Corporate Entrepreneurship, Agency Cost and Firm Performance: Evidence from Developed and Developing Economies

(A doctoral dissertation PhD-Finance)

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Submitted in partial fulfillment of the requirements for the
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Islamabad.

Dr. Syed Zulfiqar Ali Shah

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DEDICATION

I dedicate this dissertation to Holy Prophet **Hazrat Muhammed** (P.B.U.H), my loving parents, Mr. and Mrs Dr. Tariq Mahmood Bhutta, my brother Hamza Tariq Bhutta and sisters; and my grandfathers and grandmothers, Mr and Mrs Muhammed Ashfaq Bhutta and Mr and Mrs Mian Muhammed Ishaq Bhutta, my Bhutta family and my all respected teachers, especially Dr. Syed Zulfiqar Ali Shah for their excellent guidance and support, without which I would not have been at this juncture today.

(Acceptance by the Viva Voice Committee)

Title of Thesis: "Corporate Entrepreneurship, Agency Cost and Firm Performance: Evidence from Developed and Developing Economies."

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ABSTRACT

This study aims to extend the relationship of corporate entrepreneurship and agency cost, to firm performance. It also examines this relationship in the presence of behavioral biases to address the behavioral finance approach, and validates it in developed (USA) and developing (Pakistan) economies, in order to generalize the study. The design of this dissertation is to investigate the relationship of corporate entrepreneurship, agency cost and firm performance across both behavioral and traditional approaches of finance. The validated construct has been adopted to measure the corporate entrepreneurship, behavioral biases and risk perception of USA and Pakistani non-financial sector companies listed on the New York Stock Exchange (NYSE) and the Karachi Stock Exchange (KSE), respectively. The data for firm performance and agency cost has been taken from Balance Sheets Analyses (SBP Report) for Pakistani companies and from annual reports of the USA companies on a three yearly average bases (2009, 2010 and 2011).

The findings highlight the significant negative relationship between corporate entrepreneurship and agency cost in USA, showing that corporate entrepreneurship can act as an excellent technique in reducing agency problems within organizations, ultimately leading to high performance, however, there is an insignificant impact between corporate entrepreneurship and agency cost in Pakistani context. Regarding the behavioral finance approach, both economies didn't show any significant relationship of behavioral biases on risk perception and significant relationship of risk perception on corporate entrepreneurship. This study provides a foundation for future studies on the relationship of corporate entrepreneurship, agency cost and firm performance.

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DECLARATION

I hereby declare that this dissertation, neither as a whole nor as a part thereof, has been copied out from any source. It is further confirmed that I have written this thesis entirely on the basis of my personal endeavor, made under the valuable guidance of my supervisor. No portion of work, presented in this dissertation has been submitted in support of any application for any degree or qualification of this or any other university or institute of learning.

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PhD (Finance)

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Nousheen Tariq Bhutta

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CHAPTER 1

INTRODUCTION

1.1. Rationale of the study

Since the last decade, research on Corporate Entrepreneurship has expanded rapidly, and it has been seen that the Corporate Entrepreneurship leads to enhanced financial performance (Zahra, 1993). Prior literature demonstrates that corporate entrepreneurship facilitates new ventures to exploit innovative market prospects (Wiklund and Shepherd, 2003); enhances firm performance (Ireland, at.al, 2003); and allows firms to prosper in a competitive environment (Lumpkin and Dess, 2001; Shane and Venkataraman, 2000). Corporate entrepreneurship promotes the development and execution of innovative ideas within organizations (Hornsby et al., 2002), which might be a fundamental element of successful enterprises (Kanter, 1984).

Moreover, corporate entrepreneurship can be a crucial source for managing and controlling threats (Peterson and Berger, 1971). The emerging trend of corporate entrepreneurship prompts entrepreneurs to perform their entrepreneurial activities within their organizational structure (Burgelman, 1983). However, fundamental modifications in corporate organizational cultures as well as their managerial styles might be needed for implementation of entrepreneurial orientation (Zahra, 1991) which can be achieved through the strong support of executives. (Zahra and Covin, 1995).

Corporate Entrepreneurship is significantly positively related to firm performance (Zahra and Covin, 1995; Aktan and Bulut, 2008). Moreover, a positive relationship has been confirmed between corporate entrepreneurship and performance of small, medium and large organizations in Slovenia but not in the US. This study also explained one possibility that *"firms in the U.S. are more growth oriented and value growth more than profitability than the firms in Slovenia that may be still more survival and profit rather than growth oriented"* (Antoncic and Hisrich, 2001)

Similarly, Zahra (2008) investigated the interaction of entrepreneurial orientation and market orientation and its impact on financial performance in high technology firms and low technology firms. He confirmed that the interaction effect is significant only in high technology firms. Lekmat and Selvarajah (2008) examined the positive relationship between corporate entrepreneurship and performance of auto parts manufacturing firms in Thailand.

Some research scholars proved that some dimensions of corporate entrepreneurship enhance firm performance (Wiklund and Shepherd, 2005; Zahra and Garvis, 2000) as well as market growth (Ireland et al., 2003). The dimensions of corporate entrepreneurship are innovativeness, risk taking, proactiveness and competitive aggressiveness (Lumpkin and Dess, 1996; Dess, et,al., 2003). Innovative companies can develop new products through exploiting new opportunities, which ultimately enhance their organizational profitability (Lumpkin and Dess, 1996; Zahra and Garvis, 2000). Risk taking firms also depict high performance by being involved in risky projects in order to gain higher returns(Frese, et, al, 2002). A proactive firm, being a first mover, introduces new products and services before its competitors through identifying the market opportunities, and attains high market share and firm performance (Hunt and Arnett, 2006; Wiklund and Shepherd, 2005). Firms having competitive aggressiveness can

lead to high market share and firm profitability through modifying the rules of competition, revising industrial boundaries and outperforming the competitors (Lumpkin and Dess, 2001).

Most studies examined the positive relationship between Corporate Entrepreneurship and firm performance in western economies, like Canada (Knight, 1997), United States, the United Kingdom New Zealand, The Netherlands, Argentina, Republic of Croatia, and Russia (McDougall and Oviatt, 2000, Gartner and Birley, 2002) as well as in emerging economies like China (Luo et al., 2005; Yang et, al., 2007); Slovenia (Antoncic and Hisrich, 2001); and Thailand (Lekmat and Selvarajah, 2008).

