COLLEGE OF BUSINESS AND ECONOMIC

GRADUATE PROGRAM OF MBA

THE RELATIONSHIP BETWEEN CORPORATE ENTREPRENEURSHIP AND STRATEGIC MANAGEMENT: THE CASE OF FOOD PROCESSING FIRMS IN ADDIS ABABA

A Thesis Submitted to the Department of Management in Partial Fulfillment of the Requirements for the Degree of Master in Business Administration.

By

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Declaration

I, Robel Hilegiyorgis declare that this project is my original work and has not been presented for award of degree in any other university and that all sources of materials used for the project have been duly acknowledged.

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Abstract

Purpose: *The purpose of this paper is to analyze the results of a survey that aims to explore and identify the thread between strategic management practices of food processing companies in Addis Ababa and their corporate entrepreneurship intensity.*

Design\methodology: *The research followed deductive approach, survey as a strategy, a cross-sectional time horizon and questionnaire as data collection instrument. It also employed factor analysis (explanatory and confirmatory factor analysis) to analyze the data. Both primary and secondary data were used to gather data. Primary data were used for data analysis while the secondary sources of data included extensive review of literature.*

Findings: *Major findings revealed that most of strategic management practice component (i.e. locus of planning, planning horizon, strategic control and planning flexibility) has positive impact on core corporate entrepreneurship dimensions (i.e. innovativeness, pro-activeness and risk taking) whereas some SM dimension (i.e. financial control) has negative impact on CE dimensions.*

Research limitation: *The research is temporally and contextually limited to food processing sub sector specifically in Addis Ababa city only which might limit its generalizability into other industries, sectors, small, medium, and large-scale business organizations and other cities and country level as a whole.*

Originality/value: *As far as the researcher's knowledge is concerned, the absence of similar empirical studies specifically on the relationship between a firm's strategic management practices and its corporate entrepreneurial intensity in Ethiopian context also motivated the researcher to put his own contribution since Ethiopian manufacturing sector in not yet well strong as developed countries and need empirical study on this area.*

Key words: *Strategic management, corporate entrepreneurship intensity, food processing firms*

Paper type: *Research paper*

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Acronyms

AMOS Analysis of moment structures
CE Corporate Entrepreneurship
CFI Comparative fit index
CFA Confirmatory Factor Analysis
EFA Exploratory Factor Analysis
ES Environmental Scanning
FA Factor analysis
FC Financial Control
GOF Goodness of fit
IN Innovativeness
KMO Kaiser-Meyer-Olkin
LP Locus of Planning
MI Modification index
PCA Principal Component analysis
PCFI Parsimony comparative fit index
PF Planning Flexibility
PH Planning Horizon
PNFI Parsimony normed fit index
PR Pro-activeness
RBV Resource-based view
RI Risk taking
RMR Root Mean Residual
RMSEA Root Mean Square Error of Approximation
SC Strategic control
SEM Structural equation modeling
SM Strategic management
SMC Squared multiple correlations
SPSS Statistical Package for Social Sciences
TLI Tucker-Lewis index
VIF Variance Inflation Factor

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Business organizations are the culmination of a confluence of forces; some are internal to the individual entrepreneurs themselves, while others reside in the external environment. How do firms reconcile the conflicting forces for change and stability? How do they promote order and control, while having to respond, renew, and learn? Expanding worldwide competition, fragmenting markets, and emerging technologies force established firms to create new sources of wealth through new combinations of resources (Guth & Ginsburg, 1990). The forces for change are countered by short-term competitive forces which require organizations to maximally exploit their existing capabilities and competencies. Companies are born in different sectors of the economy, endowed with unequal amount of resources, and exhibit diverse capabilities. They are founded for different reasons, and created by different kinds of people. In spite of all the differences, there is a common thread especially among company's strategic management practices and there corporate entrepreneurship intensity, that is, these strategic management practice has an impact on corporate entrepreneurial intensity.

Corporate entrepreneurship, which has become an important field of management study, was developed as a strategic orientation to overcome the external adaptation problems faced by firms which have been looking for sustainable competitive advantage in global competition (Miller & Friesen, 1978; Covin & Slevin, 1989; Covin & Covin, 1990). It is a set of activities to enhance a company's ability to innovate, take a risk, and seize the opportunities that are allocated in the market. Corporate entrepreneurship is targeted on new business establishment, new market

allocation with further business pursuing, or both (Zahra, 1991). And the basis of strategic management is the notion that strategy creates an alignment between the enterprise's internal strengths and weaknesses on the one hand and its opportunities and threats (SWOT) in its external environment on the other (Andrews, 1987) and it deals with how enterprises develop sustainable competitive advantages resulting in the creation of value (Ramachandran et al., 2006). An underlying basis of the Austrian school in strategic management (Schumpeter, 1993) is the temporary nature of such competitive advantages. Accordingly, strategic management can be regarded as setting the context for entrepreneurial behavior, i.e. the exploitation of opportunities (Ireland et al., 2001).

Corporate entrepreneurship will discover, foster, launch and manage new business ideas inside the firm that leverages firms' assets, market knowledge and position, capabilities and expertise and facilitates the corporate efforts to exploit opportunities for value creating innovation (Covin & Miles 1999; Kuratko et al. 2005). However, the management of innovation and corporate entrepreneurship (CE) is complex, challenging and subject to risk (Ahmed 1998: 30). The implementation of innovation and CE cannot be achieved by paying 'lip service' to the ideal (Hof, 2004). A holistic commitment to building the CE capability and a supportive organizational climate are needed for an organization to become 'entrepreneurial' (Mokoena 1999). Among the management practices believed to facilitate entrepreneurial behavior are a firm's strategic management practices (Covin and Slevin, 1991a; Miller, 1983) (Murray, 1984) (Zahra, 1991). This stream of research is extremely valuable because a firm's ability to increase its entrepreneurial behavior is largely determined by the compatibility of its management practices with its entrepreneurial ambitions (Murray, 1984).

Unfortunately, no study has focused specifically on the relationship between a firm's strategic management practices and its entrepreneurial intensity in our country case. Instead, the studies that have examined the organizational characteristics that facilitate entrepreneurial behavior have looked at a broad array of variables and have not provided extensive insight about the relationship between a firm's strategic management practices and its entrepreneurial intensity.

1.2. Statement of the Problem

Now a day business environment is rapidly changing and companies are faced with shrinking market shares, increasing cost pressure and rising competition and facing a host of strategic and operational challenges (McGrath & MacMillan 2000). This changing business environment requires the development and successfully adaptation of entrepreneurial strategies to build on the identification of opportunities and develop them towards competitive advantages (Hitt *et al*., 2002).

Firm's ability to increase its entrepreneurial behavior is largely determined by the compatibility of its management practices with its entrepreneurial ambitions (Murray, 1984). Among the management practices believed to facilitate entrepreneurial behavior are a firm's strategic management practices (Covin and Slevin, 1991a; Miller, 1983; Murray, 1984; Zahra, 1991). Entrepreneurship and strategic management both have made their unique and valuable contributions to management. Although their foci differ, both are inevitably interrelated, and are often complementarily supportive of each other (Ireland et al., 2003). Meyer & Heppard (2000) remark that the two concept are in fact even inseparable, forming two sides of the same coin, since the research results of the one cannot fully be understood without the other (Barney & Arikan, 2001). Schendel and Hofer (1979) had already linked both fields in the late 1970s when defining strategic management as "a process that deals with the entrepreneurial work of the

organization, with organizational renewal and growth", and furthermore stating that "the entrepreneurial choice is at the heart of the concept of strategy". Venkataraman and Sarasvathy (2001) used a metaphor based on Shakespeare's Romeo and Juliet saying that strategic management research without an entrepreneurial perspective is like the balcony without Romeo, and entrepreneurship research without a strategic perspective like Romeo without a balcony.

However, most theoretical models postulate the integration between corporate entrepreneurship and strategic management and both are inevitably interrelated, and are often complementarily supportive of each other (Ireland et al., 2003), even inseparable, forming two sides of the same coin and research results of the one cannot fully be understood without the other (Barney & Arikan, 2001), Field studies propose a contrasted picture of corporate entrepreneurship such as it tend to pursue opportunities without regard to the resources they currently control and little care about synergy and relatedness which will increases the exposure of the corporation to the liabilities of unrelated diversification, uncontrolled divergence i.e., loss of direction, poor exploitation of unique resources, waste, high failure risk and loss of managerial control (Stevenson & Jarillo, 1990), vertical conflicts between the corporate entrepreneur and top management due to need of maximum autonomy to corporate entrepreneurs (Chesbrough, 2000), Since CE raises issues because it's spontaneous/emergent character (Gartner et al., 1992) is not compatible with corporate managers' belief in the deliberate nature of the corporate development process, "who are likely, at any time, to try to get their organization engage in activities that are outside of the scope of its current strategy" (Burgelman, 1984). This discrepancy has been the trigger that has encouraged the researcher to explore more about how corporate entrepreneurship can integrate with strategic management and how we can alleviate deconstructive effect of corporate entrepreneurship on the mainstream business.

In addition, as far as the researcher's knowledge is concerned, the complete absence of similar empirical studies specifically on the relationship between a firm's strategic management practices and its corporate entrepreneurial intensity conducted in the Ethiopian context also motivated the researcher to put his own contribution since Ethiopian manufacturing sector in not yet well strong as developed countries and need empirical study on this area. Given the fact that the study can support practice and policy, it is expected to serve as an input for achieving better business performance. Based on those facts, the purpose of the research is to explore the relationship between strategic management dimension (scanning intensity, planning flexibility, planning horizon, locus of planning, and control attributes) and corporate entrepreneurship and attribute of entrepreneurial intensity in some selected food processing firms in Addis Ababa. The level of entrepreneurial intensity of each organization is measured based on innovativeness, pro-activeness and risk taking behavior (Covin and Slevin, 1989; Miller and Friesen, 1982). The study tries to address the following question:

- How do corporate entrepreneurship and strategic management practices relate in those firms?
- What are the impact of strategic management practice on corporate entrepreneurship intensity?
- How can corporate entrepreneurship integrate with strategic management practice of this firm for better performance?

1.3. Research Hypothesis

The researcher develops basic six hypotheses based on previous studies and strategic management practices included (i.e., scanning intensity, locus of planning, planning flexibility, planning horizon, strategic control and financial control attributes) which is selected

on the basis of their potential for influencing one or more of these key enablers of firm-level entrepreneurial behavior, and a firm's overall entrepreneurial intensity include i.e., innovative, risk-taking and pro-activeness in order to answer the research questions (Barribger and Buledorn, 1999). These hypotheses are presented as follows

There is a significant impact of components of strategic management practices on corporate entrepreneurship attributes.

This hypothesis is divided into the following sub-hypothesizes:

H1: Environmental scanning intensity has positive effect on corporate entrepreneurship.

H1a: Environmental scanning intensity has positive effect on innovativeness.

H1b: Environmental scanning intensity has positive effect on Pro-activeness.

H1c: Environmental scanning intensity has positive effect on risk taking behaviors.

H2: Planning flexibility has positive effect on corporate entrepreneurship.

H2a: Planning flexibility has positive effect on innovativeness.

H2b: Planning flexibility has positive effect on Pro-activeness.

H2c: Planning flexibility has positive effect on risk taking behaviors.

H3: Planning horizon length (short-term vs. Long term) has negative effect on corporate entrepreneurship.

H3a: Planning horizon length (short-term vs. Long term) has negative effect on innovativeness.

H3b: Planning horizon length (short-term vs. Long term) has negative effect on Pro-activeness.

H3c: Planning horizon length (short-term vs. Long term) has negative effect on risk taking behaviors.

H4: A deep locus of planning (i.e., high level of employee involvement) has positive effect on corporate entrepreneurship.

H4a: A deep locus of planning (i.e., high level of employee involvement) has positive effect on innovativeness.

H4b: A deep locus of planning (i.e., high level of employee involvement) has positive effect on Pro-activeness.

H4c: A deep locus of planning (i.e., high level of employee involvement) has positive effect on risk taking behaviors.

H5: The degree of emphasis on strategic controls has positive effect on corporate entrepreneurship.

H5a: The degree of emphasis on strategic controls has positive effect on innovativeness.

H5b: The degree of emphasis on strategic controls has positive effect on Pro-activeness.

H5c: The degree of emphasis on strategic controls has positive effect on risk taking behaviors.

H6: The degree of emphasis on financial controls has negative effect on corporate entrepreneurship intensity.

H6a: The degree of emphasis on financial controls has negative effect on innovativeness.

H6b: The degree of emphasis on financial controls has negative effect on Pro-activeness.

H6c: The degree of emphasis on financial controls has negative effect on risk taking behaviors.

1.4. Objective of the study

1.4.1. General objective

The general objective of the study is to assess the relationship between corporate entrepreneurship and strategic management through using five dimensions of the strategic management process including scanning intensity, planning flexibility, planning horizon, locus of planning, and control attributes and three attribute of corporate entrepreneurship including risk-taking, innovative, and proactive response in some selected food processing firms.

1.4.2. Specific objective

Specifically, the research tries to address the following issue as a core objective:

- To understand the nature of corporate entrepreneurship, identify attributes and relationships with the strategic management.
- To examine the relationship between each of the dimensions of strategic management that will be included in the study and a firm's corporate entrepreneurship intensity.
- To develop a more comprehensive picture of how a firm's strategic management practices influence its corporate entrepreneurial behavior.

1.5. Significance of the study

The main reason of this study is to provide empirical evidence on the relationship between corporate entrepreneurship and strategic management of some selected food processing firm in Addis Ababa. Furthermore, the study will provide different benefit to different parties from the results that will emerge from the results of the study and are:

- The research will enable the policy makers to come up with a viable and focused entrepreneurship strategy that can help the company to become more competitive. The study

will also generate empirical data and information beneficial to the Government and the University level.

- The study will be a source of reference material for future researchers on other related topics; it will also help other academicians and research institutions who undertake the same topic in their studies.
- The study will modestly bridge the theoretical and empirical gap in the literature corporate entrepreneurship and strategic management. This research will have significant role to play in shading light on how to better understand corporate entrepreneurship and strategic management and their relationship in manufacturing firms.

1.6. Delimitation / Scope of the study

Even though, corporate entrepreneurship and strategic management if the major concern of all manufacturing companies of Ethiopia, the researcher focuses only on food processing firms specifically, in Addis Ababa, capital city of Ethiopia besides time and budget limitations.

1.7. Organization of the study

In addressing the research objectives, the rest of the study is structured into the following chapters: chapter one is all about proposal, chapter two discussed about theoretical and empirical literature review, chapter three is about research design and methodology, chapter four is about results and discussions and chapter five presented conclusions and recommendations of the results.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

The chapter begins with a discussion of concepts and definitions of entrepreneurship and corporate entrepreneurship and follows its discussion with component, risk and framework of CE. In addition, the theoretical review part of the chapter is dealt the concept, definition and dimensions of strategic management and it also discussed common dimensions for CE and SM. Empirical review of the literature discusses works which have been forwarded by previous researchers with related to relationships between components of CE and SM and the effect of SM components on CE. Finally, the chapter comes up with conceptual framework depicting the relationship between variables under the study.

2.2. Theoretical Foundation

2.2.1. Entrepreneurship

The subject of entrepreneurship has been a focus of scholarship since the eighteenth century and the field had its theoretical foundations when Richards Cantillon, (1734) used this term to differentiate entrepreneurs from employed workers. The subject originated from the emergence of competitive capitalism, which, supplanted feudalism and absolutist monarchism back in the eighteenth century AD. Entrepreneurship encouraged innovation and technological revolution in post-feudalism (Barreira, 2008; Brouwer, 1996). Cantillon was the first to use risk-taking under uncertain environment as an entrepreneurial factor. The Austrian economist Joseph Schumpeter (1883–1950) added innovation and proactive as key characteristic of entrepreneurship. From the 1970s, entrepreneurship scholarship escalated when scholars such as Birch (1979) linked

entrepreneurship to economic growth. Thereafter, prominent in any definition of entrepreneurship has been Schumpeter's notion of "creative destruct newness, renewal or redefinition of organizations, markets or industries (Covin and Miles 1999; Hamel, 2000; Zahra, et al., 1999).

Although many researchers agree on the existence and relevance of the subject, there has been a lack of consistency in the definitions of entrepreneurship used by various authors. As can be seen from these views, there is no single definition or view on entrepreneurship. Most current definitions of entrepreneurship contain similar features which are summarized by Timmons (1989):

> *"It is the ability to create and build something from practically nothing. It is initiating, doing, achieving and building an enterprise or organization, rather than just watching, analyzing or describing one. It is the knack for sensing an opportunity where others see chaos, contradiction and confusion. It is the ability to build a "founding team" to complement your own skills and talents. It is the know-how to find, marshal and control resources (often owned by others) and to make sure you don't run out of money when you need it most. Finally, it is the willingness to take calculated risks, both personal and financial, and then to do everything possible to get the odds in your favor."*

Entrepreneurship is considered to be a vital component in the process of economic growth and development for various reasons. It is a mechanism by which society converts technological information into products and services (Shane & Venkataraman, 2000).This type of entrepreneurially driven innovation in products or services and processes is a crucial engine driving the change process in a capitalist society (Schumpeter, 1934). Entrepreneurship discovers and mitigates not only technological, but also temporal and spatial inefficiencies in an economy

(Shane & Venkataraman, 2000). The above makes it clear that the study of entrepreneurship is an essential component of the study of business.

2.2.2. Corporate Entrepreneurship

In its early stages, corporate entrepreneurship was seen as a behavioral phenomenon aiming at re-energizing large and/or established companies. Later on it has been recognized entrepreneurship activities should not be dependent on firm size (Antoncic & Hisrich, 2001; Carrier, 1996). Corporate entrepreneurship is often seen as a school within entrepreneurship theory (Cunningham & Lischeron, 1991; Sharma & Chrisman, 1999). Following, as there is no generally accepted definition of entrepreneurship, the same definitional gap thus also burdens the corporate entrepreneurship construct. A necessary step preceding the empirical study of corporate entrepreneurship is defining it by determining those dimensions of entrepreneurship that translate to corporate entrepreneurship (Barrett & Weinstein, 1998).

Despite the fact that there remains a considerable degree of definitional ambiguity about the corporate entrepreneurship construct, entrepreneurship and corporate entrepreneurship literature seem to agree on the differentiation between the nature of independent entrepreneurship and corporate entrepreneurship. Independent entrepreneurship is seen as the activities through which a single individual or a group of individuals create a new organization, acting independently of any association with an existing organization (Sharma & Chrisman, 1999). Corporate entrepreneurship is then considered as entrepreneurial (new value creating) activities within an organization and being established by a(n) individual(s) acting as part of the corporate system of one or more existing organizations.

However, the differences in terminology used to describe those particular corporate entrepreneurial activities have created confusion, and still continue to do so. Throughout the

years, researchers have used a variety of terms to describe the entrepreneurial efforts associated with existing organizations: corporate entrepreneurship (Carrier, 1996; Covin & Miles, 1999; Covin & Slevin, 1991; Dess et al., 1999; Zahra, 1991; Zahra, 1993b; Zahra, 1995; Zahra et al., 2000), intra-preneurship (Antoncic & Hisrich, 2001; Carrier, 1996; Kuratko et al., 1990), corporate venturing (MacMillan et al., 1986; Miles & Covin, 2002; Von Hippel, 1977), firm-level or organization-level entrepreneurship (Covin & Slevin; 1991; Savage & Black, 1995), entrepreneurial orientation (Lyon et al., 2000) and internal corporate entrepreneurship (Jones & Butler, 1992).

It will not come as a surprise that the expectations for Corporate Entrepreneurship are high. Yet, although some remarkable successes in creating new revenue and profit growth through Corporate Entrepreneurship have been achieved, the number of failures still appears to surpass the number of successes (Sykes, 1986). In fact, Corporate Entrepreneurship can be risky or even detrimental to a firm's short-term financial performance (Zahra & Covin, 1995). As Miles and Covin (2002) note, "Solid theoretical frameworks and empirically grounded and managerially useful prescriptions involving Corporate Entrepreneurship have not progressed as quickly as enthusiasm for the practice". Thus, current knowledge regarding the role, risks and effective conduct of corporate entrepreneurship remains limited (Miles & Covin, 2002).

Corporate Entrepreneurship is characterized by the following:

- The birth of new businesses within existing businesses. The transformation or rebirth of organizations through a renewal of key areas of business. Renewal or rebirth is entrepreneurial since it reflects a radical departure from historical and predominant structural patterns.

