



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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**THE MEDIATING ROLE OF ORGANIZATIONAL CULTURE
ON THE RELATIONSHIP BETWEEN ENTREPRENEURIAL
ORIENTATION AND ORGANIZATIONAL PERFORMANCE**

(A STUDY OF BUSINESS FIRMS IN SUDAN).

الدور الوسيط للثقافة التنظيمية في العلاقة بين التوجه الريادي

والأداء التنظيمي

(دراسة في الشركات السودانية)

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سَمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ يَهْدِيهِمْ رَبُّهُمْ بِإِيمَانِهِمْ تَجْرِي مِنْ تَحْتِهِمُ الْأَنْهَارُ فِي

جَنَّاتٍ النَّعِيمِ (9) دَعَاؤُهُمْ فِيهَا سُبْحَانَكَ اللَّهُمَّ وَتَحِيَّتُهُمْ فِيهَا سَلَامٌ وَأٰخِرُ

دَعَاؤُهُمْ أَنْ الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ (10)

(سورة يونس : الآيتان 9 ، 10)

DEDICATION

To the dear ones, the beloved ones, to whom I am immeasurably indebted:

My Mother,

My Father,

My Sisters,

And My Brothers,

I dedicate this humble effort of a work.

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المستخلص

هدفت هذه الدراسة الى اختبار الدور الوسيط للثقافة التنظيمية في العلاقة بين التوجه الريادي و أداء المنظمة للشركات السودانية. و قد أجرت الدراسة مسحاً على عينة مناسبة من الشركات السودانية في ولاية الخرطوم، حيث تم توزيع مائتي إستبانة، إسترد منها 150 إستبانة صالحة للتحليل.

وقد قامت الدراسة باختبار الاعتمادية للتأكد من صلاحية المقاييس عن طريق ألفا كورنباخ و التحليل العاملي. و لاختبار الفرضيات تم الاعتماد على اختبار الإنحدار المتعدد.

وبناءً على النتائج الإحصائية، أبانت الدراسة أن التوجه الريادي ذو أثر إيجابي على أداء المنظمة، و أن الثقافة التنظيمية تؤثر إيجابياً على أداء المنظمة. كما ظهر أن الثقافة التنظيمية تتوسط العلاقة بين التوجه الريادي و أداء المنظمة.

وقد أبرزت هذه الدراسة عدة مضامين تمثلت في كيفية تأثير التوجه الريادي على أداء المنظمة في الدول النامية، مع توضيح دور وساطة الثقافة التنظيمية على العلاقة بين التوجه الريادي و أداء المنظمة. و ظهر أيضاً أن مضامين الدراسة يمكن أن تفيد المدراء و أصحاب الاعمال في إدراك أهمية الأنشطة الريادية و أثرها على نمو الأعمال، و تفيد في تعزيز الفهم الجيد لأثر الثقافة في تحسين الأداء.

وبناءً على تلك المضامين، ترى الدراسة إجراء بحوث مستقبلية، بشأن القيام بمثل هذه الدراسة في دول أفريقية أخرى. و من الممكن أيضاً لدراسات مستقبلية يصار إليها، أن تطور من أبعاد متغير التوجه الريادي لتشمل إضافة أبعاد أخرى.

ABSTRACT

The aim of this study was to investigate the mediating role of Organizational Culture on the relationship between Entrepreneurial Orientation and Organizational Performance (A study of business firms in Sudan).

The study conducted a cross-sectional survey with a convenient sample, and a sample size of 200 business firms, where 200 questionnaires were distributed among business firms in Khartoum. The answers to 150 questionnaires were valid to be statistically analyzed through the SPSS program.

Validity and Reliability tests were used for goodness of measure, Factor Analysis for validity, Cronbach's Alpha for reliability, and Multiple Regression Analysis was used for testing the study hypotheses.

Based on the statistical findings, the study has shown that Entrepreneurial Orientation and Organizational Culture were positively related to Organizational Performance, and that Organizational Culture was found to mediate the relationship between Entrepreneurial orientation and Organizational Performance.

Our study has contributed to the literature by explaining how Entrepreneurial Orientation can enhance Firm Performance in the context of developing countries. It also contributed by clarifying the mediating role of Organizational Culture on the relationship between Entrepreneurial Orientation and Organizational Performance.

The results of our study claim to be useful to managers, owners and business practitioners in making them aware of the importance of entrepreneurial activities to their business growth. They also claim to be useful for organizations by granting them a better understanding of the effects of their culture in enhancing business performance.

The study calls for future studies regarding the relationship between Entrepreneurial Orientation and Organizational Performance to be conducted in developing countries, especially in Africa.

While Innovativeness, Pro-activeness, and Risk-taking are the dimensions of Entrepreneurial Orientation which have been used in many previous studies, the need for their development by future studies is confirmed by this study.

CHAPTER ONE

INTRODUCTION

1.0-CHAPTER OVERVIEW

This chapter is an introductory chapter which provides an overview introduction, statement of the problem, research questions, objectives of the study, significance of the study, definitions of terminologies, and organization of the research.

1.1-Introduction:

Organizations have an important role in our daily lives and therefore, successful organizations represent key ingredients for developing nations. Thus, many economists consider organizations and institutions similar to an engine in determining the economic, social and political progress (Gavera et al., 2011).

The goal of any organization is not only to survive, but also to sustain its existence by improving performance (Karamat, 2013).

In order to meet the needs of the highly competitive markets, organizations must continually increase performance (Arslan&Stuab, 2013).

Organizational performance stimulation has always been a priority in private as well in public sectors, since it is directly associated with the value creation of the entity (Bartuseviciene and Sakalyte, 2013).

Organizational performance refers to the ability of an enterprise to achieve such objectives as high profits, quality product, large market share, good financial results, and survival at pre-determined time using relevant strategy for action (Koontz and Donnell, 1993).

Organizational performance can be used to view how an enterprise is doing in terms of level of profit, market share and product quality in relation to other enterprises in the same industry. Consequently it is a reflection of productivity of members of an enterprise measured in terms of revenue, profit, growth, development and expansion of the organization. (Koontz and Donnell, 1993).

High performance organizations are clear on their missions, define outcomes and focus on results, empower employees, motivate and inspire people to succeed, are flexible and adjust nimbly to new conditions. They are as well competitive in terms of performance, restructure work processes to meet customer needs, and maintain communications with stake holders (Brewer and Selden, 2000).

Based on the above discussion, it can be said that organizational performance is an important strategic mean that contribute to the growth of the organization. Therefore, it is the fundamental element that helps organizations to achieve growth in their market share, increase their profitability and achieve their goals and objectives.

Entrepreneurial orientation explains the degree of importance that a firm places on the activities of identification and exploitation of new opportunities (Shane and Venkataraman), 2000) from the dynamics of its macro and task environment (Abebe, 2014). It includes entrepreneurial innovativeness, pro-activeness, and risk taking (Covin and Slevin, 1989; Miller, 1983; Wiklund and Shepherd, 2003, 2005).

Due to the increasing importance of Entrepreneurial orientation concept, a great attention has been given by researchers to explore the impact of entrepreneurial orientation on the organizational performance (Al-swidi & Hosam, 2012). The attention given to the Entrepreneurial orientation construct is due to its potentiality in helping organizations to lead to the market and attract and retain loyal customers through its capabilities to innovatively revolve with their needs and expectations (Zahra, 1991; Zahra et al., 1999). Thus, Entrepreneurial orientation as the base of innovative environment formulation, is expected to sustain the organizational growth (Miller, 1983; Lumpkin & Dess, 1996).

Previous studies have shown that entrepreneurial orientation is a key ingredient for organizational success and has been found to lead to higher performance (Zahra and Covin, 1995, Wiklund and Shepherd, 2005). Similarly, research has shown that high growth correlates with a firm's entrepreneurial orientation (Stevenson & Jarillo, 1990). Thus entrepreneurial orientation would be taken into consideration as a key ingredient for the success of a firm (Zainol and Ayadurai, 2011).

According to Lumpkin and Dess (1996), entrepreneurial orientation is a source of competitive advantage, where firms that possess higher levels of entrepreneurial orientation will perform better than those with lower level of entrepreneurial orientation (Lyon et al., 2000, Rauch et al., 2009).

Hence, adopting higher levels of entrepreneurial orientation allows firms to have the ability to identify and seize opportunities in a way that differentiate them from non-entrepreneurial firms (Covin and Slevin, 1991).

Organizational culture refers to the values and beliefs that provide norms of expected behaviors that employees might follow (Schein 1992).

Organizational culture has consistently emerged as a pivotal variable in determining the success of efforts to implement change in an institution (Belias&Koustelios, 2014).

The importance of culture for management lies in the fact that culture may constrain business organization or may create opportunities and affect marketing and product development (Blake and Laurence, 1989).

Organizational culture could be a strategic asset for the organization in that it increases the adaptability and fit between an organization and its environment (Kotter, 1995, Peters & Waterman, 1982).

Organizational culture is ultimately important because it is an important driver of critical outcomes of an organization's functioning, such as innovation, productivity, and financial performance. The essence of culture is that the organization's members can find solutions to problems about internal integration, adaptation to environment, and coordination through shared cultural values (Blackwell, 2006: Furnham and Gunter, 1993).

It has been claimed that organizational culture is so important to the organization that in the long run it may have decisive influence on the survival or fall of the organization (Hofstede, 1998), and that a culture matters because decisions made without awareness of the operative cultural forces may have unanticipated and undesirable consequences (Schein, 2002).

Thus organizational culture is not just an important factor of an organization: it is the central driver of superior business performance (Gallagher &Bown, 2007)

1.2-Problem statement:

Entrepreneurial orientation (EO), with its three core dimensions of risk-taking, pro-activeness, and innovativeness (Keh et al., 2007), is considered to be an essential element for firm success (Wang, 2008).

Entrepreneurial orientation has been a topic of great debate in management and entrepreneurship literature for a long time. It has been recently recognized as one of the most important factors for firm's success.(Zainol and Ayadurai, 2011).

The importance of entrepreneurial orientation to the survival and performance of firms has been acknowledged in the entrepreneurship literature (Miller, 1983; Lumpkin and Dess (2001); Wiklund (1999); Wiklund&Shepherd (2005); Zahra &Covin, 1995; Zahra and Gravis, 2000).

The potential role of entrepreneurial orientation as a vector of performance has been analyzed both theoretically and empirically. Theoretically, entrepreneurial orientation has been demonstrated as a factor having a positive impact on performance on the firm through the creation of a competitive advantage that translates it into significant financial results (Wiklund, 1999). Empirically a number of studies found a positive relationship between entrepreneurial orientation and firm performance (e.g., Frese, Branties& Hoorn, 2002; Hult, Hurely& Knight, 2004; Lee, Lee, &Pennings, 2001, Smart & Conant, 1994; Swierezek& Thai, 2003; Wiklund, 1999; Wiklund and Shepherd, 2005; Yusuf, 2002).

Several studies on Entrepreneurial orientation and organizational performance relationship had been conducted in the USA, Western and Asian countries. Among these studies are some examples which are the studies of: (e.g., Rodriguez et al., (2015), Mason et al., (2015), Zhang &Zhang (2012) Jia et

al.,(2014) ,Xiauhua&Jinanu (2013), Lumpkin &Dess (1996), Hughes & Morgan (2007), Arshad et al., (2014), Engelen et al., (2014), Jalali et al., (2014) Eggers et al., (2013), Vora et al.,(2012) , Anderson &Eshima(2013), Bayacelik&Ozsahin (2014)).

Studies on the relationship between Entrepreneurial orientation and organizational performance are few in Africa. It is hoped that this present study will partly make up for this deficiency in the African content.

Besides, most of the studies on the relationship between Entrepreneurial orientation and organizational culture such as the studies of (Davis et al.,(2010), Engelen et al., (2014), Moeljadi et al.,(2014), Ambad&Wahab (2103), Zulkifli&Rosli (2013), Anderson&Eshima(2013), Lumpkin and Dess (2001), Soares et al., (2014), Mason et al., (2015), Sciascia et al., (2014) were examined using different moderators, while only few of them were examined through mediators.

Hopefully this study which employs a mediator will be a contribution in this respect.

Organizational culture has been used by this study to mediate the proposed relationship.

It has been used by some authors such as (Berson et al., (2005), Hutahayan et al., (2011), BernadArogyaswamy&Charles M.Byles, 1987, Emmanuel Ogbonna and Lloyd C.Harris, 2000, Emmanuel Ogbonna and Lloyd C.Harris, 2003) as a mediator variable between different relationships.

It has also been used as a mediator in one of the few studies on Entrepreneurial orientation and organizational performance which has been examined through a mediator; (i.e., the study of Shehu and Mahmood (2014)).

Organizational culture had thus been incorporated by this study to examine its mediating role on the afore-mentioned relationship.

1.3-Research Questions:

The study aims to contribute to the literature by addressing the following questions:

- Does Entrepreneurial Orientation influence the performance of firms in Sudan?
- Does Entrepreneurial Orientation relate to the organizational culture of firms in Sudan?
- Does organizational culture affect the performance of firms in Sudan?
- Does organizational culture mediate the relationship between Entrepreneurial orientation and the performance of firms in Sudan?

1.4-Objectives of the Study:

This study was carried for the following purposes:

- To determine the relationship between Entrepreneurial orientation variables and performance of firms in Sudan.
- To assess the relationship between Entrepreneurial orientation variables and the organizational culture of firms in Sudan.
- To evaluate the relationship between organizational culture and firm's performance in Sudan.

- To investigate the effect of organizational culture dimensions on the relationship between Entrepreneurial orientation variables and organizational performance.

1.5-Significance of the study:

1.5.1-Scientific significance:

The scientific significance of this study can be summarized as follows:

- This study will be a significant endeavor in explaining the impact of Entrepreneurial Orientation on the performance of firms in Sudan.
- It provides a model that will contribute to the field of business administration and particularly in the discipline of entrepreneurship.
- It tries to diagnose the strength and weaknesses of firms in Sudan in the area of innovativeness, pro-activeness and risk-taking.
- It tries to investigate the mediating role of organizational culture in the relationship between Entrepreneurial Orientation and firm performance.
- It will provide recommendations on how to evaluate the performance of a certain firm in accordance to Entrepreneurial Orientation.

1.5.2-Practical significance:

From a practical perspective, this study is expected to:

- Serve as strong reminder of the importance of Entrepreneurial Orientation to the performance of firms. By creating such a milieu of awareness, it will assist administrators of firms in improving their performance, thereby helping to enhance the country's economic growth.
- Be helpful to business practitioners in training and informing them in the area of innovativeness, pro-activeness and risk-taking.

- Alert managers to consider the importance of intangible assets such as entrepreneurial orientation and organizational behavior for the purpose of improving their firm's performance.
- Serve as a future reference for researchers on the subject of strategic management.

1.6-Definitions of terminologies:

Entrepreneurial Orientation is defined as the processes, structures, and behaviors of firms that are characterized by innovativeness, pro-activeness, and risk-taking (Covin and Slevin, 1988; Miller, 1983).

Entrepreneurial orientation explains the degree of importance that a firm places on the activities of identification and exploitation of new opportunities (Shane and Venkataraman), 2000) from the dynamics of its macro and task environment (Abebe, 2014). It includes entrepreneurial innovativeness, pro-activeness, and risk taking (Covin and Slevin, 1989; Miller, 1983; Wiklund and Shepherd, 2003, 2005).

-Innovativeness:

Innovativeness refers to the degree to which a firm engages in and embraces new ideas, novelty, experimentation and creativity that may lead to new products, services or processes (Lumpkin & Dess, 1996; Wang, 2008).

- Pro-activeness:

Pro-activeness is a forward-looking, opportunity-seeking perspective (Ahuja&Lampert, 2001; Rauch et al., 2009). It is acting opportunistically in order to shape the environment by influencing trends and creating demand and becoming a first mover in a competitive market (Lumpkin &Dess, 1996).

- Risk-taking:

Risk-taking involves a firm's propensity to support projects in which the expected results are uncertain (Walter et al., 2006) such as moving into unfamiliar new markets and committing substantial resources to ventures with vague outcomes (Lumpkin and Dess, 2001).

- Organizational culture:

Organizational culture represents the character of an organization, which directs its employees' day-to-day working relationships and guides them on how to behave and communicate within the organization, as well as guiding how the company hierarchy is built (Ribiere and Sitar, 2003).

- Adaptability:

Adaptability is a combination of two or more cultural values (including innovation and action orientation) which allow a firm to adjust to environmental conditions better than others, thereby, leading to superior performance(Angle &Perry, 1981; Gordon&DiTomaso, 1992;Kotter&Heskett, 1992). It is viewed by some researchers as a set of shared values that are a part of organizational culture (Gordon&DiTomaso, 1992;Kotter&Heskett, 1992).

- Consistency:

Shared values, systems and processes that support efficiency and effectiveness in reaching goals. (Momot and Litvinenko, 2012).

- Mission:

Mission is a statement that encompasses organization's philosophy, identity, and values giving the meaning to its goals, norms, decisions, actions and every day behavior. (Bartkus and Glassman, 2008; Hirota et al., 2010; Khalifa, 2011).

-Vision:

Vision is described as an organizational compass that points in the direction the organization should aim. (Levy, 2000).

-Organizational performance:

Organizational performance refers to the ability of an enterprise to achieve such objectives as high profit, quality product, large market share, good financial results, and survival at pre-determined time using relevant strategy for action (Koontz and Donnell, 1993).

-Efficiency:

Efficiency is defined as a term practiced by an organization or a firm to use people and resources to carry out important operations in a way which minimize the costs. (Karamat, 2013).

-Effectiveness:

Effectiveness according to early writers referred to the degree to which the goals of organizations are achieved. (Musibau et al., 2011).

- Success:

Success is related to the degree to which the firm's are able to achieve their objective subject to the constraints of long run viability. (Miller and Friesen, 1978, p.923).

-Mediator variable:

A variable that underlies the relationship between predictor and criterion, it is affected by predictor and affects criterion (Baron & Kenny, 1986).

1.7-Organization of the research:

This research contains five chapters:

- The First Chapter is an introductory chapter which includes an introduction of the study, statement of the problem, research questions, objectives of the study, significance of the study, definitions of the study terminologies and organization of the research.
- The Second Chapter is divided into two sections. The first section is the literature review which includes the definitions and concepts of the study variables, and the relationships between the variables. The second section includes the related previous studies.
- The Third Chapter is the research methodology which contains two sections. The first section presents the theory that underpins the study framework, the research conceptual framework, and the development of hypotheses. The second section includes the study population and study sampling, questionnaire design, pre-testing of the questionnaire and data collection and measurements of the variables.

- The Fourth Chapter is an analytical chapter which includes the findings of the data analysis and is presented into three sections. The first section presents the factor analysis that identifies the underlying dimensions, or factors that explain the correlations among the set of variables, the second section includes testing the reliability for each variable and highlighting the results of the descriptive statistics for the variables. The third section focuses on the results of the regression analysis and hypotheses testing.
- The Fifth Chapter is a conclusion chapter which includes the findings of the study, discussion of the study results, Implications of the study, limitations and general recommendations, special recommendations of the study and finally the suggestions for future studies.

CHAPTER TWO

LITERATURE REVIEW AND RELATED PREVIOUS STUDIES

2.0-CHAPTER OVERVIEW

This chapter is divided in two parts:

The first section presents the literature review of the study which contains: definitions of entrepreneurship, definitions and concepts of entrepreneurial orientation and its dimensions, the relationship between entrepreneurship and economic growth, the relationship between entrepreneurship and strategic management, definitions and concepts of organizational performance, definitions and concepts of organizational culture, the relationship between entrepreneurial orientation and organizational performance, entrepreneurial orientation dimensions and organizational performance, and between organizational culture and organizational performance.

The second section of this chapter presents the related previous studies.

Section one

2.1-Entrepreneurship:

According to Hisrich and Peters (1992,2), entrepreneurship is defined as the process of “creating something different of value by devoting the necessary time and effort, assuming the accompanying financial, psychological and social risks, and receiving the resulting rewards of monetary and personal satisfaction. Others suggest entrepreneurship is related to innovative behavior.

The literature has "conceptualized entrepreneurship as a process by which individuals either on their own or inside organizations pursue opportunities without considering the resources they currently control". (Ropo et al.,1995). This means that entrepreneurship is focused on a vision where the entrepreneur can see beyond the limits of resource constrains and identify opportunities that are not recognized by others. (Keogh &Polonsky, 1998).

Entrepreneurship is describes as a process of “creative destruction” in which an entrepreneur continually displays or destroys existing products or methods of production with new ones (Barringer and Bluedorn, 1999, p.422). Entrepreneurship refers to the ability of the firm to constantly renew, innovate, and constructively take risks in the markets and areas of operations (Miller, 1983; Naman and Slevin, 1993) and to bring creative innovations into useful ventures (Wood et al., 2004).

Stevenson defines entrepreneurship as "the process by which individuals either on their own or inside organizations –pursue opportunities without regard to the resources they currently control" (Stevenson and Jarillo ,1990, p.23).

As stated by Franco &Haase (2013), Entrepreneurship is regarded as a means for the sustainability of business growth.

It is suggested that entrepreneurship is linked to innovative behavior coupled with a strategic orientation in the quest for profitability (Carland et al. 1984). This mix of innovative behavior and strategic orientation was defined by (McGrath and MacMillan,2000), by defining the common characteristics of habitual entrepreneurs which include: a desire to seek and create new opportunities through the incidence of innovative, proactive and risk taking behaviors(Covin and Selvin;1989; Miller 1983).

Entrepreneurship is considered to be a never-ending, continually aimed at discovering, assessing and exploiting new business opportunities (Kirzner,1973; Shane and Venkataraman,2000;Venkataraman,1997).

Similarly, Venkataraman, 1997 stated that entrepreneurship entails the discovery, assessment, and utilization of future goods and service. The act of Entrepreneurship does not require the creation of a new firm, nor a single individual to manage all of a firm's aspect over time (Eckhardt and Shane, 2003). As such the unreliable linkages between individual, firms and environments means that entrepreneurship begins with opportunities (Murphy, 2009).

At a firm level entrepreneurship stems from the entrepreneurial venture's orientation towards determining market opportunities that are not recognized by competitors, and creating a unique set of resources for exploiting them (Davidsson et al., 2002; Hitt et al., 2002).

2.2-Entrepreneurial orientation (Definitions and concepts):

Entrepreneurial Orientation which was originally suggested by Miller (1983), and later amended by Covin and Selvin (1991), has emerged to be a multi-dimensional firm-level construct within the strategic management and entrepreneurship literature. It describes certain firm-level characteristics and management related preferences and beliefs concerning the overall business operations of an organization, its response to customers' needs and product offerings as well as its interactions with competitors (Covin et al., 2006).

According to Lumpkin & Dess (1996), Entrepreneurial orientation refers to the processes, practices and decision-making that leads to new entry. They stated that it consists of three main factors, namely innovativeness, pro-activeness and risk taking.

It can be described as the involvement of a firm to enter a new market (Lumpkin and Dess 1996; Lee and Peterson, 2000).

Entrepreneurial orientation is a strategic orientation in that it captures how a firm intends to compete (Hughes & Morgan, 2007; Wiklund & Shepherd, 2003).

Avlonitis and Salavou (2007) assumed that entrepreneurial orientation represents an organizational phenomenon that reflects a managerial capability by which firms embark upon proactive and aggressive initiatives to change the competitive scene to their advantage.

It represents the specific style and method about strategic guidance, decision making and implementations in enterprises. (Lan & Wu 2010).

Lumpkin & Dess (1996), mentioned that a firm's entrepreneurial orientation is its proclivity to take risks, and act autonomously, innovative, and act proactively when encountered with market opportunities.

Similarly, Miller, (1983), pointed out that entrepreneurial orientation of a firm is defined as the firm that involves in technological innovation, undertakes risky ventures, and pursues opportunities proactively.

Entrepreneurial orientation is a process construct and concerns the "methods, practices, and decision-making styles managers use" (Lumpkin & Dess, 1996:136).

Fanco&Haase (2013), referred to entrepreneurial Orientation as a key concept in understanding whether a firm adopts entrepreneurial activities or not. It is the opportunity for having the ability to improve the business operations (Brunaker and Kurvinen,2006).

Lumpkin &Dess, (1996), have also stated that entrepreneurial orientation refers to the entrepreneurial strategic orientations that characterize the strategy making behaviors which managers engage in to find out and exploit entrepreneurial opportunities.

Mahmood and Hanafi(2013), pointed out that entrepreneurial orientation is a resource and capability that present a lasting competitive advantage and superior performance to the firm.

It refers to the decision making styles, practices, processes and behaviors that lead to 'entry' into new or established markets with new or existing goods or services (Limpkin and Dess; Wiklund and Shepherd 2003; Walter et al 2006).

Similarly Lan& Wu, (2010) pointed out that entrepreneurial orientation implies that the enterprise is willing to get involved in product innovation, and is ready for risks from introducing new and uncertain product and services into markets, and find out new opportunities before their competitors.

Covin and Slevin (1989) defines an entrepreneurial orientation as the processes, structures, and behaviors of firms that are characterized by innovativeness, proactiveness and risk-taking.

Entrepreneurial orientation reflects an independent posture, where the firm adheres to take risks, innovate and be proactive in implementing strategies (Miller 1983; Covin and Lumpkin, 2011).

It involves a continuous behavior for attaining the identification of new business, which will create a sustainable competitive advantage in the long run (Wiklund and Shepherd, 2003).

The concept of entrepreneurial orientation refers to the strategic process, where new opportunities are determined, and entrepreneurial actions are implemented by organizations. (Dess and Lumpkin, 2005).

2.3-Dimensions of Entrepreneurial Orientation:

Although Lumpkin and Dess (1996) identify five dimensions of entrepreneurial orientation, typical conceptualizations of EO include three dimensions: Pro-activeness, risk taking, and innovativeness (Covin and Slevin, 1986, 1989, 1991; Miller, 1983; Zahra, 1991).

-Innovativeness:

Many authors in entrepreneurship believe that innovativeness is the essence of entrepreneurship that requires increasing resources and making new capabilities to pursue new opportunities (Walter et al., 2006).

Entrepreneurial innovativeness is defined as the "willingness to support creativity and experimentation in introducing new products/ services, and novelty technological leadership and R&D in developing new processes (Lumpkin & Dess, 2001, p.431).

From a micro perspective, Garcia and Calantone (2002, p. 113) defined innovativeness as the "capacity of a new innovation to influence the firm's existing marketing resources, technological resources, skills, knowledge, capabilities or strategy."

According to Rhee et al., (2010), innovativeness is an action based capacity to introduce and execute creative new ideas within a firm.

Innovativeness is considered to be an important component of an entrepreneurial orientation because it represents important methods by which firms pursue new opportunities (Lumpkin and Dess, 1996).

It embraces creativity and experimentation in product development, technology adoption, and internal processes (Baker &Sinkula, 2009; Li, Wei, & Liu, 2010). Moreover, it reflects a posture of predicting and acting on future changes in the market and pioneering new processes and products (Baker &Sinkula, 2009; Lee et al., 2001; Li et al.,2010).

Innovativeness relies on the extent to which the managers acquire and act on market intelligence (Hult et al., 2004), or the extent to which the firms have a strong innovative culture that encourages them to adopt innovative behavior (Skerlavaj et al., 2010).

-Pro-activeness:

Pro-activeness is defined as the “opportunity- seeking, forward –looking perspective involving new products or services ahead of the completion and acting in anticipation of future demand to create change and shape the environment.” (Lumpkin and Dess, 2001). It represents a forward-looking view, where firms try to develop new products or improvements on them, anticipating changes and opportunities that arise in the environment, promote changes in current tactics and detect future market trends (Hughes and Morgan, 2007).

As mentioned by Lumpkin and Dess (1996), pro-activeness is about market leading through innovative usage of market opportunities, or in the words of Miles et al., (2003), combination of competitive benefits in the current market. Pro-activeness shows that the company with perseverance searches further market opportunities and it indicates focus on shaping the market by innovations, products, technologies, and management techniques (Ercan et al., 2004, p. 260).

-Risk-taking:

Risk taking is a component of entrepreneurial orientation (Lumpkin and Dess, 2001) and a distinctive facet of entrepreneurial behavior (Das and Teng, 1997; Lee and Peterson, 2000).

According to Miller & Friesen (1982), risk taking is defined as the degree to which managers are willing to make large and risky recourse commitments, that is, those which have a reasonable chance of costly failures.

Risk- taking is related the firm's willingness to involve a higher level of resources in projects where the error cost can be very high or the results are uncertain (Wiklund and Shepherd, 2003). It is about accepting the uncertainty and risk inherent in the activity and involves committing resources to uncertain outcomes (Hughes & Morgan, 2007).

Risk taking can be an individual level (Sitkin and Pablo, 1992; Brockhaus, 1980) or a firm-level trait (Baird and Thomas, 1985) that differs by a firm's stage of development (Lumpkin, 2002).

Beside these three most commonly used dimensions Lumpkin and Dess (1996) argue that two additional dimensions, competitive aggressiveness and autonomy, are also prominent components of Entrepreneurial orientation.

-Autonomy:

Autonomy is the degree in which organizational actors (individuals and teams) operate independently, taking the key decisions, and are free to pursue opportunities (Walter et al., 2006, p.549).

-Competitive aggressiveness:

Competitive advantage refers to a firm's proclivity to directly and intensely challenge its competitors to attain entry or improve position, in other words to outplay industry rivals in the market place (Lumpkin & Dess, 1996).

2.4-Entrepreneurship and Economic growth:

Entrepreneurship is 'at the heart of national advantage' (Porter, 1990, p.125) Entrepreneurship has long been viewed as an engine that drives innovation and promotes economic development (Reynolds, 1997; Schumpeter, 1934).

There have been efforts to empirically explore the importance of the effect of entrepreneurship on economic performance, mostly at the firm, region or industry level (e.g. Audretsch, 1995, Audretsch and Fritsch, 2002 and Caves, 1998).

In empirical terms, it was found that several developed countries, especially in Europe, launched new initiatives, after years of economic downturn and decline in business creation. On the other hand, widespread theoretical reflections about events that marked the world economy are reflected in national economies.

These changes indicate that economic growth was not only sustained in economies of scale or scope, but that companies had an important role in growth (Portela et al., 2012). Thereby, Auresch&Thurik, 2004, concluded that the change in consumption patterns, the rise of more flexible production processes and more competition among small and medium enterprises were striking in the transition from an economy of management to an entrepreneurial economy.

Stel et al., 2004, reported that the effect of entrepreneurial activity on growth is not straightforward and can be understood using the 'entrepreneurial' versus 'managed' economy.

According to Davidsson et al., 2001, entrepreneurship can be considered as an emergence of new economic activity, which includes imitation and innovation.

A sizeable literature has emerged examining the impact of entrepreneurship on economic performance at the level of the firm. These studies measure economic performance in terms of firm growth and survival (Audretsch, 1995; Caves, 1998; Sutton, 1997). The convincing outcomes that have emerged from this literature are that entrepreneurial activity, measured in terms of firm size and age, is positively related to growth (Carree&Thurik,2002).