Mostly, corporate entrepreneurial activities have been conducted in developed nations (Zahra and Covin 1995; Gartner and Birley, 2002; Knight, 1997; McDougall and Oviatt, 2000; Fitzsimmons et al. 2005). However, very little awareness about the importance of corporate entrepreneurial activities and its outcomes exists in developing countries. Therefore, there is a need for research of entrepreneurial outcomes in developing countries (Lekmat and Selvarajah, 2008). To eradicate the shortfall in entrepreneurial research, this study has been conducted in one of the developing countries i.e. Pakistan.

Briefly, Corporate Entrepreneurship can incresae shareholder value by creating a work environment that supports individual and corporate growth, conferring upon employees an opportunity to exploit their creative skills and fabricating the organizational culture that enhances the market performance of company (Zahra,1991) . However, sometimes agency problems arise between the shareholders and managers that weaken firm performance (Xiao, 2012), it might be a barrier to executing Corporate Entrepreneurship and enhancing financial firm performance.

However, Corporate Entrepreneurship can be helpful in reducing the agency cost within the organization (Bhutta and Shah, 2011,a) that may lead to high financial performance.

1.2. Standard Finance and Behavioral Finance

Standard Finance is well developed on arbitrage principle of Miller and Modigliani, portfolio construction theories of Markowitz (1952) and Capital Asset Pricing Model of Sharpe (1964) and Lintner (1965), however, it does not explain the descriptive theory of finance well because investors overlook the arbitrage opportunities, application failure of Markowitz construction rules and are unable to draw stock returns corresponding to CAPM. Standard finance assumes people are rational, not confused by frames or cognitive biases, don't feel pain of regret, and have no lapses of self-control.(Statman,1995).

The other main theme regarding standard finance is the Efficient Market Hypothesis which states the general idea that all information has been incorporated in the intrinsic, or market value, of security, and that it is selling at a fair price. Due to this reason, proponents argue that portfolio managers may not be able to produce higher returns which beat the market.

However, another approach has emerged as an alternative to the standard finance approach. Here, questions arise about how the behavioral finance will emerge. This answer to this query has been explained through the following diagram quoted by Ricciardi and Simon (2000). If fundamental aspects of psychology and sociology are considered in standard finance theories, standard finance will turn to behavioral finance. Briefly, we can say that standard finance is the of behavioral finance. Therefore, for an overall understanding of behavioral finance principles, a person must have a clear understanding of psychology, sociology and finance concepts

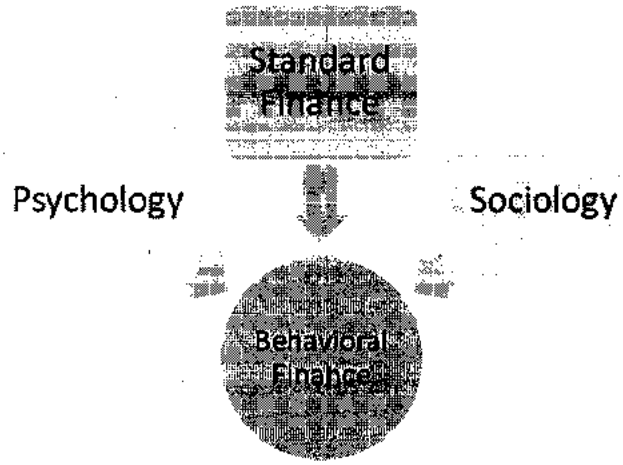


Fig. 1.1. Standard Finance and Behavioral Finance

Behavioral finance is well developed regarding human behavior, generally it is involved with the emotional attributes of individuals who affect the entrepreneurial process. Behavioral finance provides justification of three basic queries like the what, how and why of investing through considering the human perspective, however, it does not remain at the individual level but it also considers the group and organizational levels. (Ricciardi and Simon, 2000)

Behavioral finance is defined as the "*interaction of psychology with financial actions and performance of practitioners*". Moreover, people should be aware of their "investment mistakes" as well as "error of judgment" of others because one's mistake can turn to the other's profit (Shefrin, 2000).

Behavioral finance assumes people are normal, not rational. Normal people are confused by frames and cognitive biases, feel pain of regret and lapses of self-control. Behavioral finance deals well with afore-mentioned puzzles of finance. Therefore, Behavioral finance may improve the decision making of finance professionals and institutional investors through understanding their own behavior. Institutional investors who understand behavioral finance will better serve

and educate their clients through understanding their motives and beliefs..(Statman,1999). Briefly, behavioral finance endeavors to forecast the systematic behavior of people to make efficient entrepreneurial activities (Olsen, 1998).

1.3. Developed and Developing Economies

Schøtt and Jenson (2008) compared entrepreneurial activity and policy across the developed and developing economies. They concluded that entrepreneurial policy and activity are generally lower in developing economies compared to developed economies. This is attributable to experiences of developed countries which have not been applied to developing countries yet, and developing economies have been internally inconsistent due to lack of resources. Cognitive biases are different across developed and developing economies, attributable to social orientation (Varnum, et, al 2010). Based on this justification, this study is investigated across the developed and developing economies.

1.4. Problem Statement of Study

Corporate Entrepreneurship leads to lower agency cost and enhances firm performance. However, behavioral biases may result in deviations from this outcome. Secondly, economies also transform the possible consequences. Therefore, to study the afore mentioned relationship in the presence of behavioral biases across developed and developing economies would provide insight into this relationship.