- Creation, innovation and renewal within an existing organization. The creation of an organization is entrepreneurial in that it entails fundamental, strategic and structural decisions. So corporate entrepreneurship is about bringing entrepreneurial behavior into an organization and focusing on extending the firms domain of competence and functioning. Innovation is entrepreneurial because it involves new combination of resources and the way in which they are used that can dramatically alert base of competition in an industry or lead to the creation of a new industry.

As a result of increased global competition, organizations have been forced to rethink how they produce and deliver products and services (Kemelgor, 2002). Kemelgor (2002) asserts that stagnation in this environment leads to erosion of market share or quick failure. A firm in a turbulent environment, therefore, must continually innovate to remain competitive and incremental innovations are essential in maintaining an organization's wellbeing (Herbert & Bazeal, 1998).

2.2.2.1. Components of Corporate Entrepreneurship

The primary assumption underpinning corporate entrepreneurship is that it is a behavioral phenomenon in which firms fall along the conceptual continuum ranging from conservative on one end to entrepreneurial on the other. An entrepreneurially oriented organization would exhibit innovativeness; high propensity to take calculated risks and pro-activeness towards renewal, intra-organizational innovation and new venture creation (Miller 1983; Covin and Slevin, 1991). Such an organization would be more aggressive, prospective and pioneering (Avlonitis and Salavou, 2007; Covin, Slevin and Heeley, 2000). In contrast, conservative firms are risk averse, less innovative and exhibit a wait-and-see posture (Barringer and Bluedorn, 1999).

- ***Innovativeness****:* indicates product and service innovation with emphasis on development and

innovation technology. It includes new product development, product improvements and new production methods and procedures. The emphasis here is on concepts or activities that represent a departure from what is currently available. The fundamental question is to what extent is the company doing things that are novel, unique or different? In other words does the concept address a need that has not previously been addressed? Does it change the way the organization goes about addressing the need? Is it a dramatic improvement over conventional solutions?

- ***Pro-activeness***: This term signifies aggressive posturing relative to competitors. A proactive firm is inclined to take risks through experimentation. It takes initiatives and is bold and aggressive in pursuing opportunities. It attempts to lead rather than follow competitors. Miller (1983) sees entrepreneurial companies as acting on rather than reacting to their environment. Morris and Kuratko (2002), aver that the essence of pro-activeness is about implementation. Implementation is about bringing an entrepreneurial concept to fruition. Venkatraman (1989) conceives of pro-activeness as a continuous search for market opportunities and experimentation with potential responses to changing environmental trends.
- ***Risk-taking***: According to Morris and Kuratko (2002) risk-taking involves a willingness to pursue opportunities that have a reasonable likelihood of producing losses or significant performance discrepancies. These authors are quick to state that entrepreneurship does not entail reckless decision-making. It involves a realistic awareness of the risks involved. By engaging in numerous experiments, testing markets, and trial runs, the entrepreneur is better able to determine what works and what does not. These authors further argue that this form of quickened learning may come at the expense of minor failures, but it is also likely to

ensure more sustainable long-term success. Companies that do not innovate are likely to face a higher risk of not perceiving market and technology shifts that are capitalized on by competitors.

2.2.2.2. Risk in Corporate Entrepreneurship

Morris and Kuratko (2002) assert that in order to understand risk within the context of CE, it is important in appreciating its relationship with innovation. These authors go on to differentiate among four innovation types as follows:

- ***Discontinuous innovation***: This involves breakthrough innovation and results in the development of products and services that address needs that have not yet emerged. The authors postulate that risk is highest with this type of innovation. The reason is that this form of innovation involves entry into uncharted waters, as the authors put it, it is movement into an area where no one has been. Consequently there is a high risk of failure, owing to improper market analysis or a possible mismatch of technology to market needs or inadequate design of marketing programs. These authors go on to argue that sometimes the requisite infrastructure that supports the innovation is inadequate.
- ***Dynamically Continuous innovation***: This involves the improvement over the existing solutions. Consequently, this form of innovation is not disruptive to the markets as the discontinuous innovation. This form of innovation is less risky in that it involves minor modifications to existing product offerings.
- ***Continuous innovation***: This form of innovation involved incremental changes which tend to enhance the performance or functionality or existing products or services. Because new features are added to existing products, risk is minimal.
- ***Imitation innovation***: This form of innovation involves copying, adapting or mimicking the

innovations of other organizations. Morris and Kuratko (2002) argue that firms that pursue an imitation strategy incur high risks, principally because they tend to follow market leaders. Because of the speed involved in technological development firms pursuing the imitation strategies find it harder to catch up with more innovative companies.

2.2.2.3. Frameworks for Corporate Entrepreneurship

Different corporate entrepreneurship researchers have developed some integrative frameworks to aid our understanding of intra-organizational entrepreneurship (Morris *et al*., 2008; Zahra, 2007). Guth and Ginsburg (1990) developed the domain framework that indicates two types of corporate entrepreneurship processes. The first process is internal innovation where new businesses are created within an existing firm. The second process is strategic renewal that seeks to transform organizations. The domain framework also identified four realms within which corporate entrepreneurship manifest or fit in organizational strategic management. The framework recognizes the external environment as the first important determinant of corporate entrepreneurship. Guth and Ginsburg (1990) argue that turbulent environment promotes higher levels of entrepreneurship. The other determinant factor in the domain framework is organizational leadership, which posits that levels of corporate entrepreneurship are determined by leadership characteristics whether they support opportunity recognition, innovativeness, risk-taking and internal change (Morris *et al*., 2008: 48). The last feature of the domain framework is organizational conduct or internal environment, which includes structures, processes, culture and strategies. The forth feature is firm performance and the role it plays in driving organizational strategy and promoting innovation output.

2.2.3. Entrepreneurial Environment

According to Russell (2002) there are three ways in which the entrepreneurial environment can be characterized, namely dynamic, heterogeneous and hostile:

- *Dynamic* environments provide precipitating events in the environment. Dynamic events are defined by Zahra (1991) as events that tend to displace existing bases for competitive advantage and generate a search for innovative sources of competitive advantage (Khandwalla, 1977; Miller & Friesen, 1982, Kanter, 1985). Static environments, on the other hand tend to reinforce and maintain existing sources of competitive advantage thus providing few opportunities for innovative change (Miller & Friesen, 1982; Covin & Slevin, 1989; Zahra, 1991).
- Secondly, environments can be characterized as *heterogeneous* (Zahra, 1991). These environments, associated with CE, are marked by multiple market segments with diverse customer needs and characteristics and this diversity provides expanded scope and multiple opportunities for innovation that entrepreneurial firms tend to exploit.
- Thirdly and finally, environments can be characterized as *hostile* (Covin & Slevin, 1989; Zahra, 1993; Zahra & Covin, 1995). These environments demonstrate high levels of uncertainty and vulnerability to external influences, probably inhibiting innovation.

From the foregoing discussion it is seen that although firms can pursue entrepreneurial ventures in all types of environments, the concentration will tend to be in dynamic, heterogeneous and hostile contexts (Miller & Friesen, 1982; Covin & Slevin, 1991). Dynamic and heterogeneous environments may provide more opportunities for entrepreneurial ventures to be exploited by entrepreneurial firms. Hostile environments necessitate strong incentives from firms to pursue innovation as a source of competitive advantage.

2.2.4. Strategic Management

Strategic management is the full set of commitments, decisions, and actions a firm requires to carry out its strategy to gain sustainable competitive advantage (Wheelan and Hunger, 2002). Strategic management guides how the basic work of the organization is approached; ensures the continual renewal and growth of the firm, and provides a context for developing and carrying out the strategy that drives the firm's operations (Schendel and Hofer, 1979; Kuratko and Audretsch, 2009). Strategic management practices are organizational level activities that dictate the business's mission and goals, explore the competitive environment, analyze strategic alternatives and coordinates implementation activities through the organization's entire value chain (Anderson, 2004).

2.2.4.1. Dimensions of Strategic Management

To gain an extensive insight into the impact of strategic management practices on entrepreneurial behavior and provide empirical evidence, the present study employs the five dimensions of strategic planning practices developed by (Barribger and Buledorn, 1999): environment scanning intensity, planning flexibility, planning horizon, locus of planning, and control system (financial and strategic controls). In selecting strategy dimensions, (Ibid, p. 243) sought to include enough dimensions to reflect the overall essence of the strategic management process while keeping the number of dimensions manageable and theoretically relevant. Accordingly, the five dimensions of strategic planning were selected through a literature review focused on identifying the areas of strategic management most relevant to the pursuit of corporate entrepreneurship.

Dimension 1: Environmental scanning intensity

Environmental scanning refers to the managerial activity of learning about events and trends in the organization's environment (Hambrick, 1981). The entrepreneurial activity calls for search

and identifies new opportunities existing in the industry environment. Environmental scanning can assist firms in identifying forces that are driving changes in the consumer market and are likely to lead to preemptive competitive opportunities (Olsen *et al*., 1998).

Barribger and Buledorn (1999) indicate an intensive scanning system is a practical approach for entrepreneurial firms. In contrast, scanning is less likely to be critical for conservative firms. Conservative firms usually compete in a stable environment, which generates slow changes and does not require an extensive search process to remain understood.

Dimension 2: Planning flexibility

Planning flexibility refers to the capacity of a firm's strategic plan to change as environmental opportunities/threats emerge (Barribger and Buledorn, 1999). Kukalis (1989) theorizes that firms in complex environmental settings maximize performance by adopting "flexible" planning systems. While a flexible planning system allows a firm's strategic plan to remain current, it also permits a firm's entrepreneurial initiatives to be planned rather than to take place in an ad hoc manner outside the parameters of a strategic plan (Barribger and Buledorn, 1999). On the other hand, conservative firms seek reliability in executing repetitive transactions and routine activities. In this setting, a flexible planning system runs the risk of disrupting rather than facilitating a firm's business plan (Barribger and Buledorn, 1999).

Dimension 3: Planning horizon

Planning horizon refers to the length of the future time period that decision makers consider in planning (Das, 1987). According to Rhyne (1985), the planning horizon for firms can vary from less than one year to more than 15 years. The rationale for a given planning horizon is that it should be long enough to permit planning for expected changes in strategy and yet be short enough to make reasonably detailed plans available (Das, 1987). A reliance on short-term

planning would be practical for entrepreneurial firms that continually look for opportunities for new products and services as a result of environmental change (Barribger and Buledorn, 1999). Conversely, a relatively long planning horizon (more than five years) may be optimal for conservative firms operating in a stable environment, as they seek reliability in production and brand awareness rather than speed of new product introduction (Barribger and Buledorn, 1999).

Dimension 4: Locus of planning

Locus of planning refers to the depth of employee involvement in firms' strategic planning activities (Barribger and Buledorn, 1999). Organizations can be characterized as having either a shallow or deep locus of planning. Deep locus of planning denotes a high level of employee involvement in the planning process. It brings into the planning process front line people who are closest to the customer and who can facilitate new product and service recognition, a central element in the entrepreneurial process. Conversely, a shallow locus of planning only involves the top managers of a firm. Conservative firms do not emphasize opportunity recognition and the pursuit of new ideas to the same extent as entrepreneurial firms. As a result, broad participation in planning, which is expensive in terms of managerial time and energy, may not be necessary (Barribger and Buledorn, 1999).

Dimension 5: Control system

A well-designed control system is to make sure that business strategies meet the goals and objectives. Two forms of control attributes relevant to corporate entrepreneurship are strategic control and financial control (Hitt *et al*., 1996). Strategic control bases performance on strategically relevant criteria (Hoskisson & Hitt, 1988). Examples of criteria include customer satisfaction, progress on product innovations, and achievement of quality control standards. A well-designed strategic control system is capable of rewarding employees for incremental but

substantive progress on product or process innovation that take a long time to reach market (Hitt et al., 1996). Financial control, on the other hand, bases performance on objective financial criteria such as cash flow, net income, and return on investment. Financial controls are clear and unambiguous and introduce a high degree of discipline into the control system (Barribger and Buledorn, 1999). Conservative firms tend to rely on financial controls to save costs in managerial time and efforts required to maintain strategic controls (Goold & Quinn, 1990). However, financial control and strategic control do not represent opposite ends of the conceptual continuum and can present simultaneously in a firm (Barribger and Buledorn, 1999).

2.2.5. Common Dimensions for Entrepreneurship and Strategy

- **Opportunity**: The detection and utilization of formerly unemployed opportunities (Ireland *et al.*, 2001). This type of effort on opportunities is a worthy to define the correlation between strategy and entrepreneurship. Both strategic management and entrepreneurship emphasis on the means in which industries make change by using opportunities they notice within the unclear surroundings in which they work. Once the idea has been developed by entrepreneurs, they must activate the procedure of evaluating whether the idea is viable or not. Entrepreneurs are capable to make wealth by pinpointing opportunities and then evolving competitive advantages to exploit those (Hitt *et al*., 2002).
- **Innovation**: as a common dimension for strategy and entrepreneurship; in order to highlight matches and dissimilarities between strategy and entrepreneurship. Hit & Ireland (2000) detect some strategic issues which are representative for entrepreneurship. The first is innovation. The foundation of innovation lies on the line between an organization and environment. And the process of innovating includes keenly building a theoretical structure, imposing it on the environment, and reflecting on their interaction.

Schumpeter (1934) and then Peter Drucker (1985) are very known specialists who analyzed and describe the high correlation between innovation and entrepreneurship. 'The entrepreneur is the innovator who is carrying out of new combinations. The carrying out of new combinations can take several forms; 1) the introduction of a new good or quality thereof, 2) the introduction of a new method of production, 3) the opening of a new market, 4) the conquest of a new source of supply of new materials or parts, 5) the carrying out of the new organization of any industry.

- **Organizational learning** is trait of an adaptive organization, an organization that is able to ensure changes in signs from its environment, both internal and external, and change accordingly. Both, entrepreneurship and strategy must be adjustable to new demand structures and trends. A learning organization keenly generates, seizures, transfers, and activates knowledge to empower it to adapt to a changing environment. A business relocating or organizational alteration through learning will be much less hurting than a usual changing process because of no opposition to change and would be more likely successful. (Dai Z., Duserick F. 2005).
- **Evaluation**: is conducted not only by the entrepreneur but also by as many stakeholders in the new project as possible: potential customers or clients, employees, advisers, investors, and suppliers. Same kind of tactic is likewise useful for the strategy formulation. Stakeholders' analyses should be cons order to declare about successful strategies is very important to conclude the creativeness among the strategy and the main stakeholders and other businesses or corporate strategies. One of the first steps required in assessing the feasibility of an idea is to become aware of forces and factors in the internal and external environment that directly influence the opportunity. For example internal factors include: the

knowledge, skills, and abilities of the entrepreneur, the management team members, employees, and advisers but also the resources available to the entrepreneur, including people, financial resources, and technologies that can be acquired for the launch and growth of the opportunity. When the entrepreneur has completed the feasibility analysis, the next steps into business involve strategic planning. (Tanţău, 2008).

2.3. Empirical Review

Hornsby and Naffziger (1994) indicated that much of the empirical work on Corporate Entrepreneurship has been drawn from entrepreneurship research. In the discussion of the following relationships between the variables to be investigated in corporate entrepreneurship and strategic management, the findings on previous relationships findings will be presented both in terms of entrepreneurship and corporate entrepreneurship.

2.3.1. The relationship between corporate entrepreneurship and strategic management

The following studies indicate the relationship between corporate entrepreneurship and strategic management:

The study of Barringer & Bluedorn (1999) examines the relationship between corporate entrepreneurship intensity and strategic management practices (scanning intensity, planning flexibility, planning horizon, locus of planning, and control attributes) in a sample of 169 U.S. manufacturing firms. The results of the study indicated a positive relationship between corporate entrepreneurship intensity and scanning intensity, planning flexibility, locus of planning, and strategic controls. The fine-grained nature of these results may be of practical use to firms that are trying to become more entrepreneurial and may help researchers better

understand the subtleties of the interface between strategic management and corporate entrepreneurship.

Kraus & Kauranen (2009) indicates the intersection of the academic fields of entrepreneurship and strategic management, based on an aggregation of the extant literature in these two fields. The article structures and synthesizes the existing scholarly works in the two fields, thereby generating new knowledge and attempts to integrate the two fields by first identifying apparent interrelations, and then by concentrating in more detail on some important intersections, including strategic management in small and medium-sized enterprises and start-ups, acknowledging the central role of the entrepreneur. The content and process sides of strategic management are discussed as well as their important connecting link, the business plan.

Hitt et al. (2001) on its study indicates an integration of entrepreneurial and strategic thinking. It explores this strategic entrepreneurship in several important organizational domains to include external networks and alliances, resources and organizational learning, innovation and internationalization. Entrepreneurship involves identifying and exploiting entrepreneurial opportunities. However, to create the most value entrepreneurial firms also need to act strategically. The research in this special issue examines both traditional (e.g., contingency theory, strategic thinking) and new theory (e.g., cultural entrepreneurship, business model drivers) and also integrates, extends, and tests theory and research from entrepreneurship and strategic management in new ways such as creative destruction (discontinuities), resource-based view, organizational learning, network theory, transaction costs and institutional theory.

Cheema & Akhtar (2013) study enhance the understanding of the relationship between the strategy planning and the entrepreneurship by explaining the concepts and the things in a very

brief way on Different dimensions of the strategy and entrepreneurship are provided like opportunity, innovation, learning and evaluation. A theoretical review of strategic behavior, strategic management, and corporate entrepreneurship has been presented as integration between strategy planning and entrepreneurship.

In the study by Nath C. L & Rayudu T. S. (2014) indicate Corporate Entrepreneurship has been recognized as a potentially viable means for promoting and sustaining organizational performance, renewal and corporate competitiveness over the past three decades and help companies to develop new businesses that create revenue streams. It also enhances a company's success by promoting product and process innovations. Corporate Entrepreneurship is embodying risk taking, pro-activeness and radical product innovations. These Corporate entrepreneurship activities can improve organizational growth and profitability and, depending on the company's competitive environment, their impact may increase over time. The empirical evidence is compelling that Corporate Entrepreneurship improves company performance by increasing the firm's pro-activeness and willingness to take risks, and by pioneering the development of new products, process and services through enriching its competitiveness. However, the creation of corporate activity is difficult since, it involves radically changing internal organizational behavior patterns. Many studies have attempted to understand the factors that accelerate or impede Corporate Entrepreneurship, which examined the effect of a firm's strategy, organization and external environment. It appears that the environment plays a profound role and influencing. There is consensus that the external environment is an important antecedent of Corporate Entrepreneurship. Focus on the environment, the literature highlights two fire-burning questions that deserve examination. First, how do firms that compete in different environments vary in the Corporate Entrepreneurship activities? Second, which

Corporate Entrepreneurship activities are philosophicative, processsicative and conductive to superior performance in different environments? In this backdrop, the present paper develops a theoretical foundation of these questions and emphasizing on the perceptual mapping between Corporate Entrepreneurship and strategic management in a integrating model of Corporate Entrepreneurship, giving special and unique attention to the strategic behavior, corporate context and organizational type.

2.3.1.1. The relationship between environmental scanning and attribute of corporate entrepreneurship

Environmental scanning refers to the managerial activity of learning about events and trends in the organization's environment (Hambrick, 1981). The entrepreneurial activity calls for search and identifies new opportunities existing in the industry environment. Environmental scanning can assist firms in identifying forces that are driving changes in the consumer market and are likely to lead to preemptive competitive opportunities (Olsen et al., 1998).

Miller, 1983; Stevenson and Jarrillo-Mossi, 1986 and Zahra, 1991, indicate the relationship between environmental scanning and corporate entrepreneurship, scanning can help managers cope with uncertainty, but only if they realize that uncertainty can only be reduced, not eliminated. Managers must remain vigilant, regardless of the degree of rigor in their scanning practices. A high level of environmental scanning is congruent with the entrepreneurial process. Recall that entrepreneurial firms are innovative, risk-taking, and proactive; and a central theme of the innovation literature is that information gathering and analysis is critical to the development and maintenance of successful innovation strategies (Covin, 1991; Kanter, 1988; Zumd, 1983). In addition, Industries that pay a premium for innovative behavior require constant monitoring and analysis to remain understood. Scanning also facilitates the risk-

taking and pro-activeness dimensions of entrepreneurial behavior. As a means of partial uncertainty absorption, scanning may lower the perception of risk associated with a potential entrepreneurial venture, increasing the likelihood that the firm will engage in entrepreneurial activates. Entrepreneurial managers may also realize that scanning is their bridge to remaining competitive. A firm in a turbulent environment must be continually innovative to remain competitive, which requires extensive scanning to recognize and exploit environmental change. Consequently, the researcher develop the following hypothesis

H1: Environmental scanning intensity has positive effect on corporate entrepreneurship intensity.

