3	126	2.07	0.706	1	3
agressiveQ4	126	2.00	0.738	1	3
agressiveQ5	126	2.040	0.6974	1	3
agressiveQ6	126	1.98	0.681	1	3
SCA					
AdvantageQ2	126	1.93	0.671	1	3
AdvantageQ3	126	1.921	0.7548	1	3
AdvantageQ5	126	1.873	0.7265	1	3
AdvantageQ6	126	1.96	0.731	1	3
Proactive CSR					
proCSRQ1	126	1.75	0.704	1	3
proCSRQ2	126	1.75	0.680	1	3
proCSRQ3	126	1.89	0.695	1	3
proCSRQ4	126	1.86	0.723	1	3
Reactive CSR					
ReactCSRQ1	126	1.960	0.6248	1	3
ReactCSRQ4	126	1.78	0.656	1	3
ReactCSRQ5	126	1.730	0.6860	1	3
ReactCSRQ6	126	1.810	0.6895	1	3

Appendix C.11: Coefficient of Determination (R2)

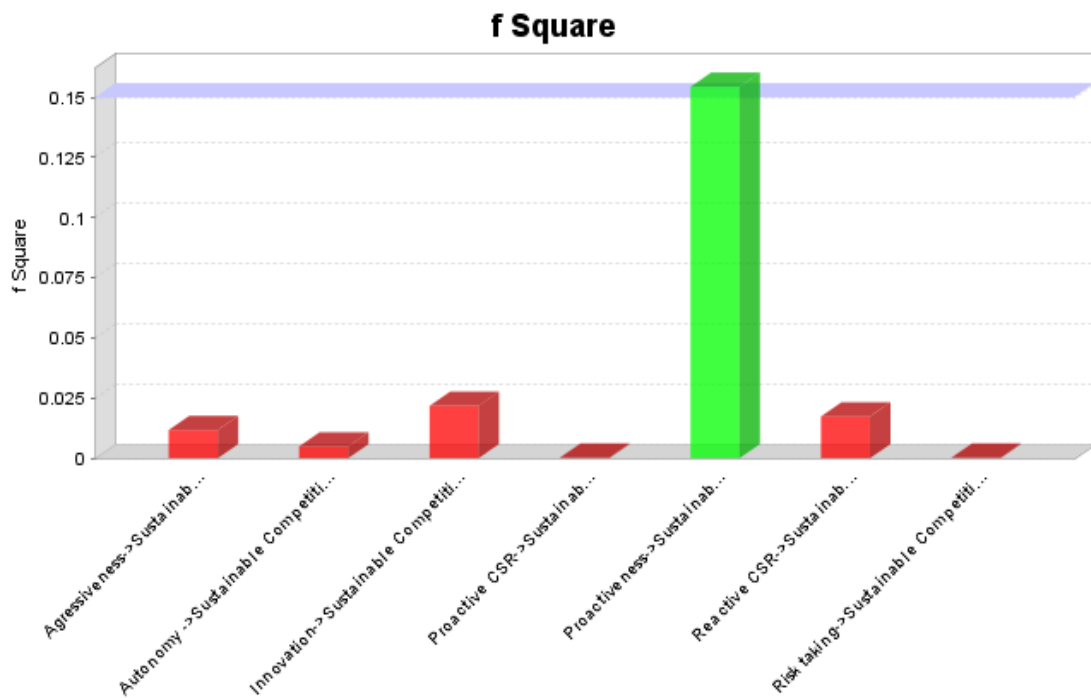
	R Square	R Square Adjusted
Sustainable Competitive Advantage	0.401	0.366



Appendix C.12: Model's Path Coefficients



Appendix C.13: Model's Effect Size



Appendix C.13.1: Multigroup Analysis (Type of Industry)

Group1 : Banking

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	0.166	0.143	0.222	0.749	0.454
Autonomy -> SCA	-0.032	0.020	0.219	0.146	0.884
Innovation -> SCA	0.121	0.135	0.241	0.504	0.615
Proactive CSR -> SCA	0.002	0.002	0.205	0.011	0.991
Proactiveness -> SCA	0.448	0.412	0.217	2.061	0.040
Reactive CSR -> SCA	0.024	0.082	0.290	0.083	0.934
Risk taking -> SCA	0.041	0.070	0.291	0.141	0.888

Appendix C.13.1: Multigroup Analysis (Type of Industry)

Group4 : Education

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	0.120	0.196	0.451	0.265	0.791
Autonomy -> SCA	0.186	-0.072	0.517	0.361	0.718
Innovation -> SCA	0.370	0.392	0.650	0.569	0.569
Proactive CSR -> SCA	0.325	0.194	0.740	0.439	0.661
Proactiveness -> SCA	0.344	0.195	0.643	0.535	0.593
Reactive CSR -> SCA	-0.151	-0.014	0.578	0.262	0.794
Risk taking -> SCA	-0.237	-0.079	0.700	0.339	0.735

Appendix C.13.2: Multigroup Analysis (Firm Size)

Group1 : Les than 50

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Agressiveness -> SCA	0.113	0.148	0.158	0.719	0.472
Autonomy -> SCA	0.092	0.099	0.164	0.563	0.573
Innovation -> SCA	0.192	0.197	0.176	1.094	0.275
Proactive CSR -> SCA	0.030	0.032	0.174	0.172	0.863
Proactiveness -> SCA	0.537	0.488	0.135	3.983	0.000
Reactive CSR -> SCA	-0.198	-0.115	0.203	0.976	0.329
Risk taking -> SCA	0.164	0.138	0.156	1.048	0.295