Salgado-Banda, 2005, presented a new variable based on patent data as a proxy for productive entrepreneurship and, alternatively, a proxy based on data of self-employment. They concluded that a positive relationship is found between the proposed measure to productive entrepreneurship and economic growth, on the other hand they found a negative relationship between the alternative measure based on self-employment and economic growth (Portela et. al.,2012).

Reynolds (1999) asserted that the degree of entrepreneurship was positively associated with growth in the United States, while a group of studies by Audretsch and Fritsch (1996) and Fritsch (1997) could not identify such a relationship for Germany. These different results suggested that the relationship between entrepreneurship and growth was fraught with ambiguities (Carree and Thurik, 2002).

Mojica et al., (2009), have found a positive contribution of entrepreneurial activity to economic growth. Similarly, the findings of Li, et al., 2009, have suggested that entrepreneurial activity is positively related to economic growth.

Countries such as Great Britain and the United States industrialized fairly rapidly because entrepreneurial skills were allowed to proliferate (Casson, 1990; Storey, 1994).

Entrepreneurship research has focused broadly on the development of smaller firms (ACs, 1992; Aronson, 1991) and more narrowly on the founding and success of firms that are introducing new products to the market place (Schumpeter, 1934). In both cases it is argued that these firms are the ones that provide the impetus for economic growth (Reynolds, 1997; Rondinelli&Kasarda, 1992).

2.5-Entrepreneurship and strategic management:

Stevenson and Jarillo (1990) found it essential to link between the fields of entrepreneurship and strategic management. As Dess et al. (1999) put it, “understanding entrepreneurial processes has been a central theme in a good deal of both the entrepreneurship and strategic management literature” (p.85).

Schendel and Hofer (1979) had already linked both research fields in the 1970s when defining strategic management as a “process that deals with the entrepreneurial work of the organization, with organizational renewal and growth...”(p.11), and further more stating that “ the entrepreneurial choice is at the heart of the concept of strategy”(p.6).

Entrepreneurship and strategic management are both dynamic processes concerned with firm behavior and performance, where strategic management calls for firms to establish and exploit competitive advantages within a particular environmental context, and entrepreneurship on the other hand promotes the search for competitive advantage through product, process, and market innovations (Ireland et al., 2001).

Since entrepreneurship and strategic management are concerned with value creation, acknowledging it as a major organizational goal, entrepreneurial actions and strategic actions can contribute to value creation independently, but they can contribute even more when they are integrated (Kraus and Kauranen, 2009).

Similarly Krasniqi and Kume (2013), have mentioned that entrepreneurship is focuses on growth and innovation, and strategic management focuses on competitive advantage.

They have thus stated that the integration of entrepreneurship and strategic management results in the creation of a firm's wealth.

One of the most obvious linkages between entrepreneurship and strategic management are opportunities (Kraus and Kauranen, 2009). Opportunities are both at the very heart of entrepreneurship and part of e.g. the SWOT analysis of strategic management.

Enterprises create value by identifying opportunities in their external environment and by subsequently developing competitive advantage to exploit them (Hitt et al., 2001; Ireland et al., 2001).

As Ireland et al., (2001) have mentioned, Entrepreneurial and strategic actions are often intended to find new market or competitive space for the firm to create wealth, where firms try to find fundamentally new ways of doing business that will disturb an industry's existing competitive rules, leading to the development of new business models that create new competitive life forms. They have stated that the degree to which the firm acts entrepreneurially in terms of innovativeness, risk -taking and pro-activity is related to dimensions of strategic management.

Six “natural” domains where the intersection between entrepreneurship and strategic management exist have been proposed: 1) innovation, 2) networks, 3) internationalization, 4) organizational learning, 5) top management teams and governance, and 6) growth (Covin& Miles, 1999; Hitt& Ireland, 2000; Ireland et al., 2001).

2.6- Organizational Performance (Definitions and Concepts):

In the field of strategic management and organizational studies, organizational performance has been attracting the scholar attention as one of the most important constructs (Combs, Crook, & Shook, 2005). This is why the last decades, practitioners and researchers conducted huge attention to explore the determinants of the organizational performance and what are the mechanisms that through which some variables can affect organizational performance positively or negatively (Jing & Avery, 2008).

There are various and different explanation of performance in management literature, but general definition of performance is the accumulated results of all work activities in the organization (Robbins and Coulter, 2009).

Most practitioners seemed to use the term performance to describe a range of measurements including input efficiency, output efficiency and in some cases transactional efficiency (Stannack, 1996).

Performance is a method or a trend, in which the entity under consideration performs a certain activity on the basis of similarity with the reference method (trend) of the normal execution of the activity. (Wanger, 2009).

According to Neely (2005), Performance is a complex and dynamic concept which has been conceptualized in two ways namely the drivers of performance and the results of performance.

Fwaya (2006) views performance as a formula for the assessment of the functioning of an organization under certain parameters such as productivity, employee' morale and effectiveness.

According to Emamgholi (2011), performance is the processing of the results of material and human resources in organizations.

Performance is regarded as an output which is aligned to objectives or simply profitability and is explained in terms of expected behavioral output and also results.(Mutindi, 2013). It can be examined from different aspects: actual results or outputs of activities (e.g., financial results), or how an activity is carried out (e.g., efficiency, quality, or production process. (Sillanpaa, 2001).

Javier (2002), has mentioned that performance is equivalent to the famous 3Es (economy, efficiency and effectiveness) of a certain program of activity.

However, Daft (2000), asserted that organizational performance is the organization's ability to attain its goals by using resources in an efficient and effective manner. Quite similar to Daft (2000), Richardo (2001) defined organizational performance as the ability of the organization to achieve its goals and objectives.

It is described as the extent to which the organization is able to meet the needs of its stake holders and its own needs for survival (Jarad et al., 2010).

Tangen (2005), stated that an organization's performance is considered as a multidimensional umbrella concept including all aspects related to that organization's success and activities. It is an indicator which measures how well an organization accomplishes its objectives (Valmohammadi, 2012).

Conceptually, Organizational performance has been defined as the comparison of the value produced by a company with the value owners expected to receive from the company (Alchian and Demetz, 1972).

According to Antony and Bhattacharyya (2010), organizational performance is defined as the measure of organizational success with regards to the value it creates and delivers to internal as well as external customers. It is concerned with the overall productivity in a organization in terms of stock turnover, customers, profitability, and market share. (Mutindi, 2013).

Organizational performance is one of the most broadly and extensively used dependent variable in organizational studies, and yet at the same time, it remains one of the most imprecise and loosely –defined constructs (Rogers and Wright, 1998).

It refers to both objective (e.g., profit, return on investment; productivity, growth) and subjective performance outcomes (e.g., quality of products and services, client satisfaction, innovativeness (Looise et al.,2011). Several researchers (e.g., Paauwe, 2004; Addison & Teixeira, 2006; Forth & McNabb, 2008) emphasize that the current common research approach to organizational performance in its sole focus on financial performance is too narrow. They urge an alternative use of multidimensional performance perspective that includes further objective (e.g., employment growth) and subjective performance measures (e.g., employee well being, societal well being) (Looise et al., 2011).

Moulin (2003) defines an organization's performance as "how well the organization is managed" and "the value the organization delivers for customers and other stake holders".

In the context of organizational financial performance, performance is a measure of the change of the financial state of an organization, or the financial outcomes that result from management decisions and the execution of those decisions by members of the organization (Carton, 2004).

Odhiambo (2009) identified three approaches to performance in an organization which are the goal approach, which states that an organization pursues definite identifiable goals. This approach describes performance in terms of the attainment of these goals. The second approach is the systems resource approach which defines performance as a relationship between organization and its environment. This concept defines performance according to an organization's ability to secure the limited and valued resources in the environment. The third approach is the process perspective which defines performance in terms of the behavior of the human resource of an organization (Waiganjo et al., 2012).

Kiragu (2005) highlights performance in terms of four perspectives which are the financial, customer, internal processes and innovativeness. The financial perspective identifies the key financial drivers of enhancing performance which are profit margin, asset turn over, leverage, cash flow, and working capital (Odhuno et al., 2010). The customer focus describes performance in terms of brand image, customer satisfaction, customer retention and customer profitability, Internal processes involve the efficiency of all the systems in the organization, while innovativeness is concerned with the ease with which a firm is able to adapt to changing conditions (Mutindi, 2013).

In general, the concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of achieving a shared purpose (Alchian&Demetz, 1972; Barney, 2001; Jensen &Meckling, 1976; Simon 1976).

The concept of performance has been expressed by Brumbrach (1988) as follows: Performance means both behaviors and results. Behavior emanates from the performer and transforms performance from abstraction to action. Not just the instruments for results, behaviors are also outcomes in their own right- and the product of mental and physical effort applied to tasks- can be judged apart from results.

2.6.1-Performance measurements:

The enormous interest in measurement has manifested itself in practitioner conferences and publications as well as in academic research (Neely, 1998).

Malt et al, (2003) noted that "measuring" the organizational performance has been a major research topic in organization theory literature for long years and managers along with researchers are still struggling with the issue of performance measurement.

Performance measurement has been traditionally considered as an element of the planning and control cycle that captures performance data, enables control feedback, influences work behavior (Flamholtz, Das and Tsui 1985) and monitor strategy implementation (Simon, 1990). It endorses a process perspective where the focus is on the internal process of quantifying the effectiveness and the efficiency of action with a set of metric (Neely, Gregory and Platts, 1995).

Performance measurement has been defined as the development of indicators and collection of data to describe report on, and analyze performance (Marshall et al., 1999, p.13).

Neely (1998), defines performance measurement as "the process of quantifying the efficiency and effectiveness of past actions through acquisition, collation, sorting, analysis, interpretation and dissemination of appropriate data.

According to Nanni et al.(1990), performance measurement is defined as means of monitoring and maintaining organizational control which is the process of ensuring that an organization pursue strategies that lead to the achievement of overall goals and objectives.

Amaratunga and Baldry (2002), defined performance measurement as the measurement that provides the basis for an organization to assess how well it is progressing toward its predetermined objectives, helps to identify areas of strengths and weaknesses, and decide on future initiatives, with the goal of improving organizational performance.

Njihia et al., (2013) highlight performance measurement as one of the tools which helps firms in monitoring performance, identifying the areas that need attention, enhancing motivation, improving communication and strengthening accountability.

Performance measurement has several main objectives (Anderson &Faberhaug, 2002): to support decision making; to change behavior and increase motivation; to monitor performance trends; to state priority and action; to verify the effectiveness of optimization measures already implemented; to aid dissemination of organizational results via marketing; and to aid benchmarking processing (Vilanova et al., 2015).

Parmenter (2007) suggested three types of performance measures:

1. Key result indicators (KRIs), which indicate what was accomplished with respect to a perspective.
2. Performance indicators (PIs), which indicate what should be accomplished.
3. Key performance indicators (KPIs), which indicate what should be accomplished to obtain a significance increase in performance.

Performance may be measured by both quantitative and qualitative methods (Mutindi, 2013).

Studies investigating the relationship between culture and performance tend to use several performance measures (Abu-Jarad et al., 2010; Lim, 1995). Reviewing the culture-performance relationship, Abu-Jarad et al., (2010) noted that the most common measures of organizational performance are financial profitability and growth.

Traditionally, the organizational performance has been measured using the cost and account-based measures (Demirbag, Tatoglu, Tekinus, &Zaim, 2008).

Due to the differences of the organizational performance definition, there has been a continuous debate regarding which is the best measure of the organizational culture (Jusoh, Ibrahim, & Zainuddin, 2008).

The classical approach to performance measurement, as described by the Sink and Tuttle model (Sink and Tuttle, 1989), claimed that the performance of an organizational system is a complex interrelationship between six performance criteria: effectiveness, efficiency, quality, productivity, innovation, and profitability (Rolstadas, 1998).

Doyle (1994) has mentioned that there was no single measure or best measure of organizational performance.

Fwaya (2006) asserted that the only worthy performance measure is financial performance because of its value to shareholders, executives and the market. While Ittner and Larcker (2003), claimed that a firm performance should not only be measured by financial performance but also operational and market indicators.

Hamel and Prahalad (1989) and Doyle (1994), argued that profitability was the most common measurement used for organizational performance in business organizations.

Galbraith and Schendel (1983), supported the use of return on assets (ROA), return on equity (ROE), and profit margin as the most common measures of performance.

According to Al-Swidi and Al-Hosam (2012), the financial measures of organizational performance are not stable and might be so sensitive to changing of

the industry-related factors. They have asserted that the financial measures can be easily manipulated and hence do not reflect performance.

Kaplan and Norton (1996), argued that the financial measures lack the strategic focus, since they describe the past performance and they might be misleading when used to predict the future performance (Al-Swidi& Al-Hosam, 2012).

Banker et al.,(2005) stated that non-financial measures have been deemed to be more effective in motivating managerial performance because they are more reflective of the overall corporate strategy.

The classical approach to performance measurement, as described by Sinkand Tuttle model (Sink and Tuttle, 1989), claims that the performance of an organization system is a complex interrelation between six performance criteria: effectiveness, efficiency, quality, productivity, innovation and profitability.

Mandy (2009) posits that organizational performance can be measured using a number of criteria's; which includes effectiveness, efficiency, growth and productivity. Shariff, Peous, Juhary&Ali (2010) asserted that measures of performance can be viewed from (objective), that is more about the financial assessment to organizational performance on return on equity, return on assets and sales growth.

2.6.1.1-Functions of Performance measurement:

According to Neely (1998), the functions of performance measurement can be categorized into the following four aspects:

- Checking position. Establishment of current status and monitoring of progress over time and against benchmarks.
- Communicating position. Communicate with shareholders, customers, or employees by releasing annual reports, etc.
- Confirm priorities. Performance data provide insights into what it is important to a business, thus exposing shortfalls that allow organizations to identify priorities.
- Compel progress. The measures can help organizations focus on specific issues and encourage people to search for ways to improve performance.

2.6.2-Performance Measurement System:

A performance measurement system is viewed as a system that transforms input data into usable information for various kinds of decisions in organizations (Elg, 2001; Kazardijan and Lied, 1999). It consists of resources, internal dynamics and context (Wicker, 1987). The goal of the system is to provide decision makers with relevant information (Mckinnon and Bruns, 1992; Neely et al., 2002; Simons, 1995).

Performance measurement system is a tool the company uses to monitor the contractual relationship between the organization and stakeholder (Atkinson et al., 1997).

It facilitates and spurs the strategy management process (Srimai et al., 2010), enables informed decisions to be made and actions to be taken (Neely, 1998, pp. 5-6), translates business strategies into deliverable results and combines financial, strategic and operating measures to gauge how well a company meets its targets (Gates,1999).

It is important to have a performance measurement system in any organization since such system is essential for developing strategic plans and assessing the fulfillment of the objectives (Ittner&Larcker, 1988). Accordingly, research indicates that organizations using balanced performance measurement systems as the basis for management perform better than those that do not (Lingle and Schiemann, 1996).

Performance measurement systems have an important role in management as they serve as a link between the various units of an organization, and facilitates higher management's propagation of plans and goals (which are linked to the overall strategy) throughout the organization (Elg, 2007).

As stated by Fanco-Santos et al.,(2007), a performance management system can be defined in three perspectives; features, roles, and processes. The necessary features of a performance measurement system include performance measures and supporting infrastructure. Roles of the performance measurement system include performance measurement, strategy management, communication influence on behavior, and learning and improvement. The processes of a performance measurement system include selection and design of measures, collection and manipulation of data, information management, performance evaluation and rewards, and system review (Rompho and Boon-itt, 2012).

Atkinson (1998), has mentioned that the process of performance measurement system begins with specifying the primary objectives of an organization, followed by undertaking strategic planning, setting a set of formal and informal contracts between the organization and its stakeholders, defining secondary objectives that employees use to promote success, monitoring the level of achieved primary and secondary objectives, using data to revise the model of the relationship between primary and secondary objectives, and tying incentive pay to performance measurement results.

As mentioned by Elg (2007), five typical situations in which performance measurement is used have been identified:

- **Setting** 1. Continuous follow up in managerial work, where performance measure serve as a measure of temperature or an attention-getter (Elg, 2001).
- **Setting** 2. Usage in development / improvement of work, in which performance measurement helps in problem solving (Forsberg, 1998, Fundin and Elg, 2006; Kaplan and Norton, 1992).
- **Setting** 3. "The interested manager" uses databases, collects information, and makes his/her own analyses "ad hoc" (Simon, 1995).
- **Setting** 4. Performance measures are used in a goal deployment process (Bourne et al.,2000, Elg,2001).
- **Setting** 5. Information from performance measurement is used in reports and presented specific groups of stakeholders (Elg and Persson, 2005).

The components of performance measurement systems as proposed by Mc Gee (1992) are:

- Performance metrics: defining evaluation criteria and corresponding measure that will operate as leading indicators of performance against strategic goals and initiatives.
- Management process alignment: designing and reengineering core management processes to incorporate new performance metrics as they evolve, and balancing the various management processes of the organization so that they reinforce one another.
- Measuring and reporting infrastructure: establishing processes and supporting technology infrastructure to collect the raw data needed for all of the organization's performance metrics and to disseminate the results throughout the organization as needed.

Based on a literature review, Gomes et al.,(2004) has identified several characteristics of performance measurement systems:

- Measures must involve relevant non-financial information based on key business success factors (Clarke, 1995)
- Systems should be implemented to articulate strategy and monitor business results (Grady, 1991)
- Measures and related systems should be based on organizational objectives, critical success factors, and have a customer orientation. One of the main tasks should be monitoring both financial and non-financial aspects of the obtained results (Manoocherhri,1999).
- Performance system should dynamically follow the strategy (Bhimani, 1993).

- Performance system should accomplish the requirements of specific situations in operations, be long term oriented, and simple to understand and implement (Santori and Anderson, 1987).
- Performance system should be linked to reward systems (Tang et al., 1999).
- Financial and non-financial set of measures should be coherent and consistent with the strategic framework (Drucker, 1990; McNair and Mosconi, 1987).

2.7- Organizational culture (Definitions and Concepts):

Several definitions of organizational culture can be found in the literature (Uzkurt et al., 2013). The most common one is made by Lundy and Cowling (1996) and states that organizational culture represents the type of activities naturally occurring in the organization. Further specification of this perspective from studies in organizational behavior, sociology and anthropology describes organizational culture as “shared values and beliefs which provide both insights for organization functioning as well as norms for behaviors” (Deshpande and Webster, 1989).

According to Sun (2008), organizational culture refers to the pattern of beliefs, values and learned ways of coping with experiences that have developed during the course of an organization's history, and which tend to be manifested in its material arrangements and in the behaviors of its members.

Another popular description of organizational culture is “the sum of the main assumptions which are adopted by employees of the organization” (Martins and Terblanche, 2003). These assumptions worked well in the organizations’ past, spread among people via human interaction and are adopted and considered valid in the whole organization (Uzkurt et al., 2013).

Organizational culture can be defined as the values, beliefs and hidden assumptions that organizational members have in common (Cameron and Quinn, 1999; Denison, 1990; Deshpande and Webster, 1989; Miron et al., 2004).

Although there are many definitions of culture, organizational culture has been viewed as holistic, historically determined, and socially constructed (Abdulrashid et al., 2004). Culture involves beliefs and behavior, exists at various levels, and manifests itself in a wide range of features of organizational life (Hofstede et al., 1990). As such, organizational culture refers to a set of shared values, belief, assumptions, and practices that shape guide members' attitudes and behavior in the organization (Davis, 1984; Denison, 1990; Kotter and Heskett, 1992; O'Reilly and Chatman, 1996; Wilson, 2001).

Organizational culture is defined as the “shared, basic assumptions that an organization learns while coping with the environment and solving problems of external adaptation and internal integration that are taught to new members as the correct way to solve problems” (Park et al., 2004). According to Abujarad et al., (2010, p.34), organizational culture refers to “something that is holistic, historically determined (by founders or leaders), related to things anthropologists study (like rituals and symbols), socially constructed (created and preserved by the group of people who together form the organization), soft and difficult to change.

In the organizational behavior literature, a number of definitions for organizational culture have been proposed (Lund, 2003). For example, Kilmann et al. (1985, p.5) defined corporate culture as “the shared philosophies, ideologies, values, assumptions, beliefs, expectations, attitudes and norms” that knit an organization together.

Deal (1986, p. 301) defined it as “the human invention that creates solidarity and meaning and inspires commitment and productivity.” Uttal (1983) defined it as a “system of shared values (what is important) and beliefs (how things work) that interact with a company’s people, organizational structures, and control systems to produce behavioral norms.”

Many researchers agree that organizational culture refers to a system of values, beliefs and behavior shared among employees (Deshpande & Webster 1989; Ravasi & Schultz, 2006; Xiaoming & Junchen, 2012).

Hartman (1996) asserted that culture includes laws, rules and systems as well as language, history, formal and informal practices, beliefs and rituals.

According to Schein (2004), organizational culture is the pattern of basic assumptions that a group has invented, or discovered in learning to cope with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (p. 3). In the frame of this definition, culture is a dynamic process, resulting from the integration among others and promoted by leadership behaviors (Belias et al., 2015).

Claver et al., (2001), have stated that organizational culture is a set of values, symbols and rituals, shared by the members of a specific firm, which describes the way things are done in an organization in order to solve both internal management problems and those related to customers, suppliers and environment.

Organizational culture is a form of collective interpretative scheme shared by the members of an organization, due to which they assign meanings to occurrences, people and events within and outside of the organization in a similar way and treat them similarly (Schein, 2004; Alvesson, 2002; Marin 2002).

Organizational culture through its assumptions, values, norms, and symbols, determines the way in which the members of an organization perceive and interpret the reality within and around their organizations as well as the way they behave in that reality (Janicijevic, 2012). It encompasses “a set of structures, routines, rules and norms that guide and constrain behavior” (Schein, 2004, p.1).

Organizational cultures represent the character of an organization, which directs its employees’ day-to-day working relationships and guides them on how to behave and communicate within the organization, as well as guiding how the company hierarchy is built (Ribiere and Sitar, 2003).

Yiing and Bin Ahmad (2009), asserted that the study on organizational culture can take on a multiple of aspects, including levels (visible, expressed values, and underlying assumptions), strength (strong or weak), and adaptiveness (adaptive or unadaptive). They have mentioned that organizational cultures can be assessed along many dimensions, resulting in conceptually different, but fundamentally similar, models and theories. For example, culture can be categorized as ability/achievement /clan/bureaucratic (Daft, 2005), clan/adhocracy /hierarchy/ market (Cameron and Freeman, 1991; Quinn and Cameron, 1983; Quinn and Rohrbaugh, 1983), and communal /fragmented / networked/mercenary (Goffee and Jones,1998).

The concept of organizational culture has been defined by different scholars and in different ways (Shehu and Mahmood, 2015). According to Hofstede (1994), culture is viewed as “the collective programming of the mind which differentiates the members of one group from that of another”. Culture refers to shared traditions, values and norms (Schein, 1985).

Cameron and Quinn (2006) asserted that Organizational culture is a persistent set of values, beliefs, and assumptions that describes organizations and their members.

The concept of “organizational culture” refers to the overall ethos of an organization: those characteristics, including both psychological and structural elements, which affect the perceptions and behavior of employees. Cultural descriptions will distinguish one organization from another, will be relatively identifiable over a period of time, and will influence people in the company as individuals as well as company performance. Such “culture” is a diffuse and nebulous notion, encompassing the underlying values, beliefs and principles of the personnel as they are expressed in the management structure and practices. It may be manifest in structures, behaviors and attitudes at all levels of the organization. It can therefore be viewed at a number of levels and in a number of ways (Fletcher and Jones, 1992).

The concept of organizational culture could be described as a compass which provides the institution with direction. It offers a kind of informal language for the interpretation of issues and events; it ensures a sense of order and reduces employees' uncertainty (Belias et al.,2015).

Based on the literature the concept of organizational culture has four key elements: First, organizational culture is a shared phenomenon (Schein, 1997:8; Wilson, 2001; Baumgartner, 2009). Second, organizational culture has visible and less visible levels (Schein, 1997: 17; Wilson, 2001; Baumgartner, 2009). Third, each new member of the organization learns the culture (Wilson, 2001; Baumgartner, 2009). Finally, culture tends to change slowly over time (Wilson, 2001; Baumgartner, 2009).

2.7.1-Types of Organizational Culture:

Cameron and Quinn (1999) define four cultures – adhocracy, clan, market and hierarchy.

2.7.1.1-The Adhocracy culture:

This type of culture is characterized by innovation and risk taking, assured by a highly creative and dynamic working environment (Belias et al., 2015). It is an organizational culture which gives a lot of opportunities for individuals to develop in their own way, as long as they are consistent with the organization goals (Aktas et al., 2011). Moreover, it emphasizes new product and service development, adaptability, growth, change, productivity, efficiency and experimentation (Cameron, 2004; Cameron & Quinn, 2006; Tseng, 2010).

2.7.1.2-The clan culture:

According to Aktas et al.,(2011),the clan culture is full of shared values and common goals, an atmosphere of collectivity and mutual help, and an emphasis on empowerment and employee involvement. They have stated that in this culture type the organization focus is to maintain its stability, and that loyalty, cohesiveness and participation are highly regarded in setting the criteria of success.

2.7.1.3-The Market culture:

Market culture produces a workplace with hard-driving competitiveness; a result oriented organization led by tough and demanding leaders who are hard drivers, producers, and competitors (Tseng,2010). Market culture is externally focused, but it is control oriented. The core values of firms with this culture are productivity and competitiveness (Valencia,2010).

2.7.1.4-The hierarchy culture:

The hierarchy culture has a clear organizational structure, standardized rules and procedures, strict, control, and well defined responsibilities. This culture can be simply identified through the domination of rule, system and procedure. Stability inside the organization is a prime orientation which should be maintained through a set of fixed and tight rules (Aktas et al.,2011).

As cited by Uzokurt et al.,(2010), there are several other classifications of an organization's culture including Quinn and Spreitzer's (1991) four cultures which are: group culture, development culture, hierarchical culture, and rational culture; Chang and Lin's (2007) classified culture into four constructs: cooperativeness, innovativeness, consistency, and effectiveness, while Wallach (1993) has categorized organizational culture as bureaucratic, innovative, and supportive.

A bureaucratic culture is hierarchical, compartmentalized, organized, systematic, and has clear lines of responsibility and authority. An innovative culture refers to a creative, results-oriented, challenging work environment. A supportive culture exhibits team work and a people-oriented, encouraging, trusting work environment (Yiing and Bin Ahmad, 2009).

2.8-Entrepreneurial Orientation and Organizational Performance:

There is a general consensus that entrepreneurial orientation influences the performance of organizations (Miller,1983; Covin&Slevin,1988; Covin&Slevin,1989; Zahra&Covins,1995; Barret&Weintein, 1998, Lyon et al., 2006).

Kraus, Frese, Fredrick, and Unger (2005) found that entrepreneurial orientation is a valuable predictor for business.

Thus, entrepreneurial orientation research accumulated a considerable body of evidence regarding the relationship between entrepreneurial orientation and outcomes or performance (Barringer&Bluedon, 1999; Covin&Slevin, 1989; Miller, 1983; Wiklund, 1999; Wiklund&Shepherd, 2003; Zhara, 1991; Zahra &Covin, 1995).

Entrepreneurial orientation has recently been recognized as one of the most important factors for a firm's growth and profitability (Zainol and Ayadurai, 2011).

With its three core dimensions of risk-taking, pro-activeness, and innovativeness (Keh et al., 2007), it is considered to be an essential element for firm success (Wang, 2008).

The importance of entrepreneurial orientation to the survival and performance of firms has been acknowledged in the entrepreneurial literature (Miller 1983; Lumpkin &Dess, 2001; Wiklund, 1999; Wiklund and Shepherd, 2005; Zahra &Covin ; 1995; Zahra Garvis, 2000).

Studies on EO have typically focused on the casual relationships between EO and firm's performance (Cassia and Minola, 2012). Several studies have found this relationship to be positive (Eggers et al., 2013; Kraus, 2013; Soininen et al., 2012a; Madsen, 2007; Wiklund and Shepherd, 2005; Jantunent et al., 2005).

Similarly, Wiklund and Shepherd (2005) confirmed a positive relationship between Entrepreneurial Orientation and firm performance. Aloulou and Fayolle (2005) found that the entrepreneurs or top managers of entrepreneurial firms are eager to show innovative, proactive and risk taking characteristics.

Several authors have investigated the impact of EO on firm performance and have found that EO is a construct that is associated with firm success, particularly in the long-run (e.g. Becherer and Maurer, 1997; Lumpkin and Dess, 1996; Shepherd and Wiklund, 2005; Wiklund1999), though this relationship is not entirely unambiguous (Hughes and Morgan, 2007), largely because the conversion of EO into firm growth remains something of an enigma (Lumpkin and Dess, 1996).

Prior theory and research have suggested that an Entrepreneurial orientation is a key ingredient for organizational success. There often appears to be a normative bias, however, toward the inherent value in entrepreneurship and an assumption that for new entry to result in high performance, firms must have a strong entrepreneurial orientation (Collins & Moore, 1970; Covin & Slevin, 1991; Peters and Waterman, 1982; Schollhammer, 1982; Zahra, 1993). This assumption remains largely untested, as suggested by Zahra, who found that there is “a paucity of empirical documentation of the effect of entrepreneurship on company financial performance (1993: 11).

Entrepreneurship scholars have attempted to explain performance by investigating the relationship between entrepreneurial orientation and firm performance (Lumpkin & Dess, 2001; Wiklund & Shepherd, 2003, 2005; Zahra & Covin, 1995; Zahra & Gravis, 2000) because of the belief that firms with strong entrepreneurial orientation perform much better than those that do not adopt an entrepreneurial orientation (Covin & Slevin, 1986; Hult et al., 2003; Wiklund & Shepherd, 2003). However, assessing the magnitude of this relationship has yielded mixed results (Shan et al., 2015).

Some studies found that entrepreneurial orientation enables small firms or new ventures, which are defined as firms newly built or less than ten years old (Lussier, 1995), to perform better than competitors and enhance firm performance (Ireland, Hitt, & Sirmon, 2003; Lumpkin & Dess, 2001; Wiklund & Shepherd 2005; Zahra & Gravis, 2000). Others reported lower correlations or even no significant relationship between entrepreneurial orientation and performance (Covin & Slevin & Schultz, 1994; Lumpkin & Dess, 2001).

The study of Mohsen & Ramin 2011; Zainol & Daud 2011; Idar & Mahmmod; Al-swidi & Mahmood 2012; Fatoki 2102 reported significant positive relationship between entrepreneurial orientation and firm performance, whereas in contrast, the findings of Arbaugh, Cox and Camp (2009) showed a mixed results, while Frank, Kessler and Fink (2010) reported a negative relationship between entrepreneurial orientation to performance relationship.

Similarly, Anderson (2010), reported a negative relationship between entrepreneurial orientation to performance relationship.

The varied empirical results raise the question of whether entrepreneurial orientation is always an appropriate strategic orientation or if its relationship with performance is more complex (Li et al., (2009).

As argued by Lumpkin & Dess (1996), most studies investigating the independent effect of entrepreneurial orientation on firm performance ignore the factors that may mediate the strength of the entrepreneurial orientation - firm performance relationships (Wiklund & Shepherd, 2005).