H1a: Environmental scanning intensity has positive effect on innovativeness.

H1b: Environmental scanning intensity has positive effect on Pro-activeness.

H1c: Environmental scanning intensity has positive effect on risk taking behaviors.

2.3.1.2. The relationship between planning flexibility and attribute of corporate entrepreneurship

Planning flexibility refers to the capacity of a firm's strategic plan to change as environmental opportunities/threats emerge (Barribger and Buledorn, 1999). Kukalis (1989) theorizes that firms in complex environmental settings can maximize performance by adopting “flexible” planning systems. While a flexible planning system allows a firm's strategic plan to remain current, it also permits a firm's entrepreneurial initiatives to be planned rather than to take place in an ad hoc manner outside the parameters of a strategic plan (Barribger and Buledorn, 1999) and it allow firms to adjust their strategic plans quickly to pursue opportunities and keep up with environmental change (Stevenson and Jarrillo-Mossi, 1986).

The study conducted by Aaker, 1995 and Schumpeter, 1936 indicate that concerted effort in the direction of planning flexibility facilitates a high level of corporate entrepreneurship intensity because first, flexible planning system, coupled with intensive environmental scanning, allows a firm's strategic plan to remain 'current' and permits a firm's entrepreneurial initiatives to be planned rather than to take place in an ad hoc manner outside the parameters of a strategic plan. What entrepreneurial behavior does imply is that the pace of this process must be accelerated and made more flexible because the essence of entrepreneurship is capitalizing on environmental change. Second, although the entrepreneurial process is intended to keep a firm in step with environmental change, entrepreneurial firms are not completely free from inertia. As a result, putting a planning system in place that is flexible and is by design subject to change may remove a potential obstacle to change when it is needed.

As a result, the researcher proposed the following hypotheses:

H2: planning flexibility has positive effect on corporate entrepreneurship.

H2a: Planning flexibility has positive effect on innovativeness.

H2b: Planning flexibility has positive effect on Pro-activeness.

H2c: Planning flexibility has positive effect on risk taking behaviors.

2.3.1.3. The relationship between planning horizon length (short-term vs. Long term) and attribute of corporate entrepreneurship

Planning horizon indicate the length of the future time period that decision makers consider in planning (Das, 1987). According to Rhyne (1985), the planning horizon for firms can vary from less than one year to more than 15 years. The rationale for a given planning horizon is that it should be long enough to permit planning for expected changes in strategy and yet be short enough to make reasonably detailed plans available (Das, 1987). Short horizons (less than five

years) are ideal for entrepreneurial organizations competing in a turbulent hypercompetitive environment where product and services cycles are characteristically short. Short planning horizon combined with intensive environmental scanning, high degree of organizational planning flexibility creates a fertile ground for entrepreneurial organization to be responsive to opportunities emerging from environmental changes and develop appropriate product and service innovations to sustain competitiveness (Barringer and Bluedorn, 1999).

Consequently, the researcher develop the following hypothesis:

H3: Planning horizon length (short-term vs. Long term) has negative effect on corporate entrepreneurship.

H3a: Planning horizon length has negative effect on innovativeness.

H3b: Planning horizon length has negative effect on Pro-activeness.

H3c: Planning horizon length has negative effect on risk taking behaviors.

2.3.1.4. The relationship between locus of planning (i.e., level of employee involvement) and attribute of corporate entrepreneurship

Locus of planning refers to the depth of employee involvement in firms' strategic planning activities (Barribger and Buledorn, 1999). Organizations can be characterized as having either a shallow or deep locus of planning. Deep locus of planning denotes a high level of employee involvement in the planning process and it is team oriented and places a heavy emphasis on employee participation (Reid, 1989). It brings into the planning process front line people who are closest to the customer and who can facilitate new product and service recognition, a central element in the entrepreneurial process. Conversely, a shallow locus of planning only involves the top managers of a firm.

A deep locus of planning facilitates a high level of corporate entrepreneurship intensity because, a high level of employee involvement in planning brings the people 'closest to the customer' into the planning process. This characteristic of employee participation in planning may facilitate opportunity recognition, which is central to the entrepreneurial process (Schumpeter, 1936). And it maximizes the diversity of viewpoints that a firm considers in formulating its strategic plan.

Based on the above empirical works, the proposed the following hypotheses:

H4: A deep locus of planning (i.e., high level of employee involvement) has positive effect on corporate entrepreneurship.

H4a: A deep locus of planning has positive effect on innovativeness.

H4b: A deep locus of planning has positive effect on Pro-activeness.

H4c: A deep locus of planning has positive effect on risk taking behaviors.

2.3.1.5. The relationship between the degree of emphasis on strategic controls and attribute of corporate entrepreneurship

Strategic control refers to the emphasis on bases performance on strategically relevant criteria (Hoskisson & Hitt, 1988) include customer satisfaction, new patent registrations, success in meeting target dates for new product or process introductions, and the achievement of quality control standards. A well-designed strategic control system is capable of rewarding employees for incremental but substantive progress on product or process innovation that take a long time to reach market (Hitt et al., 1996) and Strategic controls are capable of rewarding creativity and the pursuit of opportunity through innovation. Firms do not gain their competitive advantage by pursuing opportunities through innovation, there are costs involved in maintaining strategic controls in terms of managerial time and effort (Goold and Quinn, 1990).

As a result, the researcher proposed the following hypotheses:

H5: The degree of emphasis on strategic controls has positive effect on corporate entrepreneurship.

H5a: The degree of emphasis on strategic controls has positive effect on innovativeness.

H5b: The degree of emphasis on strategic controls has positive effect on Pro-activeness.

H5c: The degree of emphasis on strategic controls has positive effect on risk taking behaviors.

2.3.1.6. The relationship between the degree of emphasis on financial controls and attribute of corporate entrepreneurship

Financial control indicates base performance on objective financial criteria such as cash flow, net income, and return on investment. Financial controls are clear and unambiguous and introduce a high degree of discipline into the control system (Barribger and Buledorn, 1999) and provide an opportunity for the parties involved to agree on objective performance standards well in advance of any performance evaluation. But these factors may be particularly beneficial to less entrepreneur firms, which are firms that do not have as significant a need to encourage creativity and innovation as entrepreneurial firms. Focusing on objective, rigid and disciplined control process based on financial criteria's like cash flow, net income, return on investment and etc. these factors do not encourage creativity and risk taking and innovation. Resulting from this discussion, the researcher develops the following hypotheses:

H6: The degree of emphasis on financial controls has negative effect on corporate entrepreneurship intensity.

H6a: The degree of emphasis on financial controls has negative effect on innovativeness

H6b: The degree of emphasis on financial controls has negative effect on Pro-activeness

H6c: The degree of emphasis on financial controls has negative effect on risk taking behaviors.

2.3.2. Conceptual framework

As indicated by the following figures, independent variable of the study are strategic management practices include (i.e., *scanning intensity, locus of planning, planning flexibility, planning horizon, and control attributes*) were selected on the basis of their potential for influencing one or more of these key enablers of a firm's level of overall entrepreneurial intensity and frequently used by strategic management researcher (Barribger and Buledorn, 1999). And three variables that underlie a firm's ability to behave in an entrepreneurial manner and can measure overall entrepreneurial intensity of a firm are consistently mentioned in the literature. These are perceptions of a firm's tendency towards *innovative, risk-taking and proactive behavior* (Covin & Slevin 1989; Miller & Friesen 1983; Sathe, 1988; Zahra, 1993) and the study will use these variables as dependent variables.

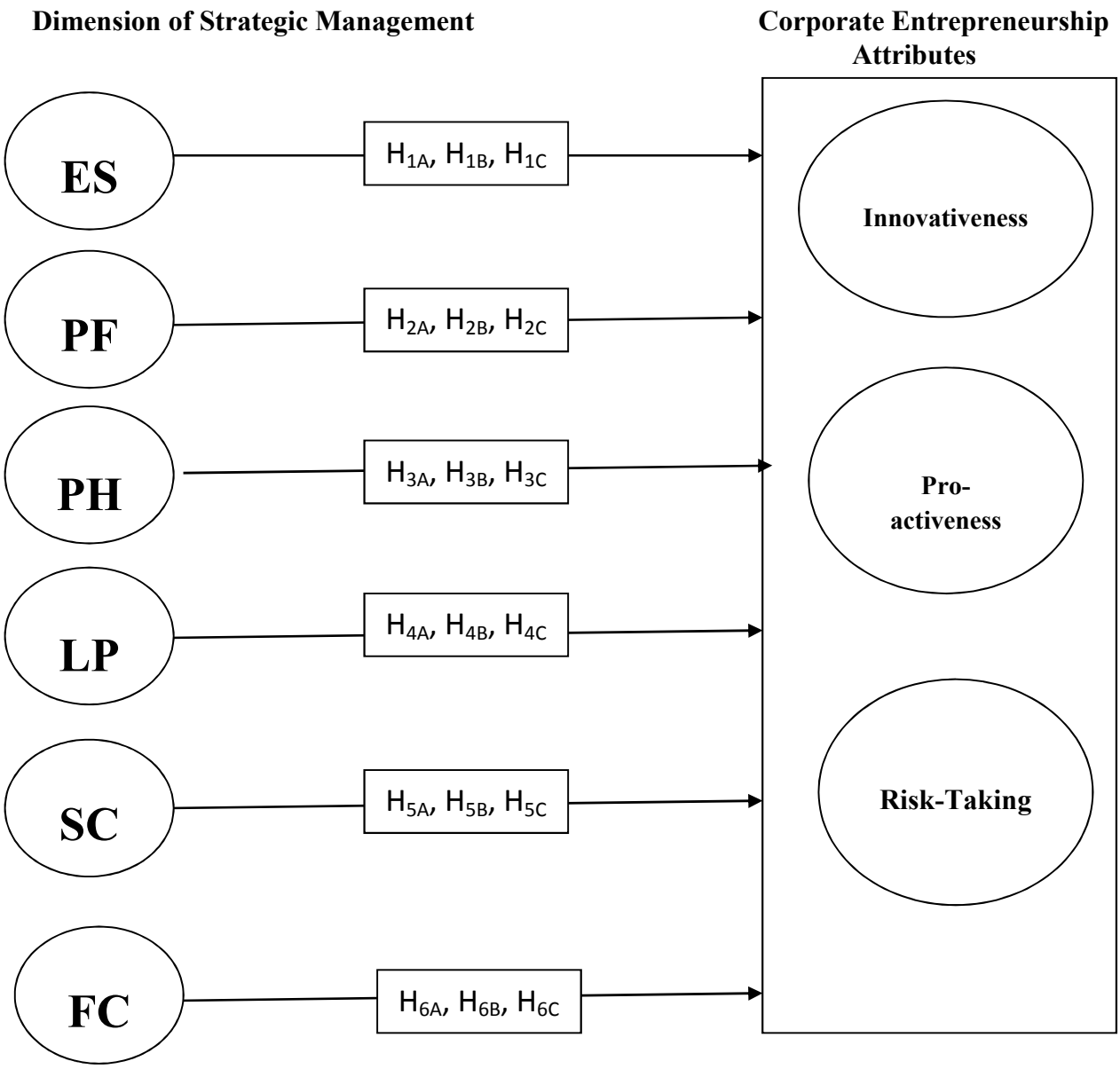

Figure 2.1 Conceptual framework model

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

This chapter reports the research methodology which is a way to accomplish the research objectives or to solve the research problem. This chapter include about research approach, research methods, research strategy, research data, nature and source, study population, sample and sampling frame, procedure of data collection and techniques, time horizon of the data and research measures.

3.2. Research Approach

Determining the research approach is very important in management science research because it can indicate the type of research design to adopt in the quest to uncover hidden phenomenon of interest to researchers (Wilson, 2010). Researchers oscillate between two main research approaches, deductive and inductive (Saunders et al., 2012) and both approaches and routes involve the use of physical observation and logic in different ways.

Inductive approach as a process of reasoning which begins with critical observations of the world, and then moves systematically towards abstraction and generalizations about the phenomena or ideas observed (Neumann, 2003). It is form of reasoning observation and the development of explanations and theories for those patterns through series of hypotheses. Whereas deductive approach is a manner of reasoning whereby the conclusions of research logically flow from the tentative premises, propositions or assumptions drawn from existing theories (Saunders et al., 2012) and once the conclusion emanating from deductive reasoning has been justified as factual all the premises or underlining propositions would also be factual

(Ketokivi and Mantere, 2010).

The study used deduction approach because its framework or research hypotheses are built based on the previous studies and this approach is searching for an explanation of the causal relationships between variables by collecting data in most cases using a quantitative method. It helps in generalizing from the chosen sample to the whole population (Sekaran, 2003).

3.3. Research Design and Method

According to Saunders et al. (2012), there are three common methods to conduct a research project in the area of business and social sciences research namely; quantitative, qualitative, and mixed research approaches. Qualitative research explores, understands and interprets social interactions by collecting open-ended responses from people using interviews, observations, field notes and personal reflections on the basis of which new hypotheses and theory are generated. It is usually called a bottom-up approach to research whereas; quantitative research examines cause-effect relationships and tests hypotheses for the purpose of making predictions on the subject of enquiry. Unlike the qualitative method, the quantitative method is a top-bottom approach to research (Johnson and Christensen, 2008).

Quantitative research method is considered suitable for this study because it is used to test a theory by identifying the variables based on the previous studies, examining the research relationships and obtaining the findings (Saunders et al., 2012). Quantitative research approach was used by the researcher in order to achieve the objectives of this study and thereby to give answer for its problems and it also used explanatory research design because it aimed to test the relationship between the dependent variables and independent variables.

3.4. Research Strategy

Determining research strategy is very important because it can help researchers to provide data that can answer the research questions or achieve the research objectives and give direction to the academic research. Even though there are many types of research strategies such as experiment, survey, case study, action research and grounded theory (Saunders et al, 2009), the study utilized survey methods, because the data collected from the survey strategy can be used to suggest a possible explanation of the relationship between the study's variables (Saunders et al, 2012). The use of a survey strategy provided a good opportunity to develop first-hand data unique to understanding the phenomenon under study and it is a potent strategy for collecting qualitative and quantitative primary data (Borrego et al., 2009).

3.5. Research data, nature and collection

3.5.1. Data type

Jankowicz (2005) and Saunders et al. (2012) note that all types of data available for research could be broadly classified into primary and secondary data sources. The research data required for this study are mixture of primary and secondary data. A questionnaire is considered to be a key tool in collecting data and it is the most widely used tool in social research (Lancaster, 2005) and Primary data for this study collected through using questionnaire. Secondary data, on the other hand, are data already developed by others which have been accessed (Saunders et al., 2012). In reality, secondary data are mostly generated from research publications, journal articles, textbooks, research-oriented websites and academic online databases, publications of professional/institutional bodies, magazines, periodicals, published annual reports of companies and government publications and online information available related to corporate entrepreneurship and strategic management.

The secondary data are required only for exploratory purposes in the literature review to gain insight into techniques, measurement and statistical tools used in previous studies. The secondary data were used as empirical evidences and proofs for strengthening the findings from the chapters four and five. However, for data analysis, this research relies purely on primary data specifically numerical data for quantitative research aspect and non-numerical data otherwise called voice to words data for qualitative research aspect.

3.5.2. Data collection technique

A questionnaire is considered to be a key tool in collecting data and it is the most widely used tool in social research (Lancaster, 2005). Primary data for this study were collected based on close-ended questionnaire and it contains standardized questions whereby all respondents may understand these questions in the same way. Hence, this study collected data using a questionnaire because the present study is an explanatory research.

3.5.3. Procedure of data collection

In the outset, face to face contact with top management of targeted manufacturing company was used to gain their cooperation in data collection. Next, the researcher obtained general information regarding kinds of enterprises and their current activities. Then, researcher identifies respondents to be included in sample and arrange time and place to get the respondents. Questionnaires were distributed to sample respondents in their respective workplaces by the researcher with the help of coordinators. Lastly, the researcher identifies the number of returned and unreturned questionnaire papers and files the returned ones.

3.5.4. Time horizon of the data

Data can be divided in to cross-sectional and longitudinal data based on the time horizon of collection (Saunders et al, 2012). The study used a cross-sectional data because it considered only the current level of entrepreneurship and strategic management of the targeted firms.

3.6. Study population, sample and sample frame

3.6.1. Study population

The population for this study includes managers of food processing companies located in Addis Ababa, capital city of Ethiopia. According to food, medicine and health care administration and control authority of Ethiopia, in Addis Ababa there are a total of 142 food processing companies availing 142 company managers to be selected for the sample. The respondents were managerial level because they are responsible for strategic decisions at the corporate level and the strategic business unit level, and therefore they are in the best position to describe the various organizational characteristics of their company (Mahmood and Abd Wahid, 2012).

3.6.2. Sampling

In effective and meaningful survey research, it is very difficult to have a hundred percent (population) assessment; hence a representative sample size becomes expedient.

According to Saunders et al. (2012) there are two basic sampling methods probability and non-probability sampling and they have divergent relationships (both are at extreme). Probability sampling is an objective method of sampling that allows researchers or interviewers to make inferences on the population on the strengths of the randomness in chosen sample/units from the population. It is often viewed as an unbiased method because it forestalls arbitrary and subjective selection of samples (Saunders et al., 2012). However Non-probability sampling is a method of

selecting units or samples from the target population on the basis of justifiable personal judgment or subjectivity.

The sampling technique for the study was random sampling because such a sampling technique avoids researcher bias in selecting the sample improving the external validity of the research and permissibility of inferences/generalization from sample (Statistics Canada, 2010: 91). Even though there are different form random sampling namely, simple, systematic, stratified and cluster, probability-proportional-to-size, multi-stage, multi-phase and replicated random sampling (Saunders et al, 2009), the researcher selected simple and systematic random sampling techniques for this study. Simple random sampling was used because it can completely avoid the researcher's bias and eventually it will produce a random result. Stratified random sampling was also used because the targeted companies are distributed throughout the sub-cities and data needs to be collected from each sub-city considering each sub-city as strata. Sample from each sub-city was selected proportionally that is; depending on the number of companies each sub-city has in the population.

3.6.3. Sampling frame

A complete list of all the cases in the population from which your sample will be drawn is a sampling frame in probability sampling (Saunders et al., 2009). The researcher takes list of food processing firms at every sub-city located in Addis Ababa city as a sampling frame for this study. The sampling frame data was obtained from food, medicine and health care administration and control authority of Ethiopia last updated as of 2016. The sampling frame of the study has a total of 142 food processing company mangers.

3.6.4. Sample size

When the target population size is known, Yamane's (1967) provides a simplified formula to calculate sample size presented as follows:

$$n = \frac{N}{1 + Ne^2}$$

Where,

N= population size

n= sample size

e= the desired level of precision (5%)

Based on this Yamane's formula the sample size of the study was calculated as:

$$n = \frac{142}{1+142(0.05)^2} = 104$$

For business and social science research a confidence level of 95 percent or margin of error ± 5 percent is acceptable (Krejcie and Morgan, 1970). Table 3.1 shows the details of how many companies were taken from each sub-city depending on the proportion of the population. Sub population section of the table indicates the number of food processing firms in each sub city of Addis Ababa city based on the data from food, medicine and health care administration and control authority of Ethiopia.

Table 3.1 Sample proportion taken from each sub city

S. no	Name of Sub city in Addis Ababa	Sub population	Sample proportion
1	Addis Ketema	6	4
2	Akaki Kality	23	19
3	Arada	7	5

4	Bole	24	17
5	Gullele	4	2
6	Kirkos	12	7
7	Kolfe keranyo	9	6
8	lideta	16	12
9	Nifas silk lafito	24	19
10	Yeka	17	13
	Total	142	104

3.7. Research measures

Under this section every dependent and independent variable should be outlined and its measurement should be stated. The variable of this study are strategic management practices dimension (scanning intensity, planning flexibility, planning horizon, locus of planning, and control attributes) and corporate entrepreneurial intensity (risk-taking, innovative, and proactive response). These Items were measured based on a five-point Likert-type scale ranging from "1= strongly disagree" to "5 = strongly agree with a neutral midpoint".