1.5. Theoretical Support

The theoretical support of this study has been presented in ensuing paragraphs:

1.5.1. Theory of Corporate Entrepreneurship (TCENT):

.According to the theory of corporate entrepreneurship, three factors are involved in creation of new business, namely 'business environment', 'organizational culture', 'top managers including corporate executives, divisional general managers and division and its top management team'. (Sathe, 2003), as shown in Fig 2

Moreover, the theory of corporate entrepreneurship indicates a direct and indirect influence that the top manager has on business creation.(Drucker, 1970); however, business environment and organizational culture have an indirect influence on business creation. This implies that entrepreneurs are able to create new business through taking on risky projects and being involved in entrepreneurial activities. The behavior of the entrepreneur reflects that he is ready to take risks irrespective of his career and financial security (Knight ,1921) However, business environment and organizational culture may be helpful in corporate entrepreneurship

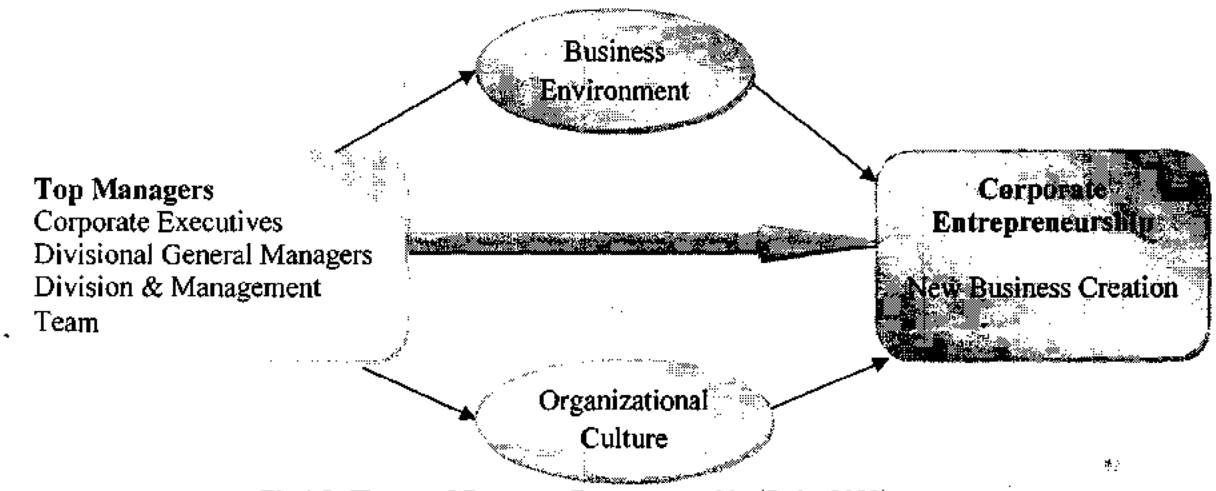


Fig 1.2- Theory of Corporate Entrepreneurship (Sathe,2003)

1.5.2. *Agency Theory* (AGT)

Agency theory developed in the 1970s as a response to the problems that arise when one party, the principal, delegates work to another party, innate to the public corporation. (Jensen and Meckling, 1976). Based on their self interest, managers make decisions which may harm the organization and owner's wealth. Thus, moral hazards and conflicts arise, which may diminish the firm's profitability as well as other investment decisions. Some researchers suggest that bonuses in addition to fixed salaries may reduce the agency problems within organizations (Jensen and Murphy, 1990). The other alternative for reducing agency problems is to involve corporate entrepreneurship activities. (Bhutta and Shah, 2011,a)

1.5.3. *Resource-Based Theory* (RBT)

According to this theory, firms have tangible and intangible capabilities and resources. (Wernerfelt , 1984). This basically seeks to explain why firms succeed. Regarding current literature of corporate entrepreneurship, much attention has been given towards the combination of resources and their management in order to pursue opportunities for new business (Castrogiovanni et al. 2011). Generally, firms must secure the right type of resources. Successful companies must concentrate on the acquisition and enhancement of those resources that are scarce and valuable to customer now and in the near future (Olavarrieta and Ellinger, 1997). To hold unique and rare resources are mainly attributable to firm profitability and competitive advantage (Barney 1991). Hence, research studies have highlighted this theory as driver of growth, profitability and competitive advantage (Penrose 1959). Furthermore, firms must be nimble in the marketplace to survive and succeed in a competitive milieu. Thus, logistics has become an increased focus of strategic concern for firms (Bowersox *et al.*, 1995). Therefore, this theory supports the relationship between corporate entrepreneurship and firm performance

1.5.4. *Probabilistic Mental Models* (PMM) *Theory*

In this theory, Gigerenzer, et, al (1991) highlighted the individual's behavior regarding overconfidence in decisions and judgments. According to this theory, "individuals performed two alternative tasks. The first task is to construct local mental model and then solve the problem through long-term memory. However, if the problem could not be handled with first tools, then probabilistic mental models have been used through using probabilistic information taken from long-term memory. It implies that executives can make entrepreneurial orientation activities through incorporating inductive interference. Moreover, it explains the overconfidence bias in those scenarios in which the overconfidence bias appears or disappears. It introduces a new concept i.e. confidence-frequency that explores the systematic difference between judgment of confidence in a single event and judgment of correct answers in the long run.(Gigerenzer et.al, 1991).

1.5.5. *Illusion of Control Theory* (ICT):

Ellen Langer firstly presented the theory of illusion of control in 1975 as "*an expectancy of a personal success probability that exceeds the objective probability of the outcome*". It happens when an event is determined by some factors that result in under skill-based scenarios like response familiarity, choice familiarity, active and passive involvement, particularly leading to perceived control of individuals over the situation and unrealistic success outcomes. However, the illusion of control can be more attributable to skill and chance scenarios, shows that skill factors may attribute the success. Moreover, non-skilled factors like foreknowledge, degree of correspondence and outcome sequence also contribute towards the perceived control of individuals over the situation.(Kahai et al., 1998; Langer and Roth, 1975 and Presson and Benassi, 1996)

On the contrary, it was applied to gambling tasks. It explored the persons, who are in descending condition, rated themselves as more successful, memorized more wins and thought they would be more successful over future trials as compared to those in other conditions (Langer, 1983).This implies that entrepreneurs exhibiting illusion of control may be able to create new business opportunities and perform entrepreneurial activities effectively.