Lumpkin and Dess (2001) found that the innovative characteristics of entrepreneurs allow creativity and experimentation in organizations, which lead to the introduction of new products or services, strong research and development, and technological leadership. Moreover, different studies have found that the innovative work behavior of individuals has an important role in improving firm performance (Dorenbosch et al., 2005; Ramamoorthy et al., 2005).

Miller and Bromiley (1990), found that entrepreneurial orientation had an impact on overall firm performance, such as return on equity, assets, sales.

Wiklund (1999) maintains that, Entrepreneurial Orientation (EO) contributes to performance, defined as “compound measure incorporating dimensions of growth as well as financial performance”, and therefore “risk-taking”, innovativeness, and pro-activeness keep small firms ahead of competitors”. Wiklund (1999), Zahra and Covin (1995), in their studies found that firms who demonstrate more entrepreneurial strategic orientation are performing better than the average company.

Covin and Slevin(1989, 1991), built a model that links entrepreneurial posture to organizational performance. They found that entrepreneurial orientation was positively related to performance and that entrepreneurial posture was positively related to firm performance.

According to Lumpkin&Dess, (2001), entrepreneurial firms achieve superior performance because they can target premium segments ahead of the competition with their innovative products and reap above-average returns in these segments.

Previous studies have found that every dimension of entrepreneurial orientation has active impact on enterprises' performance.

Developing and introducing new products and technology in innovative firms, contribute greatly to the economy and are regarded as growth engines (Brown and Eisenhardt, 1998). Proactive enterprises have the advantages of prioritized actions, being the first to march into new markets and charge higher prices, and would exceed competitors and become leaders of their industries (Zahra and Covin, 1995).

These enterprises control their markets by occupying distribution channels and market brands. Although the relationship between the dimension of risk taking and enterprises' performance is not clear, many researchers argue that traditional step-by-step activities could enhance enterprises' average performance, but enterprises with risk-taking strategies could bring about long better long-term performance.(Lan&Wu,2010).

Likewise, Some researchers found that each entrepreneurial orientation dimensions affect business success differently (Kreiser,Marino and weaver, 2002: Lumpkin and Dess 1996, 2001). High innovativeness exhibits positive relationships with sales growth, while pro-activeness is reported to produce positive relationship with sales level, sales growth and gross profit (Kreiser et al., 2002). On another study, risk-taking yields inverted curvilinear relationship with sales level and sales growth (Begley &Boyd, 1987: Kreiser et al.,2002; Miller and Friesen, 1982).

While there is often assumed to be a universally positive influence of EO on firm performance as broadly constructed, Rauch et al. (2009) note that the EO-performance linkage appears to be contextual in nature; the nature or degree of the EO-performance relationship changes as a function of the endogenous and exogenous phenomenon influencing a given firm.

For example, the relationship between EO and performance is stronger among firms operating in hostile environments (Covin and Slevin, 1989), and in environments characterized by unpredictability in the rate and nature of change (Miles et al., 2000).

Stam and Elfring (2008) found that two elements of a founding team's social capital significantly moderated the EO-performance relationship among new ventures. Given the preceding studies and others in this vein, it behooves scholars to continue to probe potential moderating effects on the EO-performance relationship to paint a more comprehensive picture of the circumstances under which pursuing entrepreneurial strategies result in favorable performance outcomes.

As stated by Shehu&Mahmood (2014), study in entrepreneurial orientation to performance relationship is inconclusive, hence; Wales, Gupta and Mousa (2011) asserted that most of EO studies were conducted in Europe and recommended the need for further study across different countries.

2.9- Entrepreneurial Orientation Dimensions and Organizational performance:

2.9.1-Innovativeness and organizational performance:

Innovativeness as conceptualized by EO concerns the willingness of firms to pursue new ideas and to explore and experiment them creativity (Lumpkin and Dess, 1996). It can offer a strategic means by which firms deal with internal and external environmental changes (Rhee et al., 2010).

Innovativeness ranges from a willingness to try new products or services, to a commitment to be at the cutting edge of practice (Lumpkin and Dess, 1996), moving “beyond the current state of the art” (Dess and Lumpkin, 2005, p. 150). It is demonstrated by problem solving, finding creative solutions, and developing new products and services (Kropp et al., 2008) through the support of new ideas and experimentation (Madsen, 2007).

The notion of innovativeness plays a pivotal role in augmenting performance (Mone et al., 1998). It is the innovative approach of the firm that differentiates it from its competitors in the market and provide a unique positioning (Hughes & Morgan, 2007).

The organizations following innovativeness continuously strive to develop new products that in turn increase their performance (Zahra & Gravis, 2000).

There are several studies supporting that innovation has a positive effect on firm performance (Artz et al., 2010; Eisingerich et al., 2009; Chen et al., 2009; Rosenbusch et al., 2011; Damanpour and Evan, 1984), where authors have generally agreed that innovativeness leads firms to higher firm performance (Damanpour, 1991; Calantone et al., 2002; Hult et al., 2004).

Similarly, it was confirmed by some researchers that innovation is an important determinant of superior firm performance and competitiveness for various industry.

Segments (Baker and sinkula, 2002; Damanpour, 1991; Farely et al., 2008; Jimenez-Jimenez and Sanz-Valle, 2011; Luke et al., 2009).

According to Armour and Treece (1978), innovation at the organizational level is anticipated to lead to organizational changes that may influence its performance.

Simpson et al., (2006) identified positive outcomes of innovativeness on organizational effectiveness and efficiency.

Huda and Wemmerlov (2006) found a positive relationship between rate of new product introduction and firm performance. Likewise, Damanpour(1991) asserted that the embracing of innovativeness is envisioned to heighten a firm effectiveness and performance.

Rosenbusch et al.(2011) show that innovation has a positive effect on the performance of SMEs, while Chen et al.,(2009) suggests that innovation orientation plays a critical role in facilitating superior performance in service firms.

Some researchers also suggest that innovative firms have higher profitability and growth (Li and Atuahene-Gima, 2001; Price, 1996).

Calantone, Cavusgil, and Zhao (2002) found that firm innovativeness has a positive impact on performance and contributes to competitive advantage by facilitating creative thinking within a firm's learning activities. Similarly, someresearchers have also confirmed for various industry segments that innovation is an important determinant of superior firm performance and competitiveness (Baker and Sinkula, 2002; Damanpour, 1991; Farley et al., 2008; Jimenez-Jimenez and Sanz- Valle, 2011; Luk et al., 2008).

Hult et al., (2004) have stated that innovativeness empower managers to solve business problems, offering a foundation for future corporate success.

Innovativeness improves the application of market intelligence acquired through market orientation activities, which can benefit performance (Han, Kim & Srivastava, 1998; Hurely & Hult, 1998). It often strengthens the competitive positions of organizations in markets where customer demands quickly change, and differentiation is limited (Harvey, 2000), as it facilitates flexibility in building, selecting and adapting various strategies (Seo et al., 2014).

Innovativeness in activities can potentially carry costs however and depends largely on commercialization for the success of its outcomes, but given that it changes how firms apply many of their learning and market mechanisms by establishing new insight and perspective, it is likely to contribute to business performance (Hughes and Morgan, 2007).

Innovative companies may have a broader base of skills and knowledge which they can exploit in building distinctive competences (Zahra & Gravis, 2000).

Firms need to be innovative in order to fulfill potential customer needs, engage in new discoveries, try out new ideas, and stimulate creativity. All of which are efforts that may result in new products (Li, Liu, & Zhao 2006), services, or technological processes (Lumpkin & Dess 1996), and change existing technologies or practices and ventures (Kimberly 1981).

Firms with greater innovativeness will be more successful in responding to changing environments and in developing new capabilities that allow them to achieve better performance (Rao, 2012).

According to resource-advantage theory, innovative competences may be a source of competitive advantage because they are deeply rooted in the context of the organization and cannot be explicitly articulated and imitated (Barney, 1991; Hunt & Arnett, 2006; Hunt & Morgan, 1996; Nonaka, 1994).

By increasing commitment to innovative products or processes, firms can renew their operations in the market place and improve their profitability (Lumpkin and Dess, 1996; Miller, 1983; Zahra& Gravis, 2000).

In general, innovativeness has become a prerequisite for a firm's success and survival (Rhee et al., 2010).

2.9.2-Pro-activeness and Organizational performance:

Pro-activeness is defined as acting opportunistically to shape the environment by influencing trends, creating demand, and becoming a first mover in a competitive market (Lumpkin and Dess, 1996).

Pro-activeness originated in the modern view in which companies actively pursue anticipation of opportunities to develop and introduce new products to obtain their benefits and finally be a leader in the market (Hughes and Morgan, 2007, p.652; Chang et al., 2007, p.1005).

Proactive firms adopts continuous environmental scanning and acts in advance of change to better serve customers and markets rather than allow its destiny to be guided by external factors. Moreover it leverages the firm's responsiveness capability and propensity to act to meet new circumstances (Hughes and Morgan 2007).

Proactive firms strive to be the market leaders (Hussain et al.,2015) , and they are likely to get higher returns as compared to their competitors in the market because of early responsiveness to the market signals (Lumpkin and Dess, 2001).

According to Hughes and Morgan (2007), increasing the firm's receptiveness to market signals and awareness of customers' needs (expressed or latent) are two of the main advantages offered by pro-activeness.

Previous studies have often found a strong positive relationship between pro-activeness and performance (e.g., Miller 1983; Miller and Friesen 1983).

According to Kirzner (1997), Organizational performance depends on entrepreneurial pro-activeness if there is uniqueness in the creation of new products from the available resources.

Zahra and Covin (1995) argued that proactive companies can develop competitive advantage by initiating the first move, planning novel requests and market, and by charging high prices. Thus a positive relationship between pro-activeness and firm performance is evident (Jalali et al., 2014).

Studies have reported high performance returns to proactive firms because of their responsiveness to market signals (e.g., Day & Wensley, 1988; Wright, Kroll, Pray, & Lado, 1995). Proactive firms, through proprietary learning and experience effects gained over time, tend to be more attuned to changes and trends in the marketplace, which yields opportunities to the firm to meet expressed and latent needs ahead of competitors (Hamel & Prahalad, 1991).

An investigation related to pro-activeness of small business holders in South America shown that there is a positive relationship between pro-activeness and business success (Krauss, Frese, Fredrick & Unger, 2005).

According to Ambad and Wahab, (2013), pro-activeness had no direct relationship with firm performance when this relationship was moderated by environmental hostility. They have stated that when the environment is unfavorable or hostile, pro-activeness can enhance firm performance.

Richard et al., (2004), have mentioned that sometimes a highly proactive approach of a firm may result in the development of products that are not in line with the image of the firm. The firm may try to find out new markets and invest new resources and the investment of resources to a particular product or market may increase the cost of the company (Hussain et al., 2015). Therefore, a highly proactive approach may not be beneficial for the firm and may result in negative consequences (Chen & Hus, 2013).

Pro-activeness is likely to be valuable in securing superior performance returns because it implies customer-centrality given the need to understand customers, ascertain and exploit their needs, and actively deconstruct the value package of competitors to generate superior offerings (Hughes and Morgan, 2007).

2.9.3-Risk taking and Organizational performance:

Risk taking is defined as the willingness to be bold and aggressive in pursuing opportunities and in preferring high-risks projects with opportunities for very high returns over low-risk projects with lower and more predictable rates of return (Katz and Brockhaus, 1993).

It is often assumed that risk taking has positive impact on performance, as risk is rewarded in the form of a risk premium (Boermans and Willebrands, 2012).

If firms have a risk-taking orientation, they may seize lucrative deals. Hence, risk-taking tendencies may be positively related to success (Frese et al., 2002; Lumpkin and Dess, 1996).

The empirical literature finds mixed results for the effect of risk taking on firm performance (e.g., Rauch et al., 2009, Zhao et al., 2010).

Rauch and other (2009) have found a weak positive effect on firm performance, while Zhao and collegeous (2010) found no significant effect of risk taking on performance. On the other hand, Aaker and Jacobson (1987) argued that risk had a positive influence on performance and found support for that view using business unit data.

Likewise, a study among Taiwanese SMEs in China found that risk-taking is positively related to firm success (Wang & Yen, 2012).

The theatrical economic literature often assumes that risk taking behavior of entrepreneurs has a positive effect on performance, even though the mitigation of risk by reducing the exposure to income shocks is regarded as beneficial (Boermans and Willebrand, 2012).

Empirical research using primary data in 167 large New Zealand firms found that a higher risk-taking profile would lead to higher financial performance (Gibb and Haar, 2010).

Based on John et al.,(2008), Kim (2011) has shown that Korean firms with high foreign ownership are more risk taking and risk taking in turn is positively associated with firm growth.

The meta-analysis results by Rauch et al.,(2004) revealed that the risk-taking dimension is positively related to firm performance even if it is significantly smaller than other entrepreneurial orientation dimensions.

A small number of empirical studies suggest that the impact of risk taking on performance is negative in risky environments (Kraus et al., 2012, Tang & Tang, 2007, Willerbrands et al., 2012).

In a non-hostile environment risk taking will be associated with better firm performance, because there will be less need for uncertainty reduction (Lumpkin & Dess, 2001).

Kraus and Colleagues (2012) have argued that increased levels of unpredictability and dynamisms lead to flawed understanding of uncertainty in the market place. This makes risk taking lower firm performance (Boermans and Willebrands, 2012). In a similar vein, Tang & Tang (2007) suggested that under uncertainty higher levels of risk taking result in lower firm performance.

According to Ambad and Wahab (2013), the positive effect of risk taking on firm performance is due to the fact that firms that have the courage to make a significant resource commitment to high-risk projects with high returns would definitely have the advantage of boosting their firm's income.

2.10- Organizational Culture and Organizational Performance:

Organizational culture is an important internal environment aspect that can lead an organization either to success or failure (Belias and Koustelios, 2014).

For many researchers, organizational culture is the link between corporate success and effective organization (Peters and waterman, 1982).

The link between organizational culture and performance has received much attention among researchers in the field of organizational culture. (e.g., Gordon and Ditomaso, 1992; Lim, 1995, Ogbonna and Harris, 2000; Henri, 2006a).

According to Detert et al.,(2000), Culture is generally assumed to be related to performance and to the success and failure of attempts to improve performance (Detert et al., 2000).

The relationship between organizational culture and organizational performance has been established, and an increasing body of evidence supports a linkage between organizational culture and its business performance (Poku& Anash, 2013).

The claim that organizational culture is linked to performance is found on the perceived role that culture can play in generating competitive advantage (Scholz, 1987), by defining the boundaries of the organization in a manner which facilitates individual interaction and/or by limiting the scope of information processing to appropriate levels (Krefting and Frost, 1985).

The relationship between organizational culture and performance is influenced by the way companies search for and filter the information from the market place and by their responsiveness (Stoica et al., 2004).

Organizational culture was used to explain the economic success of Japanese over American firms, through the development of a highly motivated workforce, committed to a common set of values, beliefs and assumptions (Denison, 1984; Furnham and Gunter, (1993). While it has been suggested that culture accounts for the economic performance of various countries (Hofstede, 1980; Hofstede and Bond, 1988), the idea of corporate culture also serves to provide a basis for understanding the differences that may exist between successful companies operating in the same national culture (Schein, 1990). Peter and Waterman (1982), for example, held that successful organizations possess certain cultural traits of "excellence". Ouchi (1981) presented a similar relationship between corporate culture and increased productivity, while Deal and Kennedy (1982) argued for the importance of a "strong" culture in contributing towards successful organizational performance.

Organizational culture has been identified as one of the essential factors that determines a firm's efficiency and productivity (Alas et al., 2009), generates competitive advantage (Martins and Martin 2002) and impacts on business efficiency by hindering or facilitating the achievement of the firm's goals (Yilmaz and Eurgun, 2008).

Previous searchers have emphasized the significance of organizational culture in several outcomes related to firm performance, such as job satisfaction, productivity and employee turnover (Uzkurt, 2013).

According to Pellegrin and Currey, (2015), there is evidence to support the notion that organizational culture matters in terms of performance. They have stated that strong cultures generally predict better performance, and mentioned that a "strong" culture is one in which the values and beliefs are intensely held by a large number of employees throughout the organization, which increases behavioral consistency.

If an organizational maintains a strong culture by demonstrating a well-integrated and effective set of specific values, beliefs and behaviors, then it will perform at a higher level of productivity (Sorensen, 2002). Gordon and DiTomaso (1992) found the supporting evidence that a strong culture was predictive of short-term company performance. They found that a cultural value of "adaptability" is also predictive of short-term performance.

Researchers (e.g. Deshpande and Webster, 1989; Denison, 1990; Gordon and DiTomaso, 1992) have examined the relationship between organizational culture and performance.

These studies suggest that certain types of organizational cultures lead to superior financial performance, and argue that the performance of an organization is dependent on the degree to which the values of the cultures are widely shared, that is, are “strong” (Ogbonna and Haris, 2000).

Krefting and Frost (1985) argue that organizational culture may create competitive advantage by defining the boundaries of the organization in terms of individual interactions and information processing capabilities. Ogbonna (1993) argues that widely shared and strong held values enable management to predict employee reaction to certain strategic options thereby minimizing the scope for undesired consequences.

Denison and Mishra (1995) discovered that cultural strength was significantly associated with short-term financial performance. Kotter and Heskett (1992) found that firms with “adaptive values” are strongly associated with superior performance over a long period of time as compared to just short-term performance. This findings hold out the value of “adaptiveness” in determining organizational performance. This hypothesis was given support by both Collins and Porras (1994) and De Geus (1997) in their work in long lived, financially successful companies. Saffold's (1988) discussion on strong culture, having a sense of mission and being adaptable resembles Kotter and Heskett's (1992) discussion on adaptable culture. These results suggest that culture can affect organizational performance if it is "strong" (wide consensus, deeply internalized and socialized) and appropriate to its environment (Kim et al., 2004).

A number of the studies appear to assume the presence of a "strong" culture as a positive influence on organizational performance (Lim, 1995).

However this assumption does not appear to take into account the influence of sub-culture, while suggesting that one set of cultural values are superior to others (Alvesson, 1989; Saffold, 1988).

Dension (1984), found that the strength of culture was predictive of short-term performance, when performance was defined with broad indicators like return on assets, return on investment and return on sales. Gordon and DiTomaso (1992) found the supporting evidence that a strong culture was predictive of short-term company performance. They found that a cultural value of “adaptability” is also predictive of short-term performance.

Kilman et al., (1985), advanced the view that strong culture can have a major impact on the success of the business due to its pervasive influence throughout any organization.

Referring to the dimensions of organizational culture that affect performance, Fekete and Bocskei (2011) concluded that a hierarchic orientation is negatively related to various performance outcomes, and that commitment to the organization, loyalty and tradition are positively related to companies financial performance. Moreover, the market culture, when it is result-oriented, will focus on effectiveness, efficiency and competitiveness, which in turn will have a positive effect on the firm's financial performance (Miranda et al., 2015).

As cited by Mirands et al.,(2015), the empirical study conducted by Yesil and Kaya (2013) found no relationship between the dimensions of organizational culture (including the hierarchy and results-oriented outlook) and the results of financial performance and recommended further study of the relationship between culture and performance in different contexts with different measures and research designs.

Ogbonna& Harris (2000) reported that competitive and innovative cultures are positively related to organizational performance. They also found no relationship between organizational performance and bureaucratic and community cultures.

Deshpande et al. (1993) found that the culture type which has the most powerful effect on organizational performance is a market culture and the least one is the culture of hierarchy. On the other hand, the study of Tseng (2010), revealed that adhocracy culture is a better performer than clan and hierarchy culture.

Although most of the studies examining the relationship between culture and performance revealed positive results, Shrivastava (1985) pointed out that culture may prematurely restrict decision alternatives, producing severe negative effect on performance.

As mentioned by Saffold (1988), it is possible that a particular cultural trait or feature may not affect all performance-related organizational processes in the same direction. He stated that development of shared meanings, for example, may have a positive impact on organizational control processes by fundamentally shaping members' perceptions of the work and its value, and that the same shared meanings may simultaneously reduce the organization's capacity to learn and adapt.

Section two

2.11- Related previous studies:

2.11.1- Studies concerning the relationship between Entrepreneurial orientation and organizational performance:

The study of Davis et al., (2010):

This study was carried in the United States with the objectives of exploring three key entrepreneurial characteristics of top managers and the impact these characteristics have on firm performance. The authors argue that top managers with a high tolerance of risk, those who favor innovative activities and those who display a high degree of pro-activeness will positively affect firm performance.

The study has suggested that entrepreneurial orientation play a fundamental role in heightening levels of firm performance, and that organizations with managers who have a preference for innovative activities, who are not risk averse, and who are proactive (exhibiting an Entrepreneurial orientation) are in a more favorable position to compete in a fast-paced business climate.

An initial limitation of this study as reported by its authors is the wide number of industries represented in their sample. They stated that their analysis did not target a specific industry, allowing only broad conclusions about the overall influence of Entrepreneurial orientation and power variables examined.

They also stated that their study followed the majority of studies in the area of Entrepreneurial orientation by using the survey methodology for data collection, arguing that while this in itself is not a significant limitation, it does highlight the lack of variability in methodological approach in the stream of the study literature. The study recommended the use of various sources of secondary data to test the entrepreneurial orientation construct.

The study of Li et al., (2009):

This study was carried in Taiwan with the objective of examining the relationships among entrepreneurial orientation, knowledge creation process, and firm performance using survey data from 165 entrepreneurs. LISREL analysis was used to test the direct and indirect effects of the entrepreneurial orientation on firm performance.

The results indicated that the significance of the direct effect of entrepreneurial orientation on firm performance is reduced when the indirect effect of entrepreneurial orientation through knowledge creation process is included in a total effect model. Consequently, entrepreneurial orientation is positively related to firm performance, and knowledge creation process plays a mediating role in this relationship.

This study has several limitations. First this study goes further than other studies in examining a potential mediator in the relationship between entrepreneurial orientation and firm performance, not considering the roles played by organizational routines, cultures, and other knowledge management process such as knowledge accumulation and knowledge integration.

The authors recommended that further studies might gain additional insights by exploring other potential mediators such as organizational factors or other knowledge management processes. Second, the firm age of this study is restricted within ten years and the majority of the study response samples are small and medium enterprises. Further research could overcome this limitation by expanding the scope of studies to include larger and elder firms. Fourth, the study is based on self-report data incurring the possibility of common method bias. Further studies might use objective measures for firm performance to strengthen the research design.

The study of Ambad and Wahab (2013):

This study was carried to investigate the moderating role of environmental hostility on the relationship between entrepreneurial orientation dimensions and performance of large companies in Malaysia.

The study employed partial least square (PLS). Objective data was used to measure the firm performance, whilst subjective data was used to measure the independent and moderating variable.

The findings have shown that innovativeness and risk taking affect firm performance positively, while pro-activeness did not. The study suggested that when business environment is perceived as hostile, pro-activeness affect firm performance positively.

This study is constrained by some limitations. Firstly, there is limitation in the sample size. Thus the study recommended that future research could include all large firms' establishments. Secondly, this study used cross-sectional data or one time occasion research.

As mentioned by the study, for a short term, entrepreneurial strategies such as innovativeness and risk taking require largeresource commitments, especially in research and development and investments in high risk projects. As results these huge expenses may jeopardize the firm's profit. Thus firms may need to sacrifice profits in the short term especially if they intend to stay on the cutting edge technology for long term innovativeness. Therefore a longitudinal research design was recommended by the study.

The study of Arief et al.,(2013):

This quantitative study was carried in Malang with the purpose of determining the effect of Entrepreneurial orientation on the firm performance, using the strategic flexibility as a mediator. The population in this study is the owners or managers of SMEs cluster in Malang. The results have indicated that the significance of the direct effect of Entrepreneurial orientation on firm performance is reduced when the indirect effect of Entrepreneurial orientation through strategic flexibility is included in a total effect model. Consequently, Entrepreneurial orientation is positively related to firm performance, and strategic flexibility plays a mediating role in this relationship.

This study has some limitations. First, the sample of this study only focuses on SMEs. On the future research this limitation can be developed by the use of firms with a larger scale as recommended by the authors. Second, performance measurement is done subjectively. Performance measurement can be done objectively in future researches.

The study Hughes and Morgan (2007):

This study was carried in the United Kingdom, aiming to examine the independent impact of risk-taking, innovativeness, pro-activeness, competitive aggressiveness and autonomy on performance of young high-technology firms at an embryonic stage of development. The results show that pro-activeness and innovativeness have a positive influence on business performance, while risk-taking has a negative relationship.

This study has some limitations. First, the study concentrated on emerging young high-technology firms, not considering the different population of firms. Second, a cross-sectional design was adopted, and this has the effect of constraining the strength of the casual inferences can be made by the study. A longitudinal design which might help to elucidate the findings further was recommended.

The study of Arshad et al., (2014):

This study was conducted in Malaysia, with the objective of determining the impact of entrepreneurial orientation which is represented by five dimensions and business performance among hundred technology-based SMEs. Descriptive statistical tool was used to analyze the data. The study has revealed that innovativeness, pro-activeness and risk-taking have influence towards business performance.

The relatively small sample size and the exploratory nature of the study may bias the results. The study recommended that future studies should use larger samples to validate these results. Besides, this study is limited to the Malaysian context only. Therefore, it is recommended that similar studies should be conducted in other developing countries as well.

The study of Zhang and Zhang (2012):

This study was carried in the north-east of China with the purpose of exploring the impact of network capabilities on Entrepreneurial orientation and business performance. Based on the survey of small to medium-sized enterprises (SMEs) among 130 respondents, it was found that Entrepreneurial orientation has a positive effect on business performance, and network capabilities can significantly moderate the relationship between entrepreneurial orientation and business performance.

One of the limitations of this study was the regional limitation, since the study focused on SMEs in northern-east China. Another limitation of this study is its small sample size. As well, the original scales in English were to be translated to Chinese for accurate understanding by the respondents.

The study recommended that future researches should overcome the shortcomings mentioned above.

The study of Engelen et al., (2014):

This cross-sectional study was conducted in Germany to determine the relationship between Entrepreneurial orientation and firm performance through the introduction of absorptive capacity (ACAP) as a moderator in turbulent markets. The research model is empirically validated using survey data from 219 small and medium-sized enterprises.

The results of the study found that the relationship between Entrepreneurial orientation and firm performance is high when ACAP is high and when market turbulence is high, whereas there is no significant effect of Entrepreneurial orientation on firm performance when (ACAP) is low.

Concerning the limitations of this study, the cross-sectional sample precludes the study excluding the possibility of a casual bias. It is recommended by the study the use of longitudinal data by future studies to deal with this problem. Another limitation is that the study was conducted in Germany, so the findings were evaluated in the context of highly developed society. Further studies in the same context might be conducted in less developed countries as recommended by the study.

The study of Soares et al., (2014):

This study was conducted in Dili city, Timor Leste. The purpose of the study was to analyze and explain the effect of entrepreneurial orientation on business performance, moderated by government policy. The study population was 275 SMEs. The results have shown that entrepreneurial orientation positively affects firm performance.

This study has suggested that future researches should take a different location in Timor Leste to get data to describe the overall condition of SMEs in the region. The study also suggested that future research should take samples at other types of business because there are many growing SMEs.

The study of Hussain et al., (2015):

This study was carried in Malaysia with the purpose of examining the relationship between entrepreneurial orientation and business performance in the context of SMEs. Five propositions were developed on the dimensions of entrepreneurial orientation and performance of SMEs. The study concluded that entrepreneurial orientation is positively linked to growth, competitive advantage and superior performance of SMEs.

The study suggested that owners/managers of SMEs should adopt the Entrepreneurial orientation mindset in order to attain sustainable competitive advantage and superior performance, and that SMEs must review their strategies and adapt them according to the changing and dynamic environment in order to compete in the cut throat competition at domestic and global levels. The study also suggested that SMEs should constantly seek new ways to exercise flexibility and improve their abilities to become innovative and more competitive in order to ensure growth and superior performance.

2.11.2-Studies related to the relationship between organizational culture and organizational performance:

The study of Lee and Yu (2000):

The purpose of this study is to investigate the possible relationship between organizational culture and organizational performance among Singaporean companies, in three different industries – high-tech manufacturing, hospitals and insurance. The results of this study indicated that the cultural strength of organizations was related to performance in some cases, and culture was found to impact a variety of organizational processes.

One of the limitations of this study is that the sample only included senior management. Another limitation is that the selection of three distinct industries was deliberate to create diversity in sample groups, however, it also reduced the comparability of performance indicators across industries.

The study of Yesil and Kaya (2013):

This study attempts to investigate the role of organizational culture on firm financial performance. Data was collected from managers of firms in Gaziantep in Turkey.

The results of the study revealed that none of the organizational culture dimensions (Clan, adhocracy, market and hierarchy) are related to firm financial performance (Sales growth and ROA)

Concerning the limitations of this study, the participated firms come from firms in one city with relatively small sample size. Therefore, this creates barriers to generalize the findings to the other contexts. It is then recommended that further studies may involve relatively big sample, including other cities.

The study of M.A.O.AUKO (2003):

This study was conducted in selected textile firms from Lagos, Asaba and Kano in Kenya among 630 respondents, specifically to examine the extent to which culture influences organizational performance. The data was collected using both quantitative and qualitative methodologies.

The study showed that there is a significant positive relationship between culture and organizational performance. This study has some limitations. First, the size of the sample is not large enough. Second, there is restriction of the study to the manufacturing sector specially the textile firms. The findings may not be applicable to organizations in sectors other than the manufacturing, or in the public sector.

The study of Ahmed and Shafiq (2014):

This is a quantitative study which was conducted in different Bahawalpur based franchises of telecom companies to investigate the impact of organizational culture identified by Hofstede on organizational performance among 15 respondents. Results show that Hofstede culture dimensions affect organizational performance in telecom companies.

There are some limitations concerning this study. The outcome of the study is not precisely accurate as the sample size is too small. As well, there is a lack of geographical coverage because this study has considered only the Bahawalpur based franchises of telecom companies. Limited time span is also another limitation of this study.

Future research needs to consider some other variables that affect the organizational performance as recommended by the study because this research considers only the dimensions of Hofstede which affect the organizational performance. Future research should enlarge the size of the population and more respondents from franchises of other cities should be included to get more accurate results.

The study of Yilmaz and Ergun (2008):

This study has examined the effect of four major organizational cultural traits, involvement, consistency, adaptability and mission, on measures of firm effectiveness, using data collected from manufacturing firms in Turkey. It is hypothesized that each cultural trait will exert positive effect on overall firm performance. The results indicate that these cultural traits positively affect firm performance.

One of the limitations of this study is that the findings suggest that imbalances between certain cultural traits facilitate effectiveness, and this contradicts the fact that effective organizations are those that are able to manage the competing demands imposed on the organization by keeping the four major cultural traits at a balance, much research is required to reveal the exact nature of these relationships. Another limitation is that the study relies on measures of cultural traits obtained from a broad range of organizational members. This constitute a major advantage over prior studies that used single informants only and relies mostly on top manager perspectives – thus failing to control for informant bias as well as to reflect different perspectives.

The study of Ozigbo (2012):

This study was carried in Nigeria in service sector organizations to investigate the impact of organizational culture and information technology firm performance with a sample of 200 enterprises The study adopted Hofstede's (1980) four dimensions of culture.