Likert scale measures are fundamentally ordinal level measurements because responses indicate a ranking data only. This has generated some contention in the empirical research world whether likert scales are good for measuring attitude. For example, Helgeson (1993) points out major reviews 'repeatedly point to two problems: lack of conceptual clarity in defining attitudes and technical limitations of the instruments used to assess attitude' (Bucci, 2003). These criticisms may be valid but they should be taken into context. For this study, it should perhaps be emphasized that scale is not applied to provide any kind of diagnostic information that shows underlying issues of concern to the individual respondents. The scale measures human judgment

relevant to organizational strategic management practices and corporate entrepreneurship. It requires the respondents to rate their level of agreement on a five point scale. Attitude scales do not need to be factually accurate because they seek to reflect the respondent's possible perceptional likert of the scale, respondents do not assess the factual accuracy of each item, but responds to the feelings, which, the statement triggers (Dyer, 1995). Furthermore, the Likert scale has received growing research support in the past two decades and the simplicity and ease of use of the likert scale is its real strength (Neuman, 2000). That is why it is adequate and appropriate scaling method in improving the accuracy of subjective estimation procedures concerning questions on strategic management practices and corporate entrepreneurial intensity constructs relevant to this study.

CHAPTER FOUR

4. DATA ANALYSIS AND DISCUSSION

4.1. Introduction

This chapter describes the research sample and sample characteristics providing the foundation for the data analysis procedures used to extract research results. Subsequent sections also discuss the test for non-response bias, pilot test for (reliability & validity analysis), description of respondent profile, assessing the quality of data (sample size, common method bias, missing data, outliers, linearity, multi-colinearity), explanatory factor analysis, confirmatory factor analysis and reports on the hypothesis test results.

4.2. Testing for Non-Response Bias

Test for non-response bias needs to be conducted because it is likely that data may not fully collect if the instrument is questionnaire and some questionnaires distributed but may not be collected. In this study 104 questionnaires were distributed but actually collected 102 usable questionnaires (response rate of 98%) were collected. Therefore, there is a need to test for non-response rate to check if there is any mean difference between late and early respondents using independent t-test. Even though there is no consensus around the number of items which should be tested like Armstrong and Overton, (1977) used 53 of the 112 items (47%); Lambert and Harrington (1990) chose 28 of 56 original questions. For this study the researcher used 20 cases of the collected data half of which are late respondents and half of them are early respondents. The t-tests results showed that for almost all of items (99.1%) there was no significant difference between the late and early respondents ($p > .05$) indicating that non-response bias was not a problem for the data. (See in appendix II).

4.3. Questionnaire Pilot Testing

Questionnaire is a common tool used to collect data in business research. This questionnaire should be piloted to redesign the questionnaire to ensure that respondents have no problems answering the questions and to assess the validity and reliability of the questions (Saunders et al., 2009). This test should be undertaken for pre-testing the questionnaire. The objectives of the pilot study were to make sure that the respondents understand the questions in the survey, to ask feedback for improvements to the instrument from respondent. The responses showed the general ease of completion of the questionnaire, and there were no comments or improvement suggestions from the respondents. Therefore, no further adjustments were needed. In addition, a reliability test was conducted to examine the internal consistency of the instruments employed in this study.

4.3.1. Validity

Validity indicates how much an instrument measures what it is supposed to measure (Bryman and Bell, 2007) and it depends on the definitions of the variable which is used to design the measure. The common types of validity are content validity, external validity, construct (convergent and discriminant) validity. This study's questionnaire was evaluated by respondents through pilot test, PhD candidates and university lecturers and they assure that the contents included in the questionnaire were sufficient and easy to understand. Beyond the above reasons corporate entrepreneurship variable measures were derived from well-defined entrepreneurship theory (Zahra, 2001; 2007) and the measures of strategic management practices were derived from an established management discipline of strategy (Hitt, et. al., 2008; Miller and Friesen, 1982). These indicate that the instrument have good content validity. Regarding to external validity, the actual survey data were based on random sample and adequate sample size from

the population as a result this study is believed to have good external validity. Convergent and discriminant validity were assessed as a part of factor analysis.

4.3.2. Reliability

Reliability refers to the extent to which a test measured consistently regardless of what it measured or whether or not a test produced the same results on different occasions. The measure was reliable when respondents gave the same answer in different situations. A question might be unreliable because it contained words which could be misunderstood and, consequently, which might cause confusion (Bordens and Abbott 2014). In order to check that the measures are reliable or not the researcher used Cronbach's coefficient which range from 0 (observed items are not consistent) to 1 (they completely correlate) to test alpha the reliability of the measures (Cronbach 1951).

Internal consistency will be acceptable if Cronbach‟s alpha is high (George and Mallery, 2003) and ought to be equal to or above 0.70 or 0.60 (Hair et al. 2010). In order to conduct reliability test of the study the researcher delivered 20 initial questionnaires and collected from 20 food processing firms in order to obtain some assessment related to the questions‟ reliability and validity. All questionnaires were returned (a response rate of 100 %.) with acceptable response rate (Saunders et al. 2009) who recommended that a 30% response rate was reasonable for questionnaires delivered and collected for pilot test. As a criterion to evaluate reliability the researcher used Cronbach‟s alpha ought to be above 0.70 (Hair et al., 2010), corrected item-total correlations ought to be not less than 0.35 (Netemeyer et al., 2003). Correlated item-total correlations should not be less than 0.3 (Bernstein, 1994).This value indicates the extent to which, within a scale, an item correlated with the other items to support construct validity. For

better reliability, this study used 0.35 as a minimum point and finally, inter item correlation should not exceed 0.8 for all pairs of items (Bernstein, 1994).

Table 4.1 compiles the Cronbach alphas for the variables in this study. Cronbach alpha coefficients tested the validity of the scales. From the nine Cronbach alphas of factors measured, al variable's Cronbach alphas are above 0.7. This enabled the study to validate the viability of the scales used to measure the strategic management practices and entrepreneurial orientation of the sampled firms.

Table 4.1 Reliability test for constructs

Constructs	Number of items	Cronbach's alpha
Innovativeness	8	.783
Pro-activeness	5	.765
Risk taking	5	.796
Environmental scanning	12	.733
Planning flexibility	9	.811
Planning horizon	4	.747
Locus of planning	13	.902
Strategic control	3	.936
Financial control	6	.870

4.4. Description of Profile of the Respondents

This section provides details of the survey instruments accuracy and completeness as well as frequency distributions of variables. Table 4.2 below revealed that most of (71.6 %) of food processing company managers were male and (28.4 %) were female. Nearly (60.8 %) hold an undergraduate degree, 32.4 % possessed masters' degree and the rest (6.9 %) were diploma holder. Of the total respondents, 42.2 % have 5 to 10 years' experience, 35.3% have more than 10 years and the rest 20.6% have up to 5 years' experience in their current job and company.

Regarding to registered capital of the company nearly 39.2 % of the sample firms has more than 50 million birr registered capital and the rest 37.3% & 18.6% of the firms has 25 to 50 million and less than 25 million respectively. Of the total targeted companies, 49.0 % of them have 200 to 500 employees and the remaining 29.4% and 21.6% has less than 200 and more than 500 employees respectively. Based on market scope 47.1% of the total firms are providing their product only for domestic market and the rest 45.1% and 7.8% for both (domestic & international) and international market respectively.

Table 4.2 Profile of respondent and company statistics

Items	Category	Frequency	Percentage
Gender	Male	73	71.6
	Female	29	28.4
	Total	102	100
Experience	Less than 5 years	21	20.6
	5 to 10 years	43	42.2
	More than 10 years	36	35.3
	Missing	2	2.0
	Total	102	100
Education	Diploma	7	6.9
	BA degree	62	60.8
	Advanced studies	33	32.4
	Total	102	100
Capital	Less than 25 million	19	18.6
	25 to 50 million	38	37.3
	More than 50 million	40	39.2
	Missing	5	4.9
	Total	102	100
Number of	Less than 200	30	29.4

employee	200 to 500	50	49.0
	More than 500	22	21.6
	Total	102	100
Market scope	Domestic	48	47.1
	International	8	7.8
	Both	46	45.1
	Total	102	100

Source: SPSS output

4.5. Data Analysis: Assessing the Quality of Data

4.5.1. Assessing the Sample Size

The sample size will affect the accuracy of all the statistical estimates in Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) and it should be at least 100 to 200 cases in order to conduct structural equation modeling (SEM) (Loehlin, 2004). The sample size used for this study was 104 and meets the minimum requirement for performing the EFA, CFA and the structural model.

4.5.2. Assessing Missing Data

Missing (or incomplete) pieces of data are a common problem in social science research. There are many reasons for the occurrence of missing data which, usually, are beyond the researchers control like the respondent forgot to answer some items in the questionnaire and he/she was absent on the day of data collection or some questions were sensitive for the respondent or missing data might occur because the questionnaire is too long. Missing data may cause two major negative effects on the research results: (1) it may produce biased estimates‟ and (2) it reduces the model's fit (Ahmed 2014).

Only six cases out of the 102 responses had missing data in this study but none of them were omitted because variables or cases ought to be omitted if they had 50% or more missing data (Hair et al, 2010). The missing values spread randomly across the variables. Given the variability of the missing data in the 6 observations, no imputation was attempted. Instead, the statistical software used for data analysis was programmed to apply case wise deletion of missing data or maximum likelihood procedures where applicable during particular analyses.

4.5.3. Assessing outliers

In social science research outliers are a common problem and about values which are either on one or a set of variables (Tinsley and Brown, 2000) that can occur as "a result of an error in the data file (e.g., entry of an incorrect value), a programming error (e.g., an error in recoding or transforming variables or a failure to identify missing data values correctly), or the presence of a valid but exceptional data point" (Tinsley and Brown, 2000). Outliers will cause negative effects on data analysis. For example, data can contain collinearities and non-normality which can lead to negative variance estimates (Brown, 2006). These effects can deform statistical results which cannot be generalized. Outliers can be univariate related to cases with an extreme value on a single variable or these values exist in cases of two or more variables (multivariate outliers) (Kline, 2005).

In this study the researcher used frequency distributions of z scores in order to find univariante outliers. According to Tinsley and Brown (2000), there is a univariate outlier if the Z score is greater than 3.29 with $p < .001$ (see table 4.3). Accordingly, there is no univariate outlier that can threat on the data since no Z sore values is not above 3.29.

Table 4.3 Z score value for unobserved (latent) variables

Variables	Maximum Z score in variables
Innovativeness	2.26511
Pro-activeness	2.02415
Risk taking	2.07443
Environmental scanning	2.27331
Planning flexibility	2.1344
Planning horizon	2.36133
Locus of planning	1.40149
Strategic control	0.91302
Financial control	0.89282

Source: SPSS output

4.5.4. Assessing Common Method Bias

When the researchers rely on the same respondent who provides information about all the variables and if a single factor explains the majority of variance Common method bias is believed to exist (Podsakoff et al, 2012). And it is a problem because it is considered to be a main source of measurement error which has a negative effect on the validity of the measure (Podsakoff et al, 2003) and correlations will be inflated (Meade *et al*., 2007). Since this study used one questionnaire to measure all constructs common method bias should be investigated. As indicated on un-rotated factor analysis (see appendix III) showed that the first factor accounted for 23.611 % of the total variance. Therefore, the results suggested that there were no common variable that can threat the data since its value was not above 50% (Podsakoff et al, 2012).

4.5.5. Assessing Linearity Assumption

Standard multiple regression can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature. This is the assumption of

linearity indicate that dependent variable as a linear function of the predictor (independent) variables. In most case in the social sciences non-linear relationships between dependent and independent variables were occurs and if the relationship between independent variables and the dependent variable is not linear, the results of the regression analysis will under-estimate the true relationship.

Under- estimation of the true relationship will carries two risks (1) increased chance of a Type II error for that independent variables, and (2) in the case of multiple regression, an increased risk of Type I errors (over- estimation) for other independent variables that share variance with that independent variables. If linearity is violated there will be biased estimates of the regression including regression coefficients, standard errors, and tests of statistical significance (Keith, 2006). In order to check whether there is a linear relationship between variables the researcher conducted curve estimation for all the relationships in the model and all the relationships were sufficiently linear to be tested using a covariance based structural equation modeling (see appendix III).

4.5.6. Assessing Normality Assumption

Normality test is common technique of evaluating data quality before further analysis which focuses on the extent to which the sample data distributes according to normal distribution (Hair et al., 2010). The most common methods to evaluate the normality of the observed items are skewness and kurtosis. According to Landau and Everitt (2003), Skewness is “a measure of the asymmetry of the probability distribution of a real-valued random variable”. On the other hand, kurtosis refers to “the peaked or flatness of the distribution compared to the normal distribution”.

Skewness value can be zero, negative or positive, if it is zero, indicates a perfectly symmetrical distribution and positive value indicates that the tail on the right side is longer. On the contrary, a negative value refers to the tail on the left side is longer. On the other hand, a kurtosis value is zero for normal distributions, whilst it is negative for flat distributions (low kurtosis) and a positive value for peaked distributions (high Kortosis). As a rule of thumb, the values of skewness and kurtosis should be between -1 and +1 in order to obtain a reasonably normal distribution (Bachman, 2004).

In order to check whether the sample data are normally distributed or not, the researcher conducted univariate skewness and kurtosis value test and were well within their respective rule-of-thumb ranges (between -1 and 1) which provided support for univariate normality of the study (see in the appendix III).

4.5.7. Assessing Multicolinearity Assumption

After the normality of the data in the regression model is met, the next step is to determine whether there is a similarity between independent variables. Multicollinearity is a problem that occurs with regression analysis when there is a high correlation of at least one independent variable with a combination of the other independent variables. The researcher is able to interpret regression coefficients as the effects of the independent variables on the dependent variables when collinearity is low. Multicollinearity will occur when several independent variables correlate at high levels with one another, or when one independent variable is a near linear combination of other independent variables. The more variables overlap (correlate) the less able researchers can separate the effects of variables (Keith, 2006) this will create misleading and unusual results, inflated standard errors, reduced power of the regression coefficients that create a need for larger sample sizes (Jaccard et al., 2006; Keith, 2006).

A good model should not happen correlation between independent variable or not happen multicollinearity. Variance Inflation Factor (VIF) is the most common technique of identifying the existence of multicollinarity between all independent variables and it measures the impact of collinearity among the variables in a regression model. As recommended by Shieh (2010) when a predictor variable has a strong linear association with other predictor variables, the associated VIF is large and is evidence of multicollinearity and if VIFs is 3.3 or lower to suggest no multicollinearity in the model (Kock, 2013).

In this study the researcher used Variance Inflation Factor (VIF) index in order to check whether the data is free from multicollinearity or not. As can be seen in table 4.5, VIF index for all independent variables are below the threshold of 3.3 indicating there is no multicollinearity problem for the data.

Table 4.4 Variance Inflation Factor (VIF) Statistics of Multicollinearity Test

Collinearity Statistics with Environmental scanning	
Variables	**VIF**
Planning flexibility	1.418
Planning horizon	1.137
Locus of planning	1.907
Strategic control	1.852
Financial control	1.242
Collinearity Statistics with Planning flexibility	
Variables	**VIF**
Environmental scanning	1.050
Planning horizon	1.133
Locus of planning	1.777
Strategic control	1.884

Financial control	1.123
Collinearity Statistics with Planning horizon	
Variables	**VIF**
Environmental scanning	1.070
Locus of planning	1.900
Strategic control	1.890
Financial control	1.210
Planning flexibility	1.439
Collinearity Statistics with locus of Planning	
Variables	**VIF**
Environmental scanning	1.073
Strategic control	1.274
Financial control	1.215
Planning flexibility	1.350
Planning horizon	1.136
Collinearity Statistics with strategic control	
Variables	**VIF**
Environmental scanning	1.051
Financial control	1.206
Planning flexibility	1.443
Planning horizon	1.140
Locus of planning	1.285
Collinearity Statistics with financial control	
Variables	**VIF**
Environmental scanning	1.078
Planning flexibility	1.316
Planning horizon	1.116
Locus of planning	1.874
Strategic control	1.845

Source: SPSS output

4.6. Data Analysis: Factor Analysis

Factor analysis (FA) is a type of statistical procedure that is conducted to identify clusters or groups of related items (called factors) on a test and explain the relationship between a set of observed and construct variables (Tinsley and Brown, 2000; Byrne, 2010). Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables. The observed variables are modeled as linear combinations of the potential factors, plus "error" terms.

In general Factor analysis can be used for calculating the factor loading, evaluating the validity of measurements, to confirm or develop a theory through investigating the observed variables which belong to latent ones (unobserved variables) and to produce a smaller group of latent variables which consist of a larger set of observed variables or manifest variables (Albright and Park, 2009; Field, 2009). Factor analyses are divided in to two Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). EFA is a statistical method used to uncover the underlying structure of a relatively large set of variables and it is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables (Norris *et al*., 2009). It is commonly used by researchers when developing a scale (a scale is a collection of questions used to measure a particular research topic) and serves to identify a set of latent constructs underlying a battery of measured variables (Fabrigar *et al.,* 1999). Therefore, it aims to determine the degree to which the observed variables are linked to their fundamental factors (latent variables). It is designed only to suggest and not to confirm groups or dimensions. Confirmatory factor analysis (CFA) is a special form of factor analysis,

most commonly used in social research and It is used to test whether measures of a construct are consistent with a researcher's understanding of the nature of that construct (or factor). As such, the objective of confirmatory factor analysis is to test whether the data fit a hypothesized measurement model (Preedy & Watson, 2009).

4.6.1. Exploratory Factor Analysis (EFA)

Explanatory factor analysis is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables and explain the structure of the inter-relationships (correlations) between items which should relate to each other for the purpose of producing an appropriate structure model (Hair et al., 2010). It is commonly used by researchers when developing a scale (a scale is a collection of questions used to measure a particular research topic) and serves to identify a set of latent constructs underlying a battery of measured variables. It should be used when the researcher has no a priori hypothesis about factors or patterns of measured variables (Finch & West, 1997). The primary objectives of EFA are to find the factors consist of a set of measures, to discover the strength of the relationship between each factor and each observed measure and to reduce a data set to a more manageable size whilst retaining as much of the original information as possible (Field, 2009).

Accordingly the researcher used the principal components method for factor extraction and Variamax rotation to carry out factor interpretation. There were, also factorability test of data through using two SPSS generated statistical measures: Kaiser-Meyer-Olkin (KMO); and Bartlett's test of Sphericity (Pallant, 2003). Factorability is the assumption that there are at least some correlations amongst the variables so that coherent factors can be identified. Basically, there should be some degree of collinearity among the variables but not an extreme degree or singularity among the variables. The Kaiser-Meyer-Olkin (KMO) measure of overall sampling

adequacy assesses the degree to which indicators are valid or appropriate for factor analysis. According to Kaiser (1974) KMO value is between 0 (Factor analysis is likely to be inappropriate) and 1 (Factor analysis yield reliable factors) and KMO value might be excellent if it is above 0.9, great if it is in between 0.8 and 0.9, good in between 0.7 and 0.8, middling and unacceptable if it is in between 0.5 and 0.7 and less 0.5 respectively. Whereas Bartlett's test of Sphericity tests is used to test whether or not a samples are from populations with equal variances and supposed that the population correlation matrix was an identity matrix. Bartlett's test is sensitive to departures from normality and if your samples come from non-normal distributions, then Bartlett's test may simply be testing for non-normality.

As indicated on table 4.6, KMO value was 0.714 which is great and Chi-Square under Bartlett's test of sphericity was 356.937 with ($df = 36$, $p<0.001$) which means that variables were related to one another and factorable. Therefore, the study was able to continue to complete the remaining steps of the factor analysis.

Table 4.5 Statistics of KMO and Bartlett's Test of factorability

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.714	
Bartlett's Test of Sphericity	356.937	
	df	36
	Sig.	000

4.6.1.1. Factor Extraction

After the two major test of factorability (KMO and Bartlett's Test) the next step under explanatory factor analysis is factor extraction which concerned with finding the smallest

numbers of factors that can be used to best represent the inter-relations among the set of variables (Pallant, 2003). Factor extraction was conducted through using two methods: communality by using common variance and total variance explained through using Eigen values.

4.6.1.2. Total Variance Explained

Total variance is another way to determining the number of factors which explain most variances in the data through using Eigen values (Kim and Mueller, 1978). In this study initially they were 65 variables and 13 factors explained 83.832 % of the variance but later on these factors were reduced in to 9 because some variables which were unrelated to any of the factors and/or have low loadings were dropped. And these 9 variable explained 68.647 % of total variance (Appendix III).