1.5.6. *Representativeness Theory (RT)*

Kahnman and Tversky (1972) defined the representativeness theory as the "tendency for people to think something is more likely to happen because of stereotype". Basically, it reflects the sample of the whole population; it explains concrete thinking, the importance of task characteristics and the difficulty of a priori specifications of the salient features with respect to which representativeness is assessed. (Chester , 1976). Thus, it implies that individuals can make decisions on the basis of a representative sample for incorporating entrepreneurial orientations

1.5.7. *Preference Theory (PT)*

Kenneth (1958) defined the preference theory as "a set of assumptions relating to ordering some options, based on the extent of happiness, satisfaction, enjoyment, or utility, which leads to optimal outcomes". It would assign a special role to the status quo, giving up some standard assumptions of stability, symmetry and reversibility which the data have shown to be false. But the task is manageable. The generalization of preference theory to indifference curves that are indexed to reference level is straightforward (Tversky and Kahneman, 1991). The factors that determine the reference point in the evaluations of outcomes are reasonably well understood: the role of the status quo, and the role of entitlements and expectations are sufficiently well

established to allow these factors to be used in locating the relevant reference levels for particular analyses (Kahneman, et.al, 1991).

1.6. Research Questions of Study

Q1. Is the relationship enhanced between Corporate Entrepreneurship and agency cost by adding Firm Performance?

Q2. Does the relationship between Corporate Entrepreneurship and agency cost differ in standard finance and behavioral finance?

Q3. Does the relationship between Corporate Entrepreneurship and agency cost differ across developed and developing economies?

1.7. Objectives

- Corporate Entrepreneurship can act as an efficient technique in reducing agency cost Bhutta and Shah (2011, a) . However, low agency cost enhances the firm performance. (Xiao, 2012). Therefore, the prime objective of this study is to extend the model of Bhutta and Shah (2011,a) to firm performance.
- Normally, outcomes of standard finance might be deviated due to presence of behavioural intentions (Statman, 1999). So the second objective of our study is to investigate the above model across both approaches of finance i.e. fundamental and behavioural approaches.
- Thirdly, it would investigate this relationship into developed and developing economies for its generalization.

1.8. Significance of the Study

- The present study is expected to contribute to the literature on Corporate Entrepreneurship in many ways. Firstly, it is an endeavour to further enhance a significant relationship of Corporate Entrepreneurship and Agency Cost (Bhutta and Shah, 2011(a)) by introducing firm performance in this link, and further investigate it according to standard and behavioral finance approaches. So, the speciality of the study is to explore and gain the attention of the academicians and practitioners towards this omission in literature.
- Secondly, academicians and practitioners promote Corporate Entrepreneurship in firms to enhance the firm performance, and this study has been conducted at USA (Developed) and Pakistan (Developing) economies; now all economies need these activities to achieve their competitive positions in the global environment. Thirdly, this study posits the comparison of both approaches across different economies.

1.9. Potential Contribution of Study

This study contributes to prior literature in many ways which has been presented in ensuing points:

1. To extend the nexus between corporate entrepreneurship and agency cost (Bhutta and Shah, 2011, a) to firm performance.

2. To investigate the relationship between Corporate Entrepreneurship and Agency cost, in the presence of behavioural biases. There is no study to date that investigates the afore-mentioned relationship. Thus, the prime contribution of this study is to explore and gain the attention of academicians and practitioners towards this omission in literature.

3. Scrutinizing the above nexus, across developed and developing economies, is a major contribution.

4. It is helpful for practitioners as all economies need these activities to compete in the global milieu.

5. It is helpful for policy makers to make better decision-making in public and private sector companies

1.10. Organization of the Study

This study is organized as follows; Section II discuss the prior literature of corporate entrepreneurship, agency cost, firm performance and behavior biases, followed by Section III that describes the justification of study for both fundamental and behavioral approach. Section IV presents the proposed models and hypothesis. Section V discusses the research methodology followed by section VI highlights the timeline expected to complete the study

CHAPTER 2

LITERATURE REVIEW

2.1. Corporate Entrepreneurship

Corporate entrepreneurship was coined by Pinchot in 1985. Many scholars referred to corporate entrepreneurship as corporate venturing (Vesper, 1990); Intrapreneurship (Antoncic and Hisrich, 2001) as well as internal corporate entrepreneurship (Jones and Butler, 1992). Moreover, researchers defined corporate entrepreneurship as " a *process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization*" (Sharma and Chrisman,1999); "a process by *which individuals inside organizations pursue opportunities independent of the resources they currently control*" (Stevenson and Jarillo, 1990); *"activities in a large firm resulted in diversified products and markets, as well as being instrumental to producing "impressive financial results".* (Kuratko,et, al, 2001) ; *doing new things and departing from the customary to pursue opportunities"* (Vesper 1990); and "*a spirit of entrepreneurship within the existing organization*" (Hisrich and Peters, 2007).

Other definitions of corporate entrepreneurship has been presented in table 2.1; quoted by Adonisi (2003) and Kearney, et, al. (2007)

Table 2.1 .Definitions of Corporate Entrepreneurship	
Schollhammer (1982)	"Internal (or intra-corporate) entrepreneurship refers to all formalized entrepreneurial activities within existing business organizations. Formalized internal entrepreneurial activities are those which receive explicit organizational sanction and resource commitment for the purpose of innovative corporate endeavours – new product developments, product improvements, new methods or procedures (p. 211)"
Burgelman *(1984)*	"Corporate entrepreneurship as extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations"
Pinchot (1985)	"Intrapreneurs are 'dreamers who do', those individuals who take hands-on responsibility for creating innovation of any kind within an organization. They may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality (p. ix)".
Jennings and Lumpkin (1989)	"Corporate entrepreneurship is defined as the extent to which new products and/or new markets are developed. An organization is entrepreneurial if it develops a higher than average number of new products and/or new markets (p. 489)"
Covin and Slevin (1989).	"Corporate Entrepreneurship encourages leaders to promote innovativeness, pro-activeness and risk taking among the members within a larger organizational context"
Guth and Ginsberg (1990)	"Corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them; (1) the birth of new businesses within existing organizations, i.e., internal innovations or venturing and (2) the transformation of organizations through renewal of the key ideas on which they are built, i.e. strategic renewal (p. 5)"

Covin and Slevin (1991)	"Corporate entrepreneurship involves extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations (p. 7)"
Zahra (1995, 1996)	"Corporate entrepreneurship is seen as the sum of a company's innovation, renewal, and venturing efforts. Innovation involves creating and introducing products, production processes and organizational systems. Renewal means revitalizing the company's operations by changing the scope of its business, its competitive approaches or both. It also means building or acquiring new capabilities and then creatively leveraging them to add value for shareholders venturing means that the firm will enter new businesses by expanding operations in existing or new markets (1995, p. 227; 1996 p.1715)"
Antoncic and Hisrich (2003)	"Entrepreneurship within an existing organization, including emergent behavioural intentions and behaviours of an organization related to departures from the customary"
Kuratko, Ireland, Covin, and Hornsby (2005)	"Corporate entrepreneurship represents a set of behaviors "requiring organizational sanctions and resource commitments for the purpose of developing different types of value-creating innovations" (p. 700)."