Appendix C.13.2: Multigroup Analysis (Firm Size)

Group4 : Les than 50

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	-0.025	0.002	0.150	0.169	0.866
Autonomy -> SCA	0.181	0.186	0.139	1.302	0.194
Innovation -> SCA	0.156	0.168	0.118	1.324	0.186
Proactive CSR -> SCA	0.226	0.218	0.125	1.813	0.070
Proactiveness -> SCA	0.170	0.174	0.123	1.376	0.169
Reactive CSR -> SCA	0.457	0.434	0.111	4.100	0.000
Risk taking -> SCA	-0.221	-0.202	0.149	1.482	0.139

Appendix C.13.3: Multigroup Analysis (Firm Age)

Group4: More than 20

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	0.009	0.016	0.148	0.062	0.951
Autonomy -> SCA	0.020	0.036	0.146	0.138	0.890
Innovation -> SCA	0.166	0.178	0.144	1.157	0.248
Proactive CSR -> SCA	0.079	0.093	0.156	0.509	0.611
Proactiveness -> SCA	0.296	0.307	0.132	2.252	0.025
Reactive CSR -> SCA	0.164	0.158	0.149	1.102	0.271
Risk taking -> SCA	0.069	0.067	0.183	0.375	0.708

Appendix C.13.3: Multigroup Analysis (Firm Age)

Group3: 11-20

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	0.202	0.202	0.270	0.750	0.454
Autonomy -> SCA	0.307	0.243	0.248	1.237	0.217
Innovation -> SCA	0.127	0.172	0.238	0.536	0.592
Proactive CSR -> SCA	-0.007	0.043	0.222	0.032	0.975
Proactiveness -> SCA	0.430	0.362	0.223	1.926	0.055
Reactive CSR -> SCA	0.176	0.159	0.255	0.692	0.489
Risk taking -> SCA	-0.138	-0.107	0.296	0.465	0.642

Appendix C.13.4: Multigroup Analysis (Firm Ownership)

Group3: Foreign Owned

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Agressiveness -> SCA	0.059	-0.073	0.320	0.185	0.854
Autonomy -> SCA	-0.040	-0.001	0.343	0.115	0.908
Innovation -> SCA	0.678	0.636	0.339	2.001	0.046
Proactive CSR -> SCA	0.376	0.315	0.509	0.737	0.461
Proactiveness -> SCA	0.135	0.088	0.300	0.449	0.654
Reactive CSR -> SCA	-0.502	-0.287	0.468	1.072	0.284
Risk taking -> SCA	0.048	0.026	0.434	0.110	0.913

Appendix C.13.4: Multigroup Analysis (Firm Ownership)

Group1: Sudanese Owned

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Agressiveness -> SCA	0.026	0.037	0.129	0.201	0.841
Autonomy -> SCA	0.172	0.165	0.112	1.541	0.124
Innovation -> SCA	0.051	0.041	0.102	0.497	0.620
Proactive CSR -> SCA	0.028	0.049	0.118	0.235	0.814
Proactiveness -> SCA	0.454	0.444	0.095	4.792	0.000
Reactive CSR -> SCA	0.215	0.206	0.103	2.085	0.038
Risk taking -> SCA	-0.026	0.002	0.124	0.213	0.831

Appendix C.13.4: Multigroup Analysis (Number of competitors)

Group4: More than 15

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	-0.002	0.022	0.144	0.013	0.989
Autonomy -> SCA	0.039	0.054	0.141	0.278	0.781
Innovation -> SCA	0.080	0.097	0.144	0.553	0.581
Proactive CSR -> SCA	0.006	0.000	0.158	0.041	0.968
Proactiveness -> SCA	0.477	0.461	0.110	4.333	0.000
Reactive CSR -> SCA	0.120	0.124	0.140	0.861	0.389
Risk taking -> SCA	0.032	0.041	0.169	0.189	0.850

Appendix C.13.4: Multigroup Analysis (Number of competitors)

Group3: 11-15

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Agressiveness -> SCA	-0.293	-0.378	0.527	0.557	0.578
Autonomy -> SCA	-0.226	0.232	0.464	0.486	0.627
Innovation -> SCA	0.596	0.293	0.354	1.682	0.093
Proactive CSR -> SCA	0.110	0.136	0.407	0.270	0.787
Proactiveness -> SCA	-0.422	-0.028	0.368	1.148	0.251
Reactive CSR -> SCA	0.718	0.396	0.523	1.374	0.170
Risk taking -> SCA	0.000	0.075	0.525	0.001	0.999

Appendix C.13.4: Multigroup Analysis (Number of competitors)

Group1: 1-5

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Aggressiveness -> SCA	0.333	0.353	0.292	1.141	0.255
Autonomy -> SCA	0.369	0.363	0.288	1.282	0.200
Innovation -> SCA	0.492	0.449	0.351	1.400	0.162
Proactive CSR -> SCA	0.029	0.008	0.307	0.093	0.926
Proactiveness -> SCA	0.152	0.134	0.247	0.614	0.539
Reactive CSR -> SCA	0.054	0.078	0.277	0.197	0.844
Risk taking -> SCA	-0.301	-0.292	0.315	0.955	0.340