The regression analysis results demonstrated that organizational culture practices have a strong significant relationship to overall improvement of firm performance. All the four cultural types adopted in the study had influence on the return on assets, and earning per share which were used to measure firm performance in this study.

A limitation of this study is that the participated firms in this study came from one city in Nigeria with relatively small sample size. This limits the ability for generalizing the findings to the context. Although the sample size for this study provided a good representation of the population group, the study recommended that future research should be conducted utilizing a larger sample size.

The suggested that SMEs must review their strategies and adapt them according to the changing and dynamic environment in order to compete in the cut throat competition at domestic and global levels. The study also suggested that SMEs should constantly seek new ways to exercise flexibility and improve their abilities to become innovative and more competitive in order to ensure growth and superior performance.

2.11.3-Studies related to the relationship between Entrepreneurial orientation and organizational culture:

The study of Engelen et al., (2014):

Based on a sample of 643 German and Thai companies, this study has examined the relationship between organizational culture and entrepreneurial orientation and how this relationship is influenced by national culture. Results have shown that there is a positive relationship between an organizational culture that is adhocracy, especially in national cultures that are characterized by strong individualism and low power distance, whereas a negative relationship was found between a hierarchical organizational culture and entrepreneurial orientation.

This study contains some limitations. First, the theoretical model was empirically tested by survey data from only two countries: Germany and Thailand. Therefore, though the authors found differences between these countries that can be traced back to national culture, they could not assign differences to one or the other of the cultural dimensions they examined (e.g., the degree of individualism) as both countries differ significantly in terms of both cultural dimensions. The study recommended that future studies should extend the set of national cultures in order to derive more fine-grained results on these culture dimensions.

Second, by focusing on the two cultural dimensions of individualism and power distance, this study has neglected the dimension of uncertainty avoidance even though this dimension may well be relevant to the relationship between organizational culture and entrepreneurial orientation. The study recommended that it could be useful to examine in greater detail the interaction effects between types of organizational culture, uncertainty avoidance, and entrepreneurial orientation.

The study of Doosti et al., (2013):

The purpose of this study was to analyze the relationship between organizational culture (and its aspects including dominating features, organizational leadership, management of staff, solidarity of organization, strategic emphasis and success criteria) and organizational entrepreneurship in the head office of sport and youth of Zanjan province. The statistical population of this research included 60 people of the general office of sport and youth of Zanjan province. The method of research was descriptive-correlation, and questionnaire was use for data collection. The kind of research was practical and data collection was field-oriented.

The findings of this study have shown that there was a positive relationship between organizational culture and organizational entrepreneurship, and organizational culture (in four dimensions including organizational leadership, management of staff, strategic emphasis and success criteria) with entrepreneurship was positive and meaningful among the staff of general office of sport and youth of Zanjan province.

The study of Yildiz (2014):

This study was carried to examine the relationship between the dimensions of organizational culture (power distance, uncertainty avoidance, etc.) developed by Hofstede and corporate entrepreneurship, and the relationship between organizational culture and corporate entrepreneurship.

The survey of the study was conducted on a leading multinational company in Turkey. The firm had approximately 60 low-level and middle-level employees in the firm's head office. Data related to the variables were obtained directly from employees of the firm through questionnaires. A total of 54 questionnaires were returned.

Results have shown that there is a positive relationship between one of the organizational culture factors (power distance) and corporate entrepreneurship innovativeness dimension.

The limitation of this study was related to its sample. Therefore, the study has recommended the expansion of the sample size by future studies in order to generalize the findings.

The study of Shihab et al., (2011):

This study was carried for the purpose of investigating the relationship between organizational culture and entrepreneurial orientation. It was based on a questionnaire survey which was applied to the owners or managers of small and medium sized enterprises in Indonesia with a total of 463 responses. Semi-structured interviews to 8 respondents were also carried out.

Results have shown that there was a significant relationship between organizational culture and entrepreneurial orientation, and suggested that this relationship could be expanded to include the performance indicator, to gain a better understanding of the relationship of both constructs on company performance.

2.11.4-Studies on the mediating role of organizational culture on the relationship between entrepreneurial orientation and organizational performance:

The study of Shehu and Mahmood (2014):

The purpose of this study was to examine the mediating effect of organizational culture on the relationship between entrepreneurial orientation and firm performance in Nigerian small and medium enterprises.

A quantitative survey method was used. The data was collected from the owners/managers of SMEs in Kano-Nigeria. A total of 640 questionnaires was distributed, 511 usable were returned.

Based on the statistical findings, entrepreneurial orientation and organizational culture were significantly related to firm performance, and organizational culture was found to mediate on the relationship between entrepreneurial orientation and firm performance.

Our study differs from the above mentioned studies in that it was carried in small, medium and large business firms, whereas most of the mentioned studies were conducted in SMEs.

CHAPTER THREE

RESEACH FRAMEWORK AND METHODOLOGY

3.0 CHAPTER OVERVIEW

This chapter consists of two sections: the first section presents the theories that underpin the study framework, the research conceptual framework and the development of hypothesis. The second section includes the general research design, the study population, respondents, sampling and sample size, the questionnaire design, pre-testing of questionnaire, characteristics of the study sample, and the measurements of variables.

Section one:

3.1- Resource based theory

The resource based view has become one of the most influential and cited theories in the history of management theorizing (Kraaijenbrink et al., 2009). It is one of the most accepted theories for explaining differences in performance across firms (Barney, 1991; Newbert, 2007).

It highlights the importance of resources and capabilities in supporting organizational survival, growth, and overall effectiveness (Barney, 1991; Wernerfelt, 1984).

The resource based view originated from the private sector, but it is increasingly being applied as a theoretical basis for studying public organizations, which also rely on resources and capabilities to deliver public value to key stake holders (Piening, 2013).

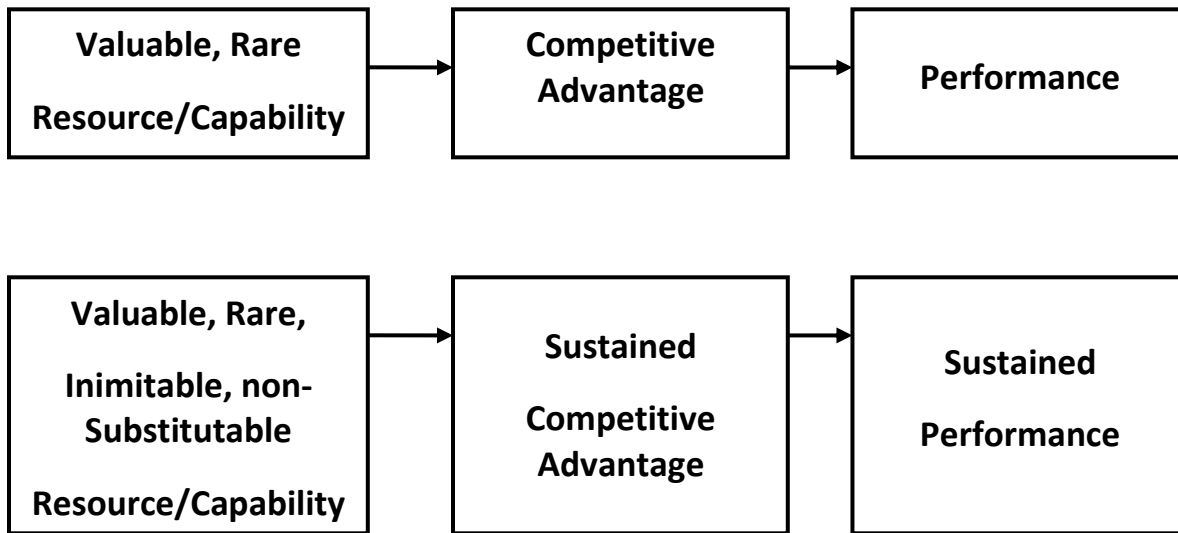
The resource –based view maintains that organizations achieve competitive advantage and superior performance outcomes by leveraging their idiosyncratic bundles of resources and capabilities (e.g., Barney,1991, Peteraf, 1993). It assumes firms are profit maximizing entities directed by boundedly rational managers operating in distinctive markets that are to a reasonable extent predictable and moving towards equilibrium (Bromiley&Papenhausen, 2003; Leiblein, 2003). It suggests that the resources possessed by a firm are the primary determinants of its performance, and these may contribute to sustainable competitive advantage of the firm (e.g. Hoffer &Schendel, 1978, Wernerfelt, 1984), and that resources are transformed into outputs of greater value through various capabilities in deploying resources (Barney 1991; Grant, 1991).

Its defining characteristics are:

- Its focus on the resource endowments of firms as the basis of firm heterogeneity.
- Its claim that differential performance among firms can be explained by differences in their resource endowments.
- Its resulting suggestion that building up stocks of "strategically valuable" resources is the key to achieve competitive success and the generation of economic profits (rents) (Sanchez,2008).

Barney (1991), argued that firms that possess resources that are valuable and rare would attain a competitive advantage and enjoy improved performance in the short term. He has contended that in order for a firm to sustain these advantages over time, its resources must also be inimitable and non-substitutable.

Figure (3.1): Barney's (1991) Conceptual Model:



According to Barney (1991), the concept of resources includes all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness (Barney, 1991; Daft, 1983).

Three important categories of resources identified in the RBV are physical, organizational, and human resources (Barney, 1991). Physical resources are typically tangible and consist of plant and equipment, raw materials, financial instruments, geographic location and information technology (IT). Organizational resources include formal reporting structure as well as planning, controlling, coordination and management system, while human resources include experience, judgment, insights and social relationships of employees (Pee & Kankanhalli, 2015).

Capabilities are repeatable patterns of actions in the use of resources to create value in the forms of products and services (Pee & Kankanhalli, 2015).

They refer to a firm's capacity to deploy and coordinate different resources, usually in combination, using organizational processes, to affect a desired end (Amit&Shoemaker, 1993; Grant, 1996; Prahalad& Hamel, 1990). They are information-based, intrinsically intangible processes that are firm specific and are developed over time through complex interactions among the firm's resources (Amit& Shoemaker, 1993; Corner &Prahalad, 1996; Itami&Rohel, 1987; Kogut& Zander, 1992; Leonard-Barton, 1992; Winter, 1987).

3.1.1-Critiques of Resource based view:

The resource based view has been criticized for restoring to unobservable variables, thus making empirical research and validation problematic (Godfrey& Hill, 1995).

Priem& Butler (2001a) has stated that the resource based view lacks substantial managerial implications or 'operational validity'.

According to Porter's (1991;1996) critiques, resource based view did not address appropriately the question of explicating the processes by which advantages were created, and that activities were more focusing on analysis than resources.

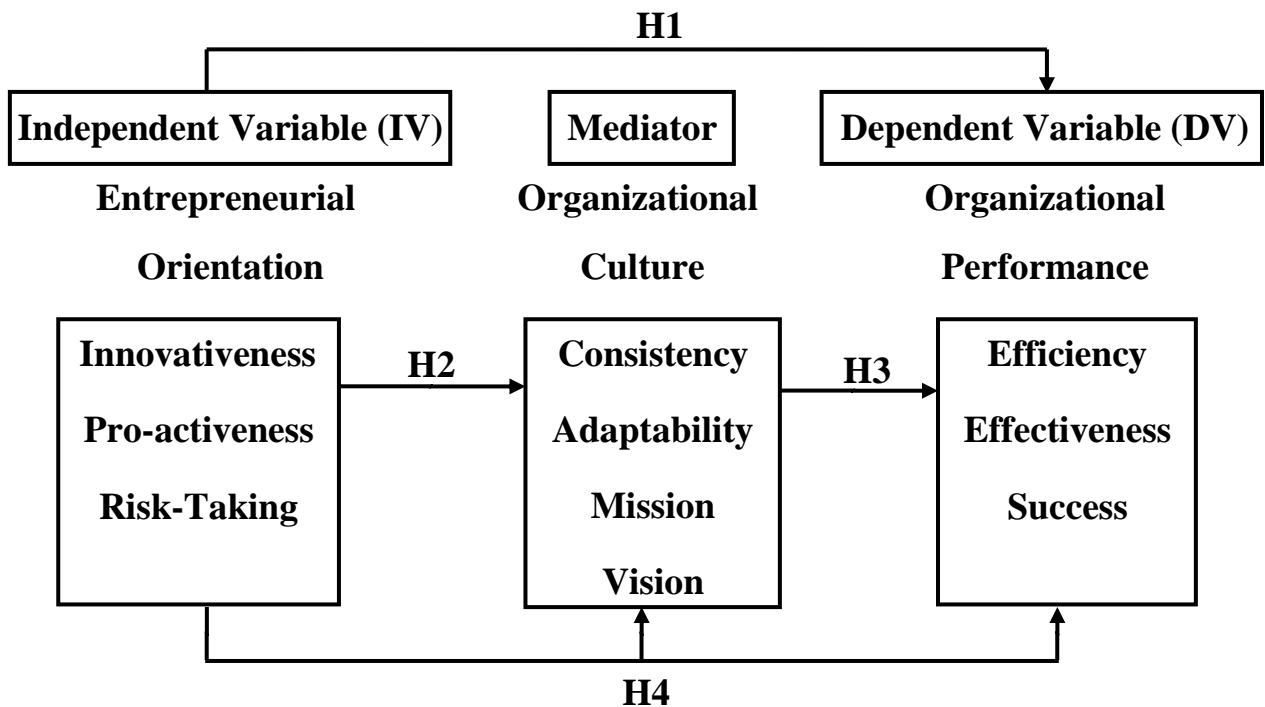
The resource based view has also been criticized by McGuinness& Morgan, (2000), who have mentioned that the resource based view invokes the "illusion of total econtrol", trivializing the property-right issues, exaggerating the extent to which managers can control resources or predict their future values.

Gibbert (2006a, 2006b), argues the notion of resource uniqueness- the melding of heterogeneity and immobility- denies the resource based theory any potential for generalization. Connor (2002), argued that the resource based view is only applied to large firms with significant market power, the smaller and nimbler firms' sustainable competitive advantage cannot be based on their static resources and therefore they fall beyond the bounds of the resource based view.

Resource based view has also been under attack for proposing tautological arguments, because resources are defined in terms of their performance outcomes and thus not empirically tested (Priem et al.,2001).

3.2- Conceptual framework:

Figure (3.2): Conceptual framework:



The above figure represents the conceptual framework of the study, which is consist of the Entrepreneurial orientation (Independent variable), and its dimensions (Innovativeness, Pro-activeness and Risk-taking), the organizational culture (the mediator), and its dimensions (adaptability, consistency, mission and vision), and the organizational performance (the independent variable and its dimensions (Efficiency, effectiveness and success).

3.2.1-Entrepreneurial orientation:

Entrepreneurial orientation is a strategic orientation that shows how a firm is organized to find out and exploit new market strategy that includes entrepreneurial innovativeness, pro-activeness and risk-taking (Covin and Slevin, 1989; Miller, 1983; Wiklund and Shepherd, 2003, 2005).

- Innovativeness:

Innovativeness refers to the creativity and experimentation through the introduction of new products and services, likewise the technological leadership via R&D in new processes. (Soininen et al., 2012). It is the inclination to support new ideas and favor change. (Ahuja&Lampert, 2001; Lumpkin&Dess 1996; Rauch et al., 2009).

- Pro-activeness:

Pro-activeness is a mindset that concentrates on introducing new products or services in anticipation of future demand and shaping the environment. (Lumpkin and Dess 2001).

- Risk-taking:

Risk -taking describes the nature of easily venturing into the unknown, borrowing heavily, and/or committing remarkable resources to ventures in uncertain environment (Soininen et al., 2012).

3.2.2-Organizational Culture:

Organizational culture can be defined as the values, beliefs, and hidden assumptions that organizational members have in common (Cameron and Quinn, 1999); Denison, 1990; Deshpande and Webster, 1989; Miron et al., 2004).

The dimensions of the organizational culture used in this study were:

- Adaptability:

Adaptability is the ability of the company to scan the external environment and respond to the ever-changing needs of its customers and other stakeholders (Zakari et al., 2013).

- Consistency:

Consistency is what based on the stability and internal integration deriving from the general attitude (Senge, 1990). It includes the values and systems that are the foundations of creating a strong culture in the organization (Rahimnia and Alizadeh, 2009: 156).

- Mission:

Mission is the degree to which the organization and its members know where they are going, how they intend to get there, and how each individual can contribute to the organization's success (Zakari et al.,2013)

- Vision:

Vision is a mental image of a possible and desirable future state of the organization (Bennis and Nanus (1985, p.89). It is ultimately a cognitive construction or specifically a conceptual representation used to both understand systems operations and guide actions within the system (Mum ford and Strange, (2005).

3.2.3-Organizational performance:

Organizational performance is described as an organization's ability to acquire and utilize its scarce resources and valuables as expeditiously as possible in the pursuit of its operational goals (Griffins, 2006).

The dimensions of organizational performance used in this study are:

- Efficiency:

Efficiency is the extent to which a resource is being used for the intended purpose (Antony & Bhattacharyya, 2010). It measures the ratio of outcome over input, and is regarded as an internal standard of performance (Mackenzie, 1978; Scott, 1987). It measures "not simply whether a desired effect was produced but whether it was done so efficiently-that is, with a minimum of inputs" (Scott, 1987).

- Effectiveness:

Organizational effectiveness is defined as the extent to which an organization, by the use of certain resources, fulfils its objectives without depleting its resources and without placing undue strain on its members and/or society (Thibodeaux and Favilla, 1996).

- Success:

Success is related to the degree to which the firm's are able to achieve their objective subject to the constraints of long run viability. (Miller and Friesen, 1978, p.923).

3.3- Development of Hypotheses:

3.3.1- Entrepreneurial orientation and Organizational performance:

The relationship between Entrepreneurial orientation and firm performance has been considered as the main subject of interest in past literature, where entrepreneurial processes have positive effect on the firm's growth and performance.(Lumpkin & Dess, 1996; Wiklund, 1996; Zahra, Jennings, & Kratko, 1999).

According to Soininen (2012), several empirical studies have found that firms with high entrepreneurial orientation perform better than firms with low entrepreneurial orientation. For example, Keh et al.(2007), concluded that entrepreneurial orientation plays a vital role in enhancing firm performance, while Wiklund and Shepherd (2003) found a strong correlation between entrepreneurial orientation and performance. On the other hand, Bhuianet et. al., (2005) found that entrepreneurship is one of the key elements in organizational success.

Similarly, certain studies link high growth to a firm's entrepreneurial orientation (Brown et al., 2001; Stevenson and Jarillo, 1990), where high growth would be a result of firm's innovativeness, pro-activeness and risk-taking orientation. (Zainol & Ayadurai, 2011).

Shedu & Mahmood (2014), pointed out that some studies have confirmed positive relationships between entrepreneurial orientation and firm performance, which are the studies of Lumpkin & Dess 1996; Wang 2008; Merlo & Auh 2009; Faisal, Hirobuni & Tanaka 2010; Ogunsiji & Kayode 2010; Wales, Gupta & Mousa 2011; Mehrad, Abdolrahim, Hamidreza, Mohsen & Ramin 2011; Zainol & Daud 2011; Idar & Mahmood 2012; Fatoki 2012).

Arshad et al. (2013) have stated that the studies of (Jantunen, Puumalainen, Saarenketo, and Kylaheiko, 2005; Chow, 2006; Coulthard, 2007; Wiklund and Shepherd 2005, and Lee, Lee and Pennings, 2001) have found a positive relationship between entrepreneurial orientation and firm performance.

Based on the above consensus, the following hypothesis was formed:

A- There is a positive relationship between entrepreneurial orientation and organizational performance.

From this main hypothesis, the following sub hypotheses were branched:

A1- There is a positive relationship between innovativeness and organizational efficiency.

A2- There is a positive relationship between innovativeness and organizational effectiveness.

A3- There is a positive relationship between innovativeness and organizational success.

A4- There is a positive relationship between pro-activeness and organizational efficiency.

A5- There is a positive relationship between pro-activeness and organizational effectiveness.

A6-There is a positive relationship between pro-activeness and organizational success.

A7-There is a positive relationship between risk-taking and organizational efficiency.

A8- There is a positive relationship between risk-taking and organizational effectiveness.

A9-There is a positive relationship between risk-taking and organizational success.

3.3.2- Entrepreneurial orientation and Organizational culture:

Some studies (for e.g. the study of Kuratko and Hodgetts (1992), Smerek and Denison (2007), MirzaeiAhraanjani and Moghimi (2003), and Seyedhoseini (2002) reported a relationship between Organizational culture and entrepreneurship. Similarly Seifari and Amoozadeh (2014) suggested that there is a significant positive relationship between corporate entrepreneurship and Organizational culture.

Accordingly, the following hypothesis was to be considered:

B- There is a positive relationship between entrepreneurial orientation and organizational culture.

The following sub hypotheses were branched:

B1- There is a positive relationship between innovativeness and organizational adaptability.

B2- There is a positive relationship between innovativeness and organizational consistency.

B3-There is a positive relationship between innovativeness and organizational efficiency.

B4- There is a positive relationship between innovativeness and organizational effectiveness.

B5- There is a positive relationship between pro-activeness and organizational adaptability.

B6- There is a positive relationship between pro-activeness and organizational consistency.

B7- There is a positive relationship between pro-activeness and organizational efficiency.

B8- There is a positive relationship between pro-activeness and organizational effectiveness.

B9- There is a positive relationship between risk-taking and organizational adaptability.

B10- There is a positive relationship between risk-taking and organizational consistency.

B11- There is a positive relationship between risk-taking and organizational efficiency.

B12- There is a positive relationship between risk-taking and organizational effectiveness.

3.3.3- Organizational culture and Organizational performance:

Organizational culture has been recognized as one of the important drivers of better firm performance (Uzkurt et al., 2013), where many authors argue that organizational culture is essential to organizational excellence (Schein, 1984).

Correspondingly, theoretical arguments support the idea that organizational culture is linked to organizational performance and long term effectiveness (Ahmed, 1998; Cameron & Quinn, 2006; Saffold, 1988; Zheng et al., 2010).

According to (Hofstede, 1998) Organizational culture plays a vital role in the success of organizations. He states that it may have an imperative effect on the survival or fall of the organization. Likewise Marcoulides & Heck (1993) found that organizational culture has a powerful direct effect on organizational performance.

Most organizational scholars recognize that culture has a strong impact on the performance and long-term effectiveness of service organizations (Ozigbo, 2013). Oparanma (2010) affirmed that organizational culture generates many activities that achieve corporate success.

Similarly Lee and Yu (2004) stated that culture was found to affect an assortment of organizational processes and performance. On the other hand Hooijberg and Petrock (1993), pointed out that culture contributes to improved performance.

As reported by Eminoglu et al.,(2013), most previous studies examining the relationship between organizational culture and firm performance have found support for the effects of organizational culture on firm performance (Daft, 2007; Kotter and Heskett, 1992; Denison and Mishra, 1995; Ngo and Loi, 2008)

Hence, it was hypothesized that:

C- There is a positive relationship between Organizational culture and Organizational performance.

The following sub hypotheses were branched:

C1- There is a positive relationship between organizational adaptability and organizational efficiency.

C2-There is a positive relationship between organizational adaptability and organizational effectiveness.

C3-There is a positive relationship between organizational adaptability and organizational success.

C4-There is a positive relationship between organizational consistency and organizational efficiency.

C5-There is a positive relationship between organizational consistency and organizational effectiveness.

C6- There is a positive relationship between organizational consistency and organizational success.

C7- There is a positive relationship between organizational mission and organizational efficiency.

C8- There is a positive relationship between organizational mission and organizational effectiveness.

C9- There is a positive relationship between organizational mission and organizational success.

C10- There is a positive relationship between organizational vision and organizational efficiency.

C11- There is a positive relationship between organizational vision and organizational effectiveness.

C12- There is a positive relationship between organizational vision and organizational success.

3.3.4- Mediation of Organizational culture in the relationship between Entrepreneurial orientation and Organizational performance:

According to Baron & Kenny (1986), an empirical study with mediator must propose that:

- The independent variable significantly influences the mediating variable.
- The independent variable significantly influences the dependent variable without the mediator.
- The inclusion of the mediator attenuates the relationships between the independent and the dependent variable while showing a significant relationship between the mediator and the dependent variable.

The fourth hypothesis proposed by the study was:

D- There is a positive relationship between entrepreneurial orientation and organizational performance when mediated by organizational culture.

The following sub hypotheses were branched:

D1- There is a positive relationship between innovativeness and efficiency when mediated by consistency.

D2- There is a positive relationship between innovativeness and effectiveness when mediated by consistency.

D3- There is a positive relationship between innovativeness and success when mediated by consistency.

D4- There is a positive relationship between innovativeness and efficiency when mediated by mission.

D5- There is a positive relationship between innovativeness and effectiveness when mediated by mission.

D6-There is a positive relationship between innovativeness and success when mediated by mission.

D7-There is a positive relationship between innovativeness and efficiency when mediated by vision.

D8-There is a positive relationship between innovativeness and effectiveness when mediated by vision.

D9-There is a positive relationship between innovativeness and success when mediated by vision.

D10-There is a positive relationship between pro-activeness and efficiency when mediated by consistency.

D11- There is a positive relationship between pro-activeness and effectiveness when mediated by consistency.

D12-There is a positive relationship between pro-activeness and success when mediated by consistency.

D13-There is a positive relationship between pro-activeness and efficiency when mediated by mission.

D14-There is a positive relationship between pro-activeness and effectiveness when mediated by mission.

D15-There is a positive relationship between pro-activeness and success when mediated by mission.

D16-There is a positive relationship between pro-activeness and efficiency when mediated by vision.

D17-There is a positive relationship between pro-activeness and effectiveness when mediated by vision.

D18-There is a positive relationship between pro-activeness and success when mediated by vision.

D19-There is a positive relationship between risk taking and efficiency when mediated by consistency.

D20-There is a positive relationship between risk taking and effectiveness when mediated by consistency.

D21-There is a positive relationship between risk taking and success when mediated by consistency.

D22-There is a positive relationship between risk taking and efficiency when mediated by mission.

D23-There is a positive relationship between risk taking and effectiveness when mediated by mission.

D24-There is a positive relationship between risk taking and success when mediated by mission.

D25-There is a positive relationship between risk taking and efficiency when mediated by vision.

D26-There is a positive relationship between risk taking and effectiveness when mediated by vision.

D27-There is a positive relationship between risk taking and success when mediated by vision.

Section Two

3.4- Research design:

A cross-sectional descriptive survey was conducted in this study to examine the mediating role of organizational culture on the relationship between Entrepreneurial orientation and organizational performance.

Descriptive research refers to research studies that have as their main objectives the accurate portrayal of the characteristics of persons, situations or groups (Polit and Hungler, 2004: 716).

According to Burns and Grove (2003: 201), descriptive research is designed to provide a picture of a situation as it naturally happens. It is designed to develop theories, identify problems with current practices or determine what others in similar situations are doing (Burn and Grove, 2003:200).

Cooper and Schindler (2000), have stated that if the research was concerned with finding out what, when and how much phenomenon, descriptive research design was found to be appropriate.

Descriptive studies serve several purposes: the discovery of associations among different variables and discovery and measurement of cause and effect relationships among variables. (Cooper and Schindler, 2000).

A descriptive design was adopted by this study since the study main objective was to examine relationships among different variables (Entrepreneurial orientation and organizational performance, with the mediating role of organizational culture).

A cross-sectional study involves making observation of sample or entire population of the study or phenomena at one point in time (Babbie, 2013).

Cross-sectional is cost and time effective because data can be gathered once perhaps over a period of days, weeks or months, in order to answer research questions (Sekarana, 2003).

3.5- Research Population:

The population of this study was business firms registered in Khartoum.

3.6- Respondents:

Since the top and middle managers are the ones who are responsible for the setting of plans, formulation and implementation of strategies, and aware of all levels of performance and all the conditions concerning the firm, they were selected to be the targeted respondents of the study.

3.7- Sampling and sample size:

It was difficult for the researcher to know the exact number of the operating firms in Khartoum, because many of them are non-operating, while some others are family business, therefore a convenience sampling was found suitable to be adopted by the study.

Convenience sampling is a kind of non-probability or non random sampling in which members of the target population, as Dornyei (2007) mentioned are selected for the purpose of the study if they meet certain practical criteria, such as geographical proximity, availability at a certain time, easy accessibility, or the willingness to volunteer.

Convenience sampling refers to the collection of information from members of the population who are conveniently available to provide it. It is most often used during the exploratory phase of a research project and is perhaps the best way of getting some basic information quickly and easy (Sekaran,2003).

Based on the convenience sampling, 200 business firms were found suitable to represent the sample size of the study.

3.8- Questionnaire Design:

Questionnaires are most useful as a data collection method especially when large number of people is to be reached in different geographical regions. They are a popular method of collecting data because researchers can obtain information fairly easily, and the questionnaire responses are fairly coded (Sekaran, 2003).

A self-administered questionnaire, which included closed format questions was the tool used by the study for collecting data.

The questionnaire questions were mainly developed from previous studies and have been modified to fit the nature of the study. They were translated into Arabic to be understood by the respondents.

The questionnaire was divided into three parts:

- **The first part** contained personal data of the respondents which included the following:
 - 1- Gender.
 - 2- Age.
 - 3- Job.
 - 4- Marital status.
 - 5- Educational Qualifications.

- **The second part** of the questionnaire contained information about the company which were:
 - 1- Nature of the company's business.
 - 2- Number of people working in the company.
 - 3- Age of the company.
 - 4- Markets that the company deal with.
- **The third part** of the questionnaire which contained the measurement of the variables, was divided into three sections:

Section A:

Included the measurement of the independent variable (Entrepreneurial orientation) through the following three dimensions:

- Innovativeness (five items).
- Pro-activeness (three items).
- Risk taking (four items).

Section B:

Includes the measurement of the Mediator variable (Organizational culture) through the following dimensions:

- Consistency (five items).
- Adaptability (five items).
- Mission (three items).
- Vision (four items).

Section C:

Included the measurement of the dependent variable (Organizational performance) through the following dimensions:

- Efficiency (three items).
- Effectiveness (five items).
- Success (five items).

3.9- Pre-testing of Questionnaire:

Pre-testing refers to the testing of questionnaire on small sample of respondents in order to identify and eliminate potential problems (Malhotra, 1999). The aim of pre-test is to validate the data collection instrument and to ensure the appropriateness of the survey administration. (Aake et al., 2007).

After the questionnaire had been prepared, it was presented to a group of arbitrators who are specialized in the same field. They were asked to check the questionnaire structure, phrases, the validity of the statements, and to amend, exclude and add what they see suitable for the purpose of the study validity. After the amendments had been done by the arbitrators, the questionnaire was retrieved in its final form. A letter assuring that all information that will be given by the respondents will be treated confidentially, and will be used only for the purpose of the scientific research was attached with the questionnaire. (*See Appendix A & B*).

A draft of 50 questionnaires was prepared to be pretested among a small group of the study respondents.

Cronbach's alpha coefficient values were calculated for each variable of the study for internal consistency reliability.

The following tables have shown the results of the pre test reliability for all the dimension of the study variables.