After reviewing the above definitions, it has been seen that researchers used different terminologies while explaining the same concepts. However, a few common characteristics have been extracted from the above table as presented below:

- The establishment of a new startup and bringing innovation within existing enterprise.
- Strategic renewal of companies including stance and culture.
- Corporate entrepreneurship is important both for large and small companies.

Despite these common features, some people mixed the concept of corporate entrepreneurship with entrepreneurship; however, there is a distinction between them. Corporate entrepreneurship is a multi-dimensional process; usually large firms behave in an entrepreneurial way (Covin and Slevin, 1991). It considers that organizational structure along with key challenges is attributable to more complexity irrespective of entrepreneurship (Dess, et.al, 1999), whereas entrepreneurship is limited to the theoretical background of economics, psychology and sociology (Stevenson and Jarillo, 1990). This distinction between corporate entrepreneurship and entrepreneurship was presented by Christensen (2004) with the help of following diagram in Fig 2.1. He depicted that entrepreneurs developed and polished their capabilities within the existing enterprise before establishing a new startup. This could be attributable to that existing company which may have a relation with the new venture, as shown in dotted line (Pinchot, 1985). Whereas Intrapreneurship is entrepreneurship within organization (Morris and Kuratko, 2002) and Exopreneurship operates via external networks (Chang, 1998).

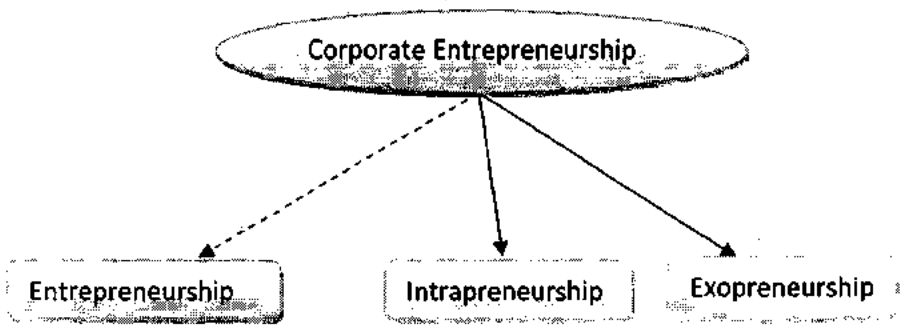


Fig 2.1: Corporate Entrepreneurship and Entrepreneurship

During the last three centuries, it become a crucial part of the strategic orientation process that firms usually face external adaption threats in lieu of competitive advantage in the global

milieu (Miller and Friesen 1978; 1982). Moreover, innovation is an important part of corporate entrepreneurship through which competitive success can be attained (Drucker, 1985). Similarly, entrepreneurial orientation is the effective technique of wealth creation. (Hitt et al, 2001). Moreover, it may be a vital element of company growth.(Antoncic and Hisrich, 2001).

Corporate entrepreneurship can be an effective method for companies to survive in a hostile milieu (Zahra and Covin, 1995). Firms having an entrepreneurial strategic structure with a competitive edge contribute long term orientation along with high market share even in a hostile environment. (Covin and Slevin, 1989). Firms can show more hospitality through focusing on corporate entrepreneurship strategies instead of organizational stance in the existing atmosphere (Pittaway, 2001). Furthermore, corporate entrepreneurship is positively related to firm performance contributing towards tangible outcomes. Additionally, it enhances intangible outcomes like skill and knowledge development. Hence, corporate entrepreneurship provides tangible as well as intangible benefits. (Davis, 2006).

Moreover, corporate entrepreneurship has a multidimensional structure that is comprised of Risk-taking, Innovativeness, Proactiveness and Competitive Aggressiveness (Dess, et.al, 2003) like "the ability of firms to engage in risky projects along with higher return is risk taking" (Lumpkin and Dess, 1996) ; " the ability of firms to engage in new business is innovativeness" (Miller,1993); " the ability of firms for seeking opportunities is Proactiveness" and " the ability of firms to compete in a competitive milieu in order to achieve high market share is competitive aggressiveness " (Dess, et.al, 2003).

Researchers depicted that antecedents of corporate entrepreneurship may be strategic factors because 'growth', 'stability' and 'retrenchment strategies' are related to firm

competitiveness. There are two more factors that might be antecedents of corporate entrepreneurship. One is the environmental factor because 'industry growth', 'dynamism', 'customer demands' as well as external 'technological development' are extrinsically linked to the organization . However, the second one is the organizational factor because organizational structure, managerial support along with culture, is intrinsically related to the company. The internal factors are more linked to entrepreneurial orientation because they are directly associated with executives and managers. (Zahra,1986)

Corporate entrepreneurial orientation is crucial for all types of organizations in terms of type (public and private) and size (small and large)(Davis, 2006). Previously, large organizations do not emphasize innovations because according to public sector theory, these are monopolies and don't need to be innovative. However, private organizations emphasize innovation as a key attribute of firm profitability and growth (Borins, 2002). Large firms that discourage corporate entrepreneurship, at both the individual and organizational level, is attributable to their bureaucratic structure. Entrepreneurial activities cannot be achieved without supportive leadership, organizational behavior and culture at the individual level. Creative employees don't perform enthusiastically in the absence of two these factors. However, firms don't show entrepreneurial aptitude at the organizational level. (Singer, 2009). Due to the above justification, entrepreneurial activities are less important in public sector organizations as compared to private sector organizations, because private sector organizations are usually small companies, encouraging entrepreneurial activities with clear goals, and facilitating culture (Sadler, 2000). Regarding the above critics. Public sector companies are more likely to innovate. Additionally, the key challenge of public sector organizations is to recognize entrepreneurial activities within the organization and derive significant outcomes