4.6.1.3. Communality

In Principal Components and Factor Analysis, communality is the proportion of variance that each item has in common with other items. For any variables, the variances can be divided into two components. These are called common variances which are shared with other variables and the unique variance which is specific to that measure. Common variances are the major concern of communality related to how much of the variance in the variables had been explained or was accounted for by the extracted factors (Field, 2009). As a rule of thumb low communality with value of below 0.5 may lead to its variable being omitted (Thompson, 2004).

In this study initially 65 variables and common factors were ready for principal component analysis and initially it was assumes that all variances are common (communalities equal 1). As

indicated on Appendix III, most (more than 90%) of variables in the data were above 0.5 communality value indicating high communality.

4.6.1.4. Factor Rotation

Factor rotation serves to make the output more understandable, by seeking so-called simple structure: A pattern of loadings where items load most strongly on one factor, and much more weakly on the other factors. The loadings reflect the strength of the relationship between a scale item and a particular construct or factor. The higher the loading, the better the representation that particular item has on the factor. There are two types of factor rotation: orthogonal and oblique rotation. Orthogonal rotations consider factors to be uncorrelated and Varimax rotation is considered the best orthogonal rotation and consequently is used the most often in social science research whereas Oblique rotations permit correlations among factors (Fabrigar et al., 1999).

According to Hair et al. (2006), factor loadings greater than 0.30 are the minimum requirement; loadings of 0.40 are considered more important; and loadings of 0.50 or greater are considered significant. Based on this guideline, items that have factor loadings of lower than 0.3 should be discarded to get items more representatives for their respective factor.

Appendix III contains the rotated factor loadings which related to the correlations between each item and its construct and all factor loading are greater than 0.3. Under this part the first factor contain four questions representing IN, the second and third factor contain five and three questions representing PR and RI respectively. Under fourth, fifth and sixth factors consist of four, six and three questions representing ES, PF and PH respectively. The last three factors contain eight, three and six which belongs to LP, SC and FC respectively. Generally EFA result

indicates nine factors (IN, PR, RI, ES, PF, PH, LP, SC and FC) with respective 4, 5, 3, 4, 6, 3, 8, 3 and 6 questions.

4.6.2. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a special form of factor analysis, most commonly used in social research. It is used to test whether measures of a construct are consistent with a researcher's understanding of the nature of that construct (or factor). As such, the objective of confirmatory factor analysis is to test whether the data fit a hypothesized measurement model (Kline, 2011). Structural equation modeling software is typically used for performing confirmatory factor analysis and it offers benefits not provided by first generation statistical techniques such as correlation analysis, exploratory factor analysis, multiple regression, discriminant analysis, analysis of variance or logistic regression (Bagozzi and Yi 2012). Confirmatory factor analysis is also frequently used as a first step to assess the proposed measurement model and construct validity through model fit indices in a structural equation model after identifying the underlying structure using exploratory factor analysis with a method of principal component analysis (Tabachnick and Fidell, 2007). SEM employs confirmatory factor analysis rather than an exploratory approach to data analysis, and enables better inferential analysis (Hair et al, 2006). Secondly, although hypothesis testing is difficult in most multivariate techniques, SEM offers a less difficult means to test research hypotheses, and enables the analysis of relationships between dependent variables (Kline, 2005). In general aims of SEM is to test the relationships between one or more independent and dependent variables by assessing the extent to which the hypothetical constructs are suitable or fit with the obtained data. For analysis purpose SEM method can be separated into two models: the measurement model and the structural model (Byrne, 2001).

4.6.2.1. Measurement Model

Measurement model showing the relations between latent variables and their indicators and the main purpose of using SEM to assess the measurement model is to find the most parsimonious model which is well fitting and valid. It also evaluates construct validity in terms of convergent and discriminant validity to discover the extent to which the measures have adequate internal consistency by conducting the necessary tests and the acceptance levels for goodness of fit (Paschke, 2009).

4.6.2.1.1. Construct Validity (convergent and discriminant validity)

Construct validity is "the degree to which a test measures what it claims, or purports, to be measure (Cronbach *et al*., 1955). It is the appropriateness of inferences made on the basis of observations or measurements (often test scores), specifically whether a test measures the intended construct and it is necessary to assess construct validity through CFA before assessing the structural model and testing the research hypotheses (Byrne, 2010). Construct validity can be divide in to convergent and discriminant validity.

Convergent validity refers to the degree to which two measures of constructs that theoretically should be related are in fact related. In CFA, convergent validity measures whether items of the same latent factor share a proportion of variance (Hair et al, 2006). Statistical test of the significant factor loading is the key criterion in assessing factor validity (Holmes-Smith, 2007). Convergent validity is assessed through a variety of measures: firstly, with standardized regression loadings of higher than 0.5 (Hair et al, 2006); secondly, with significant p-values (at 95% confidence interval) (Hair et al, 2006) and critical ratios outside the -1.96 to +1.96 z-ranges; and finally, SMC values below 0.3 are considered not to hold convergent validity.

Discriminant validity tests whether concepts or measurements that are supposed to be unrelated are, in fact, unrelated and can be assessed based on correlations between different constructs. High correlations (above 0.8 or 0.9) between constructs indicate a lack of discriminant validity (Holmes-Smith 2007).

4.6.2.1.2. Goodness of Fit

Goodness of fit indicate how well the model reflects the data, in other words, how well the specified model reproduces the covariance matrix among the indicator items (Hair *et al*. 2006). Measures of goodness of fit typically summarize the discrepancy between observed values and the values expected under the model in question. Generally GOF indicators can be grouped into three categories: absolute measures, incremental measures and parsimonious fit measures and to ensure rigor in the empirical assessment, multiple GOF indices should be used (Kline, 2005). This study used chi-square (X2) value and degrees of freedom, (CFI and TLI) for incremental index, (RMSEA and SRMR) for absolute index and Parsimony comparative fit index (PCFI) for Parsimony fit indices. This study evaluates model fit based on selected fit measures as summarized in Table 4.6.

Table 4.6 list of Selected Goodness of Fit (GOF) Measures and Established Criteria

Category	Statistics	Abbreviation	Acceptable level
Chi-Square	Chi-square (with df, p)	x2 (df, p*)	p-value can be less than 0.5
Absolute fit indices	Normed chi-square	x2 /df	Value between 1 and 5
	Root mean-square error of approximation	RMSEA	Values < .08/.10
	Root mean-square residual	RMR	Values < .09
Incremental	CFI, Tucker Lewis index,	CFI, TLI, IFI	Values >= .90 and sample

fit indices	Incremental fit index		size
Parsimony fit indices	Parsimony normed fit index (PNFI), Parsimony	PNFI, PCFI	Values >= .5

Source: Hair et al, (2010)

4.6.2.1.3. Model Re-specification Considerations

A model is said to be correctly specified squared multiple correlations (SMC) values should be greater than 0.5. Standardized residual covariance should also be less than the benchmark value of |4| but preferably less than |2.58| (Hair et al, 2010). When large standardized residuals is associated with either a single item or several of the items (items which is not accounted for sufficiently by the model) within the factor, the necessary re-specification should be made to account for this association between the variables, such as by dropping an item and re-running the measurement model (Ibid). MI is calculated for each non-free parameter and represents a possible decrease in X2 if the parameter is freely able to be estimated in the re-specified model and MI value greater than |4| suggests that the chi-square could be significantly reduced if the corresponding parameter were estimated and made appropriate re-specification to the model (Byrne, 2010; Hair et al, 2010).

The researcher began initially the measurement model task with the final outputs of exploratory factor analysis which consists of latent variables with their respective indicators (observed variables) which are shown in table 4.7.

Table 4.7 Proposed unobserved and observed variable for CFA

s.no	Unobserved (latent) variables	Number of items	Observed (indicators) variables
1	Innovativeness (IN)	4	IN1, IN5, IN6, IN8
2	Pro-activeness (PR)	5	PR1, PR2, PR3, PR4, PR5
3	Risk taking (RI)	3	RI1, RI2, RI5
4	Environmental scanning (ES)	4	ES1C, ES1F, ES2A, ES2B
5	Planning flexibility (PF)	6	PFA, PFB, PFC, PFD, PFE, PFF
6	Planning horizon (PH)	3	PH1, PH3, PH4
7	Locus of planning (LP)	8	LP3, LP6A, LP6B, LP6C, LP7A, LP7B, LP7C, LP7D
8	Strategic control (SC)	3	SC1, SC2, SC3
9	Financial control (FC)	6	FCA, FCB, FCC, FCD, FCE, FCF

Source: SPSS output

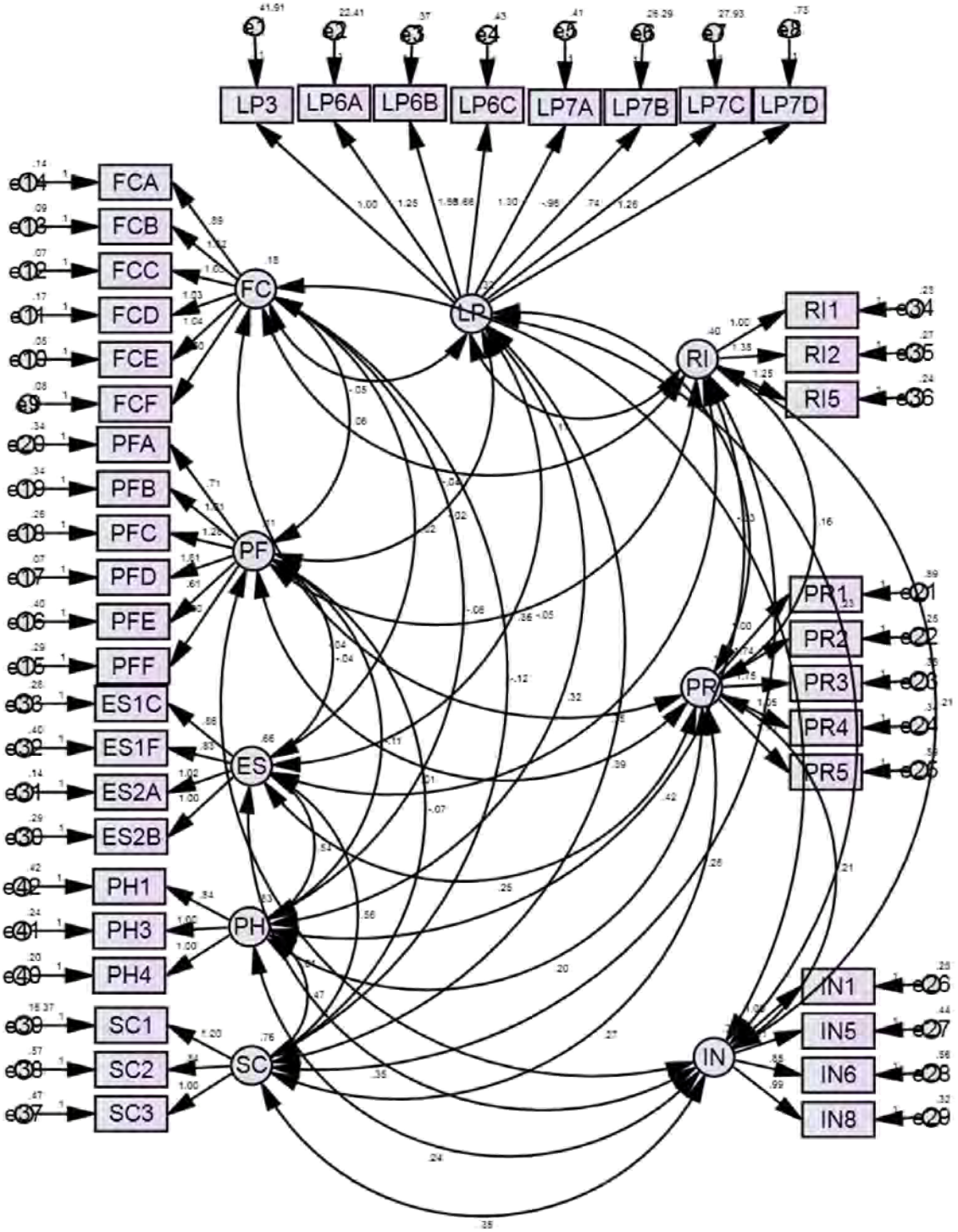

Figure 4.1 First proposed CFA measurement model (Source: AMOS output)

Table 4.8 Statistics for first proposed CFA Measurement Model

Chi-square		Absolute Fit Indices		Incremental Fit Indices		Parsimony Fit Indices	
X2 (p)	1299.49(.000)	RMSEA	.081	CFI	.789	PCFI	.716
DF	783	RMR	.179	IFI	.794	PNFI	.550
X2/DF	1.65			TLI	.766		

Factor Loadings						
Item<--- Variable	**Estimate**	**S.E**	**C.R.**	**P**	**SMC**	**Comment**
LP3<---LP	1.000	1.730	.722	.470	**.008**	**Convergent validity doesn't holds**
LP6A<---LP	1.249	1.871	.835	.404	**.022**	**Convergent validity doesn't holds**
LP6B<---LP	1.562	1.989	.835	.404	.683	Convergent validity holds
LP6C<---LP	1.661	1.559	.834	.404	.678	Convergent validity holds
LP7A<---LP	1.300	1.487	-.645	.519	.575	Convergent validity holds
LP7B<---LP	-.959	1.320	.563	.573	**.011**	**Convergent validity doesn't holds**
LP7C<---LP	.744	1.510	.832	.406	**.006**	**Convergent validity doesn't holds**
LP7D<---LP	1.256				.411	Convergent validity holds
FCF<---FC	1.000	.089	11.69	***	.699	Convergent validity holds
FCE<---FC	1.044	.122	8.431	***	.817	Convergent validity holds
FCD<---FC	1.029	.096	10.79	***	.534	Convergent validity holds
FCC<---FC	1.033	.100	10.17	***	.740	Convergent validity holds
FCB<---FC	1.020	.108	8.246	***	.688	Convergent validity holds
FCA<---FC	.892				.517	Convergent validity holds
PFF<---PF	1.000	.234	2.595	.009	**.270**	**Convergent validity doesn't holds**
PFE<---PF	.609	.358	5.059	***	**.089**	**Convergent validity doesn't holds**
PFD<---PF	1.814	.283	4.511	***	.824	Convergent validity holds
PFC<---PF	1.278	.262	3.832	***	.394	Convergent validity holds
PFB<---PF	1.006	.230	3.078	.002	**.238**	**Convergent validity doesn't holds**
PFA<---PF	.709				**.133**	**Convergent validity doesn't holds**

PR1<---PR	1.000	.442	3.928	***	**.160**	**Convergent validity doesn't holds**
PR2<---PR	1.738	.454	3.850	***	.676	Convergent validity holds
PR3<---PR	1.748	.297	3.554	***	.578	Convergent validity holds
PR4<---PR	1.054	.331	3.317	***	.358	Convergent validity holds
PR5<---PR	1.099				**.260**	**Convergent validity doesn't holds**
IN1<---IN	1.000	.148	6.155	***	.596	Convergent validity holds
IN5<---IN	.909	.157	5.396	***	.408	Convergent validity holds
IN6<---IN	.849	.141	7.037	***	.318	Convergent validity holds
IN8<---IN	.993				.527	Convergent validity holds
ES2B<---ES	1.000	.087	11.72	***	.697	Convergent validity holds
ES2A<---ES	1.021	.099	8.428	***	.830	Convergent validity holds
ES1F<---ES	.833	.090	9.507	***	.537	Convergent validity holds
ES1C<---ES	.858				.634	Convergent validity holds
RI1<---RI	1.000	.149	9.238	***	.629	Convergent validity holds
RI2<---RI	1.380	.136	9.139	***	.733	Convergent validity holds
RI5<---RI	1.247				.718	Convergent validity holds
SC3<---SC	1.000	.125	6.749	***	.615	Convergent validity holds
SC2<---SC	.844	.515	2.333	.020	.484	Convergent validity holds
SC1<---SC	1.202				**.063**	**Convergent validity doesn't holds**
PH4<---PH	1.000	.083	12.05	***	.802	Convergent validity holds
PH3<---PH	.999	.089	9.446	***	.778	Convergent validity holds
PH1<---PH	.843				.581	Convergent validity holds
(*** = p< 0.001, ** = p< 0.01, * = p< 0.05) Rows with blank space indicates indicator is set as default **Model fit: inadmissible**						

(Source: AMOS output)

Examination of the GOF statistics in Table 4.8 reveals that the proposed model has an unacceptable p-value and is inadmissible. The model fit indices shows, even though the value of X2/DF is 1.65 which is in the acceptable range (between 1 and 5), RMSEA has a value of .081

which is in the acceptable range (below 0.1), the values of PCFI and PNFI are .716 and .550 respectively and both fall within the acceptable range (above .5), RMR is .179 which is in the not within acceptable range (should below .09). CFI, TLI, and IFI values are .789, .794 and .766 respectively and all of these values are not within the acceptable range (should be above .90), some items standardized regression weights (estimates) are not significant at p value of above 0.001. The critical ratios of the factor loadings are all significantly different from zero (above 1.96).

On top of that, item LP3, LP6A, LP7B, LP7C, PFE, PFF, PFA, PFB, PR5 and SC1 shows a lower than acceptable SMC value (that is, below .3) relative to all others and this suggest that there are a problem of item reliability and convergent validity (Brown, 2006). Hence, the proposed full measurement model needs to be re-specified by deleting items LP3, LP6A, LP7B, LP7C, PFE, PFF, PFA, PFB, RI, PR5 and SC1 from the measurement model.