Table (3.1): Pre- test Reliability of Entrepreneurial Orientation Dimensions

Variables	Cronbach,s alpha
Innovativeness	0.80
Pro-activeness	0.76
Risk taking	0.70

Source: Case study data

Table (3.1) showed the alpha cronbach coefficient for all the dimensions of entrepreneurial orientation. The alpha cronbach for these dimensions ranged between (0.70) and (0.80) (greater than 60%). Thus the entire reliability coefficient was within the acceptable level of reliability.

Table (3.2): Pre- test Reliability of Organizational Culture Dimensions

Variables	Cronbach,s alpha
Consistency	0.73
Adaptability	0.69
Mission	0.71
Vision	0.76

Source: Case study data

Table (3.2) below has shown the alpha cronbach coefficient for all the dimensions of the organizational culture. The alpha cronbach for these dimensions ranges between (0.69) and (0.76). Therefore the entire reliability coefficient was within the acceptable level of reliability.

Table (3.3): Pre- test Reliability of Organizational Performance Dimensions

Variables	Cronbach,s alpha
Efficiency	0.86
Effectiveness	0.78
Success	0.75

Source: Case study data

Table (3.3) has shown the alpha cronbach coefficient for all the dimensions of the organizational performance. The alpha cronbach for these variable ranges between (0.75) and (0.86). Hence the entire reliability coefficient was within the acceptable level of reliability.

After the results of the pre-test have shown that the entire reliability coefficient was within the acceptable level of reliability for all the dimensions, the rest of the questionnaires were prepared to be distributed. A total of 200 questionnaires were distributed among 200 firms in Khartoum. 150 valid questionnaires were returned, 18 were partially answered, and 32 were unreturned.

Table (3.4): Questionnaires distributed and returned:

Issue	Number	Percentages%
Total Questionnaires distributed	200	
Completed questionnaires received	150	75%
Returned questionnaires (partially answered)	18	9%
Unreturned Questionnaires	32	16%

3.10- Characteristics of the study sample:

The sample of the study consists of the following characteristics:

3.10.1-Distribution of the sample according to sex:

Table (3.5): Frequency Distribution of the Sample according to sex:

Issue	Number	Percentages
Male	137	91.3
Female	13	8.7
Total	150	100

Source: prepared by the Researcher, 2015.

It was clear from the above table that the majority of the sample was males, where they account for 91.3%, while females were 8.7% of the total sample of the study.

3.10.2-Distribution of the sample according to age:

Table (3.6): Frequency Distribution of the Sample according to age:

Issue	Number	Percentages
Less than 25	18	12
25 and less than 35	59	34.3
35 and less than 45	34	22.7
45 and less than 55	23	15.3
55 years and above	16	10.7
Total	150	100

Source: prepared by the Researcher, 2015.

Table (3.6) showed that respondents who are in the age group of (25 and less than 35), represented 34.3% of the sample, while those who are in the age group of (55 years and above) represented 10.7% of the sample.

Respondents who are less than 25 years were 12%, whereas those who are in the age group of (35 and less than 45) were 22.7%, and the ones between 45 and 55 were 15.3% of the study sample.

3.10.3-Distribution of the sample according to Job:

Table (3.7): Frequency Distribution of the sample according to Job:

Job	Number	Percentage
General manager	32	21.3
Department manager	71	47.3
Head of department	47	31.3
Total	150	100

Source: prepared by the Researcher, 2015.

Table (3.7) has shown that the majority of respondents concerning their jobs were department managers, where they accounted for 47.3% of the total sample, followed by the heads of department who were found to be 31.3% of the sample, whereas the general managers were 21.3% of the study sample respectively as a lower ratio.

3.10.4-Distribution of the sample according to their level of Education:

Table (3.8): 3.10.5 –Frequency Distribution of the Sample according to the respondents' Qualifications:

Qualifications	Number	Percentage
P.HD	4	2.7
Master degree	44	29.3
Bachelor degree	74	49.3
Other	28	18.7
Total	150	100

Source: prepared by the Researcher, 2015.

Regarding the respondents educational level, the majority of them were bachelor's degree holders, where they represented 49.3% of the total sample, followed by those who hold master degrees, where they accounted for 29.3%. Those with other qualifications were 18.7%, whereas the PhD holders were 2.7% of the study sample respectively as a lower ratio.

3.10.5-Distribution of the sample according to Marital Status:

Table (3.9): Frequency Distribution according to marital status:

Social Status	Number	Percentage
Single	108	72
Married	42	28
Total	150	100

Source: prepared by the Researcher, 2015

Concerning the marital status of the respondents, table (3-9) has shown that respondents who are married were 28%, while the single ones have represented 72% of the total sample.

3.10.6-Distribution of the sample according to the nature of the company's business:

Table (3.10): Frequency Distribution according to Nature of the company's business:

company's business	Number	Percentage
Industrial	69	46
Commercial	50	33.3
Service	23	15.3
Other	8	5.3
Total	150	100

Source: prepared by the Researcher, 2015

Considering the nature of the company's business, the above table indicated that the industrial firms were found to represent 46% of the total sample, followed by the commercial firms which have accounted for 33.3% of the sample. The service firms were 15.3%, while others were 5.3% of the total sample.

3.10.7-Distribution of the sample according to the number of people working in the company:

Table (3.11): Frequency Distribution according to number of people working in the company:

people working in the company	Number	Percentage
Less than 50	76	50.7
50-100	29	19.3
101-150	4	2.7
More than 150	41	27.3
Total	150	100

Source: prepared by the Researcher, 2015

Regarding the number of people working in the company, the above table illustrated that firms that employ less than 50 people were 50.7% of the study sample, while companies that employ more than 150 have represented 27.3% of the sample. Companies that employ between 50 and 100 were 19.3%, whereas those that employ between 101 and 150 represented 2.7% of the total sample.

3.10.8-Distribution of the sample according to the age of the company:

Table (3.12): Frequency Distribution according to the age of the company:

Age of the company	Number	Percentage
Less than 5 years	43	28.7
5-15 years	62	41.3
More than 15 years	45	30
Total	150	100

Source: prepared by the Researcher, 2015

The above table has shown that companies that are 5-15 years old were 41.3% of the study sample. Those which are more than 15 years old were 30%, while the ones which are less than 5 years old were 28.7%, of the total sample.

3.10.9-Distribution of the sample according to the markets that the company deals with:

Table (3.13): Frequency Distribution according to the markets that the companies deal with:

Markets that the company deal with	Number	Percentage
Local	85	56.7
International	11	7.3
Local and international	54	36
Total	150	100

Source: prepared by the Researcher, 2015

Table (3.13), has shown that firms that deal with local markets have represented 56.7% of the study sample. Those that deal with local and international markets accounted for 36%, while the ones that deal with international markets represented 7.3% of the total sample.

3.11- Measurements of the study variables:

A five-point likert scale ranging from 1=strongly disagree to five = strongly agree was used to measure the variables of the study:

The degree of potential Responses:

The degree of potential responses was measured by Likert Scale Pentathlon.

The respondent's answers weight were distributed from the top weight to the lower weight. The top weight was given the degree (5) and represented the answer (strongly agree). The lower weight was given the degree (1) and represented (strongly disagree). The other in between three weights were: agree which was given the degree (4), mutual which was given the degree (3), and disagree which was given the degree (2).

Table (3.14): The degree of measurement approval:

Approved Degree	Relative weight	%	Statistical Significance
Strongly Agree	5	Greater than 80%	Veryhigh degreeof Approval
Agree	4	70 – 80%	high degreeof Approval
Neutral	3	50 – 69%	Medium
Disagree	2	20 – 49%	Lowapproval
Stronglydis agree	1	Less than20%	Nonexistent degree of approval

Source: Prepared bythe researcher,

3.11.1-Entrepreneurial Orientation measures:

Drawn upon previous studies (e.g. Belgacem, 2015, Ambad&Wahab, 2013, Keh et al., 2007, Lisboa et al., 2011, Javalgi and Todd, 2011) , entrepreneurial orientation was measured with three dimensions: Innovativeness, pro-activeness and risk-taking.

Entrepreneurial Orientation measures were adapted from Chen et al.,(2012), Eggers et al.,(2013) and Zhang et al.,(2014) with a total of 12 items scales

3.11.2- Organizational culture measures:

Organizational culture measures were adapted from Yilmaz and Ergun (2008), with a total of 18 measurement items.

3.11.3- Organizational performance measures:

Organizational performance measures were adapted from Li et al.,(2009), Gounaris et al.,(2007), Rogoff (2004) with a total of 13 measurement items.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.0-CHAPTER OVERVIEW

This chapter is an analytical chapter which includes the findings of the data analysis and is presented into four sections. The first section presents the factor analysis that identifies the underlying dimensions, or factors that explain the correlations among the set of variables, the second section includes testing the reliability for each variable, and the third section includes high lightening the results of the descriptive statistics for the variables. The fourth section focuses on the results of the regression analysis and hypotheses testing.

Goodness of Measures:

The exploratory factor analysis (Principal component analysis) was conducted on the three variables (Entrepreneurial Orientation, Organizational culture and organizational Performance variables. Reliability test (Cronbach alpha) was done to measure the internal consistency of the variable used on the questionnaire. These two methods were very important to assess the goodness of the measures (Sekaran, 2003).

Section One

4.1- Factor Analysis:

In conducting factor analysis, this study followed the assumptions that were recommended by Hair. (2010)

- There must be sufficient number of statistically significant correlations in the matrix.
- Kaiser-Meyer-Olkin measure of sampling adequacy should be at least 0.6.
- Bartlett's test of sphericity should be significant at 0.05.
- Communalities of items should be greater than 0.50.
- The minimum requirement of factor loading 0.50 (based on a 0.05 significant level, with value of cross loading exceeds 0.50).
- Eigenvalues should be more than 1 for factor analysis extraction.

4.1.1-Factor Analysis on Entrepreneurial orientation:

The original questionnaire had three variables and (12) items measuring:

- Innovativeness (five items).
- Pro-activeness (three items).
- Risk taking (four items).

Table (4.1): Rotated Factor Loading for Entrepreneurial orientation (EO)

Items No:		Components		
		f1	f2	f3
Entrepreneurial orientation (EO)				
EO2	In our firm, there is a long-term commitment to invest in Research and Development	0.770		
EO1	In our firm, there is a long-term commitment to invest in new technology	0.768		
EO4	Our firm adopts creative solutions when it comes to problem solving	0.763		
EO3	Our firm adopts creative techniques in its methods of operations	0.713		
EO12	Our firm adopts the trial and error method in case of uncertainty in its future decisions		0.794	
EO9	Our firm invests in high risk projects		0.752	
EO10	Our firm commits a large portion of its resources for future growth		0.658	
EO11	People in our firm are encouraged to take risks with new ideas.		0.612	
EO7	Our firm tries to investigate about its customer's future needs.			0.863
EO8	Our firm favors a strong emphasis on technological development			0.723
EO6	Our firm is always looking for new business opportunities.			0.722
Eigenvalues		4.251	1.627	1.32
Percentage of Variance Explain				
Total Variance Explained (%)		.61.2		
Kaiser-Meyer-Olkin (KMO)		0.807		
Bartlett's Test of Sphericity		584.49		

*Variables loaded significantly on factor with Coefficient of at least 0.5, * Items deleted due to high cross loading*

- Table (4.1) has shown the summary of results of factor analysis on Entrepreneurial orientation and the SPSS output is shown in Appendix (C1).
- The factor analysis results indicated that the measure of (KMO) was 0.807, whilst the Bartlett test of sphericity was significant (584.49).
- Table (4.1) showed that the items for Entrepreneurial orientation were loaded on three components factors with eigenvalues exceeding 1.0. For factor 1, eigenvalue is (4.251), for factor 2 eigenvalue is (1.627) and for factor 3 eigenvalue is (1.32). These three factors explain (61.2) % of variance in the data (above the recommended level of 0.06)
- In Table (4.1) factor loading of Entrepreneurial orientation items on the three factors ranged from (0.62 to 0.86).
- The first factors of Entrepreneurial orientation, (innovativeness) captures four items (EO2, EO4, EO1, EO3) (EO5 was removed)

Table (4.1.1):

1- Factor (1) :(EO2, EO1, EO4.EO3):

Items	Questions
EO2	In our firm, there is a long-term commitment to invest in Research and Development
EO1	In our firm, there is a long-term commitment to invest in new technology
EO4	Our firm adopts creative solutions when it comes to problem solving
EO3	Our firm adopts creative techniques in its methods of operations

The second factor (Risk-taking) captures four items (EO9, EO12, EO10, and EO11).

Table (4.1.2):

2-Factor (2): (EO12,EO9,EO10,EO11):

Items	Questions
EO12	Our firm adopts the trial and error method in case of uncertainty in its future decisions
EO9	Our firm invests in high risk projects
EO10	Our firm commits a large portion of its resources for future growth
EO11	People in our firm take risks with new ideas.

The third factor (Pro-activeness) captures three items, (EO7, EO8 EO6).

Table (4.1.3):

3- Factor (3):(EO7,EO8,EO6):

Items	Questions
EO7	Our firm tries to investigate about its customer's future needs.
EO8	Our firm favors a strong emphasis on technological development
EO6	Our firm is always looking for new business opportunities.

4.1.2-Factor Analysis on Organizational Culture:

The original questionnaire had three variables and (18) items measuring:

- Consistency (five items).
- Adaptability (five items).
- Mission (four items).
- Vision (four items).

Table (4.2): Rotated Factor Loading for Organizational Culture (OC)

Items No:		Components			
		F1	F2	F3	F4
(OC) Organizational Culture					
OC2	There are values that govern the way we do our work.	0.778			
OC3	Our approach in doing business is consistent and predictable	0.731			
OC1	There is a characteristic management practices in our firm	0.692			
OC4	It is easy to coordinate projects across different departments of the company.	0.623			
OC7	Our firm seeks customer’s opinions regarding the future shape of the commodities produced/ services offered	0.614			
OC6	Our firm takes into account any changes in the business environment in order to readjust its strategies	0.610			
OC5	The way we manage things is very flexible	0.565			
OC11	There is a clear strategy for the future		0.855		
OC10	There is a clear mission that identifies our business trends		0.767		
OC12	All members of our firm are well acquainted with its goals.		0.758		
OC15	Leaders have a long-term view point			0.808	
OC14	The vision of our firm is understood by all the firm’s members			0.773	
OC8	All members of our firm have a deep understanding of their customer’s wants and needs			0.520	
OC9	In our firm, attempts to create change is usually met with resistance				0.819
OC13	The goals set are sometimes difficult to achieve.				0.632

Eigenvalues	4.850	1.723	1.337	1.279
Percentage of Variance Explain				
Total Variance Explained (%)	.61.261			
Kaiser-Meyer-Olkin (KMO)	0.763			
Bartlett's Test of Sphericity	792.578			

*Variables loaded significantly on factor with Coefficient of at least 0.5, * Items deleted due to high cross loading*

- Table (4.2) has displayed the summary of results of factor analysis on Organizational Culture Variables and the SPSS output is shown in Appendix (C2).
- The factor analysis results indicated that the measure of (KMO) was (0.763), whilst the Bartlett test of sphericity was significant (792.578).
- Table (4.2) has shown that the items for Organizational Culture Variables loaded on four components/factors with eigenvalues exceeding 1.0. For factor (1) eigenvalue is (4.850) and factor (2) eigenvalue is (1.723) and factor(3) eigenvalue is (1.337) and factor(4) eigenvalue is (1.279), These four factors explain (61.261)% of variance in the data (above the recommended level of 0.60).
- In Table (4.2), the factor loading of Organizational Culture Variables items on the four factors ranged from (0.52 to 0.85).

Table (4.2.1):

1- Factor (1): (Consistency) consists of seven items (OC2,OC3, OC1, OC4,OC7,OC6,OC5):

Items	Questions
OC2	There are values that govern the way we do our work.
OC3	Our approach in doing business is consistent and predictable
OC1	There is a characteristic management practices in our firm
OC4	It is easy to coordinate projects across different departments of the company.
OC7	Our firm seeks customer's opinions regarding the future shape of the commodities produced/ services offered
OC6	Our firm takes into account any changes in the business environment in order to readjust its strategies
OC5	The way we manage things is very flexible

Table (4.2.2):

2- Factor (2) (Mission) consists of three items (OC11, OC10, OC12):

Items	Questions
OC11	There is a clear strategy for the future
OC10	There is a clear mission that identifies our business trends
OC12	All members of our firm are well acquainted with its goals.

Table (4.2.3):

3- Factor (3) (Vision) consists of three items (OC14, OC8, OC9):

Items	Questions
OC15	Leaders have a long-term view point
OC14	The vision of our firm is understood by all the firm's members
OC8	All members of our firm have a deep understanding of their customer's wants and needs

Table (4.2.4):

4- Factor (4) (Adaptability) consists of two items (OC9, OC13):

Items	Questions
OC9	In our firm, attempts to create change is usually met with resistance
OC13	The goals set are sometimes difficult to achieve.

4.1.3-Factor Analysis on Organizational Performance:

The original questionnaire had three variables and (13) items measuring:

- Efficiency (three items).
- Effectiveness (five items).
- Success (five items).

Table (4.3): Rotated Factor Loading for Organizational Performance (OP):

Items No:		Components		
		F1	F2	F3
(OP) Organizational Performance				
OP8	We have an adequate response to emergencies	0.739		
OP5	Our firm has achieved considerable growth in its market share during the last five years	0.714		
OP9	In our firm profitability is the first measure for success	0.666		
OP4	Our firm is always keen to satisfy its customers	0.621		
OP7	Our firm employs well-trained cadres.	0.577		
OP10	Our firm's customers tend to increase during the last five years	0.558		
OP6	Our firm decreases its costs by rationalizing its operations	0.538		
OP3	Our firm is usually satisfied with its return on assets		0.867	
OP2	Our firm is usually satisfied with its return on equity		0.832	
OP1	Our firm is usually satisfied with its return on assets		0.789	
OP12	The financial incentives offered to our employees are sufficient to meet their satisfaction			0.829
OP13	The non - financial incentives offered to our employees are sufficient to meet their satisfaction			0.817
OP11	Our firm adopts marketing research methodology in order to achieve customer satisfaction			0.697
Eigenvalues		5.06	1.573	1.276
Percentage of Variance Explain		60.853		
Total Variance Explained (%)				
Kaiser-Meyer-Olkin (KMO)		0.841		
Bartlett's Test of Sphericity		762.66		

*Variables loaded significantly on factor with Coefficient of at least 0.5, * Items deleted due to high cross loading*

- Table (4.3) has revealed the summary of results of factor analysis on Organizational Performance Variables and the SPSS output is shown in Appendix (C3).
- The factor analysis results have indicated that the measure of (KMO) was (0.841), whilst the Bartlett test of sphericity was significant (762.66).
- Table (4.3) has shown that the items for Organizational Performance Variables loaded on three components/factors with eigenvalues exceeding 1.0. For factor (1) eigenvalue is (5.06), for factor (2) eigenvalue is (1.573) and factor (3) eigenvalue is (1.276). These four factors explain (60.853) % of variance in the data (above the recommended level of 0.60).
- In Table (4.3) factor loading of Organizational Performance items on the three factors ranged from (0.54 to 0.86).

Table (4.3.1):

1- Factor (1) (Effectiveness) consists of seven items (OP8,OP5,OP9, OP4,OP7,OP10, OP6):

Items	Questions
OP8	We have an adequate response to emergencies
OP5	Our firm has achieved considerable growth in its market share during the last five years
OP9	In our firm profitability is the first measure for success
OP4	Our firm is always keen to satisfy its customers
OP7	Our firm employs well-trained cadres.
OP10	Our firm's customers tend to increase during the last five years
OP6	Our firm decreases its costs by rationalizing its operations

Table (4.3.2):

2- Factor (2) (Efficiency) consists of three items (OP3, OP2, OP1)

Items	Questions
OP3	Our firm is usually satisfied with its return on assets
OP2	Our firm is usually satisfied with its return on equity
OP1	Our firm is usually satisfied with its return on assets

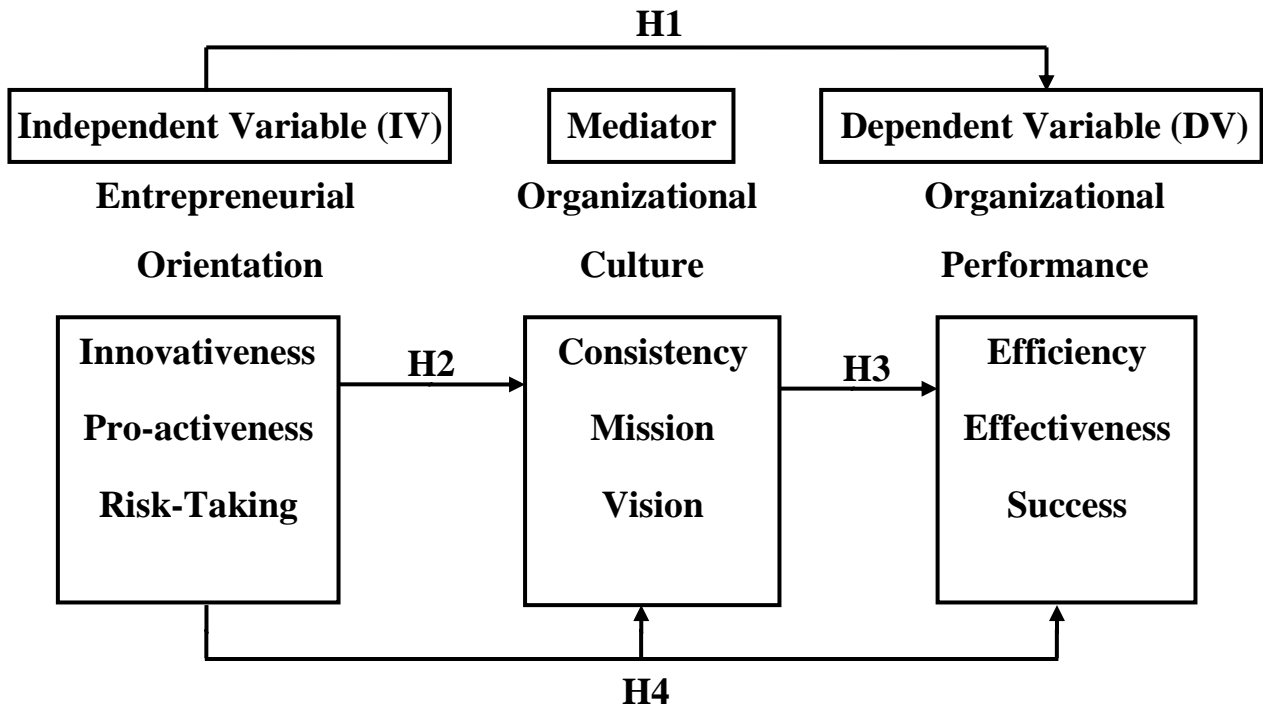
Table (4.3.3):

3- Factor (3) (Success) consists of three items (OP12, OP13, OP11):

Items	Questions
OP12	The financial incentives offered to our employees are sufficient to meet their satisfaction
OP13	The non - financial incentives offered to our employees are sufficient to meet their satisfaction
OP11	Our firm adopts marketing research methodology in order to achieve customer satisfaction

The results of the factor analysis have indicated that one of the organizational culture dimensions (Adaptability) was removed due to cross loading. Accordingly a modified conceptual framework was proposed, and therefore new hypotheses were formed.

Figure (4.1): Modified Conceptual Framework



There is a positive relationship between entrepreneurial orientation and organizational performance.

A1- There is a positive relationship between innovativeness and organizational efficiency.

A2- There is a positive relationship between innovativeness and organizational effectiveness.

A3- There is a positive relationship between innovativeness and organizational success.

A4- There is a positive relationship between pro-activeness and organizational efficiency.

A5- There is a positive relationship between pro-activeness and organizational effectiveness.

A6-There is a positive relationship between pro-activeness and organizational success.

A7-There is a positive relationship between risk-taking and organizational efficiency.

A8- There is a positive relationship between risk-taking and organizational effectiveness.

A9-There is a positive relationship between risk-taking and organizational success.

There is a positive relationship between entrepreneurial orientation and organizational culture.

B1- There is a positive relationship between innovativeness and organizational consistency.

B2-There is a positive relationship between innovativeness and organizational mission.

B3- There is a positive relationship between innovativeness and organizational vision.

B4- There is a positive relationship between pro-activeness and organizational consistency.

B5- There is a positive relationship between pro-activeness and organizational mission.

B6- There is a positive relationship between pro-activeness and organizational vision.

B7- There is a positive relationship between risk-taking and organizational consistency.

B8- There is a positive relationship between risk-taking and organizational mission.

B9- There is a positive relationship between risk-taking and organizational vision.

There is a positive relationship between Organizational culture and Organizational performance.

C1-There is a positive relationship between organizational consistency and organizational efficiency.

C2-There is a positive relationship between organizational consistency and organizational effectiveness.

C3- There is a positive relationship between organizational consistency and organizational success.

C4- There is a positive relationship between organizational mission and organizational efficiency.

C5- There is a positive relationship between organizational mission and organizational effectiveness.

C6- There is a positive relationship between organizational mission and organizational success.

C7- There is a positive relationship between organizational vision and organizational efficiency.

C8- There is a positive relationship between organizational vision and organizational effectiveness.

C9- There is a positive relationship between organizational vision and organizational success.

There is a positive relationship between entrepreneurial orientation and organizational performance when mediated by organizational culture.

D1- There is a positive relationship between innovativeness and efficiency when mediated by consistency.

D2- There is a positive relationship between innovativeness and effectiveness when mediated by consistency.

D3- There is a positive relationship between innovativeness and success when mediated by consistency.

D4- There is a positive relationship between innovativeness and efficiency when mediated by mission.

D5-There is a positive relationship between innovativeness and effectiveness when mediated by mission.

D6-There is a positive relationship between innovativeness and success when mediated by mission.

D7-There is a positive relationship between innovativeness and efficiency when mediated by vision.

D8-There is a positive relationship between innovativeness and effectiveness when mediated by vision.

D9-There is a positive relationship between innovativeness and success when mediated by vision.

D10-There is a positive relationship between pro-activeness and efficiency when mediated by consistency.

D11- There is a positive relationship between pro-activeness and effectiveness when mediated by consistency.

D12-There is a positive relationship between pro-activeness and success when mediated by consistency.

D13-There is a positive relationship between pro-activeness and efficiency when mediated by mission.

D14-There is a positive relationship between pro-activeness and effectiveness when mediated by mission.

D15-There is a positive relationship between pro-activeness and success when mediated by mission.

D16-There is a positive relationship between pro-activeness and efficiency when mediated by vision.

D17-There is a positive relationship between pro-activeness and effectiveness when mediated by vision.

D18-There is a positive relationship between pro-activeness and success when mediated by vision.

D19-There is a positive relationship between risk taking and efficiency when mediated by consistency.

D20-There is a positive relationship between risk taking and effectiveness when mediated by consistency.

D21-There is a positive relationship between risk taking and success when mediated by consistency.

D22-There is a positive relationship between risk taking and efficiency when mediated by mission.

D23-There is a positive relationship between risk taking and effectiveness when mediated by mission.

D24-There is a positive relationship between risk taking and success when mediated by mission.

D25-There is a positive relationship between risk taking and efficiency when mediated by vision.

D26-There is a positive relationship between risk taking and effectiveness when mediated by vision.

D27-There is a positive relationship between risk taking and success when mediated by vision.

Section Two

4.2- Reliability Analysis:

Reliability is an assessment of the degree of consistency between multiple measurements of variables (Haire et al., 2010). To test reliability this study used Cronbach's alpha as a diagnostic measure, which assesses the consistency of entire scale, since being the most widely used measure (Sharma, 2000). According to Haire et al. (2010), the lower limit for Cronbach's alpha is 0.70, although it may decrease to 0.60 in exploratory research. While Nunnally (1978) considered Cronbach's alpha values greater than 0.60 are to be taken reliable.

4.2.1-Reliability test of Entrepreneurial orientation

Table (4.4): Reliability Test of Entrepreneurial Orientation Dimensions

Variables	Cronbach,s alpha
Innovativeness	0.80
Risk taking	0.70
Pro-activeness	0.76

Source: Case study data

The results of the reliability analysis summarized in Table (4.4). Confirmed that all the scales have displayed satisfactory level of reliability (Cronbach's alpha has exceeded the minimum value of (0.6). Therefore, it was concluded that the measures had acceptable level of reliability.

The full SPSS output was displayed in Appendix (D1).

4.2.2-Reliability Test of Organizational Culture

Table (4.5): Reliability Test of the Organizational Culture Dimensions

Variables	Cronbach,s alpha
Consistency	0.81
Mission	0.82
Vision	0.73

Source: Case study data

The results of the reliability analysis summarized in Table (4.5) confirmed that all the scales have displayed satisfactory level of reliability (Cronbach’s alpha has exceeded the minimum value of (0.6). Hence, it was shown that the measures had acceptable level of reliability.

The full SPSS output was displayed in Appendix (D2).

4.2.3-Reliability Test of Organizational Performance

Table (4.6): Reliability Test of Organizational Performance Dimensions

Variables	Cronbach,s alpha
Effectiveness	0.80
Efficiency	0.86
Success	0.77

Source: Case study data

The results of the reliability analysis summarized in Table (4.6). Confirmed that all the scales have displayed satisfactory level of reliability (Cronbach,s alpha has exceeded the minimum value of 0.6). It was thus clear that the measures had acceptable level of reliability.

The full SPSS output was displayed in Appendix (D3)

Section Three

4.3-Descriptive Statistics of Variables:

4.3.1-Descriptive Statistics for entrepreneurial orientation dimensions:

4.3.1.1-Descriptive statistics for Innovativeness:

Table (4.7):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
In our firm, there is a long-term commitment to invest in Research and Development	1.09	3.85	High	4
In our firm, there is a long-term commitment to invest in new technology	0.916	4.21	Very high	3
Our firm adopts creative solutions when it comes to problem solving.	0.889	4.25	Very high	1
Our firm adopts creative techniques in its methods of operations	0.9313	4.22	Very high	2
Total	0.956	4.13	Very high	

Source: Prepared by the researcher, 2015

From table (4.7), it was recognized that:

- 1- All the statements of the entrepreneurial orientation (innovativeness) were averaged over the middle premise (3).
- 2- The most important phrase was the phrase “Our firm adopts creative solutions when it comes to problem solving”, where the average of respondent’s answers was (4.25) with a standard deviation (0.889)

3- The less term of approval was the phrase “In our firm, there is a long-term commitment to invest in new technology”, with an average (3.85) and a standard deviation (1.09).

4- The average of all phrases was (4.13) with a standard deviation (0.956).

4.3.1.2-Descriptive statistics for Risk taking:

Table (4.8):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
Our firm adopts the trial and error method in case of uncertainty in its future decisions	1.21	3.56	High	3
Our firm invests in high risk projects	1.33	3.30	Medium	4
Our firm commits a large portion of its resources for future growth	1.01	3.90	High	2
People in our firm take risks with new ideas.	0.949	4.06	Very high	1
Total	1.12	3.70	High	

Source: Prepared by the researcher, 2015

From table (4.8), the following was recognized:

- 1- All the statements of the entrepreneurial orientation (Risk taking) were averaged over the middle premise (3).
- 2- The most important phrase was the phrase “People in our firm are encouraged t take risks with new ideas”, where the average of respondent’s answers was (4.06) with a standard deviation (0.949)

3- The less term of approval was the phrase “Our firm invests in high risk projects”, with an average (3.30) and a standard deviation (1.33).