2.2. Corporate Entrepreneurship (CE) Conceptual Models:

Models as well as theories of corporate entrepreneurship depict the association between personality attributes of entrepreneurs with organizational environment (Gartner, 1988), which has been presented as follows:

2.2.1. Model of Guth and Ginsberg(1990)

'Guth and Ginsberg (1990) developed the corporate entrepreneurship model conceptually, presenting the strategic renewal process. They depicted antecedents as well as outcomes of corporate entrepreneurship in their model, like 'strategic leadership' and 'organizational performance'. 'Organizational form' as well as 'environment' are antecedents; and 'strategic renewal and venturing' are their outcomes. They attributed the concept of corporate entrepreneurship into the following two phenomena:

- 'The birth of new businesses within existing organization'
- 'The transformation of organization through renewal'

The model of Guth and Ginsberg (1990) is shown in fig 2.2. There is absence of a feedback loop between all indicators except firm performance, showing the drawback in this model.

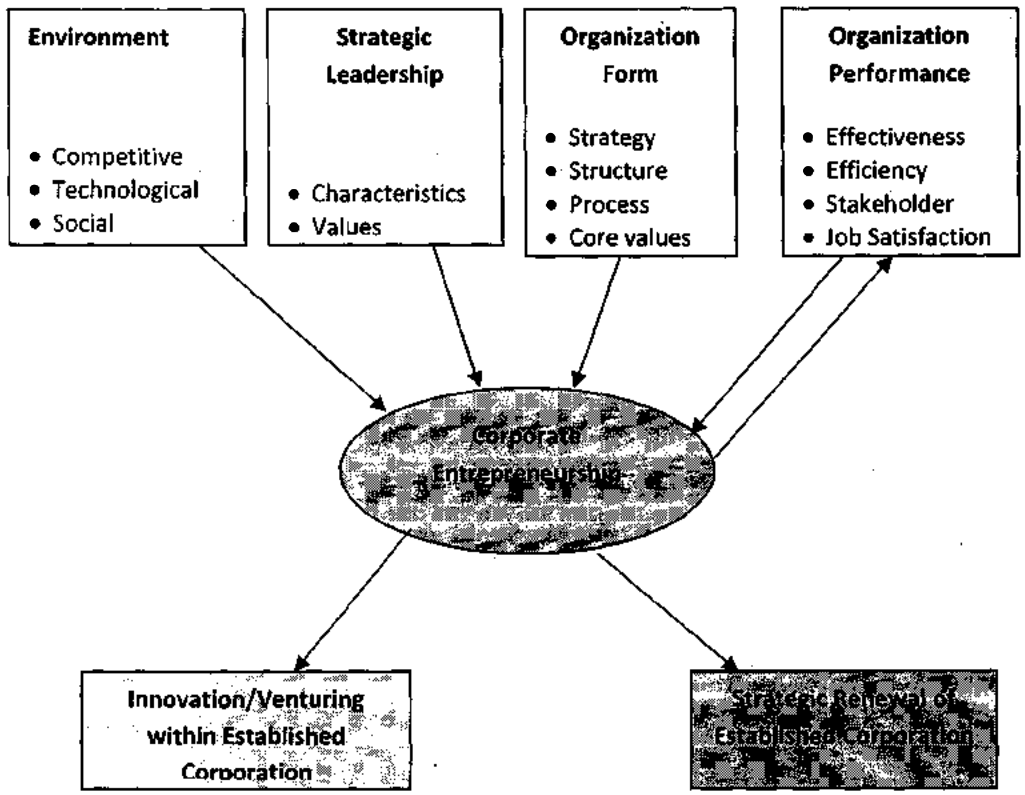


Fig 2.2. Guth and Ginsberg (1990)'s Model

2.2.2. Model of Covin and Slevin (1991):

Covin and Slevin (1991) developed a nexus between organization's 'entrepreneurial posture' with organizational performance via three mediators i.e. 'strategic variables', 'internal variables' as well as 'external environment', consequently, developing a multi-framework. According to this model, entrepreneurial orientation has a strong association with organizational performance; however, it has a weaker effect with all three mediators. Covin and Slevin (1991)'s model has been shown in Fig 2.3