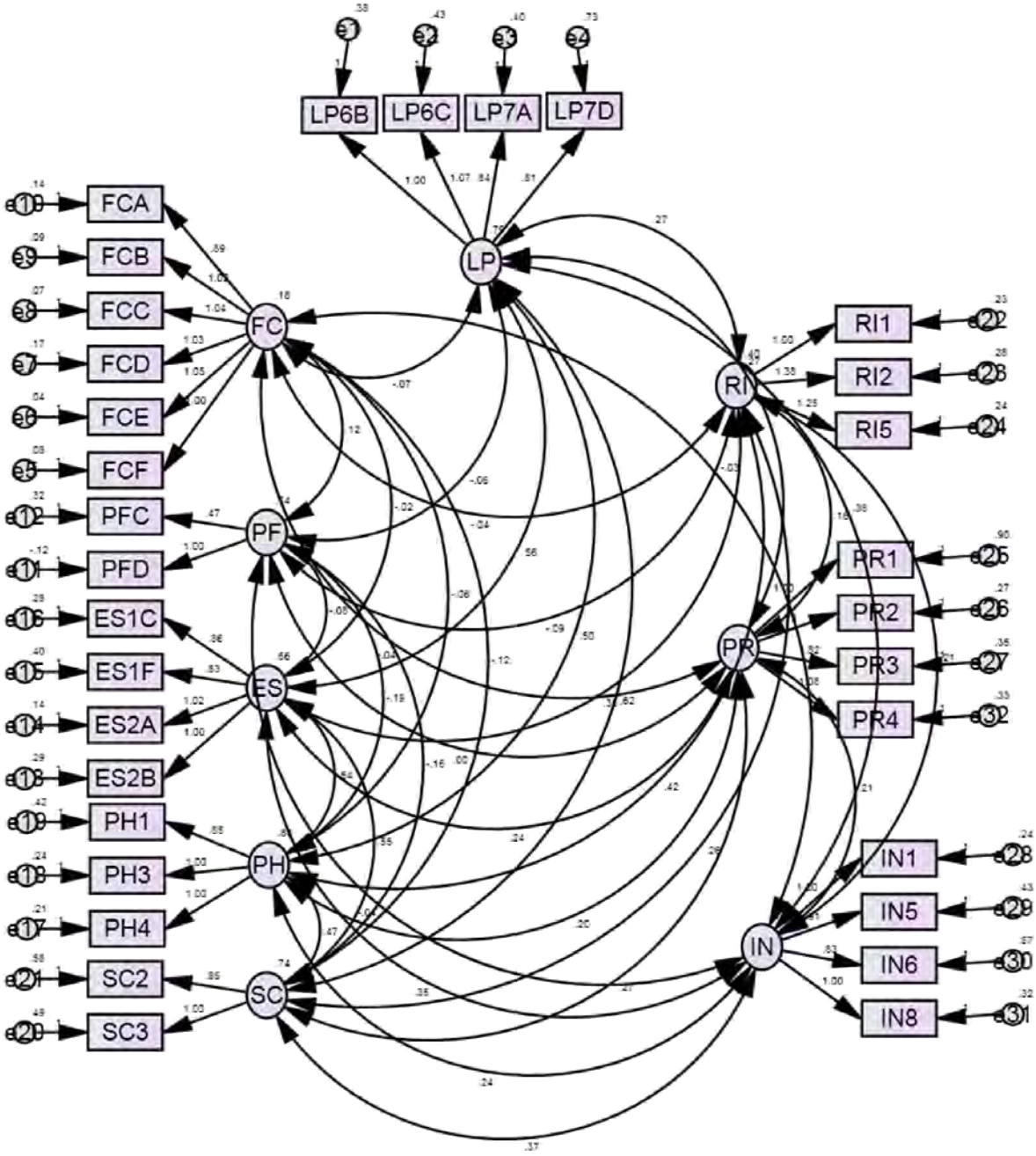

Figure 4.2 Re-specified CFA measurement Model (source: Amos output)

Table 4.9 Statistics for Re-specified CFA Measurement Model

Chi-square		Absolute Fit Indices		Incremental Fit Indices		Parsimony Fit Indices	
X2 (p-value)	683.6(.000)	RMSEA	.077	CFI	.877	PCFI	.757
DF	428	RMR	.053	IFI	.881	PNFI	.634
X2/DF	1.59			TLI	.857		

Factor Loadings						
Item<---Variable	**Estimate**	**S.E**	**C.R.**	**P**	**SMC**	**Comment**
LP6B<---LP	1.000				.677	Convergent validity holds
LP6C<---LP	1.068	.115	9.272	***	.678	Convergent validity holds
LP7A<---LP	.841	.100	8.407	***	.583	Convergent validity holds
LP7D<---LP	.810	.120	6.772	***	.414	Convergent validity holds
FCF<---FC	1.000				.699	Convergent validity holds
FCE<---FC	1.047	.089	11.751	***	.821	Convergent validity holds
FCD<---FC	1.026	.122	8.403	***	.531	Convergent validity holds
FCC<---FC	1.035	.095	10.842	***	.743	Convergent validity holds
FCB<---FC	1.017	.100	10.142	***	.684	Convergent validity holds
FCA<---FC	.888	.108	8.198	***	.512	Convergent validity holds
PFD<---PF	1.000				.824	Convergent validity holds
PFC<---PF	.468	.152	3.086	.002	.416	Convergent validity holds
PR1<---PR	1.000				.157	**Convergent validity doesn't holds**
PR2<---PR	1.726	.448	3.849	***	.652	Convergent validity holds
PR3<---PR	1.815	.475	3.818	***	.609	Convergent validity holds
PR4<---PR	1.082	.307	3.527	***	.369	Convergent validity holds
IN1<---IN	1.000				.600	Convergent validity holds
IN5<---IN	.914	.147	6.219	***	.416	Convergent validity holds
IN6<---IN	.829	.157	5.281	***	.305	Convergent validity holds
IN8<---IN	.996	.141	7.082	***	.533	Convergent validity holds
ES2B<---ES	1.000				.698	Convergent validity holds

ES2A<---ES	1.021	.087	11.731	***	.831	Convergent validity holds
ES1F<---ES	.833	.099	8.430	***	.537	Convergent validity holds
ES1C<---ES	.856	.090	9.485	***	.632	Convergent validity holds
RI1<---RI	1.000				.630	Convergent validity holds
RI2<---RI	1.378	.149	9.245	***	.732	Convergent validity holds
RI5<---RI	1.246	.136	9.149	***	.717	Convergent validity holds
SC3<---SC	1.000				.601	Convergent validity holds
SC2<---SC	.846	.127	6.684	.020	.475	Convergent validity holds
PH4<---PH	1.000				.800	Convergent validity holds
PH3<---PH	1.000	.083	12.016	***	.778	Convergent validity holds
PH1<---PH	.846	.089	9.458	***	.584	Convergent validity holds
(*** = p< 0.001, ** = p< 0.01, * = p< 0.05) Rows with blank space indicates indicator is set as default **Model fit: inadmissible**						

(Source: AMOS output)

Table 4.9 reveals that all other model fit indices are within the threshold but squared multiple correlations (SMC) of item PR1 is below the threshold of 0.3 indicating lack of convergent validity.

In measurement model it is possible to use modification indices (MI) considered from covariance between error terms of observed indicators only within the same latent variable and having a M.I. of above 4 for improving the model fit. Appendix IV indicate that the existence of covariance having a high M.I. within the same latent variable and covaring e9 with e10, e6 with e8, e8 with e10 and e7 with e10 and rerun the model after deletion of item PR1 as depicted in figure 4.3.

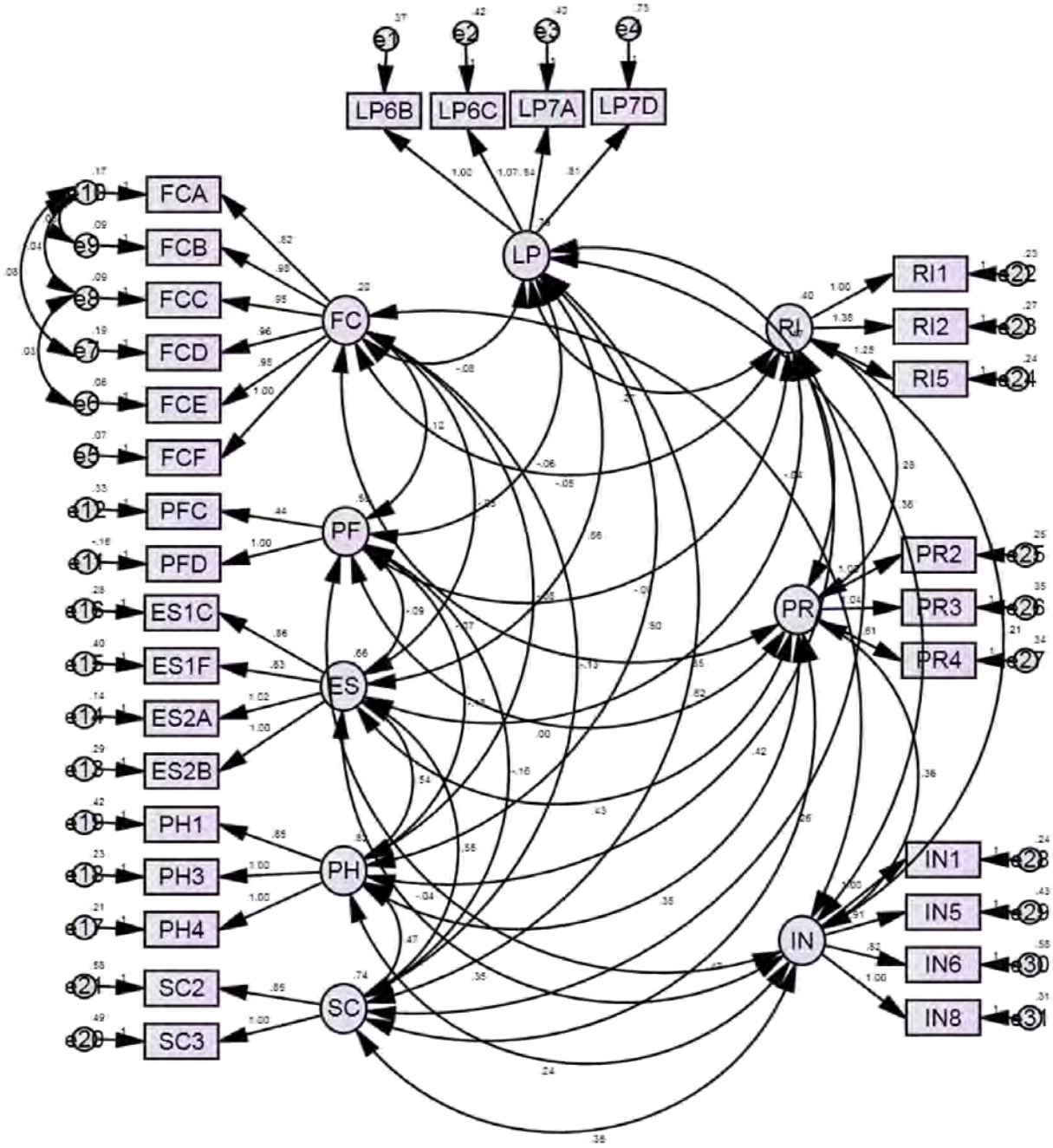

Figure 4.3 Final CFA measurement model (Source: AMOS output)

Table 4.10 Statistics for final CFA Measurement Model

Chi-square		Absolute Fit Indices		Incremental Fit Indices		Parsimony Fit Indices	
X2 (p)	562.2(.000)	RMSEA	.065	CFI	.918	PCFI	.778
DF	394	RMR	.051	IFI	.920	PNFI	.657
X2/DF	1.43			TLI	.903		

Factor Loadings

Item<--- Variable	**Estimate**	**S.E**	**C.R.**	**P**	**SMC**	**Comment**
LP6B<---LP	1.000				.678	Convergent validity holds
LP6C<---LP	1.068	.115	9.298	***	.679	Convergent validity holds
LP7A<---LP	.840	.100	8.403	***	.581	Convergent validity holds
LP7D<---LP	.808	.119	6.765	***	.413	Convergent validity holds
FCF<---FC	1.000				.747	Convergent validity holds
FCE<---FC	.985	.088	11.250	***	.777	Convergent validity holds
FCD<---FC	.957	.119	8.042	***	.494	Convergent validity holds
FCC<---FC	.950	.096	9.866	***	.666	Convergent validity holds
FCB<---FC	.981	.096	10.248	***	.681	Convergent validity holds
FCA<---FC	.824	.112	7.331	***	.438	Convergent validity holds
PFD<---PF	1.000				.824	Convergent validity holds
PFC<---PF	.439	.156	2.814	***	.416	Convergent validity holds
PR2<---PR	1.000				.670	Convergent validity holds
PR3<---PR	1.039	.124	8.381	***	.612	Convergent validity holds
PR4<---PR	.605	.100	6.047	***	.354	Convergent validity holds
IN1<---IN	1.000				.604	Convergent validity holds
IN5<---IN	.909	.147	6.184	***	.413	Convergent validity holds
IN6<---IN	.815	.157	5.192	***	.305	Convergent validity holds
IN8<---IN	.999	.141	7.108	***	.541	Convergent validity holds
ES2B<---ES	1.000				.698	Convergent validity holds
ES2A<---ES	1.021	.087	11.731	***	.831	Convergent validity holds

ES1F<---ES	.833	.099	8.430	***	.537	Convergent validity holds
ES1C<---ES	.856	.090	9.486	***	.632	Convergent validity holds
RI1<---RI	1.000				.629	Convergent validity holds
RI2<---RI	1.381	.149	9.253	***	.733	Convergent validity holds
RI5<---RI	1.246	.136	9.146	***	.717	Convergent validity holds
SC3<---SC	1.000				.599	Convergent validity holds
SC2<---SC	.848	.127	6.690	.020	.476	Convergent validity holds
PH4<---PH	1.000				.798	Convergent validity holds
PH3<---PH	1.002	.083	12.005	***	.779	Convergent validity holds
PH1<---PH	.847	.090	9.456	***	.584	Convergent validity holds
(*** = p< 0.001, ** = p< 0.01, * = p< 0.05) Rows with blank space indicates indicator is set as default **Model fit: admissible**						

(Source: AMOS output)

Now all the model fit indices are within the acceptable range and all observed variables have a convergent validity (see table 4.10) and as can also see from appendix IV, all the latent variables correlation is below 0.9 indicating the existence of discriminant validity. Consequently, the overall model fit was acceptable.

4.6.2.1.4. Final reliability test

After testing the measurement model fit, the instrument should check for reliability before proceeding with the structural model (Lewis et al, 2005) to assess how consistent the items measuring a construct are and as such ensures trustworthiness of the measurement instrument through using coefficient of internal consistency (Cronbach‟s Alpha). The recommended and widely accepted threshold in the literature is 0.7 (Hair et al, 2010).

Table 4.11 Compiles the Cronbach alphas for the factors that passed all tests of validity and all are above 0.7. This indicates the measurement instrument (model) is reliable.

Table 4.11 Final measurement model reliability test

Factors	Items	Cronbach alphas
Innovativeness (IN)	4	.756
Pro-activeness (PR)	3	.771
Risk taking (RI)	3	.866
Environmental scanning (ES)	4	.888
Planning flexibility (PF)	2	.743
Planning horizon (PH)	3	.882
Locus of planning (LP)	4	.843
Strategic control (SC)	2	.796
Financial control (FC)	6	.921

Source: SPSS out put

4.6.2.2. Structural Model Fit and Hypothesis Testing

Assessment of model fit in SEM is a two-step process (Hair et al. 2006). The first step involves testing the full measurement model's fit, as well as its construct validity to establish how well the observed variables of a hypothesized construct relate to one another. The full measurement model does not investigate the nature of the relationships between constructs beyond simple correlations but structural model can do it (Hair et al. 2006).

Structural model can be tested in terms of (1) model fit, that is, GOF indices; (2) comparing factor loadings of the structural model to that of the underlying measurement model; (3) the magnitude of variance explained, that is,; and (4) the size, direction and significance of the estimated structural parameters (Kline, 2011). Figure 4.4 presents the structural model which shows the relationship between constructs or latent variables or unobserved variables that are easy to understand.

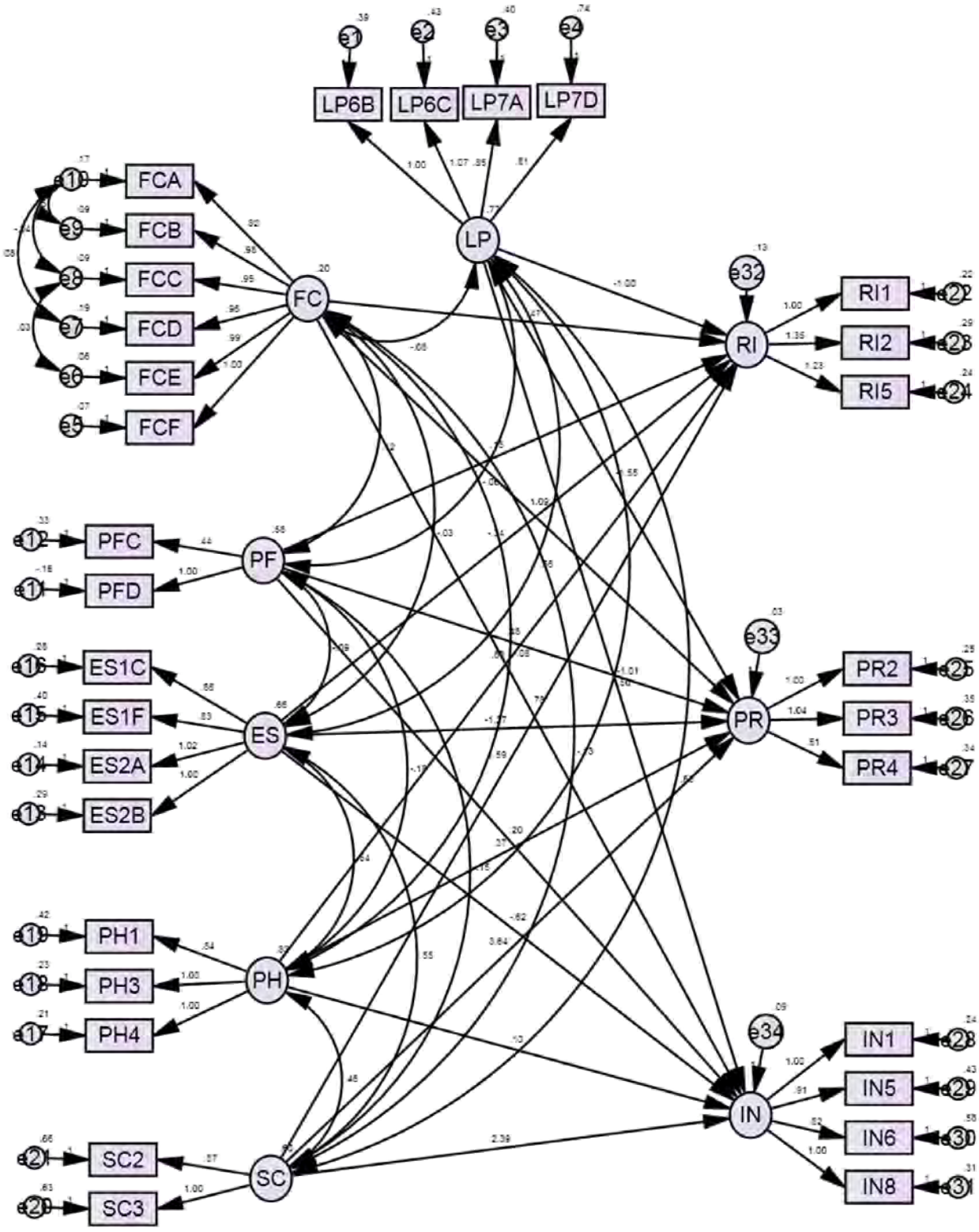

Figure 4.4 Structural model (Source: AMOS output)

Table 4.12 Model Fit Statistics for Structural Model

Chi-square		Absolute Fit Indices		Incremental Fit Indices		Parsimony Fit Indices	
X2 (p)	567.1(.000)	RMSEA	.065	CFI	.917	PCFI	.783
DF	397	RMR	.051	IFI	.919	PNFI	.661
X2/DF	1.42			TLI	.902		

Source: AMOS output

The GOF statistics in Table 4.12 reveals that the model's (figure 4.4) normed chi-square (X2/DF) is 1.42 and it is within the acceptable range. And all the incremental fit indices (CFI=.917, IFI=.919 and TLI=.902) meet the lower threshold value of 0.90 and the model's absolute fit index value is also within the recommended range in terms of RMSEA (.065) and RMR (.051). Further, the model's parsimony fit indices values are acceptable in terms of PCFI (.783) and PNFI (.661) and the full structural model is supported and accepted in terms of the selected fit indices. Loading estimates of the structural model is expected to show similar or close loadings to that of the measurement model (Hair et al, 2006). In this study most of the loading estimates of the structural model are similar with measurement model. Only three standardized estimated loadings show change and the maximum change in standardized loadings is 0.021, which is not above the 0.05 limit (Hair et al, 2006). This indicates the existence of parameter stability and validity of the structural model. Other criterion for assessing the validity of the structural model is investigating the size, direction and significance of the structural parameter estimates and most of the structural path estimates are significant.

Table 4.13 Hypotheses testing of the structural model

Hypothesis	Independent (exogenous) variables	Dependent (endogenous) variables	Path coefficient	P- value	Result
H1	ES	IN	-.619 (a)	.547	Not supported
	ES	PR	-1.265 (b)	.440	
	ES	RI	-.338 (a)	.648	
H2	PF	IN	.199 (a)	.455	Partially Supported
	PF	PR	.452 (b)	0.0025(**)	
	PF	RI	.146 (c)	.449	
H3	PH	IN	.099 (a)	.793	Partially Supported
	PH	PR	.373 (b)	.519	
	PH	RI	.528 (c)	***	
H4	LP	IN	-1.009 (a)	0.003(**)	Supported
	LP	PR	-1.553 (b)	0.0035(**)	
	LP	RI	-.997 (c)	***	
H5	SC	IN	2.387 (a)	***	Supported
	SC	PR	3.638 (b)	0.0015(**)	
	SC	RI	1.595 (c)	0.002(**)	
H6	FC	IN	.785 (a)	0.043(*)	Partially Supported
	FC	PR	1.090 (b)	.412	
	FC	RI	.472 (c)	.435	
*** p<.001, ** p<.01, *p<.05					

Source: AMOS output

4.7. Research Findings and Discussion

This section provides a discussion of the findings in relation to what the overall model suggests about the effect of strategic management practice on corporate entrepreneurship intensity and tried to answer both the very central objective of the study and the research questions that the

study wants to test. The main objective of the study is to investigate the effect of strategic management practice components on corporate entrepreneurship intensity of the targeted firms.

4.7.1. The effect of strategic management practice on corporate entrepreneurship intensity

The current study has proposed a theoretical framework that links the different components of strategic management practice to corporate entrepreneurship intensity based on insights drawn from different theories and has six major hypotheses (H1, H2, H3, H4, H5 and H6) each having three sub hypotheses.