4- The average of all phrases was (3.70) with a standard deviation (1.12).

4.3.1.3-Descriptive statistics for Pro-activeness:

Table (4.9):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
Our firm tries to investigate about its customer’s future needs.	0.778	4.37	Very high	2
Our firm favors a strong emphasis on technological development	0.925	4.17	Very high	3
Our firm is always looking for new business	0.873	4.39	Very high	1
Total	0.858	4.31	Very high	

Source: Prepared by the researcher, 2015

From table (4.8), it was concluded that:

1- All the statements of the entrepreneurial orientation (Pro-activeness) were averaged over the middle premise (3).

2- The most important phrase was the phrase “Our firm is always looking for new business opportunities”, where the average of respondent’s answers was (4.39) with a standard deviation (0.873)

3- The less term of approval was the phrase “Our firm favors a strong emphasis on technological development”, with an average (4.17) and a standard deviation (0.925).

4- The average of all phrases was (4.31) with a standard deviation (0.858).

4.3.2-Descriptive Statistics for Organizational Culture dimensions:

4.3.2.1-Descriptive statistics for consistency:

Table (4.10):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
There are values that govern the way we do our work	0.852	4.22	Very high	1
Our approach in doing business is consistent and predictable	0.915	3.98	High	7
There is a characteristic management practices in our firm	0.954	4.12	Very high	3
It is easy to coordinate projects across different departments of the company	0.866	4.02	Very high	6
Our firm seeks customer's opinions regarding the future shape of the commodities produced/ services offered	0.979	4.08	Very high	4
Our firm takes into account any changes in the business environment in order to readjust its strategies	0.829	4.20	Very high	2
The way we manage things is very flexible	0.971	4.05	Very high	5
Total	0.909	4.10	Very high	

Source: Prepared by the researcher, 2015

Table (4.10): has shown that:

- 1- All the statements of the Organizational Culture (Consistency) were averaged over the middle premise (3).
- 2- The most important phrase was the phrase “There are values that govern the way we do our work”, where the average of respondent’s answers was (4.22) with a standard deviation (00.858)
- 3- The less term of approval is the phrase “Our approach in doing business is consistent and predictable”, with an average (3.98) and a standard deviation (0.915).
- 4- The average of all phrases was (4.10) with a standard deviation (0.909).

4.3.2.2-Descriptive statistics for Mission:

Table (4.11):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
There is a clear strategy for the future	0.969	4.14	Very high	2
There is a clear mission that identifies our business trends	0.961	4.22	Very high	1
All members of our firm are well acquainted with its goals.	0.979	4.01	Very high	3
Total	0.969	4.12	Very high	

Source: Prepared by the researcher, 2015

From the table (4.11), the following was recognized:

- 1- All the statements of the Organizational Culture (Mission) were averaged over the middle premise (3).

- 2- The most important phrase was the phrase “There is a clear mission that identifies our business trends”, where the average of respondent’s answers is (4.22) with a standard deviation (0.961)
- 3- The less term of approval was the phrase “All members of our firm are well acquainted with its goals”, with an average (4.01) and a standard deviation (0.979).
- 4- The average of all phrases was (4.12) with a standard deviation (0.969).

4.3.2.3-Descriptive statistics for Vision:

Table (4.12):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
Leaders have a long-term view point	1.05	4.06	Very high	1
The vision of our firm is understood by all the firm’s members	0.940	4.04	Very high	2
Total	0.995	4.05	Very high	

Source: Prepared by the researcher, 2015

From the table (4.12), it was recognized that:

- 1- All the statements of the Organizational Culture (Vision) were averaged over the middle premise (3).
- 2- The most important phrase was the phrase “Leaders have a long-term view point”, where the average of respondent’s answers is (4.06) with a standard deviation (1.05).
- 3- The less term of approval was the phrase “The vision of our firm is understood by all the firm’s members”, with an average (4.04) and a standard deviation (0.940).

4- The average of all phrases was (4.05) with a standard deviation (0.995).

4.3.3-Descriptive Statistics for Organizational Performance Variables:

4.3.3.1-Descriptive statistics for Effectiveness

Table (4.13):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
We have an adequate response to emergencies	0.903	4.04	Very high	6
Our firm has achieved considerable growth in its market share during the last five years	0.922	4.23	High	3
In our firm profitability is the first measure for success	0.965	3.98	High	7
Our firm is always keen to satisfy its customers	0.857	4.34	Very high	1
Our firm employs well-trained cadres.	0.871	4.11	Very high	5
Our firm's customers tend to increase during the last five years	1.01	4.19	Very high	4
Our firm decreases its costs by rationalizing its operations	0.922	4.24	Very high	2
Total	0.921	4.16	Very high	

Source: Prepared by the researcher, 2015

Table (4.13) has shown that:

- 1- All the statements of the organizational Performance (Effectiveness) were averaged over the middle premise (3).

- 2- The most important phrase was the phrase “Our firm is always keen to satisfy its customers”, where the average of respondent’s answers was (4.34) with a standard deviation (0.857)
- 3- The less term of approval was the phrase “In our firm profitability is the first measure for success”, with an average (3.98) and a standard deviation (0.967).
- 4- The average of all phrases was (4.16) with a standard deviation (0.921) .

4.3.3.2-Descriptive statistics for Efficiency

Table (4.14):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
Our firm is usually satisfied with its return on assets	0.976	3.86	High	2
Our firm is usually satisfied with its return on equity	1.01	3.82	High	3
Our firm is usually satisfied with its return on assets	0.971	3.90	High	1
Total	0.985	3.86	High	

Source: Prepared by the researcher, 2015

Table (4.14) has shown that:

- 1- All the statements of the Organizational Performance (Efficiency) were averaged over the middle premise (3).
- 2- The most important phrase was the phrase “Our firm is usually satisfied with its return on assets”, where the average of respondent’s answers was (3.90) with a standard deviation (0.971)
- 3- The less term of approval was the phrase “Our firm is usually satisfied with its return on equity”, with an average (3.82) and a standard deviation (1.01).

4- The average of all phrases was (3.86) with a standard deviation (0.985).

4.3.3.3-Descriptive statistics for Success:

Table (4.15):

The Phrase	Standard Deviation	Average	Disagree of Approval	Arrangement
The financial incentives offered to our employees are sufficient to meet their satisfaction	1.14	3.91	High	3
The non - financial incentives offered to our employees are sufficient to meet their satisfaction	1.15	3.95	High	2
Our firm adopts marketing research methodology in order to achieve customer satisfaction	1.01	4.17	Very high	1
Total	1.10	4.01	Very high	

Source: Prepared by the researcher, 2015

From table (4.15), it was clear that:

- 1- All the statements of the Organizational Performance (Success) were averaged over the middle premise (3).
- 2- The most important phrase was the phrase “Our firm adopts marketing research methodology in order to achieve customer satisfaction”, where the average of respondent’s answers was (4.17) with a standard deviation (1.01)
- 3- The less term of approval was the phrase “The financial incentives offered to our employees are sufficient to meet their satisfaction”, with an average (3.91) and a standard deviation (1.14).

4- The average of all phrases was (4.01) with a standard deviation (1.10).

Section four

4.4-Hypotheses Testing:

Multiple Regression Analysis:

Hierarchical regression analyses were used to test the mediating role of Organizational culture (consistency, mission, vision) on the relationship between Entrepreneurial orientation (innovativeness , risk taking , pr-activeness), and Organizational performance (efficiency , effectiveness and success).

4.4.1-First Hypothesis

A-There is a positive relationship between Entrepreneurial Orientation and Organizational performance.

A1- There is a positive relationship between innovativeness and organizational efficiency.

A2- There is a positive relationship between innovativeness and organizational effectiveness.

A3- There is a positive relationship between innovativeness and organizational success.

A4-There is a positive relationship between pr-activeness and organizational efficiency.

A5- There is a positive relationship between pr-activeness and organizational effectiveness.

A6- There is a positive relationship between pr-activeness and organizational success.

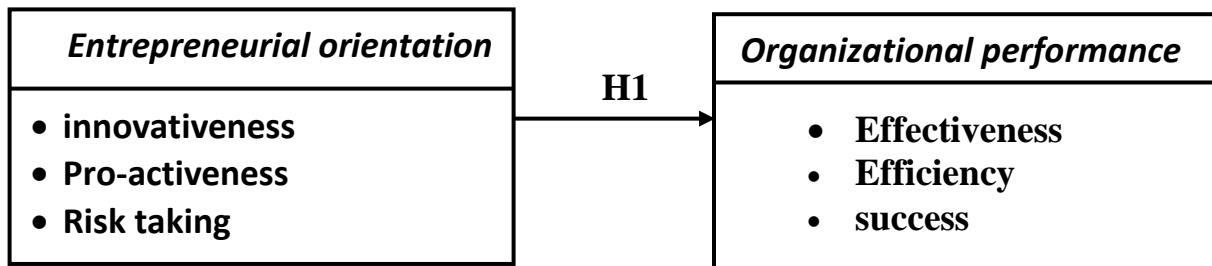
A7-There is a positive relationship between risk taking and organizational efficiency.

A8- There is a positive relationship between risk taking and organizational effectiveness.

A9-There is a positive relationship between risk taking and organizational success.

Hierarchical regression equations were used to test the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Effectiveness.

Figure (4.2):



4.4.1.1- Multiple Regressions: Entrepreneurial orientation dimensions (Innovativeness, Pro-activeness and Risk-taking) and effectiveness:

Table (4.16):

Entrepreneurial orientation dimensions	Beta coefficient	T .values	Sig
Innovativeness	0.165	2.044	0.043
Risk taking	0.282	3.623	0.000
Pro-activeness	0.222	2.862	0.005*
R ²	0.25		
Adjusted R ²	0.23		
F	16.17		
Sig	0.000		

Significant levels: 0.05

- Table (4.16) has displayed the results of the regression equation testing the influence of the entrepreneurial orientation dimensions on effectiveness.
- It has shown that entrepreneurial orientation dimensions (Innovativeness, Pro-activeness and Risk taking) had a positive impact on effectiveness.
- The regression coefficient in table (4.16) in the above indicated that among these independent variable dimensions, Risk taking was the most important in explaining the variance in effectiveness ($\beta = 0.282$), followed by Pro-activeness ($\beta = 0.222$), and innovativeness ($\beta = 0.165$).

The SPSS output was reflected in Appendix (E1).

4.4.1.2--Multiple Regressions: Entrepreneurial orientation dimensions, and efficiency:

Table (4.17):

Entrepreneurial Orientation dimensions	Beta coefficient	T .values	Sig
Innovativeness	.103	1.26	0.210
Risk taking	.374	4.71	0.000*
Pro-activeness	.108	1.36	0.0174
R ²	0.22		
Adjusted R ²	0.20		
F	13.75		
Sig	0.000		

Significant levels: 0.05

- Table (4.17) has reflected the results of the regression equation testing the influence of the entrepreneurial orientation dimensions (Innovativeness, Pro-activeness, Risk-taking) on efficiency.
- It has shown a significant positive relationship between Risk-taking and efficiency, while Innovativeness and Pro-activeness had shown no significant impact on efficiency.

The SPSS output was reflected in Appendix (E2)

4.4.1.3- Multiple Regressions: Entrepreneurial orientation dimensions, and success:

Table (4.18):

Entrepreneurial orientation dimensions	Beta coefficient	T .values	Sig
Innovativeness	.267	3.360	0.001
Risk taking	.383	4.96	0.001
Pro-activeness	-0.85	-1.109	0.269
R ²	0.27		
Adjusted R ²	0.25		
F	17.71		
Sig	0.000		

Significant levels: 0.05

- Table (4.18) has revealed the results of the regression equation testing the influence of the entrepreneurial orientation dimensions on success.
- It showed a significant positive relationship between (Innovativeness and success) and (Risk taking and success), while Pro-activeness showed no significant impact on success.

The SPSS output was reflected in Appendix (E3).

Table (4.19): Summary of Hypotheses Testing: The Impact of Entrepreneurial orientation on Organizational performance:

No.	Statement of the hypothesis	Results
H1	There is a positive relationship between Entrepreneurial orientation and Organizational Performance	Partially accepted
H1.A1	H. There is a positive relationship between Innovativeness and efficiency	Rejected
H1.A2	There is a positive relationship between Innovativeness and effectiveness	Accepted
H1A3	There is a positive relationship between Innovativeness and success	Accepted
H1.A4	H. There is a positive relationship between Pro-activeness and efficiency	Rejected
H1.A5	There is a positive relationship between Pro-activeness and effectiveness	Accepted
H1.A6	There is a positive relationship between Pro-activeness and success	Rejected
H1.A7	There is a positive relationship between Risk-taking and efficiency	Accepted
H1.A8	There is a positive relationship between Risk-taking and effectiveness	Accepted
H1.A9	There is a positive relationship between Risk taking and success	Accepted

4.4.2- Second hypothesis:

B-There is a positive relationship between Entrepreneurial orientation and organizational culture.

B1- There is a positive relationship between innovativeness and consistency

B2- There is a positive relationship between innovativeness and organizational mission.

B3- There is a positive relationship between innovativeness and organizational vision.

B4- There is a positive relationship between pro-activeness and organizational consistency.

B5- There is a positive relationship between pro-activeness and organizational mission.

B6- There is a positive relationship between pro-activeness and organizational vision.

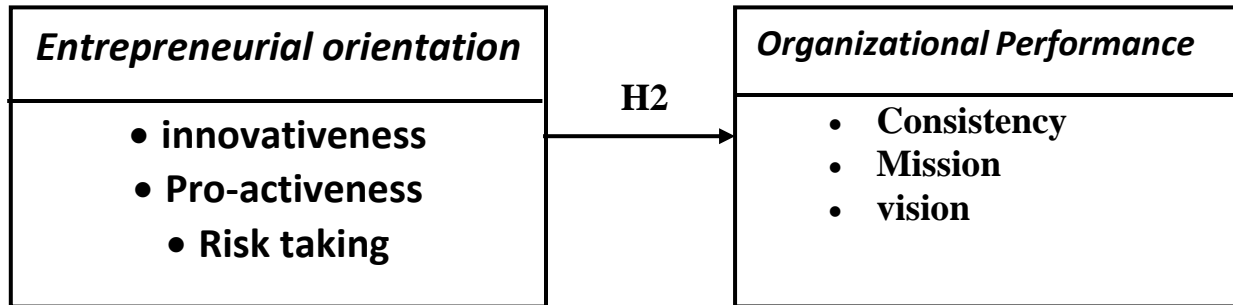
B7- There is a positive relationship between risk taking and organizational consistency.

B8- There is a positive relationship between risk taking and organizational mission.

B9- There is a positive relationship between risk taking and organizational vision.

- Hierarchical regression equations were used to test the relationship between Entrepreneurial orientation (Innovativeness, Pro-activeness, Risk-taking) and Organizational culture (Consistency, Mission, Vision).

Figure (4.3):



4.4.2.1- Multiple Regressions: Entrepreneurial orientation dimensions and Consistency

Table (4.20):

Entrepreneurial orientation dimensions	Beta coefficient	T .values	Sig
Innovativeness	.195	2.39	0.018*
Risk taking	.169	2.14	0.034*
Pro-activeness	.282	3.59	0.000*
R ²	0.24		
Adjusted R ²	0.22		
F	14.91		
Sig	0.000		

Significant levels: 0.05

- Table (4.20) has reflected the results of the regression equation testing the influence of the entrepreneurial orientation dimensions on consistency.

- The table has indicated that Innovativeness, Pro-activeness and Risk taking had a positive impact on consistency.
- The regression coefficient in table (4.20) in the above indicated that among these dimensions, Pro-activeness was the most important in explaining the variance in consistency ($\beta = .282$), followed by innovativeness ($\beta = .195$), and Pro-activeness ($\beta = 0.169$).

The SPSS output was reflected in Appendix (F1).

4.4.2.2-Multiple Regressions: Entrepreneurial orientation dimensions, and Mission:

Table (4.21):

Entrepreneurial orientation dimensions	Beta coefficient	T .values	Sig
Innovativeness	.253	2.88	0.005*
Risk taking	.095	1.113	0.268
Pro-activeness	.063	0.739	0.461
R ²	0.11		
Adjusted R ²	0.10		
F	5.94		
Sig	0.001		

Significant levels: 0.05

- Table (4.21) has displayed the results of the regression equation testing the influence of the entrepreneurial orientation dimensions on mission.

- It has shown a significant positive relationship between innovativeness and mission, while no significant relationship was shown between (Pro-activeness and mission) and between (Risk taking and mission).

The SPSS output was reflected in Appendix (F2).

4.4.2.3- Multiple Regressions: Entrepreneurial Orientation dimensions, and Vision:

Table (4.22):

Entrepreneurial orientation dimensions	Beta coefficient	T .values	Sig
Innovativeness	.096	1.134	0.259
Risk taking	.165	1.999	0.047*
Pro-activeness	.270	3.29	0.001*
R ²	0.16		
Adjusted R ²	0.15		
F	9.47		
Sig	0.000		

Significant levels: 0.05

- Table (4.22) has displayed the results of the regression equation testing the influence of the entrepreneurial orientation dimensions on vision. .
- From the table, it was clear that there was a significant positive relationship between (Risk taking and vision), and (Pro activeness and vision), while innovativeness has shown no significant impact on vision.

The SPSS output was reflected in Appendix (F3)

Table (4.23): Summary of Hypotheses Testing: The Impact of Entrepreneurial orientation on Organizational culture:

No.	Statement of the hypothesis	Result
H2	There is a positive relationship between Entrepreneurial orientation and organizational culture	Partially accepted
H2.b1	H. There is a positive relationship between Innovativeness and consistency	Accepted
H2.b2	There is a positive relationship between Innovativeness and mission	Accepted
H2b3	There is a positive relationship between Innovativeness and vision	Rejected
H2.b4	H. There is a positive relationship between Pro-activeness and consistency	Accepted
H2.b5	There is a positive relationship between Pro-activeness and mission	Rejected
H2.b6	There is a positive relationship between Pro-activeness and vision	Accepted
H2.b7	There is a positive relationship between Risk-taking and consistency	Accepted
H2.b8	There is a positive relationship between Risk taking and mission	Rejected
H2.b9	There is a positive relationship between Risk taking and vision	Accepted

4.4.3-Third Hypothesis:

C- There is a positive relationship between organizational culture and Organizational performance.

C1- There is a positive relationship between consistency and organizational efficiency.

C2- There is a positive relationship between consistency and organizational effectiveness.

C3-There is a positive relationship between consistency and organizational success

C4- There is a positive relationship between mission and organizational efficiency.

C5- There is a positive relationship between mission and organizational effectiveness.

C6- There is a positive relationship between mission and organizational success.

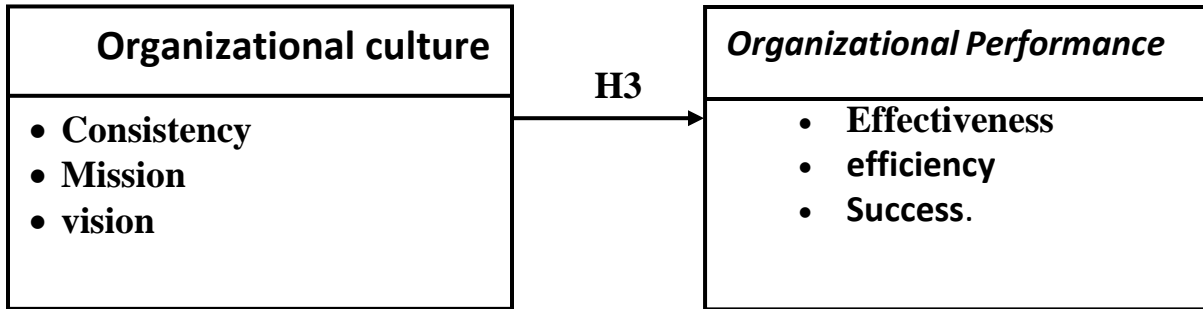
C7-There is a positive relationship between vision and organizational efficiency.

C8- There is a positive relationship between vision and organizational effectiveness.

C9- There is a positive relationship between vision and organizational success.

- Multiple regression equations were used to test the relationship between Organizational culture (Consistency, Mission, and Vision) and organizational performance (Efficiency, Effectiveness, and Success)

Figure (4.4):



4.4.3.1 Multiple Regressions: organizational culture (consistency, mission, vision), and effectiveness

Table (4.24):

Organizational culture dimensions	Beta coefficient	T .values	Sig
Consistency	0.185	2.470	0.015*
Mission	0.275	3.78	0.000*
Vision	0.350	4.69	0.000*
R ²	0.42		
Adjusted R ²	0.41		
F	34.83		
Sig	0.000		

Significant levels: 0.05

- Table (4.24) has displayed the results of the regression equation testing the influence of the organizational culture dimensions (consistency, mission, vision) on effectiveness.

- It was clear from the table that the organizational culture dimensions (consistency, mission and vision) had a positive impact on effectiveness.
- The regression coefficient in table (4.24) in the above indicated that among these dimensions, vision was the most important in explaining the variance in effectiveness ($\beta = 0.350$), followed by mission ($\beta= 0.275$), and consistency ($\beta= 0.185$).

The SPSS output was reflected in Appendix (G1).

4.4.3.2- Multiple Regressions: Organizational culture (Consistency, Mission, Vision), and efficiency:

Table (4.25):

Organizational culture dimensions	Beta coefficient	T .values	Sig
Consistency	0.136	1.532	0.128
Mission	0.135	1.566	0.119
Vision	0.263	2.984	0.003*
R ²	0.19		
Adjusted R ²	0.18		
F	11.019		
Sig	0.000		

Significant levels: 0.05

- Table (4.25) has revealed the results of the regression equation testing the influence of the organizational culture dimensions (Consistency, Mission, vision) on effectiveness.

- The table showed a significant positive relationship between (consistency and efficiency) and (vision and efficiency), while no significant positive relationship was found between mission and efficiency.

The SPSS output was reflected in Appendix (Appendix G2).

4.4.3.3- Multiple Regressions:, organizational culture (Consistency, Mission, Vision) and success:

Table (4.26):

Organizational culture dimensions	Beta coefficient	T .values	Sig
Consistency	0.256	2.957	0.004*
Mission	0.169	2.007	0.047*
Vision	0.159	1.84	0.068
R ²	0.22		
Adjusted R ²	0.20		
F	13.52		
Sig	0.000		

Significant levels: 0.05

- Table (4.26) reflected the results of the regression equation testing the influence of Organizational culture dimensions (Consistency, Mission, Vision) on success.
- There was a significant positive relationship between (consistency and success) and (mission and success) as indicated by the table, while vision did not show a significant impact on success.

The SPSS output was reflected in Appendix (G3).

Table (4.27): Summary of Hypotheses Testing: The Impact of organizational culture on Organizational performance:

No.	Statement of the hypothesis	Result
H3	There is a positive relationship between organizational culture and organizational performance	Partially accepted
H3.C1	H. There is a positive relationship between consistency and efficiency	Accepted
H3.C2	There is a positive relationship between consistency and effectiveness	Accepted
H3.C3	There is a positive relationship between consistency and success	Accepted
H3.C4	H. There is a positive relationship between mission and efficiency	Rejected
H3.C5	There is a positive relationship between mission and effectiveness	Accepted
H3.C6	There is a positive relationship between mission and success	Accepted
H3.C7	There is a positive relationship between vision and efficiency	Accepted
H3.C8	There is a positive relationship between vision and effectiveness	Accepted
HC.C9	There is a positive relationship between vision and success	Rejected

4.4.4-Fourth Hypothesis:

D4-There is a positive relationship between Entrepreneurial Orientation and organizational performance when mediated by organizational culture.

D1- There is a positive relationship between innovativeness and efficiency when mediated by consistency.

D2- There is a positive relationship between innovativeness and effectiveness when mediated by consistency.

D3- There is a positive relationship between innovativeness and success when mediated by consistency.

D4- There is a positive relationship between innovativeness and efficiency when mediated by mission.

D5-There is a positive relationship between innovativeness and effectiveness when mediated by mission.

D6-There is a positive relationship between innovativeness and success when mediated by mission.

D7-There is a positive relationship between innovativeness and efficiency when mediated by vision.

D8-There is a positive relationship between innovativeness and effectiveness when mediated by vision.

D9-There is a positive relationship between innovativeness and success when mediated by vision.

D10-There is a positive relationship between pro-activeness and efficiency when mediated by consistency.

D11-There is a positive relationship between pro-activeness and effectiveness when mediated by consistency.

D12-There is a positive relationship between pro-activeness and success when mediated by consistency.

D13-There is a positive relationship between pro-activeness and efficiency when mediated by mission.

D14-There is a positive relationship between pro-activeness and effectiveness when mediated by mission.

D15-There is a positive relationship between pro-activeness and success when mediated by mission.

D16-There is a positive relationship between pro-activeness and efficiency when mediated by vision.

D17-There is a positive relationship between pro-activeness and effectiveness when mediated by vision.

D18-There is a positive relationship between pro-activeness and success when mediated by vision.

D19-There is a positive relationship between risk taking and efficiency when mediated by consistency.

D20-There is a positive relationship between risk taking and effectiveness when mediated by consistency.

D21-There is a positive relationship between risk taking and success when mediated by consistency.

D22-There is a positive relationship between risk taking and efficiency when mediated by mission.

D23-There is a positive relationship between risk taking and effectiveness when mediated by mission.

D24-There is a positive relationship between risk taking and success when mediated by mission.

D25-There is a positive relationship between risk taking and efficiency when mediated by vision.

D26-There is a positive relationship between risk taking and effectiveness when mediated by vision.

D27-There is a positive relationship between risk taking and success when mediated by vision.

4.4.4.1-Mediation of consistency on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Efficiency:

Table (4.28):

Entrepreneurial orientation dimensions	Efficiency	
	Model 1	Model 2
Innovativeness	.103	.073
Pro-activeness	.108	.064
Risk-taking	.374***	.348***
Consistency		.156
R ²	0.220	0.239
Adjusted R ²	.204	.218
Δ R ²	.220	.019
F change	13.75	3.57

*Note: Level of significant: *p<0.10, **p<0.05, ***p<0.001*

- The results of the mediation effect of consistency on the relationship between Entrepreneurial orientation dimensions (Innovativeness, pro-activeness, Risk taking), and Efficiency was given in table (4.28)
- In model 1, the beta coefficient for Innovativeness, pro-activeness, and Risk taking was ($\beta = .103$), ($\beta = .108$), and ($\beta = .374$), respectively.
- In model 2, the beta value coefficient for Innovativeness, pro-activeness and Risk taking was decreased, where it has become ($\beta = .073$), ($\beta = .064$), ($\beta = .348$). Therefore, it was concluded that consistency partially mediated the relationship between (Innovativeness, pro-activeness, Risk taking), and efficiency.

The SPSS output was reflected in Appendix (H1).

4.4.4.2- Mediation of consistency on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Effectiveness.

Table (4.29):

Entrepreneurial orientation dimensions	Effectiveness	
	Model 1	Model 2
Innovativeness	.165**	.106
Pro-activeness	.222**	.137**
Risk-taking	.282***	.231**
Consistency		.303***
R ²	0.249	0.320
Adjusted R ²	.234	.301
Δ R ²	.249	.070
F change	16.17	14.95

*Note: Level of significant: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.*

- Table (4.29) has displayed the results of the hierarchical regression testing the mediation effect of consistency on the relationship between Entrepreneurial orientation dimensions (Innovativeness, Pro-activeness, and Risk-taking) and organizational performance (Effectiveness).
- In model 1, the beta coefficient for entrepreneurial orientation dimensions (Innovativeness, pro-activeness, Risk taking), was ($\beta = .165$), ($\beta = .222$), and ($\beta = .282$), respectively.
- In model 2, the beta value coefficient for Innovativeness, pro-activeness,
- Risk taking was decreased, where it has become ($\beta = .106$), ($\beta = .137$), ($\beta = .231$). Hence it was clear that consistency partially mediated the relationship

between (Pro-activeness, Risk-taking) and Effectiveness, and fully mediated the relationship between Innovativeness and effectiveness.

The SPSS output was reflected in Appendix (H2).

4.4.4.3- Mediation of Consistency on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Success:

Table (4.30):

Entrepreneurial Orientation Dimensions	Success	
	Model 1	Model 2
Innovativeness	.267**	.211**
Pro-activeness	-.085	-.167**
Risk-taking	.383***	.334***
Consistency		.289***
R ²	0.267	0.331
Adjusted R ²	.252	.312
Δ R ²	.267	.064
F change	17.71	13.85

*Note: Level of significant: *p<0.10, **p<0.05, ***p<0.*

- Table (4.30) has presented the results of the hierarchical regression testing the mediation effect of consistency on the relationship between Entrepreneurial orientation dimensions organizational performance (Success).
- In model 1, the beta coefficient for Innovativeness, pro-activeness, Risk taking was ($\beta=.267$), ($\beta= -.085$), and ($\beta=.383$), respectively.

- In model 2, the beta value coefficient for Innovativeness, pro-activeness, Risk taking was decreased, where it has become ($\beta = .211$), ($\beta = -.167$), ($\beta = .334$). Accordingly it was shown that consistency partially mediated the relationship between (Innovativeness, Risk-taking) and success, and fully mediated the relationship between pro-activeness and success.

The SPSS output was reflected in Appendix (H3).

4. 4.4.4-Mediation of Mission on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Efficiency:

Table (4.31):

Entrepreneurial Orientation Dimensions	Efficiency	
	Model 1	Model 2
Innovativeness	.103	.054
Pro-activeness	.108	.096
Risk-taking	.374***	.356***
Mission		.196***
R ²	0.220	0.255
Adjusted R ²	.204	.234
ΔR	.220	.034
F change	13.75	3.57

*Note: Level of significant: * $p < 0.10$. ** $p < 0.05$. *** $p < 0.001$.*

- Table (4.31) showed the results of the hierarchical regression testing the mediation effect of Mission on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Efficiency.

- In model 1 the beta coefficient for Innovativeness, Pro-activeness, Risk-taking) was ($\beta = -.103$), ($\beta = .108$), and ($\beta = .374$), respectively.
- In model 2, the beta value coefficient for Innovativeness, Pro-activeness, Risk taking was decreased to be: ($\beta = .054$), ($\beta = .096$), ($\beta = .356$). Hence it was shown that Mission partially mediated the relationship between (Innovativeness, Pro-activeness, and Risk-taking) and Efficiency.

The SPSS output was reflected in Appendix (I1)

4.4.4.5- Mediation of Mission on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Effectiveness:

Table (4.32):

Entrepreneurial Orientation Dimensions	Effectiveness	
	Model 1	Model 2
Innovativeness	.165**	.065
Pro-activeness	.222**	.198**
Risk-taking	.282***	.245**
Mission		.395***
R ²	0.249	0.389
Adjusted R ²	.234	.372
ΔR^2	.249	.139
F change	16.17	33.0

*Note: Level of significant: * $p < 0.10$, ** $p < 0.05$, *** $p < 0$.*

- Table (4.32) has presented the results of the hierarchical regression testing the mediation effect of Mission on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Effectiveness.