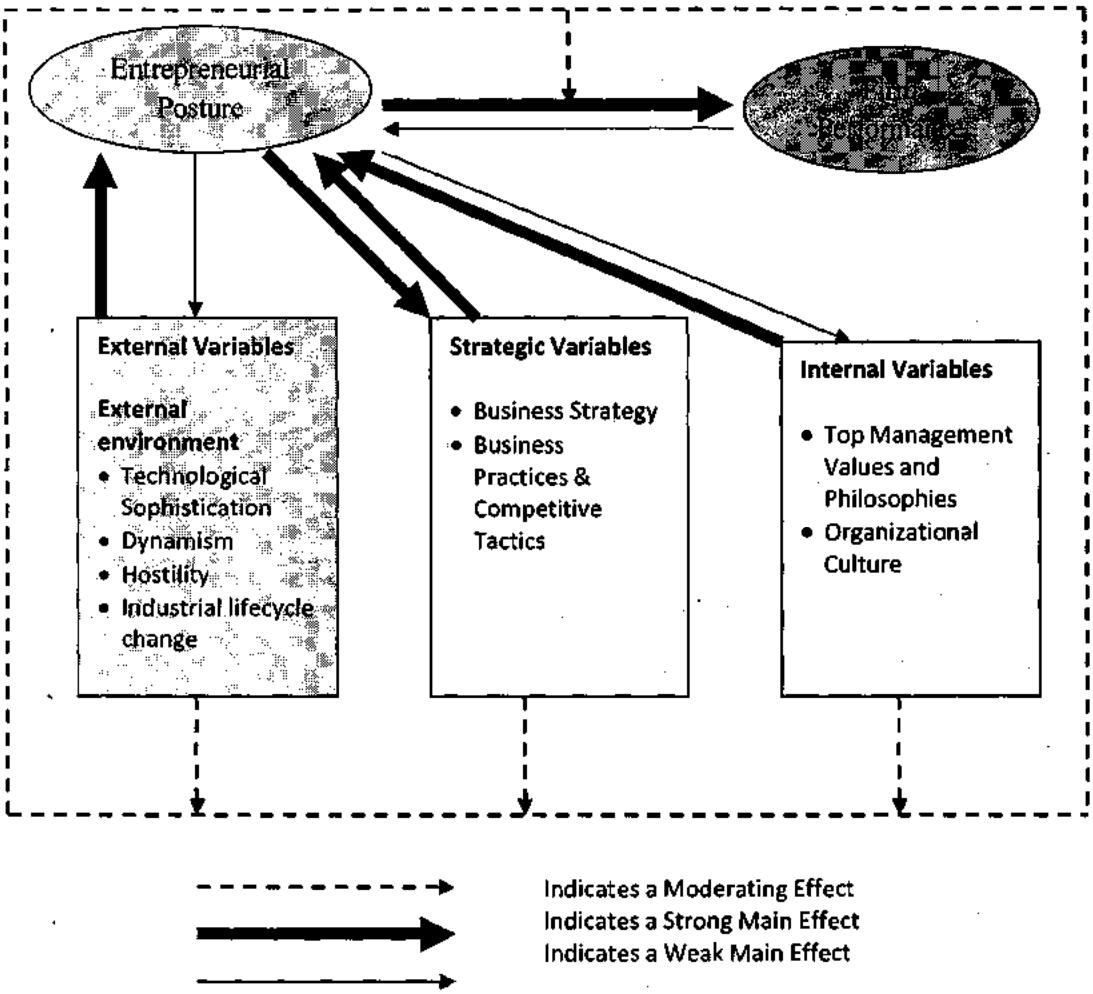


Fig: 2.3 The Covin and Slevin (1991) model for Corporate Entrepreneurship

2.2.3. Model of Zahra (1993)

Zahra (1993) criticized the model of Covin and Slevin (1991) because they failed to present the proper definition of entrepreneurial orientation and how it is dissimilar from the construct of corporate entrepreneurship, because corporate entrepreneurship occurs at multiple levels. Secondly, Zahra depicted another critique to this model in that it fails to identify the dimensions of entrepreneurial orientation impact differently on the dimensions of organizational performance. In essence, Zahra (1993) revised the model of Covin and Slevin (1991) through presenting a justification of the drawback.

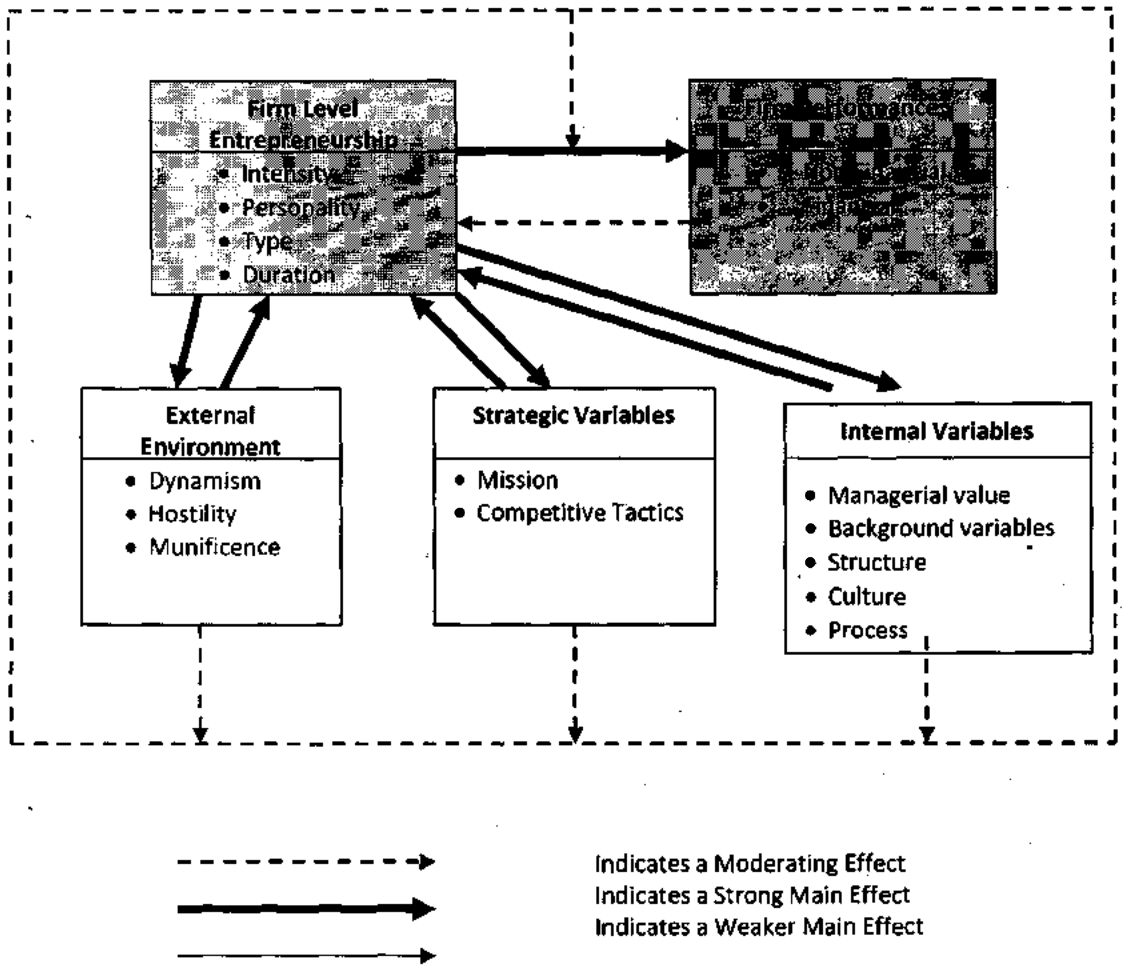


Fig: 2.4 The Zahra (1993) model

While considering the entrepreneurial orientation both at national and international level, he included 'munificence' that is attributable to opportunity seeking for developing innovations in industry. Furthermore, she combined the 'dynamism' with 'technological sophistication', along with a clear categorization of the external environmental indicators and a development of a feedback loop between different variables (Adonisi,2003). Zahra (1993) highlighted that managerial values along with organizational structure and culture should be considered while developing corporate entrepreneurship.