H1: Environmental scanning intensity has positive effect on corporate entrepreneurship.

This hypothesis has three sub hypotheses include H1a, H1b and H1c which states that environmental scanning intensity has a positive effect innovativeness, pro-activeness and risk taking respectively but empirically confirmed that environmental scanning intensity has not a statistically significant effect on innovativeness, pro-activeness and risk taking. Environmental scanning intensity does not affects innovativeness with a standardized path coefficient of (β=-.619, p=.547), pro-activeness (β=-1.265, p=.440) and risk taking (β=-.338, p=.648). Therefore, hypothesis 1 [Environmental scanning intensity has positive effect on corporate entrepreneurship intensity] was not supported at a 95 per cent confidence interval.

H2: Planning flexibility has positive effect on corporate entrepreneurship.

Under this major hypothesis, there are three sub hypotheses (H2a, H2b and H2c) which state that planning flexibility has a positive effect innovativeness, pro-activeness and risk taking respectively. The structural analysis and hypothesis testing result (table 4.13) also indicated that

planning flexibility has a significant positive effect on pro-activeness (β=.452, p<0.01) supporting H2b. planning flexibility doesn't have statistically significant relationship with innovativeness and risk taking so H2a (β=.199, p=.455) and H2c (β=.146, p=.449) are rejected. Therefore, hypothesis 2 [planning flexibility has positive effect on corporate entrepreneurship intensity] was partially supported at a 99 per cent confidence interval.

H3: planning horizon length (short-term vs. Long term) has negative effect on corporate entrepreneurship intensity.

This major hypothesis has three sub hypotheses (H3a, H3b and H3c) which state that planning flexibility has a positive effect innovativeness, pro-activeness and risk taking respectively. Empirical results of the study revealed that planning horizon has a significant negative effect on risk taking (β=.528, p<0.001) supporting H2b but it doesn't have statistically significant relationship with innovativeness and pro-activeness so H3a (β=.099, p=.793) and H3b (β=.373, p=.519) are rejected. Therefore, hypothesis 3 [planning horizon length (short-term vs. Long term) has negative effect on corporate entrepreneurship intensity] was partially supported at a 99 per cent confidence interval.

H4: A deep locus of planning (i.e., high level of employee involvement) has positive effect on corporate entrepreneurship intensity.

Under this major hypothesis, there are three sub hypotheses (H4a, H4b and H4c) which state that deep locus of planning has a positive effect innovativeness, pro-activeness and risk taking respectively. The structural analysis and hypothesis testing result also indicated that deep locus of planning has a significant positive effect on innovativeness (β= -1.009, p<0.01), pro-activeness (β= -1.553, p<0.01) and risk taking (β= -.997, p<0.001) supporting H4a, H4b and H4c. Therefore, hypothesis 4 [A deep locus of planning (i.e., high level of employee

involvement) has positive effect on corporate entrepreneurship intensity] was supported at a 99 per cent confidence interval.

H5: The degree of emphasis on strategic controls has positive effect on corporate entrepreneurship intensity.

Under H5 there are three sub hypothesis (H5a, H5b, and H5c) stating that the degree of emphasis on strategic controls has a positive effect innovativeness, pro-activeness and risk taking respectively. Empirical results of the study also revealed that degree of emphasis on strategic controls has a significant positive effect on innovativeness (β= 2.387, $p<0.001$), pro-activeness (β= 3.638, $p<0.01$) and risk taking (β= 1.595, $p<0.01$) supporting H5a, H5b and H5c. Therefore, hypothesis 5 [the degree of emphasis on strategic controls has positive effect on corporate entrepreneurship intensity] was supported at a 99 per cent confidence interval.

H6: The degree of emphasis on financial controls has negative effect on corporate entrepreneurship intensity.

Under this hypothesis, there are three sub hypotheses (H6a, H6b and H6c) which state that degree of emphasis on financial controls has a negative effect innovativeness, pro-activeness and risk taking respectively. The structural analysis and hypothesis testing result (table 4.13) also indicated that the degree of emphasis on financial controls has a significant negative effect on innovativeness (β=.785, $p<0.05$) supporting H6a but it doesn't have statistically significant relationship with pro-activeness and risk taking so H6b (β=1.090, p=.412) and H6c (β=.472, p=.435) are rejected. Therefore, hypothesis 6 [the degree of emphasis on financial controls has negative effect on corporate entrepreneurship intensity] was partially supported at a 95 per cent confidence interval.

CHAPTER FIVE

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1. Introduction

This concluding chapter discusses the main findings of the thesis. Accordingly, this chapter has five sections. Section 5.1 introductions, section 5.2 gives an overview of the study. Section 5.3 presents the summary of the issues discussed in all the five chapters. 5.4 look at the conclusions. Section 5.5 presents the recommendation forwarded. Section 5.6 presents the contributions to knowledge and direction to the future research.

5.2. Overview of the Study

The aim of this research is to explore the thread between corporate entrepreneurship and strategic management through using five dimensions of the strategic management process including scanning intensity, planning flexibility, planning horizon, locus of planning, and control attributes and three attribute of corporate entrepreneurship including risk-taking, innovative, and proactive response in 104 food processing firms in Addis Ababa capital city of Ethiopia. To do so the researcher used quantitative type of research design and deduction research approach through survey methods by using both primary and secondary data as a source of information. The sampling technique for the study was random sampling and simplified random sample size formula to calculate sample size.

5.3. Summary of the Chapters

In pursuit of answering the basic research questions, this study is structured in five chapters and all chapters are mutually intertwined with one chapter leading on to another. Chapter 1 is the

heart of the entire research which gives background for the study, problem statements, research objectives, contributions of the study to knowledge; research methodology, scope & limitation of the study were discussed briefly. In chapter 2, the researcher explored the literature for scholarly insights on strategic management and corporate entrepreneurship concepts generated from research publications, journal articles, textbooks, research-oriented websites and academic online databases, publications of professional/institutional bodies, magazines, periodicals, published annual reports of companies and government publications and online information available. Chapter 3 unveiled the research methodology adopted for conducting this research and issues discussed include research methods/design/strategies, data type and source, sampling technique and sample size and concludes with research measures. Chapter 4 is data analysis part of the research and it presented the findings from the questionnaire instrument. The data collected from 102 respondents were analyzed using factor analysis and structural equation modeling using SPSS and AMOS software, the validity and reliability of the model was tested. At the end, all six hypotheses were tested. Chapter 5 as the concluding chapter presents conclusion of the results, recommendations forwarded, research contributions and lastly direction for future research.

5.4. Conclusion of empirical Results

Based on the empirical findings of the study this research reached to the following conclusions.

- A deep locus of planning (high level of employee involvement) has a positive effect on innovativeness, pro-activeness and risk taking. The possible reasons for the strong positive influence of LP on CE intensity on the targeted companies could be as follows: first, since deep locus of planning can facilitates opportunity recognition, identification, acquisition, and deployment of firm resource to take advantage of opportunities as they emerge from the

environment. Second, encouraging participation of operating-level managers will enhance entrepreneurial behavior because they are closest to the customers, suppliers and vendors, and can bring relevant external information to the internal planning process.

- Planning flexibility has a significant positive effect on pro-activeness but it doesn't have statistically significant relationship with innovativeness and risk taking. The possible reasons for the lack of influence of planning flexibility on innovativeness and risk taking on the targeted companies may be, though food processing companies in Addis Ababa have flexible strategic plan it doesn't necessarily mean that it is an input for innovation and taking risk of new method or product. Strategic flexibility depends on an understanding of the resources and capabilities available to the firm and on management flexibility in applying those resources and capabilities to available choices of action.
- Planning horizon length has a significant negative effect on risk taking and weak negative impact on innovativeness and pro-activeness.
- Environmental scanning intensity has not a statistically significant effect on innovativeness, pro-activeness and risk taking. There may be different reason for lack of influence of ES on CE intensity but the probable reason could be as follows: first, even though different researcher were conducted a study on this topic in different sectors and concluded that ES have a positive impact on CE intensity (Barringer and Bluedorn, 1999) whereas the current study is conducted in different sector and different country case so it might be the sector type that matters ES to directly influence CE intensity. Second, Many companies may face capability gap because of the discrepancy between their current knowledge and the information that is relevant to the current business environment to use as input for entrepreneurial activities.

- The degree of emphasis on financial controls has a significant negative effect on innovativeness and weak negative impact on pro-activeness and risk taking.
- The degree of emphasis on strategic controls has a positive effect on innovativeness, pro-activeness and risk taking. The possible reason for this could be SC allows facilitation and rewarding for creativity in pursuit of opportunities through innovation in short and long-term time interval. These controls should also allow organizational learning where knowledge increases and is utilized towards innovation, risk-taking and reactiveness.

5.5. Recommendation

The results of this study suggest that managers should consider realizing the importance of strategic management practices that foster corporate entrepreneurial intensity as a route to sustainable competiveness and they may benefit from implementing strategies that encourage and increase innovativeness , proactive to marketplace opportunities, and be willing to take risks when confronted by uncertainty because firms that do not take risks and innovative in dynamic environments (such as the current global downturn) will lose market share to aggressive competitors (Freel 2005). Based on empirical findings of the study the following recommendations are forwarded by the researcher.

- Managers of food processing firms should facilitate deep locus of planning through using motivational techniques like job enlargement, job Simplification, job Enrichment, job rotation, encourage trusting relationships, offer management support, set realistic performance goals, profit-sharing or gain-sharing plan, using rewards and maintain a supportive organizational structure to promote pro-activeness of middle and lower level managers and to promote corporate entrepreneurship. Furthermore, deep locus of planning facilitates opportunity recognition, identification, acquisition, and deployment of firm

resource to take advantage of opportunities as they emerge from the environment (Lopez, 2003).

- To be competitive in today's complex and highly dynamic business environment, food processing firm's strategic plan should be operationally, financially, structurally and technologically highly flexible, short time horizon and be able to change and respond quickly to environmental opportunities and threats because flexibility aligned positively with entrepreneurial orientation variables like pro-activeness and short time horizon enable to capitalize on emerging opportunities.
- Top managers of food processing companies should not too rigid on financial control also exhibit conservative characteristics that hinder high level of corporate entrepreneurial intensity. But objective financial and strategic (non-financial) performance control measures are important to an entrepreneurial organization. This suggests that multiple performance control measures are crucial in promoting high level of corporate entrepreneurship.
- The empirical evidence reported in this study show that policymakers of this sub sector should initiative corporate entrepreneurship by freely encouraging creativity (and thereby innovation), business leaders motivated toward corporate entrepreneurship must continuously strive to exude and build trust, embracing the risk to fail and inspiring those around them to take similar calculated risks that would widen organizational entrepreneurship beyond the usual notion of R & D will potentially encourage corporations to seek long-term sustainable growth, global competitive advantage and achieve above average performance.

5.6. Implications for future research

This study hypothesized a research model and articulated strategic management practices-corporate entrepreneurship intensity relationship in a particular way. It attempted to capture the influence of the former on the latter of food processing subsector and further investigation in this area is obviously needed. Future research could explore other industries, sectors, small, medium, and large-scale business to determine outcome similarities or differences. Because, the sample population in this study was restricted to Addis Ababa city and food processing sub sector only. Future research also includes a longitudinal study because, the richness of the study is restricted by the "snapshot'' explore taken the in a particular links (cross sectional) between strategic management and corporate entrepreneurship.

5.7. Contributions of the current study

This study contributes to that body of knowledge by showing the relationship between strategic management and corporate entrepreneurship. The findings of the study further contribute to the understanding of entrepreneurship intensity in the food processing sub sectors. Furthermore, the study show relationships between the different variables established by means of Factor Analysis, were further investigated by means of structural equations modeling. As far as the researcher's knowledge is concerned, similar empirical studies specifically on the relationship between firm's strategic management practices and its corporate entrepreneurial intensity in the Ethiopian context have not been investigated previously.

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APPENDICES

Appendix I: Questionnaire

College Of Business and Economics

Graduate Program of MBA

PART I: Introduction

Dear respondent,

I am Master of Business Administration student in the department of Management, Addis Ababa University. Currently, I am undertaking a research entitled **"*The thread between Corporate Entrepreneurship and Strategic Management in case of selected food processing firms in Addis Ababa*"**. You are one of the respondents selected to participate on this study.

I understand that your time is valuable, but I would appreciate it if you would spend some minutes to complete this questionnaire. Your completion of the questionnaire is critical to the success of the study. Let me emphasize that your participation in this study is voluntary and all information you provide will be kept strictly confidential. Thank you for your timely completion and return of the questionnaire.

Instructions

- ✓ No need of writing your name
- ✓ For Likert scale type statements and multiple choice questions indicate your answers with a check mark (√) in the appropriate block.

Kind regards,

Robel Hilegiyorgis

MBA Student, AAU

PART II: Personal and Company profile

1. Gender Male ☐ Female ☐
2. Experience Less than 5 years ☐ 5-10 years ☐ more than 10 years ☐
3. Highest level of education that you have completed?

   Diploma ☐ Bachelor Degree ☐ Advanced studies after Bachelor Degree ☐
4. Your Position in this company ……
5. Registered capital of the company

   Less than 25 million ☐ 25-50 million ☐ More than 50 million ☐
6. Number of employees Less than 200 ☐ 200-500 ☐ More than 500 ☐
7. Market scope Domestic ☐ International ☐ Both ☐

PART III: Corporate Entrepreneurship Intensity

The following statements are meant to identify and measure the management style and entrepreneurship intensity of your firms. Please use the following scale to describe your response most closely matches with corporate entrepreneurship intensity of your company and managers.

NB: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD).

I. Innovativeness						
S.no	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1	Top management of our company strongly emphasis on R&D, technological leadership and innovation.					
2	Our companies employee are willing to try new way of doing things and seek unusual, novel solution.					
3	Our firm created/marketed many new lines of product and service for the last 3 years.					
4	Our company continually develops programs, process, methods and delivery method to reduce production and operation costs.					
5	Our company provides support for supplier, distributor and retailer on novel way of doing business for mutual benefit.					
6	Our products/services are innovatively designed.					

7	Our company encourages innovative employees through rewards, recognition, promotion, etc.					
8	Our company implements a new organizational method in the firm's business practices that can reduce administrative costs or transaction costs, improving workplace satisfaction (such as supply chain management, business process re-engineering, lean production and quality management system etc.)					
	II. Pro-activeness					
S.no	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1	Our company is mostly the first to introduce new product/services and in operating new technologies.					
2	Our company is typically initiator of action to which competitors will then respond.					
3	Our company takes initiative to adopt a very competitive environment and prefer 'undo the competitors' posture.					
4	Our company promptly responds to the constraint facing their suppliers and distributors for mutual benefit.					
5	Our company needs to shape their operating environments and actively seek and exploit opportunities.					
	III. Risk Taking					
S.no	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1	Our company emphasis on high risk project/ investment with expectation of very high return.					
2	Our company has a bold aggressive posture in order to maximize the probability of exploiting potential when faced with uncertainty.					
3	Top managers of our firm believe that owing to the nature of the environment and it is needed bold, wide ranging acts are necessary to achieve firms objective.					
4	Change in product/service lines in our company has been mostly of minor nature (as usual activities).					
5	Our firm is willing to commit significant resources to opportunities with a reasonable chance of costly failure as well as success.					

PART IV: Strategic Management Dimensions Measure

The following statements are used to measure your firms scanning intensity, planning flexibility, planning horizon, locus of planning, financial and strategic control of the business environment. Please rate carefully the following statement using the following scale to describe your response most closely matches with your company Strategic Management practices.

NB: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD).

Section I: Environmental scanning intensity measure						
S. No	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1	Our company use					
	A. Explicit tracking of the polices and tactics of the competitors					
	B. Routine gathering of opinion from customer and employee					
	C. Forecasting sale, customer preference and demand, technological change to know business environment					
	D. Special marketing research					
	E. Trade magazine, government publication, news media					
	F. Gathering of information from suppliers and other supply chain channel member					
2	Our company **frequently** collect information on					
	A. Economic trends (interest Rate, exchange rate, GDP, etc)					
	B. Technological trends (new products, processes, systems, materials)					
	C. Demographic trends (Life styles, social values of society)					
	D. Customer needs, preference and change in demand					
	E. Competitor's strategies (Pricing, promotion, distribution, etc.)					
	F. Supplier's strategies (production, pricing, distribution, etc.)					
Section II. Planning Flexibility Measure						
S. No	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1	In our firm it is **not at all difficult** to change is strategic plan due to:					
	A. Shift of economic condition					
	B. Market entry of new competitors					
	C. Emergences of new technology					
	D. Shit in customer needs and preference					
	E. Change in government rule and regulation					
	F. Modification/change in suppliers strategies					
	G. Political change and development that can affect your industry					
	H. Emergence of unexpected opportunities					

	I. Emergences of unexpected threat					

Section III. Planning Horizon Measure

S. No	Statements	SA	A	N	D	SD
1	Our company Board of directors places considerable emphasis for:					
	A. Less than 1 year planning horizon of business strategies					
	B. 1 to 3 years planning horizon of business strategies					
	C. 3 to 5 years planning horizon of business strategies					
	D. More than 5 years planning horizon of business strategies					
2	Our company Top management places considerable emphasis for:					
	A. Less than 1 year planning horizon of business strategies					
	B. 1 to 3 years planning horizon of business strategies					
	C. 3 to 5 years planning horizon of business strategies					
	D. More than 5 years planning horizon of business strategies					
3	Our company Middle level management places considerable emphasis for:					
	A. Less than 1 year planning horizon of business strategies					
	B. 1 to 3 years planning horizon of business strategies					
	C. 3 to 5 years planning horizon of business strategies					
	D. More than 5 years planning horizon of business strategies					
4	Our company Lower level management considerable emphasis for:					
	A. Less than 1 year planning horizon of business strategies					
	B. 1 to 3 years planning horizon of business strategies					
	C. 3 to 5 years planning horizon of business strategies					
	D. More than 5 years planning horizon of business strategies					

Section IV: locus of planning measure

S. No	Statements	SA	A	N	D	SD
1.	Each of the following level of employee involved/participated in **goal formation** phase of the strategic management process of our organization					
	A. Top management					
	B. Middle management					

	C. Lower level management					
	D. Operational employee					
2.	Each of the following level of employee involved/participated in **Scanning the business environment** phase of the strategic management process of our organization					
	A. Top management					
	B. Middle management					
	C. Lower level management					
	D. Operational employee					
3.	Each of the following level of employee involved/participated in **Strategy formulation** phase of the strategic management process of our organization					
	A. Top management					
	B. Middle management					
	C. Lower level management					
	D. Operational employee					
4.	Each of the following level of employee involved/participated in **Strategy implementation** phase of the strategic management process of our organization					
	A. Top management					
	B. Middle management					
	C. Lower level management					
	D. Operational employee					
5.	Each of the following level of employee involved/participated in **Strategy Evaluation and control** phase of the strategic management process of our organization					
	A. Top management					
	B. Middle management					
	C. Lower level management					
	D. Operational employee					
6.	When **non-executive manager** report to top executives …					
	A. Can market new segment without executives approval					
	B. Can create or imitate new product without approval					
	C. Can perform major functional activities without approval					
	D. Can introduce new process/methods without approval					
7.	In our firm **non-executive managers** participate in a decision like ….					

	A. Changing firm major operation and structure					
	B. Introducing new product, service, method …. Etc.					
	C. Moving in to new market or new target customer					
	D. Adopting new polices, rule and regulation					
Section V: Strategic Control Measure						
S. No	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1.	Formal face to face meeting between top managers and business unit or functional areas personnel is very important and common in our organization.					
2.	Measuring performance against subjective strategic criteria's such as improvement in customer satisfaction or progress on product innovations is common and very important in our organization					
3.	Informal face to face meeting between top managers and business unit or functional areas personnel is common and very important in our organization					
Section VI: Financial Control Measure						
S. No	**Statements**	**SA**	**A**	**N**	**D**	**SD**
1.	The following financial factors/criterion is common and very important in **evaluating the performance of business unit/or functional area personnel** in our organization.					
	A. Return on asset					
	B. Return on investment					
	C. Sale growth					
	D. Cash flow					
	E. Market share					
	F. Operating profit					

THANK YOU!!!