- In model 1, the beta coefficient for Innovativeness, Pro-activeness and Risk taking was ($\beta=.165$), ($\beta= .222$), and ($\beta=.282$), respectively.
- In model 2, the beta value coefficient for Innovativeness, Pro-activeness and Risk taking was decreased, where it has become: ($\beta= .065$), ($\beta= .198$), ($\beta= .245$). Accordingly it was concluded that Mission partially mediated the relationship between (Pro-activeness, Risk taking), and Effectiveness, and fully mediated the relationship between innovativeness and effectiveness.

The SPSS output was reflected in Appendix (I2)

4.4.4.6- Mediation of Mission on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Success:

Table (4.33):

Entrepreneurial Orientation Dimensions	Success	
	Model 1	Model 2
Innovativeness	.267**	.211**
Pro-activeness	-.085	-.099
Risk-taking	.383***	.362***
Mission		.224**
R ²	0.267	0.311
Adjusted R ²	.252	.292
ΔR^2	.267	.045
F change	17.71	9.37

*Note: Level of significant: * $p < 0.10$, ** $p < 0.05$, *** $p < 0$.*

- Table (4.33) showed the results of the hierarchical regression testing the mediation effect of Mission on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Success.

- In model 1, the beta coefficient for Innovativeness, Pro-activeness, and Risk taking was ($\beta=.267$), ($\beta= -.085$), and ($\beta=.383$) respectively.
- In model 2, the beta value coefficient for Innovativeness, Pro-activeness, Risk taking was decreased to be: ($\beta= .211$), ($\beta= -0.99$), ($\beta= .362$). Hence it was clear that Mission partially mediated the relationship between (Innovativeness, Pro-activeness, and Risk-taking) and Success.

The SPSS output was reflected in Appendix (I3)

4.4.4.7 Mediation of Vision on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Efficiency

Table (4.34):

Entrepreneurial Orientation Dimensions	Efficiency	
	Model 1	Model 2
Innovativeness	.103	.078
Pro-activeness	.108	.038
Risk-taking	.374***	.332***
Vision		.261**
R ²	0.220	0.227
Adjusted R ²	.204	.257
ΔR^2	.220	.057
F change	13.75	11.41

Note: Level of significant: * $p < 0.10$, ** $p < 0.05$, *** $p < 0$.

- Table (4.34) has displayed the results of the hierarchical regression testing the mediation effect of Vision on the relationship between (Innovativeness, Pro-activeness, and Risk-taking).

- In model 1, the beta coefficient for Innovativeness, Pro-activeness and Risk taking was ($\beta = -.103$), ($\beta = .108$), and ($\beta = .374$), respectively.
- In model 2, the beta value coefficient for Innovativeness, Pro-activeness and Risk taking was decreased, where it has become: ($\beta = .078$), ($\beta = .038$), ($\beta = .332$). Therefore it was concluded that Vision partially mediated the relationship between (Innovativeness, Pro-activeness, and Risk-taking) and Efficiency.

The SPSS output was reflected in Appendix (J1)

4.4.4.8- Mediation of Vision on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Effectiveness:

Table (4.35):

Entrepreneurial Orientation Dimensions	Effectiveness	
	Model 1	Model 2
Innovativeness	.165**	.124
Pro-activeness	.222**	.107
Risk-taking	.282***	.212**
Vision		.426***
R ²	0.249	0.401
Adjusted R ²	.234	.385
ΔR^2	.249	.152
F change	16.17	36.86

*Note: Level of significant: * $p < 0.10$, ** $p < 0.05$, *** $p < 0$.*

- Table (4.35) has shown the results of the hierarchical regression testing the mediation effect of Vision on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Effectiveness.

- In model 1, the beta coefficient for Innovativeness, Pro-activeness and Risk taking was ($\beta=.165$), ($\beta= .222$), and ($\beta=.282$), respectively.
- In model 2, the beta value coefficient for Innovativeness, Pro-activeness, Risk taking was decreased to be ($\beta= .124$), ($\beta= .107$) ($\beta= .212$). Accordingly it was shown that Vision partially mediated the relationship between Risk-taking and Effectiveness, and fully mediated the relationship between (innovativeness, pro-activeness) and effectiveness.

The SPSS output was reflected in Appendix (J2)

4.4.4.9- Mediation of Vision on the Relationship between (Innovativeness, Pro-activeness, Risk-taking) and Success:

Table (4.36):

Entrepreneurial Orientation Dimensions	Success	
	Model 1	Model 2
Innovativeness	.267**	.243**
Pro-activeness	-.085	-.153**
Risk-taking	.383***	.342***
Vision		.250**
R ²	0.267	0.319
Adjusted R ²	0.252	.300
ΔR^2	0.267	.052
F change	17.71	11.12

*Note: Level of significant: * $p < 0.10$, ** $p < 0.05$, *** $p < 0$.*

- Table (4.36) showed the results of the hierarchical regression testing the mediation effect of Vision on the relationship between (Innovativeness, Pro-activeness, Risk-taking) and Success.

- In model 1, the beta coefficient for Innovativeness Pro-activeness and Risk taking was ($\beta=.267$), ($\beta= -.085$), and ($\beta=.383$), respectively.
- In model 2, the beta value coefficient for Innovativeness, Pro-activeness and Risk taking was decreased to be: ($\beta= .243$), ($\beta= -.153$), ($\beta= .342$). Hence it was clear that Vision partially mediated the relationship between (innovativeness, risk-taking) and Success, and fully mediated the relationship between pro-activeness and success.

The SPSS output was reflected in Appendix (J3)

Table (4.37): Summary of Hypotheses Testing Results for the Mediation of Organizational culture on the relationship between Entrepreneurial orientation and Organizational performance

No.	Items	Results
H4	There is a positive relationship between Entrepreneurial orientation and Organizational performance when mediated by organizational culture	Partially supported
H4.D1	There is a positive relationship between innovativeness and efficiency when mediated by consistency.	Partially supported
H4.D2	There is a positive relationship between innovativeness and effectiveness when mediated by consistency.	Fully supported
H4.D3	There is a positive relationship between innovativeness and success when mediated by consistency.	Partially supported
H4.D4	There is a positive relationship between innovativeness and efficiency when mediated by mission.	Partially supported
H4.D5	There is a positive relationship between innovativeness and effectiveness when mediated by mission.	Fully supported
H4.D6	There is a positive relationship between innovativeness and success when mediated by mission.	Partially supported

H4.D7	There is a positive relationship between innovativeness and efficiency when mediated by vision.	Partially supported
H4.D8	There is a positive relationship between innovativeness and effectiveness when mediated by vision.	Fully supported
H4.D9	There is a positive relationship between innovativeness and success when mediated by vision.	Partially supported
H4.D10	There is a positive relationship between pro-activeness and efficiency when mediated by consistency.	Partially supported
H4.D11	There is a positive relationship between pro-activeness and effectiveness when mediated by consistency.	Partially supported
H4.D12	There is a positive relationship between pro-activeness and success when mediated by consistency.	Partially supported
H4.D13	There is a positive relationship between pro-activeness and efficiency when mediated by mission.	Partially supported
H4.D14	There is a positive relationship between pro-activeness and effectiveness when mediated by mission.	Partially supported
H4.D15	There is a positive relationship between pro-activeness and success when mediated by mission.	Partially supported
H4.D16	There is a positive relationship between pro-activeness and efficiency when mediated by vision.	Partially supported
H4.D17	There is a positive relationship between pro-activeness and effectiveness when mediated by vision.	Fully supported
H4.D18	There is a positive relationship between pro-activeness and success when mediated by vision.	Fully supported
H4.D19	There is a positive relationship between risk-taking and efficiency when mediated by consistency.	Partially supported
H4.D20	There is a positive relationship between risk-taking and effectiveness when mediated by consistency.	Partially supported

H4.D21	There is a positive relationship between risk-taking and success when mediated by consistency.	Partially supported
H4.D22	There is a positive relationship between risk-taking and efficiency when mediated by mission.	Partially supported
H4.D23	There is a positive relationship between risk-taking and effectiveness when mediated by mission.	Partially supported
H4.D24	There is a positive relationship between risk-taking and success when mediated by mission.	Partially supported
H4.D25	There is a positive relationship between risk-taking and efficiency when mediated by vision.	Partially supported
H4.D26	There is a positive relationship between risk-taking and effectiveness when mediated by vision.	Partially supported
H4.D27	There is a positive relationship between risk-taking and success when mediated by vision.	Partially supported

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS

5.0: Chapter Overview:

This chapter is a conclusion chapter which includes the findings of the study, the discussion of the study results, Implications of the study, limitations and recommendations of the study, and finally the suggestions for future studies.

5.1: Findings of the study:

According to the information obtained from the business firms involved in this study, it transpired that:

1. Entrepreneurial orientation positively affects the performance of firms in Sudan.
2. Entrepreneurial orientation positively affects the culture of firms in Sudan.
3. Organizational culture has a positive impact on the performance of firms in Sudan.
4. Organizational culture mediates the relationship between entrepreneurial orientation and the performance of firms in Sudan.
5. Innovativeness positively affects the efficiency of firms in Sudan.
6. Innovativeness is related to firm's consistency and success.
7. Pro-activeness is related to firms' consistency and effectiveness.
8. Risk-taking is related to firms' consistency, effectiveness and success

9. Consistency positively affects the firms' efficiency, effectiveness and overall success.
10. Organizational culture is an important predictor for business growth.
11. Entrepreneurial firms are more liable to achieve performance than others.
12. Large firms in Sudan are more entrepreneurial than medium and small firms.
13. Most of the firms under study adopt creative techniques in the case of problem solving.
14. Most of the firms under study always look for new business opportunities.
15. Most of the firms have values that govern the way they do their work.
16. Most of the firms have a clear mission that identifies their business trends.
17. Most of the firms' leaders have a long-term view point.
20. Most of the firms are keen to satisfy their customers.
18. Most of the firms are satisfied with the return on their assets.
19. Most of the firms adopt marketing research methodology in order to achieve customer satisfaction
20. The majority of the samples are males, who represented 91.3% of the total study sample. The firms under study tend to employ more males than females in the managerial positions.
21. The majority of the sample, concerning age were the age group of (25 and less than 35); they accounted for 34.4% of the total sample.

22. The majority of the sample concerning their job were department managers, where they accounted for 47.3% of the total sample.
23. The majority of the sample regarding the respondent's educational level were Bachelor Degree holders, as they represented 49.3%.
24. The majority of firms under study were industrial; they accounted for 46% of the study sample.
25. The majority of firms under study were small firms; they accounted for 50.7% of the study sample.
26. Most of the firms under study were aged between 5-15; they represented 41.3% of the study sample.
27. The majority of the markets that companies deal with were local markets, as they represented 56.7% of the total sample. Hence, it is clear that the firms under study deal with local markets more than international markets.

5.2-Discussions of the results:

1-There is a positive relationship between Entrepreneurial orientation and organizational culture.

This result agrees with the study results of Davis et al., (2010), which showed a positive relationship between entrepreneurial orientation and firm performance, and the study results of Li et al.,(2009) which indicated that entrepreneurial orientation is positively related to firm performance.

This result also agrees with the study results of Arief et al.,(2013) which have found that entrepreneurial orientation is positively related to firm performance, and the results of Arshad et al.,(2014) which concluded that innovativeness, pro-activeness and risk taking have influence towards business performance.

It is also in agreement with Zhang and Zhang (2012) and Soares et al.,(2014) results, which have found that entrepreneurial orientation has a positive effect on business performance.

It agrees as well with the results of Hussain et al., (2015), which concluded that entrepreneurial orientation is positively linked to growth, competitive advantage and superior performance of SMEs.

2-There is a positive relationship between entrepreneurial orientation and organizational culture.

This result is consistent with the study results of Doosti et al., (2013), which have shown that there is a positive relationship between organizational culture and organizational entrepreneurship.

It is also consistent with the results of Shihab et al., (2011), which found a significant relationship between organizational culture and entrepreneurial orientation.

3-There is a positive relationship between organizational culture and organizational performance.

This result agrees with the study results of Lee and Yu (2000), which concluded that culture was found to affect a variety of organizational processes.

It also agrees with the results of M.A.O.AUKO (2003), which showed that there is a significant positive relationship between culture and organizational

performance, and the results of Ahmed and shafiq (2014), which have shown that Hofstede culture dimensions affect organizational performance.

It is also in agreement with the results of Yilmaz and Ergun (2008), which found that the four major organizational cultural traits (involvement, consistency, adaptability, and mission) positively affect firm performance, and the results of Ozigbo (2012), which concluded that organizational cultural practices have a strong significant relationship to the overall improvement of firm performance.

4-There is a positive relationship between entrepreneurial orientation and organizational performance when mediated by organizational culture.

This result is consistent with the findings of Shehu and Mahmood (2014), which have indicated that organizational culture was found to mediate the relationship between entrepreneurial orientation and firm performance.

5.3-Implications of the study:

5.3.1-Theoretical implications:

- Wales, Gupta and Mousa (2011) asserted that most entrepreneurial orientation studies were conducted in Europe and pointed out the need for further studies across different countries. Therefore our findings have contributed to the literature by explaining how entrepreneurial orientation can enhance firm performance in the context of developing countries.
- This study donates to the entrepreneurship literature by integrating the domains of entrepreneurial orientation and organizational culture research, and indicating how entrepreneurial orientation affects the culture of organizations.

- It also contributed to the literature by investigating the role of organizational culture in improving the organizational performance.
- Likewise it contributed by clarifying the role that organizational culture plays as a mediating variable; it is one of the very few studies which have examined the mediating role of the organizational culture on the relationship between entrepreneurial orientation and organizational performance and how it enhances the understanding of how entrepreneurial orientation affects firm performance.

5.3.2-Practical implications:

- From a practical perspective the results of this study can be used by managers and business practitioners to gain a deep understanding of the importance of entrepreneurial activities to their business growth.
- The study is expected to make managers and owners aware of the vital role played by Organizational culture in the link between entrepreneurial orientation and firm performance.
- The results of our study calim to provide organizations with a better understanding of the effects of their culture in promoting business performance.
- This study is expected to contribute to the literature by being a future reference in the field of strategic management.

5.4-Limitations and General Recommendations of the study:

Like all other works, this study is not without certain limitations. These may be summarized as follows:

- **Firstly:** A cross-sectional design was carried by the study to examine the relationship between Entrepreneurial orientation and Organizational performance. Cross-sectional design is confined to a specific point of time, thus it might not reflect the exact factual situation. A longitudinal investigation might provide further insights into the relationship between the variables, and thereby furnish more accurate results. Therefore our study recommends that future studies adopt a longitudinal design for the sake of more accuracy.
- **Secondly:** All firm sectors were included in the study. However concentrating on a specific sector (e.g., industrial, service, commercial or agricultural) may render more precise outcomes. The study thus recommends that such future studies be undertaken in the hope that more precision may be achieved.
- **Thirdly:** The number of the study sample may not have been large enough to study the proposed relationship. In a future study a larger sample may be more informative.

5.5-Special Recommendations:

Abiding by what has transpired to us from our investigations and data analysis, we suggest the following as recommendations:

1. Firms should put more emphasis on investment in advanced technology.
2. Firms should improve their innovative processes in order to become more efficient in their business operations.
3. Firms should consider the importance of risk management.
4. Firms should adopt consistent methods in their business operations in order to produce desirable outcomes.
5. Firms should consider profitability as a measure of success, in addition to other factors like customer satisfaction, employee incentives, internal and external environment, and the mission and vision of the business organizations.
6. Small and medium firms should put more emphasis on entrepreneurial activities to improve their performance.
7. Small and medium firms should get a better understanding of their culture.
8. Firms should consider the importance of pro-activeness for the sake of achieving desired results.
9. Firms should consider the importance of pro-activeness for fulfilling their mission and achieving overall success.
10. Firms should focus on increasing their return on equity to meet the aspirations of the shareholders.
11. Firms should understand their mission in order to accomplish efficient outcomes.
12. Every firm should make sure that its members are well acquainted with its goals.

13. Every firm should make sure that its vision is understood by its members.

14. Every firm should provide its employees with sufficient incentives that meet their satisfaction.

5.6-Suggestions for future studies:

- Many studies on the relationship between Entrepreneurial orientation and Organizational performance were carried in Europe and developed societies; few were conducted among developing nations. It is suggested that other studies be conducted in developing countries, especially the countries of the African continent.
- Studies comparing entrepreneurial orientation in developed countries with entrepreneurial Orientation in developing ones can be of great value.
- In most previous studies, entrepreneurial orientation was employed to represent the independent variable; our study calls for future studies on the mediating role of entrepreneurial orientation as well.
- Innovativeness, Pro-activeness, and Risk-taking are the dimensions of entrepreneurial orientation which have been used in most previous studies, thus the development of these dimensions should be taken into consideration.

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Appendix A.

English Questionnaire



Sudan University of science and Technology

College of Graduate Studies

Department of Business Administration

RESEARCH QUESTIONNAIRE

I am currently carrying out research on **The mediating role of organizational culture on the relationship between Entrepreneurial orientation and organizational performance: A study of business firms in Sudan.** I would appreciate your sincere response to the questions. To ensure accuracy and easy completion, the questions are simplified. Only closed questions are used. You are expected to tick (✓) on the questions as appropriate. Your response to these questions is an indication of your positive contribution to the economic development of our nation. All information supplied will be treated confidentially and with high respect.

Thank You for your cooperation.

PART I
SECTION A

Personal data:

1- Gender:

(a) Male (b) Female

2- Age:

(a) Less than 25 years (b) 25 and less than 35
(c) 35 and less than 45 (d) 45 and less than 55
(e) 55 years and above

3- Job:

(a) General Manager (b) Department manager
(c) Head of department

4- Marital status:

(a) Single (b) -married

5- Educational Qualifications:

(a) P.HD (b) Master degree
(c) Bachelor degree (d) Other

SECTION B

Information about the company:

1- Nature of the company's business:

- (a)Industrial (b)Commercial
(c)Service (d)Other

2- Number of people working in the company:

- (a)Less than 50 (b) 50-100
(c) 101-150 (d) More than 150

3- Age of the company:

- (a)Less than 5 years (b) 5-15 years
(c) More than 15 years

4- Markets that the company deal with:

- (a)Local
(b)-International
(c)Local and international

PART II

The questions in this part are designed using a simple format from (Strongly Agree) to (Strongly Disagree). (Agree). (Neutral). (Disagree). You are required to tick (✓) according to your choice among the alternatives provided.

SECTION A

Entrepreneurial Orientation:

No	Questions	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Innovation						
1	In our firm, there is a long-term commitment to invest in new technology.					
2	In our firm, there is a long-term commitment to invest in Research and Development.					
3	Our firm adopts creative techniques in its methods of operations.					
4	Our firm adopts creative solutions when it comes to problem solving.					
Pro-activeness						
1	Our firm is always looking for new business opportunities.					
2	Our firm tries to investigate about its customer's future needs.					
3	Our firm favors a strong emphasis on technological development.					

Risk taking						
1	Our firm invests in high risk projects.					
2	Our firm commits a large portion of its resources for future growth					
3	People in our firm take risks with new ideas.					
4	Our firm adopts the trial and error method in case of uncertainty in its future decisions.					

SECTION B

Organizational Culture:

No	Questions	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Consistency						
1	There is a characteristic management practices in our firm.					
2	There are values that govern the way we do our work.					
3	Our work in doing business is consistent and predictable.					
4	It is easy to coordinate projects across different departments of the company.					
5	We often have problems in reaching agreements on key issues.					
Adaptability						
1	The way we manage things is very flexible.					

2	Our firm takes into account any changes in the business environment in order to readjust its strategies .					
3	Our firm seeks customer's opinions regarding the future shape of the commodities produced/ services offered.					
4	All members of our firm have a deep understanding of their customer's wants and needs.					
5	In our firm, attempts to create change is usually met with resistance.					
Mission						
1	There is a clear mission that identifies our business trends.					
2	There is a clear strategy for the future.					
3	All members of our firm are well acquainted with its goals.					
4	The goals set are sometimes difficult to achieve.					
Vision						
1	The vision of our firm is understood by all the firm's members.					
2	Leaders have a long-term view point.					
3	Our vision creates excitement for our employees.					
4	We are able enough to respond to short-term demands.					

SECTION C

Firm Performance:

No	Questions	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Efficiency						
1	In our firm, the return on investment usually meets the expectations of the company's objectives .					
2	Our firm is usually satisfied with its return on equity.					
3	Our firm is usually satisfied with its return on assets.					
Effectiveness						
1	Our firm is always keen to satisfy its customers.					
2	Our firm has achieved considerable growth in its market share during the last five years.					
3	Our firm decreases its costs by rationalizing its operations.					
4	Our firm employs well-trained cadres.					
5	We have an adequate response to emergencies.					
Success						
1	In our firm profitability is the first measure for success.					
2	Our firm's customers tend to increase during the last five years.					

3	Our firm adopts marketing research methodology in order to achieve customer satisfaction.					
4	The financial incentives offered to our employees are sufficient to meet their satisfaction.					
5	The non-financial incentives offered to our employees are sufficient to meet their satisfaction.					

Appendix B.

Arabic Questionnaire

جامعة السودان للعلوم والتكنولوجيا

كلية الدراسات العليا

قسم إدارة الأعمال



الإستبيان

إنني أجري حالياً دراسة عن الدور الوسيط للثقافة التنظيمية في العلاقة بين التوجه الريادي وأداء المنظمة ((دراسة الشركات في السودان)). وإنني لأرجو شاكره عونكم لي بالرد على هذه الأسئلة، وهي أسئلة حرصت على أن تكون بسيطة. لذلك أرجو التكرم عند الإجابة عليها بوضع العلامة (✓). ونحن نؤكد أن كل ما تمدوننا به من معلومات باجابتكم الكريمة على هذه الأسئلة سيستخدم لأغراض البحث العلمي فقط. وسوف نتعامل معها بكل الإحترام والمحافظة على خصوصيتها وما تقتضيه من سرية، أتم محافظة.

ختاماً لكم شكري وتقديري على تعاونكم ،،،

الباحثة: سكينه موسى عبد الله حامد.

الجزء الأول

القسم (أ)

البيانات الشخصية:

1- النوع:

(ب) أنثى

(أ) ذكر

2- العمر:

(ب) 25 وأقل من 35 سنة

(أ) أقل من 25 سنة

(د) 45 وأقل من 55 سنة

(ج) 35 وأقل من 45 سنة

(هـ) 55 سنة فأكثر

3- الوظيفة:

(ب) مدير قسم

(أ) مدير عام

(ج) رئيس قسم

4- الحالة الإجتماعية:

(ب) غير متزوج

(أ) متزوج

5- المؤهلات العلمية:

- (أ) الدكتوراه
- (ب) الماجستير
- (ج) البكالوريوس
- (د) أي تخصصات أخرى

القسم (ب)

معلومات عن الشركة:

1- طبيعة عمل الشركة:

- (أ) صناعية
- (ب) تجارية
- (ج) خدمية
- (د) أخرى

2- عدد العاملين:

- (أ) أقل من 50 عامل
- (ب) 50 - 100 عامل
- (ج) 101 - 150 عامل
- (د) أكثر من 150 عامل

3- عمر الشركة:

- (أ) أقل من 5 سنوات
- (ب) 5 - 15 سنة
- (ج) أكثر من 15 سنة

4- الأسواق التي تتعامل معها الشركة:

(ب) صادر

(أ) محلية

(ج) محلية وصادر

الجزء الثاني

الأسئلة في هذا الجزء مبنية على الصيغة البسيطة من (موافق بشدة) (أوفق) (محايد) (لا أوافق) (لا أوافق)

(لا أوافق على الإطلاق)، مطلوب منك هنا أن تضع علامة (✓) لإجابتك المختارة بين الخيارات المعطاه.

القسم (أ)

التوجه الريادي:

الرقم	الأسئلة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
الإبتكار Innovativeness						
1	في شركتنا هناك إلتزام طويل الأجل للإستثمار في التقنية الجديدة					
2	في شركتنا هناك إلتزام طويل الأجل للإستثمار في البحوث والتنمية					
3	شركتنا تستخدم تقنية مبتكرة في مناهج عملياتها					
4	شركتنا تستخدم حلول مبتكرة فيما يختص بحل المشاكل					
5	تراعي شركتنا إضافة خطوط إنتاجية جديدة / خدمات جديدة					
الإستباقية Pro-activeness						
1	شركتنا تبحث باستمرار عن فرص جديدة للعمل					
2	تحاول الشركة أن تبحث عن إحتياجات عملائها المستقبلية					
3	تركز الشركة على أهمية التطور التكنولوجي					
المخاطرة Risk Taking						
1	شركتنا تستثمر في مشاريع عالية المخاطرة					
2	تخصص الشركة نسبة عالية من مواردها للنمو المستقبلي					
3	العاملين بالشركة دائماً يخاطرون بطرح أفكار جديدة					
4	تستخدم شركتنا منهج المحاولة والخطأ عند عدم تأكدها من القرارات المستقبلية					

القسم (ب)

الثقافة التنظيمية:

الرقم	السئلة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
Consistency الأنساق						
1	هناك ممارسات إدارية مميزة في شركتنا					
2	هناك قيم تحكم الطريقة التي نؤدي بها عملنا					
3	نهجنا في العمل ثابت ويمكن التنبؤ به					
4	من السهل تنسيق المشاريع من خلال أقسام الشركة المختلفة					
5	في كثير من الأحيان نواجه مشاكل في الوصول إلى إتفاق حول القضايا الأساسية					
Adaptability التلائم / التأقلم						
1	الطريقة التي ندير بها الأشياء مرنة جداً					
2	تضع الشركة في إعتبارها أي تغييرات في بيئة العمل بهدف إعادة ضبط استراتيجيتها					
3	تبحث الشركة عن آراء العملاء فيما يتعلق بطرح أشكال جديدة من منتجاتها / من خدماتها					
4	كل العاملين بالشركة لديهم فهم عميق لرغبات واحتياجات العملاء					
5	تواجه الشركة أحياناً مقاومة لمحاولات التغيير					
Mission الرسالة / المهمة						
1	هناك رسالة واضحة تحدد إتجاهات عمل الشركة					
2	هناك إستراتيجية واضحة للمستقبل					
3	كل العاملين بالشركة ملمون تماماً بأهدافها					
4	الأهداف الموضوعية تكون أحياناً صعبة التحقيق					
Vision الرؤية						
1	رؤية شركتنا مفهومة لكل العاملين بالشركة					
2	للقادة وجهة نظر طويلة المدى					
3	رؤيتنا محفزة للموظفين					
4	لدينا القدرة للإستجابة للطلبات قصيرة المدى					

القسم (ج)

أداء الشركة:

الرقم	الأسئلة	أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
Efficiency الكفاءة						
1	عائد الإستثمار في شركتنا غالباً يتلائم مع توقعات اهدافها					
2	شركتنا غالباً ما تكون راضية عن العائد على حقوق المساهمين					
3	شركتنا غالباً ما تكون راضية عن العائد على الأصول					
Effectiveness الفاعلية						
1	شركتنا دائماً تحرص على رضا عملائها					
2	حققت شركتنا نمواً معتبراً في حصتها السوقية خلال الخمسة سنوات الأخيرة					
3	تقوم شركتنا دائماً بتخفيض تكاليفها عن طريق ترشيد عملياتها					
4	توظف شركتنا كوادراً مدربة تدريباً جيداً					
5	لدينا إستجابة كافية لحالات الطوارئ					
Success النجاح						
1	الربحية هي القياس الأول للنجاح في شركتنا					
2	يميل عدد عملاء الشركة إلى الزيادة خلال الـ 5 سنوات الأخيرة					
3	الشركة تتبنى منهجية بحوث التسويق لتحقيق رضا العملاء					
4	الحوافز المادية التي تقدم للموظفين كافية لتحقيق رضائهم					
5	الحوافز المعنوية التي تقدم للموظفين كافية لتحقيق رضائهم					

ولكم الشكر

Appendix (C1)

KMO and Bartlett's Test:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.807
Bartlett's Test of Sphericity	Approx. Chi-Square	584.495
	df	66
	Sig.	.000

Total Variance Explained:

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.251	35.427	35.427	4.251	35.427	35.427	2.865	23.872	23.872
2	1.627	13.555	48.981	1.627	13.555	48.981	2.172	18.097	41.969
3	1.325	11.045	60.026	1.325	11.045	60.026	2.167	18.057	60.026
4	.918	7.652	67.678						
5	.700	5.830	73.509						
6	.649	5.405	78.914						
7	.615	5.126	84.040						
8	.504	4.203	88.242						
9	.402	3.347	91.589						
10	.390	3.249	94.838						
11	.359	2.989	97.827						
12	.261	2.173	100.000						

Extraction Method: Principal Component Analysis.

Factor Analysis:

Correlation Matrix:

	EO1	EO2	EO3	EO4	EO5	EO6	EO7	EO8	EO9	EO10	EO11	EO12
EO1	1.000	.560	.442	.470	.246	.232	.054	.384	.176	.328	.170	.157
EO2	.560	1.000	.518	.527	.322	.300	.127	.403	.234	.386	.208	.286
EO3	.442	.518	1.000	.592	.392	.261	.247	.393	.039	.166	.251	.160
EO4	.470	.527	.592	1.000	.404	.231	.300	.404	.184	.447	.260	.206
EO5	.246	.322	.392	.404	1.000	.257	.257	.324	-.018	.221	.231	.159
EO6	.232	.300	.261	.231	.257	1.000	.459	.540	.134	.197	.190	.167
EO7	.054	.127	.247	.300	.257	.459	1.000	.548	.011	.182	.253	.059
EO8	.384	.403	.393	.404	.324	.540	.548	1.000	.071	.407	.255	.422
EO9	.176	.234	.039	.184	-.018	.134	.011	.071	1.000	.367	1.000	.367
EO10	.328	.386	.166	.447	.221	.197	.182	.407	.367	1.000	.385	.385
EO11	.170	.208	.251	.260	.231	.190	.253	.255	.250	.385	1.000	.435
EO12	.157	.286	.160	.206	.159	.167	.059	.122	.422	.423	.435	1.000
EO1		.000	.000	.000	.001	.002	.258	.000	.015	.000	.019	.028
EO2	.000		.000	.000	.000	.000	.061	.000	.002	.000	.005	.000
EO3	.000	.000		.000	.000	.001	.001	.000	.319	.021	.001	.025
EO4	.000	.000	.000		.000	.002	.000	.000	.012	.000	.001	.006
EO5	.001	.000	.000	.000		.001	.001	.000	.414	.003	.002	.026
EO6	.002	.000	.001	.002	.001		.000	.000	.052	.008	.010	.020
EO7	.258	.061	.001	.000	.001	.000		.000	.446	.013	.001	.237
EO8	.000	.000	.000	.000	.000	.000	.000		.195	.000	.001	.069
EO9	.015	.002	.319	.012	.414	.052	.446	.195		.000	.001	.000
EO10	.000	.000	.021	.000	.003	.008	.013	.000	.000		.000	.000
EO11	.019	.005	.001	.001	.002	.010	.001	.001	.001	.000		.000
EO12	.028	.000	.025	.006	.026	.020	.237	.069	.000	.000	.000	

Sig. (1-tailed)

Correlation

Appendix (C2)

KMO and Bartlett's Test:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.763
Bartlett's Test of Sphericity	Approx. Chi-Square	792.578
	Df	105
	Sig.	.000

Total Variance Explained:

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.850	32.336	32.336	4.850	32.336	32.336	3.349	22.328	22.328
2	1.723	11.489	43.824	1.723	11.489	43.824	2.423	16.157	38.484
3	1.337	8.912	52.736	1.337	8.912	52.736	2.002	13.344	51.829
4	1.279	8.524	61.261	1.279	8.524	61.261	1.415	9.432	61.261
5	.964	6.426	67.687						
6	.766	5.109	72.796						
7	.745	4.965	77.761						
8	.697	4.649	82.411						
9	.574	3.826	86.237						
10	.468	3.117	89.354						
11	.466	3.109	92.463						
12	.373	2.490	94.953						
13	.299	1.996	96.949						
14	.260	1.734	98.683						
15	.198	1.317	100.000						

Extraction Method: Principal Component Analysis.