Appendix II: pilot test result (using SPSS)

Independent T- test

Item	t- test	Sig. (2-tailed)	Item	t- test	Sig. (2-tailed)	Item	t- test	Sig. (2-tailed)
IN1	0.866	0.389	ES2C	0.00	1.000	LP7A	-1.546	0.139
IN2	0.264	0.795	ES2D	-0.429	0.673	LP7B	1.342	0.196
IN3	1.265	0.222	ES2E	-1.053	0.306	LP7C	1.2	0.246
IN4	1.97	0.247	ES2F	-0.287	0.777	LP7D	0.493	0.628
IN5	-1.116	0.279	PF1A	-1.152	0.264	SC1	0	1
IN6	-0.688	0.500	PF1B	-1.236	0.232	SC2	-0.6	0.556
IN7	1.414	0.174	PF1C	-0.372	0.714	SC3	-3.286	0.004
IN8	1.434	0.169	PF1D	-0.739	0.47	FCA	0.429	0.673
PR1	0.728	0.476	PF1E	0.885	0.388	FCB	0.493	0.628
PR2	-0.318	0.754	PF1F	0	1	FCC	-0.493	0.628
PR3	1.236	0.232	PF1G	0.318	0.754	FCD	-0.493	0.628
PR4	1.411	0.175	PF1H	1.116	0.279	FCE	-0.493	0.628
PR5	-2.449	0.250	PF1I	-1.434	0.169	FCF	0	1
RI1	-1.500	0.151	PH1	0.1	0.922			
RI2	0.397	0.696	PH2	2.012	0.059			
RI3	-0.600	0.556	PH3	-0.12	0.906			
RI4	-0.709	0.487	PH4	0.165	0.87			
RI5	0.477	0.639	LP1	0	1			
ES1A	0.00	1.000	LP2	-0.695	0.496			
ES1B	0.728	0.476	LP3	0.286	0.778			
ES1C	0.429	0.673	LP4	0.261	0.797			
ES1D	-1.342	0.196	LP5	3.021	0.007			
ES1E	-0.802	0.433	LP6A	0.305	0.764			
ES1F	0.318	0.754	LP6B	0	1			
ES2A	0.00	1.000	LP6C	-0.632	0.535			
ES2B	0.493	0.628	LP6D	-0.583	0.567			

Appendix III: Exploratory Factor Analysis (using SPSS)

Component total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	15.347	23.611	23.611	15.347	23.611	23.611
2	6.763	10.405	34.015	6.763	10.405	34.015
3	4.689	7.215	41.230	4.689	7.215	41.230
4	4.569	7.030	48.260	4.569	7.030	48.260
5	3.667	5.642	53.901	3.667	5.642	53.901
6	2.950	4.539	58.440	2.950	4.539	58.440
7	2.483	3.821	62.261	2.483	3.821	62.261
8	2.114	3.253	65.514	2.114	3.253	65.514
9	2.037	3.133	68.647	2.037	3.133	68.647
10	1.958	3.012	71.659			
11	1.815	2.793	74.452			
12	1.529	2.353	76.805			
13	1.334	2.053	78.857			
14	1.226	1.886	80.744			
15	1.153	1.773	82.517			
16	1.047	1.611	84.128			
17	1.003	1.542	85.670			
18	.846	1.302	86.972			
19	.789	1.213	88.186			
20	.756	1.163	89.348			
21	.717	1.104	90.452			
22	.657	1.011	91.463			
23	.591	.910	92.373			
24	.532	.818	93.191			

25	.471	.724	93.915			
26	.466	.718	94.633			
27	.382	.588	95.221			
28	.348	.535	95.756			
29	.301	.462	96.219			
30	.275	.422	96.641			
31	.254	.391	97.032			
32	.242	.372	97.403			
33	.205	.315	97.719			
34	.189	.292	98.010			
35	.186	.286	98.296			
36	.162	.249	98.545			
37	.145	.224	98.769			
38	.133	.205	98.974			
39	.113	.173	99.147			
40	.103	.158	99.305			
41	.087	.133	99.438			
42	.074	.115	99.553			
43	.070	.107	99.660			
44	.057	.087	99.748			
45	.048	.074	99.821			
46	.037	.057	99.878			
47	.029	.045	99.922			
48	.023	.036	99.958			
49	.016	.024	99.983			
50	.006	.010	99.993			
51	.005	.007	100.000			

Extraction Method: Principal Component Analysis Source: SPSS output

Factor rotation component matrix

Rotated component matrix									
Factors	Components								
	IN	PR	RI	ES	PF	PH	LP	SC	FC
IN1	.479								
IN5	.567								
IN6	.662								
IN8	.575								
PR5		.692							
PR1		.778							
PR2		.800							
PR4		.415							
PR3		.609							
RI1			.580						
RI1			.519						
RI5			.533						
ES1C				.634					
ES1F				.615					
ES2A				.676					
ES1B				.506					
PFA					.730				
PFB					.836				
PFC					.419				
PFD					.470				
PFE					.548				
PFF					.517				
PH1						.740			
PH3						.688			
PH4						.810			
LP3							.590		
LP6A							.835		
LP6B							.802		
LP6C							.726		
LP7A							.766		
LP7B							.734		
LP7C							.793		
LP7D							.744		
SC1								.597	
SC2								.517	
SC3								.407	
FCA									.714
FCB									.794
FCC									.795

FCD									.723
FCE									.863
FCF									.861

Statistics of Normality test

Items	Skewness		Kurtosis	
	Statistic	Std. error	Statistic	Std. error
IN1	-.295	.327	-.736	.644
IN2	-.516	.327	1.403	.644
IN3	-.798	.327	1.386	.644
IN4	-.031	.327	-.717	.644
IN5	-.089	.327	-.376	.644
IN6	-.527	.327	1.637	.644
IN7	-.383	.327	-.216	.644
IN8	-.152	.327	-.437	.644
PR1	-.759	.327	.346	.644
PR2	-.339	.327	.100	.644
PR3	-.015	.327	-.401	.644
PR4	.433	.327	1.920	.644
PR5	-.037	.327	-.277	.644
RI1	-.249	.327	-.461	.644
RI2	-.750	.327	.678	.644
RI3	.012	.327	-.369	.644
RI4	-.903	.327	2.469	.644
RI5	-.601	.327	1.641	.644
ES1A	-.469	.327	.203	.644
ES1B	-.290	.327	-.640	.644
ES1C	-.114	.327	-1.193	.644
ES1D	-.569	.327	2.093	.644
ES1E	-.723	.327	1.518	.644
ES1F	.023	.327	.037	.644
ES2A	-.946	.327	1.998	.644
ES2B	-.586	.327	2.058	.644
ES2C	-.436	.327	.919	.644
ES2D	.791	.327	-1.430	.644
ES2E	-.930	.327	2.277	.644
ES2F	-.745	.327	1.484	.644
PFA	-.172	.327	-.668	.644
PFB	-.695	.327	.723	.644
PFC	-.207	.327	-.841	.644
PFD	-.540	.327	-.706	.644
PFE	-.451	.327	.309	.644
PFF	-.429	.327	.734	.644

PFG	-.315	.327	.111	.644
PFH	-.428	.327	.140	.644
PFI	-.239	.327	-.012	.644
PH1	-.305	.327	.344	.644
PH2	-.215	.327	.040	.644
PH3	-1.113	.327	1.896	.644
PH4	-1.664	.327	4.000	.644
LP1	-.164	.327	-.181	.644
LP2	-.744	.327	.495	.644
LP3	-.286	.327	-.573	.644
LP4	-1.139	.327	.610	.644
LP5	-1.262	.327	2.304	.644
LP6A	-.114	.327	-.281	.644
LP6B	-.380	.327	-.734	.644
LP6C	-.537	.327	-.683	.644
LP6D	-.134	.327	-.521	.644
LP7A	-.482	.327	-.728	.644
LP7B	-.784	.327	-.371	.644
LP7C	-.645	.327	-.195	.644
LP7D	-1.046	.327	.777	.644
SC1	-1.219	.327	-.536	.644
SC2	-1.611	.327	1.752	.644
SC3	-.416	.327	-1.065	.644
FCA	-.040	.327	-1.184	.644
FCB	-.744	.327	-.646	.644
FCC	-1.389	.327	1.063	.644
FCD	-.642	.327	-.571	.644
FCE	-1.126	.327	.185	.644
FCF	-.833	.327	-.485	.644

Statistics of Communalities **Descriptive statistics**

Communalities		
Item	**Initial**	**Extraction**
IN1	1.000	.752
IN2	1.000	.788
IN3	1.000	.566
IN4	1.000	.472
IN5	1.000	.682
IN6	1.000	.655
IN7	1.000	.644
IN8	1.000	.463

Descriptive statistics			
	N	**Mean**	**St. dev.**
IN1	102	4.3585	.65323
IN2	102	3.9811	.72032
IN3	102	4.0000	.73380
IN4	102	4.2075	.71679
IN5	102	4.2642	.62484
IN6	102	4.0377	.64933
IN7	102	4.0377	.73281

PR1	1.000	.704		**IN8**	102	4.2453	.61724
PR2	1.000	.679		**PR1**	102	4.1321	.80950
PR3	1.000	.751		**PR2**	102	4.0000	.70711
PR4	1.000	.556		**PR3**	102	4.0000	.65044
PR5	1.000	.634		**PR4**	102	3.9434	.60176
RI1	1.000	.684		**PR5**	102	4.2264	.63976
RI2	1.000	.779		**RI1**	102	3.7736	.84675
RI3	1.000	.502		**RI2**	102	3.8491	.79412
RI4	1.000	.666		**RI3**	102	4.2453	.64765
RI5	1.000	.644		**RI4**	102	3.7358	.78816
ES1A	1.000	.734		**RI5**	102	4.0189	.77187
ES1B	1.000	.510		**ES1A**	102	4.0943	.71425
ES1C	1.000	.612		**ES1B**	102	4.3585	.59142
ES1D	1.000	.644		**ES1C**	102	4.4340	.53742
ES1E	1.000	.550		**ES1D**	102	4.0566	.60176
ES1F	1.000	.577		**ES1E**	102	3.9623	.67830
ES2A	1.000	.735		**ES1F**	102	4.1509	.56827
ES2B	1.000	.623		**ES2A**	102	4.1698	.69989
ES2C	1.000	.474		**ES2B**	102	4.1132	.60955
ES2D	1.000	.639		**ES2C**	102	4.0000	.65044
ES2E	1.000	.654		**ES2D**	102	4.3208	.47123
ES2F	1.000	.528		**ES2E**	102	4.1321	.68043
PFA	1.000	.675		**ES2F**	102	4.0189	.69311
PFB	1.000	.835		**PFA**	102	4.1509	.66205
PFC	1.000	.679		**PFB**	102	4.2264	.69729
PFD	1.000	.629		**PFC**	102	4.1509	.69049
PFE	1.000	.609		**PFD**	102	4.3396	.67776
PFF	1.000	.683		**PFE**	102	4.0755	.70299
PFG	1.000	.803		**PFF**	102	4.0189	.66479
PFH	1.000	.757		**PFG**	102	3.7736	.91234
PFI	1.000	.709		**PFH**	102	3.9245	.75572
PH1	1.000	.768		**PFI**	102	3.9245	.70299
PH2	1.000	.634		**PH1**	102	3.6038	.94746
PH3	1.000	.727		**PH2**	102	3.8302	.69989
PH4	1.000	.790		**PH3**	102	4.4528	.63748
LP1	1.000	.716		**PH4**	102	4.5660	.84374
LP2	1.000	.704		**LP1**	102	4.5472	.53945
LP3	1.000	.603		**LP2**	102	4.7925	.45398
LP4	1.000	.609		**LP3**	102	4.8491	.41120

LP5	1.000	.474		**LP4**	102	4.7170	.56763
LP6A	1.000	.774		**LP5**	102	4.8491	.41120
LP6B	1.000	.812		**LP6A**	102	3.0566	.90756
LP6C	1.000	.711		**LP6B**	102	3.0566	.96904
LP6D	1.000	.854		**LP6C**	102	3.1887	.94170
LP7A	1.000	.723		**LP6D**	102	2.9811	.88775
LP7B	1.000	.673		**LP7A**	102	3.3962	1.08024
LP7C	1.000	.819		**LP7B**	102	3.5472	1.08426
LP7D	1.000	.755		**LP7C**	102	3.6415	1.00181
SC1	1.000	.498		**LP7D**	102	3.7170	.92772
SC2	1.000	.714		**SC1**	102	4.7547	.43437
SC3	1.000	.471		**SC2**	102	4.7358	.48639
FCA	1.000	.704		**SC3**	102	4.5094	.54146
FCB	1.000	.766		**FCA**	102	4.4151	.53472
FCC	1.000	.743		**FCB**	102	4.5849	.53472
FCD	1.000	.717		**FCC**	102	4.6604	.55273
FCE	1.000	.875		**FCD**	102	4.3962	.66041
FCF	1.000	.798		**FCE**	102	4.6604	.51677
				FCF	102	4.6038	.53131

Extraction Method: Principal Component Analysis

Statistics of Linearity test

```
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DATASET NAME DataSet1 WINDOW=FRONT.
* Chart Builder.
GGRAPH
  /GRAPHDATASET NAME="graphdataset" VARIABLES=IN PR RI ES PF PH LP SC FC
MISSING=LISTWISE REPORTMISSING=NO
  /GRAPHSPEC SOURCE=INLINE.
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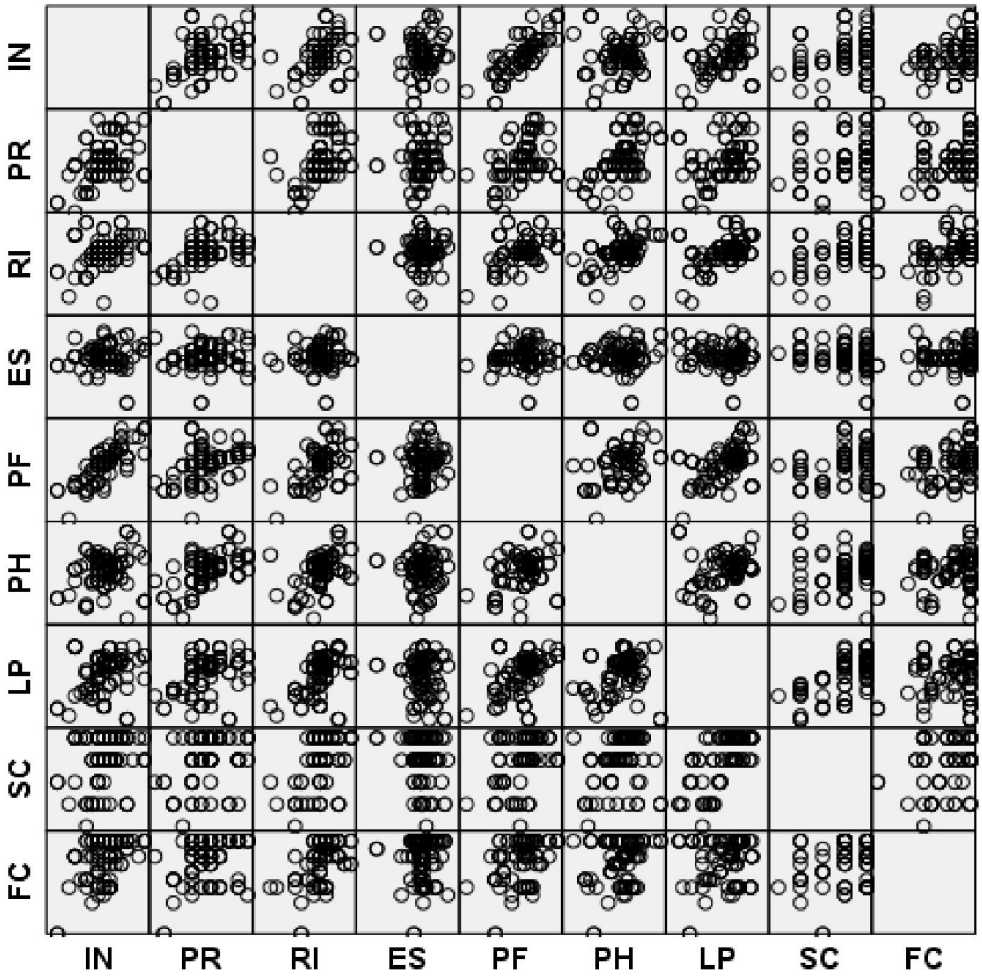
GGraph



Appendix IV: confirmatory factor analysis (using AMOS)

Statistics of Modification Indices for CFA Measurement Model

	M.I.	Par change		M.I.	Par change
e32<-->IN	6.791	.071	e8<-->e10	15.271	-.043
e30<-->IN	6.092	-.086	e7<-->e10	12.212	.058
e30<-->LP	5.029	.106	e7<-->e8	4.676	.027
e30<-->e31	6.318	-.120	e6<-->IN	4.760	-.025
e29<-->PF	7.058	-.098	e6<-->PH	4.623	-.033
e29<-->e32	5.835	.100	e6<-->e15	7.948	.046
e26<-->e28	4.717	-.070	e6<-->e10	5.860	-.023
e25<-->IN	4.985	.098	e6<-->e9	4.921	-.017
e25<-->e30	6.516	.190	e6<-->e8	15.545	.027
e23<-->SC	5.991	-.103	e6<-->e7	8.623	-.031
e22<-->SC	6.118	.089	e5<-->e25	4.315	-.061
e21<-->e26	11.378	.160	e5<-->e8	8.144	-.025
e21<-->e23	4.289	-.105	e3<-->ES	6.822	.083
e21<-->e22	4.030	.087	e3<-->LP	9.083	-.119
e19<-->RI	7.449	.086	e3<-->e19	4.527	.100
e19<-->SC	5.434	.109	e3<-->e14	4.668	.068
e19<-->e22	8.327	.106	e2<-->e22	8.570	-.115
e18<-->e27	4.122	-.077	e2<-->e21	4.025	.121
e18<-->e25	9.113	.167	e2<-->e15	5.030	.108
e17<-->PR	4.741	.034	e1<-->e16	4.661	-.084
e17<-->e27	4.489	.078	e1<-->e2	5.523	.115
e17<-->e21	8.702	-.134	e9<-->e10	21.140	.056
e16<-->LP	8.276	-.098	e11<-->e29	5.584	-.073
e16<-->e22	4.167	.061	e9<-->e27	4.129	.043
e15<-->e30	6.685	-.132	e9<-->e15	6.796	-.055
e14<-->e25	6.262	-.110			
e13<-->e22	5.910	-.075			
e12<-->e30	4.996	.092			

Statistics of Discriminant Validity of Final Measurement Model

Construct	Correlation	Comment
LP<-->FC	.208	Discriminant Validity Holds
LP<-->PF	.094	Discriminant Validity Holds
LP<-->ES	.773	Discriminant Validity Holds
LP<-->PH	.618	Discriminant Validity Holds
LP<-->SC	.817	Discriminant Validity Holds
LP<-->RI	.477	Discriminant Validity Holds
LP<-->PR	.734	Discriminant Validity Holds
LP<-->IN	.669	Discriminant Validity Holds
FC<-->PF	.362	Discriminant Validity Holds
FC<-->ES	.078	Discriminant Validity Holds
FC<-->PH	.187	Discriminant Validity Holds
FC<-->SC	.351	Discriminant Validity Holds
FC<-->RI	.164	Discriminant Validity Holds
FC<-->PR	.219	Discriminant Validity Holds
FC<-->IN	.147	Discriminant Validity Holds
PF<-->ES	.139	Discriminant Validity Holds
PF<-->PH	.266	Discriminant Validity Holds
PF<-->SC	.241	Discriminant Validity Holds
PF<-->RI	.198	Discriminant Validity Holds
PF<-->PR	.008	Discriminant Validity Holds
PF<-->IN	.092	Discriminant Validity Holds
ES<-->PH	.724	Discriminant Validity Holds
ES<-->SC	.792	Discriminant Validity Holds
ES<-->RI	.687	Discriminant Validity Holds
ES<-->PR	.734	Discriminant Validity Holds
ES<-->IN	.715	Discriminant Validity Holds
PH<-->SC	.601	Discriminant Validity Holds
PH<-->RI	.729	Discriminant Validity Holds
PH<-->PR	.538	Discriminant Validity Holds
PH<-->IN	.431	Discriminant Validity Holds
SC<-->RI	.490	Discriminant Validity Holds
SC<-->PR	.774	Discriminant Validity Holds
SC<-->IN	.701	Discriminant Validity Holds
RI<-->PR	.629	Discriminant Validity Holds
RI<-->IN	.557	Discriminant Validity Holds
PR<-->IN	.820	Discriminant Validity Holds

(Source: AMOS output)