Factor Analysis:

Correlation Matrix:

		Correlation														
		OC1	OC2	OC3	OC4	OC5	OC6	OC7	OC8	OC9	OC10	OC11	OC12	OC13	OC14	OC15
OC1	1.000	.568	.486	.248	.283	.299	.305	.228	-.065	.147	.199	.114	-.080	.285	.204	
OC2	.568	1.000	.530	.401	.319	.541	.420	.307	.200	.139	.040	.199	.147	.299	.180	.210
OC3	.486	.530	1.000	.415	.348	.376	.264	.155	.139	.264	.314	.370	.288	.307	.155	.233
OC4	.248	.401	.415	1.000	.381	.394	.314	.233	.288	.264	.370	.370	.288	.307	.155	.233
OC5	.283	.319	.348	.381	1.000	.429	.370	.288	.288	.370	.370	.370	.288	.307	.155	.233
OC6	.299	.541	.376	.394	.429	1.000	.500	.393	1.000	.150	.216	.389	.287	.097	.399	.325
OC7	.305	.420	.264	.314	.370	.500	1.000	.393	.393	.150	.216	.389	.287	.097	.399	.325
OC8	.228	.307	.155	.233	.288	.372	.393	1.000	.289	.289	.174	.607	.607	.004	.427	.025
OC9	-.065	.200	.139	.040	.199	.174	.150	.289	1.000	.076	-.031	-.037	.286	.103	.325	.149
OC10	.147	.299	.180	.210	.276	.363	.216	.174	.076	1.000	.716	.504	.191	.311	.311	.287
OC11	.199	.286	.260	.347	.371	.389	.179	.275	-.031	.716	1.000	.607	.607	.339	.339	.237
OC12	.114	.207	.240	.284	.211	.287	.111	.359	-.037	.504	.607	1.000	.240	.427	.427	.313
OC13	-.080	.116	.080	.103	.032	.097	.109	.004	.286	.191	.265	.240	1.000	.025	.025	.062
OC14	.285	.342	.223	.189	.265	.399	.164	.325	.103	.311	.339	.427	.025	1.000	.585	.585
OC15	.204	.173	.133	.098	.174	.325	.171	.259	.149	.287	.237	.313	.062	.585	1.000	1.000
OC1		.000	.000	.001	.000	.000	.000	.002	.215	.037	.007	.083	.166	.000	.006	.006
OC2	.000		.000	.000	.000	.000	.000	.000	.007	.000	.005	.005	.078	.000	.017	.017
OC3	.000	.000		.000	.000	.000	.001	.029	.045	.014	.001	.002	.164	.003	.052	.052
OC4	.001	.000	.000		.000	.000	.000	.002	.316	.005	.000	.000	.106	.010	.118	.118
OC5	.000	.000	.000	.000		.000	.000	.000	.007	.000	.005	.005	.350	.001	.016	.016
OC6	.000	.000	.000	.000	.000		.000	.000	.016	.000	.000	.000	.120	.000	.000	.000
OC7	.000	.000	.001	.000	.000	.000		.000	.033	.004	.014	.088	.091	.023	.018	.018
OC8	.002	.000	.029	.002	.000	.000	.000		.000	.017	.000	.000	.479	.000	.001	.001
OC9	.215	.007	.045	.316	.007	.016	.033	.000		.179	.353	.328	.000	.105	.034	.034
OC10	.037	.000	.014	.005	.000	.000	.004	.017	.179		.000	.000	.010	.000	.000	.000
OC11	.007	.000	.001	.000	.000	.000	.014	.000	.353	.000		.000	.001	.000	.002	.002
OC12	.083	.005	.002	.000	.005	.000	.088	.000	.328	.000	.000		.002	.000	.000	.000
OC13	.166	.078	.164	.106	.350	.120	.091	.479	.000	.010	.001	.002		.381	.224	.224
OC14	.000	.000	.003	.010	.001	.000	.023	.000	.105	.000	.000	.000	.381		.000	.000
OC15	.006	.017	.052	.118	.016	.000	.018	.001	.034	.000	.002	.000	.224	.000		.000

Sig. (1-tailed)

Appendix (C3)

KMO and Bartlett's Test:

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.841
Bartlett's Test of Sphericity	Approx. Chi-Square	762.563
	df	78
	Sig.	.000

Total Variance Explained:

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.062	38.942	38.942	5.062	38.942	38.942	3.045	23.426	23.426
2	1.573	12.099	51.041	1.573	12.099	51.041	2.536	19.507	42.932
3	1.276	9.812	60.853	1.276	9.812	60.853	2.330	17.920	60.853
4	.805	6.191	67.044						
5	.789	6.071	73.115						
6	.658	5.063	78.178						
7	.605	4.650	82.829						
8	.552	4.245	87.073						
9	.468	3.603	90.676						
10	.381	2.932	93.609						
11	.338	2.598	96.206						
12	.296	2.280	98.486						
13	.197	1.514	100.000						

Extraction Method: Principal Component Analysis.

Appendix (D1)

Reliability:

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	EO1	4.2133	.9166	150.0
2.	EO2	3.8467	1.0975	150.0
3.	EO3	4.2133	.9311	150.0
4.	EO4	4.2467	.8894	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	16.5200	9.4191	3.0690	4

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
EO1	12.3067	5.9322	.5928	.7762
EO2	12.6733	5.0000	.6549	.7506
EO3	12.3067	5.7577	.6254	.7612
EO4	12.2733	5.8510	.6454	.7536

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 4

Alpha = .8092

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	EO9	3.3067	1.3359	150.0
2.	EO10	3.9000	1.0084	150.0
3.	EO11	4.0600	.9500	150.0
4.	EO12	3.5600	1.2178	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	14.8267	10.9630	3.3110	4

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
EO9	11.5200	6.1842	.4507	.6748
EO10	10.9267	7.1825	.5114	.6292
EO11	10.7667	7.6834	.4514	.6636
EO12	11.2667	6.0626	.5699	.5836

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 4

Alpha = .7025

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	EO6	4.3867	.8731	150.0
2.	EO7	4.3533	.7784	150.0
3.	EO8	4.1733	.9250	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	12.9133	4.5092	2.1235	3

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
EO6	8.5267	2.2510	.5711	.7014
EO7	8.5600	2.4897	.5755	.7003
EO8	8.7400	1.9923	.6362	.6266

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 3

Alpha = .7603

Appendix (D2)

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	OC1	4.1200	.9548	150.0
2.	OC2	4.2267	.8525	150.0
3.	OC3	3.9800	.9157	150.0
4.	OC4	4.0267	.8666	150.0
5.	OC5	4.0467	.9717	150.0
6.	OC6	4.2067	.8298	150.0
7.	OC7	4.0800	.9798	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	28.6867	19.2636	4.3890	7

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
OC1	24.5667	14.5962	.5148	.7964
OC2	24.4600	14.1964	.6756	.7694
OC3	24.7067	14.4234	.5753	.7855
OC4	24.6600	15.1118	.5048	.7974
OC5	24.6400	14.6078	.4997	.7994
OC6	24.4800	14.6942	.6100	.7809
OC7	24.6067	14.5087	.5084	.7980

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 7

Alpha = .8142

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	OC10	4.2200	.9615	150.0
2.	OC11	4.1400	.9695	150.0
3.	OC12	4.0067	.9796	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	12.3667	6.2606	2.5021	3

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
OC10	8.1467	3.0522	.6799	.7552
OC11	8.2267	2.8342	.7617	.6704
OC12	8.3600	3.1984	.6000	.8341

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 3

Alpha = .8234

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	OC14	4.0600	1.0570	150.0
2.	OC15	4.0400	.9404	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	8.1000	3.1644	1.7789	2

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
OC14	4.0400	.8843	.5850	.
OC15	4.0600	1.1172	.5850	.

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 2

Alpha = .7350

Appendix (D3)

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	OP4	4.3400	.8579	150.0
2.	OP5	4.2333	.9226	150.0
3.	OP6	4.0533	.9609	150.0
4.	OP7	4.1133	.8711	150.0
5.	OP8	4.0400	.9040	150.0
6.	OP9	3.9800	.9657	150.0
7.	OP10	4.1933	1.0013	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	28.9533	19.4005	4.4046	7

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
OP4	24.6133	15.4602	.4750	.7897
OP5	24.7200	14.3372	.6029	.7672
OP6	24.9000	15.2852	.4248	.7997
OP7	24.8400	14.9944	.5406	.7788
OP8	24.9133	14.4153	.6072	.7667
OP9	24.9733	14.0664	.6077	.7658
OP10	24.7600	14.4655	.5163	.7836

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 7

Alpha = .8045

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	OP1	3.9067	.9717	150.0
2.	OP2	3.8200	1.0171	150.0
3.	OP3	3.8600	.9764	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	11.5867	6.9018	2.6271	3

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
OP1	7.6800	3.4942	.6781	.8622
OP2	7.7667	3.1600	.7487	.7989
OP3	7.7267	3.1798	.7950	.7554

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 3

Alpha = .8627

Method 1 (space saver) will be used for this analysis:

Reliability Analysis - Scale (Alpha):

		Mean	Std. Dev.	Cases
1.	OP11	4.1733	1.0017	150.0
2.	OP12	3.9133	1.1407	150.0
3.	OP13	3.9533	1.1489	150.0

Statistics for	Mean	Variance	Std. Dev.	Variables
Scale	12.0400	7.4212	2.7242	3

Item-total Statistics:

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item – Total Correlation	Alpha if Item Deleted
OP11	7.8667	4.2103	.5371	.7549
OP12	8.1267	3.3731	.6556	.6225
OP13	8.0867	3.4622	.6172	.6688

Reliability Coefficients:

Number of Cases = 150.0

Number of Items = 3

Alpha = .7674

Appendix (E1)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	PR, RS, IN(a)	.	Enter

a All requested variables entered.

b Dependent Variable: EFE

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.499(a)	.249	.234	3.39498

a Predictors: (Constant), PR, RS, IN

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	559.328	3	186.443	16.176	.000(a)
	Residual	1682.784	146	11.526		
	Total	2242.112	149			

a Predictors: (Constant), PR, RS, IN

b Dependent Variable: EFE

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.636	2.059		5.652	.000
	IN	.249	.122	.165	2.044	.043
	RS	.414	.114	.282	3.623	.000
	PR	.531	.185	.222	2.862	.005

a Dependent Variable: EFE

Appendix (E2)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	PR, RS, IN(a)	.	Enter

a All requested variables entered.

b Dependent Variable: EFI

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469(a)	.220	.204	1.83000

a Predictors: (Constant), PR, RS, IN

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	138.144	3	46.048	13.750	.000(a)
	Residual	488.941	146	3.349		
	Total	627.084	149			

a Predictors: (Constant), PR, RS, IN

b Dependent Variable: EFI

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.999	1.110		2.703	.008
	IN	.083	.066	.103	1.260	.210
	RS	.290	.062	.374	4.713	.000
	PR	.137	.100	.108	1.367	.174

a Dependent Variable: EFI

Appendix (E3)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	PR, RS, IN(a)	.	Enter

a All requested variables entered.

b Dependent Variable: SU

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517(a)	.267	.252	1.83257

a Predictors: (Constant), PR, RS, IN

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	178.483	3	59.494	17.716	.000(a)
	Residual	490.314	146	3.358		
	Total	668.797	149			

a Predictors: (Constant), PR, RS, IN

b Dependent Variable: SU

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.863	1.111		3.476	.001
	IN	.221	.066	.267	3.360	.001
	RS	.306	.062	.383	4.968	.000
	PR	-.111	.100	-.085	-1.109	.269

a Dependent Variable: SU

Appendix (F1)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	PR, RS, IN(a)	.	Enter

a All requested variables entered.

b Dependent Variable: CO

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.484(a)	.235	.219	3.43117

a Predictors: (Constant), PR, RS, IN

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	526.642	3	175.547	14.911	.000(a)
	Residual	1718.848	146	11.773		
	Total	2245.490	149			

a Predictors: (Constant), PR, RS, IN

b Dependent Variable: CO

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.424	2.081		5.490	.000
	IN	.295	.123	.195	2.399	.018
	RS	.247	.115	.169	2.144	.034
	PR	.674	.187	.282	3.595	.000

a Dependent Variable: CO

Appendix (F2)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	PR, RS, IN(a)	.	Enter

a All requested variables entered.

b Dependent Variable: MS

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.330(a)	.109	.091	1.90872

a Predictors: (Constant), PR, RS, IN

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.965	3	21.655	5.944	.001(a)
	Residual	531.910	146	3.643		
	Total	596.875	149			

a Predictors: (Constant), PR, RS, IN

b Dependent Variable: MS

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.416	1.157		4.679	.000
	IN	.197	.068	.253	2.884	.005
	RS	.071	.064	.095	1.113	.268
	PR	.077	.104	.063	.739	.461

a Dependent Variable: MS

Appendix (F3)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	PR, RS, IN(a)	.	Enter

a All requested variables entered.

b Dependent Variable: VS

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.404(a)	.163	.146	1.65775

a Predictors: (Constant), PR, RS, IN

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.104	3	26.035	9.474	.000(a)
	Residual	401.229	146	2.748		
	Total	479.333	149			

a Predictors: (Constant), PR, RS, IN

b Dependent Variable: VS

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.259	1.005		4.237	.000
	IN	.067	.059	.096	1.134	.259
	RS	.111	.056	.165	1.999	.047
	PR	.298	.091	.270	3.293	.001

a Dependent Variable: VS

Appendix (G1)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	VS, MS, CO(a)	.	Enter

a All requested variables entered.

b Dependent Variable: EFE

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.646(a)	.417	.405	2.99164

a Predictors: (Constant), VS, MS, CO

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	935.421	3	311.807	34.839	.000(a)
	Residual	1306.690	146	8.950		
	Total	2242.112	149			

a Predictors: (Constant), VS, MS, CO

b Dependent Variable: EFE

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.329	1.774		4.696	.000
	CO	.185	.075	.185	2.470	.015
	MS	.533	.141	.275	3.787	.000
	VS	.756	.161	.350	4.692	.000

a Dependent Variable: EFE

Appendix (G2)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	VS, MS, CO(a)	.	Enter

a All requested variables entered.

b Dependent Variable: EFI

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.430(a)	.185	.168	1.87141

a Predictors: (Constant), VS, MS, CO

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.768	3	38.589	11.019	.000(a)
	Residual	511.316	146	3.502		
	Total	627.084	149			

a Predictors: (Constant), VS, MS, CO

b Dependent Variable: EFI

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.004	1.109		2.707	.008
	CO	.072	.047	.136	1.532	.128
	MS	.138	.088	.135	1.566	.119
	VS	.301	.101	.263	2.984	.003

a Dependent Variable: EFI

Appendix (G3)

Regression:

Variables Entered/Removed (b):

Model	Variables Entered	Variables Removed	Method
1	VS, MS, CO(a)	.	Enter

a All requested variables entered.

b Dependent Variable: SU

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.466(a)	.217	.201	1.89335

a Predictors: (Constant), VS, MS, CO

ANOVA (b):

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	145.418	3	48.473	13.522	.000(a)
	Residual	523.379	146	3.585		
	Total	668.797	149			

a Predictors: (Constant), VS, MS, CO

b Dependent Variable: SU

Coefficients (a):

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.358	1.122		2.101	.037
	CO	.140	.047	.256	2.957	.004
	MS	.179	.089	.169	2.007	.047
	VS	.188	.102	.159	1.840	.068

a Dependent Variable: SU

Appendix (H1)

Regression 1:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	COb	.	Enter

a. Dependent Variable: *EFI*

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.469a	.220	.204	1.83000	.220	13.750	3
2	.489b	.239	.218	1.81410	.019	3.571	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.061

a. Predictors: (Constant), *RS*, *PR*, *IN*

b. Predictors: (Constant), *RS*, *PR*, *IN*, *CO*

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	138.144	3	46.048	13.750	.000b
	Residual	488.941	146	3.349		
	Total	627.084	149			
2	Regression	149.894	4	37.474	11.387	.000c
	Residual	477.190	145	3.291		
	Total	627.084	149			

a. Dependent Variable: *EFI*

b. Predictors: (Constant), *RS*, *PR*, *IN*

c. Predictors: (Constant), *RS*, *PR*, *IN*, *CO*

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	2.999	1.110		2.703	.008	.806
	IN	.083	.066	.103	1.260	.210	-.047
	PR	.137	.100	.108	1.367	.174	-.061
	RS	.290	.062	.374	4.713	.000	.168
2	Constant	2.055	1.208		1.701	.091	-.333
	IN	.058	.066	.073	.879	.381	-.073
	PR	.081	.103	.064	.783	.435	-.123
	RS	.270	.062	.348	4.352	.000	.147
	CO	.083	.044	.156	1.890	.061	-.004

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	5.193
	IN	.212
	PR	.334
	RS	.412
2	Constant	4.443
	IN	.189
	PR	.285
	RS	.392
	CO	.169

a. Dependent Variable: EFI

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	CO	.156b	1.890	.061	.155	.765

a. Dependent Variable: EFI

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (H2)

Regression 2:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, IN ^b	.	Enter
2	CO ^b	.	Enter

a. Dependent Variable: EFE

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.499 ^a	.249	.234	3.39498	.249	16.176	3
2	.565 ^b	.320	.301	3.24348	.070	14.958	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146 ^a	.000
2	145 ^b	.000

a. Predictors: (Constant), RS, PR, IN

b. Predictors: (Constant), RS, PR, IN, CO

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	559.328	3	186.443	16.176	.000b
	Residual	1682.784	146	11.526		
	Total	2242.112	149			
2	Regression	716.684	4	179.171	17.031	.000c
	Residual	1525.428	145	10.520		
	Total	2242.112	149			

a. Dependent Variable: EFE

b. Predictors: (Constant), RS, PR, IN

c. Predictors: (Constant), RS, PR, IN, CO

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	11.636	2.059		5.652	.000	7.567
	IN	.249	.122	.165	2.044	.043	.008
	PR	.531	.185	.222	2.862	.005	.164
	RS	.414	.114	.282	3.623	.000	.188
2	Constant	8.180	2.160		3.786	.000	3.910
	IN	.159	.119	.106	1.346	.181	-.075
	PR	.327	.185	.137	1.769	.079	-.038
	RS	.339	.111	.231	3.058	.003	.120
	CO	.303	.078	.303	3.867	.000	.148

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	15.705
	IN	.489
	PR	.897
	RS	.639
2	Constant	12.450
	IN	.394
	PR	.692
	RS	.558
	CO	.457

a. Dependent Variable: EFE

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	CO	.303b	3.867	.000	.306	.765

a. Dependent Variable: EFE

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (H3)

Regression 3:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	COb	.	Enter

a. Dependent Variable: SU

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.517a	.267	.252	1.83257	.267	17.716	3
2	.575b	.331	.312	1.75683	.064	13.860	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.000

a. Predictors: (Constant), RS, PR, IN

b. Predictors: (Constant), RS, PR, IN, CO

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	178.483	3	59.494	17.716	.000b
	Residual	490.314	146	3.358		
	Total	668.797	149			
2	Regression	221.262	4	55.315	17.922	.000c
	Residual	447.535	145	3.086		
	Total	668.797	149			

a. Dependent Variable: SU

b. Predictors: (Constant), RS, PR, IN

c. Predictors: (Constant), RS, PR, IN, CO

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	3.863	1.111		3.476	.001	1.666
	IN	.221	.066	.267	3.360	.001	.091
	PR	-.111	.100	-.085	-1.109	.269	-.309
	RS	.306	.062	.383	4.968	.000	.184
2	Constant	2.061	1.170		1.761	.080	-.252
	IN	.174	.064	.211	2.713	.007	.047
	PR	-.217	.100	-.167	-2.170	.032	-.415
	RS	.267	.060	.334	4.453	.000	.149
	CO	.158	.042	.289	3.723	.000	.074

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	6.059
	IN	.350
	PR	.087
	RS	.428
2	Constant	4.373
	IN	.301
	PR	-.019
	RS	.386
	CO	.242

a. Dependent Variable: SU

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	CO	.289b	3.723	.000	.295	.765

a. Dependent Variable: SU

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (I1)

Regression 1:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	MSb	.	Enter

a. Dependent Variable: *EFI*

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.469a	.220	.204	1.83000	.220	13.750	3
2	.505b	.255	.234	1.79534	.034	6.693	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.011

a. Predictors: (Constant), *RS*, *PR*, *IN*

b. Predictors: (Constant), *RS*, *PR*, *IN*, *MS*

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	138.144	3	46.048	13.750	.000b
	Residual	488.941	146	3.349		
	Total	627.084	149			
2	Regression	159.716	4	39.929	12.388	.000c
	Residual	467.369	145	3.223		
	Total	627.084	149			

a. Dependent Variable: *EFI*

b. Predictors: (Constant), *RS*, *PR*, *IN*

c. Predictors: (Constant), *RS*, *PR*, *IN*, *MS*

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	2.999	1.110		2.703	.008	.806
	IN	.083	.066	.103	1.260	.210	-.047
	PR	.137	.100	.108	1.367	.174	-.061
	RS	.290	.062	.374	4.713	.000	.168
2	Constant	1.909	1.168		1.635	.104	-.399
	IN	.043	.066	.054	.649	.517	-.088
	PR	.121	.098	.096	1.233	.219	-.073
	RS	.276	.061	.356	4.547	.000	.156
	MS	.201	.078	.196	2.587	.011	.048

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	5.193
	IN	.212
	PR	.334
	RS	.412
2	Constant	4.216
	IN	.174
	PR	.315
	RS	.396
	MS	.355

a. Dependent Variable: EFI

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	MS	.196b	2.587	.011	.210	.891

a. Dependent Variable: EFI

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (I2)

Regression 2:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	MSb	.	Enter

a. Dependent Variable: EFE

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.499a	.249	.234	3.39498	.249	16.176	3
2	.624b	.389	.372	3.07413	.139	33.067	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.000

a. Predictors: (Constant), RS, PR, IN

b. Predictors: (Constant), RS, PR, IN, MS

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	559.328	3	186.443	16.176	.000b
	Residual	1682.784	146	11.526		
	Total	2242.112	149			
2	Regression	871.818	4	217.955	23.063	.000c
	Residual	1370.293	145	9.450		
	Total	2242.112	149			

a. Dependent Variable: EFE

b. Predictors: (Constant), RS, PR, IN

c. Predictors: (Constant), RS, PR, IN, MS

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	11.636	2.059		5.652	.000	7.567
	IN	.249	.122	.165	2.044	.043	.008
	PR	.531	.185	.222	2.862	.005	.164
	RS	.414	.114	.282	3.623	.000	.188
2	Constant	7.485	1.999		3.744	.000	3.534
	IN	.098	.113	.065	.861	.391	-.126
	PR	.472	.168	.198	2.804	.006	.139
	RS	.359	.104	.245	3.457	.001	.154
	MS	.766	.133	.395	5.750	.000	.503

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	15.705
	IN	.489
	PR	.897
	RS	.639
2	Constant	11.436
	IN	.321
	PR	.804
	RS	.564
	MS	1.030

a. Dependent Variable: EFE

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	MS	.395b	5.750	.000	.431	.891

a. Dependent Variable: EFE

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (I3)

Regression 3:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	MSb	.	Enter

a. Dependent Variable: SU

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.517a	.267	.252	1.83257	.267	17.716	3
2	.558b	.311	.292	1.78217	.045	9.375	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.003

a. Predictors: (Constant), RS, PR, IN

b. Predictors: (Constant), RS, PR, IN, MS

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	178.483	3	59.494	17.716	.000b
	Residual	490.314	146	3.358		
	Total	668.797	149			
2	Regression	208.258	4	52.064	16.392	.000c
	Residual	460.539	145	3.176		
	Total	668.797	149			

a. Dependent Variable: *SU*

b. Predictors: (Constant), *RS*, *PR*, *IN*

c. Predictors: (Constant), *RS*, *PR*, *IN*, *MS*

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	3.863	1.111		3.476	.001	1.666
	IN	.221	.066	.267	3.360	.001	.091
	PR	-.111	.100	-.085	-1.109	.269	-.309
	RS	.306	.062	.383	4.968	.000	.184
2	Constant	2.581	1.159		2.227	.027	.291
	IN	.174	.066	.211	2.650	.009	.044
	PR	-.129	.098	-.099	-1.325	.187	-.322
	RS	.289	.060	.362	4.807	.000	.170
	MS	.237	.077	.224	3.062	.003	.084

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	6.059
	IN	.350
	PR	.087
	RS	.428
2	Constant	4.872
	IN	.304
	PR	.064
	RS	.408
	MS	.389

a. Dependent Variable: SU

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	MS	.224b	3.062	.003	.246	.891

a. Dependent Variable: SU

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (J1)

Regression 1:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	VSb	.	Enter

a. Dependent Variable: *EFI*

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.469a	.220	.204	1.83000	.220	13.750	3
2	.527b	.277	.257	1.76800	.057	11.419	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.001

a. Predictors: (Constant), *RS*, *PR*, *IN*

b. Predictors: (Constant), *RS*, *PR*, *IN*, *VS*

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	138.144	3	46.048	13.750	.000b
	Residual	488.941	146	3.349		
	Total	627.084	149			
2	Regression	173.839	4	43.460	13.903	.000c
	Residual	453.245	145	3.126		
	Total	627.084	149			

a. Dependent Variable: *EFI*

b. Predictors: (Constant), *RS*, *PR*, *IN*

c. Predictors: (Constant), *RS*, *PR*, *IN*, *VS*

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	2.999	1.110		2.703	.008	.806
	IN	.083	.066	.103	1.260	.210	-.047
	PR	.137	.100	.108	1.367	.174	-.061
	RS	.290	.062	.374	4.713	.000	.168
2	Constant	1.729	1.136		1.522	.130	-.517
	IN	.063	.064	.078	.983	.327	-.063
	PR	.048	.100	.038	.477	.634	-.150
	RS	.257	.060	.332	4.262	.000	.138
	VS	.298	.088	.261	3.379	.001	.124

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	5.193
	IN	.212
	PR	.334
	RS	.412
2	Constant	3.975
	IN	.188
	PR	.246
	RS	.376
	VS	.473

a. Dependent Variable: EFI

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	VS	.261b	3.379	.001	.270	.837

a. Dependent Variable: EFI

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (J2)

Regression 2:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	VSb	.	Enter

a. Dependent Variable: EFE

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.499a	.249	.234	3.39498	.249	16.176	3
2	.634b	.402	.385	3.04187	.152	36.864	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.000

a. Predictors: (Constant), RS, PR, IN

b. Predictors: (Constant), RS, PR, IN, VS

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	559.328	3	186.443	16.176	.000b
	Residual	1682.784	146	11.526		
	Total	2242.112	149			
2	Regression	900.431	4	225.108	24.328	.000c
	Residual	1341.680	145	9.253		
	Total	2242.112	149			

a. Dependent Variable: EFE

b. Predictors: (Constant), RS, PR, IN

c. Predictors: (Constant), RS, PR, IN, VS

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	11.636	2.059		5.652	.000	7.567
	IN	.249	.122	.165	2.044	.043	.008
	PR	.531	.185	.222	2.862	.005	.164
	RS	.414	.114	.282	3.623	.000	.188
2	Constant	7.709	1.955		3.944	.000	3.845
	IN	.187	.109	.124	1.705	.090	-.030
	PR	.256	.172	.107	1.485	.140	-.085
	RS	.311	.104	.212	2.998	.003	.106
	VS	.922	.152	.426	6.072	.000	.622

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	15.705
	IN	.489
	PR	.897
	RS	.639
2	Constant	11.573
	IN	.403
	PR	.596
	RS	.516
	VS	1.222

a. Dependent Variable: EFE

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	VS	.426b	6.072	.000	.450	.837

a. Dependent Variable: EFE

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (J3)

Regression 3:

Variables Entered/Removed:

Model	Variables Entered	Variables Removed	Method
1	RS, PR, INb	.	Enter
2	VSb	.	Enter

a. Dependent Variable: SU

b. All requested variables entered.

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.517a	.267	.252	1.83257	.267	17.716	3
2	.565b	.319	.300	1.77218	.052	11.120	1

Model Summary:

Model	Change Statistics	
	df2	Sig. F Change
1	146a	.000
2	145b	.001

a. Predictors: (Constant), RS, PR, IN

b. Predictors: (Constant), RS, PR, IN, VS

ANOVA:

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	178.483	3	59.494	17.716	.000b
	Residual	490.314	146	3.358		
	Total	668.797	149			
2	Regression	213.406	4	53.352	16.988	.000c
	Residual	455.391	145	3.141		
	Total	668.797	149			

a. Dependent Variable: SU

b. Predictors: (Constant), RS, PR, IN

c. Predictors: (Constant), RS, PR, IN, VS

Coefficients:

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B
		B	Std. Error	Beta	t	Sig.	Lower Bound
1	Constant	3.863	1.111		3.476	.001	1.666
	IN	.221	.066	.267	3.360	.001	.091
	PR	-.111	.100	-.085	-1.109	.269	-.309
	RS	.306	.062	.383	4.968	.000	.184
2	Constant	2.606	1.139		2.288	.024	.355
	IN	.201	.064	.243	3.148	.002	.075
	PR	-.199	.100	-.153	-1.983	.049	-.397
	RS	.273	.060	.342	4.524	.000	.154
	VS	.295	.088	.250	3.335	.001	.120

Coefficients:

Model		95.0% Confidence Interval for B
		Upper Bound
1	Constant	6.059
	IN	.350
	PR	.087
	RS	.428
2	Constant	4.857
	IN	.327
	PR	-.001
	RS	.393
	VS	.470

a. Dependent Variable: SU

Excluded Variables:

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	VS	.250b	3.335	.001	.267	.837

a. Dependent Variable: SU

b. Predictors in the Model: (Constant), RS, PR, IN

Appendix (K)

List of Arbitrators

Prof. Ahmad Abu Sin, Sudan University of Science and Technology

Prof. Ali Abdallah Alhakim, Sudan University of Science and Technology

Prof. Bakri Altayeb Musa, University of Science and Technology

Dr. Siddig Balal, Sudan University of Science and Technology