2.2.4. Model of Lumpkin and Dess (1996):

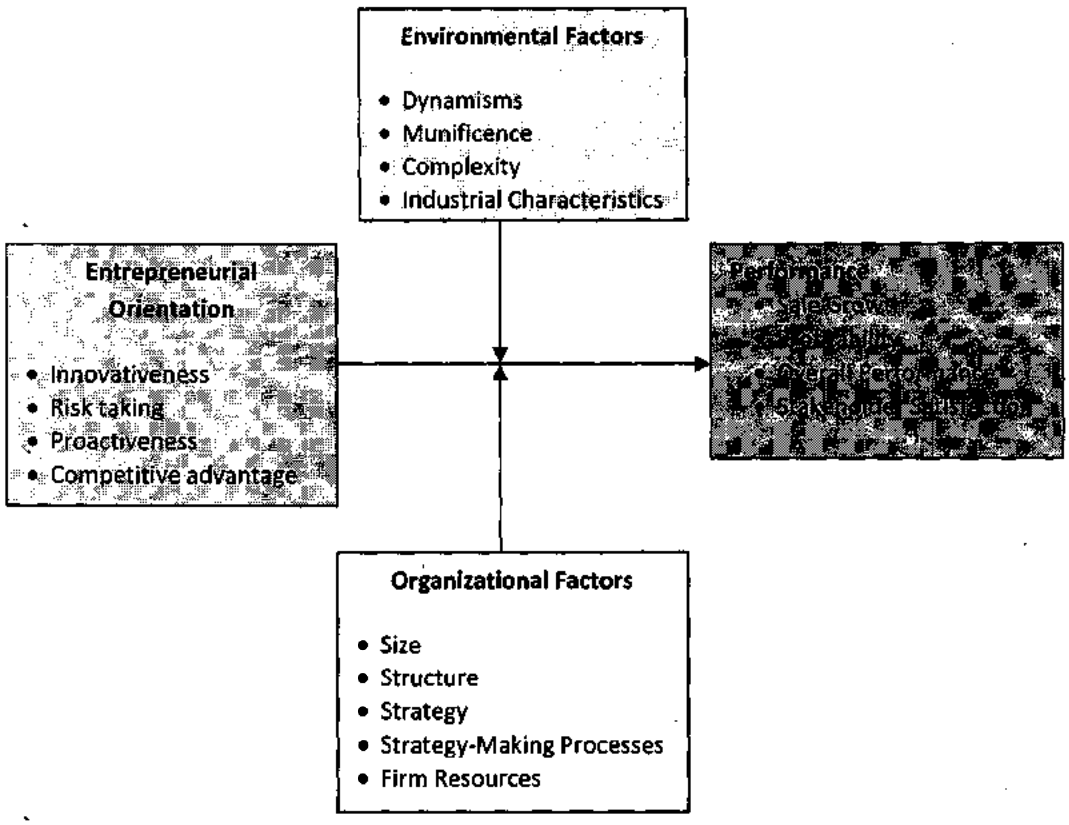


Fig: 2.5 The Lumpkin and Dess (1996) model

Lumpkin and Dess (1996) presented entrepreneurial orientation into five multiple dimensions i.e. 'risk taking', 'innovativeness', 'proactiveness', 'competitive aggressiveness' and 'autonomy'. They depicted that entrepreneurial orientation is concerned with practices, or decision-making tasks as well as processes that lead to new market entry along with innovation in terms of products and services. (Adonisi, 2003).

The model of Lumpkin and Dess (1996) enhances the model of Covin and Slevin (1991) through introducing two moderators i.e. Organizational and Environmental indicators that may impact the nexus between entrepreneurial orientation and firm performance. However, there is no

feedback among organizational performance, entrepreneurial orientation and two moderators. (Adonisi, 2003)

2.2.5. Model of Barrett and Weinstein (1998)

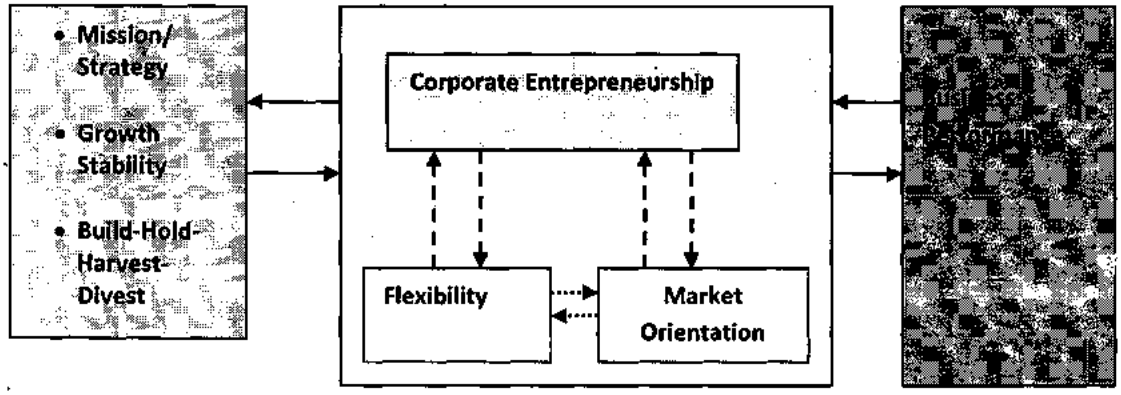


Fig 2.6. The CEFMO Model of Barrett and Weinstein (1998)

Barrett and Weinstein (1998) presented relationships among corporate entrepreneurship, market orientation, flexibility and firm performance in their CEFMO model, transferring the emphasis onto organizational mission strategy. Barrett and Weinstein (1998) recommended that in order to survive in the international competitive milieu, two factors should be incorporated, namely market orientation and flexibility as quoted by Adonisi (2003) .

2.2.6. Model of Goosen, De Coning and Smit (2002)

Goosen, De Coning and Smit (2002) categorized the corporate entrepreneurship into three dimensions, namely proactiveness, innovativeness and self renewal. Additionally, they introduced other possible dimensions of corporate entrepreneurship that heightens the organizational culture, namely risk taking, managerial styles, organizational structure and environment. This model of Goosen, et al. (2002) is shown in fig 2.7

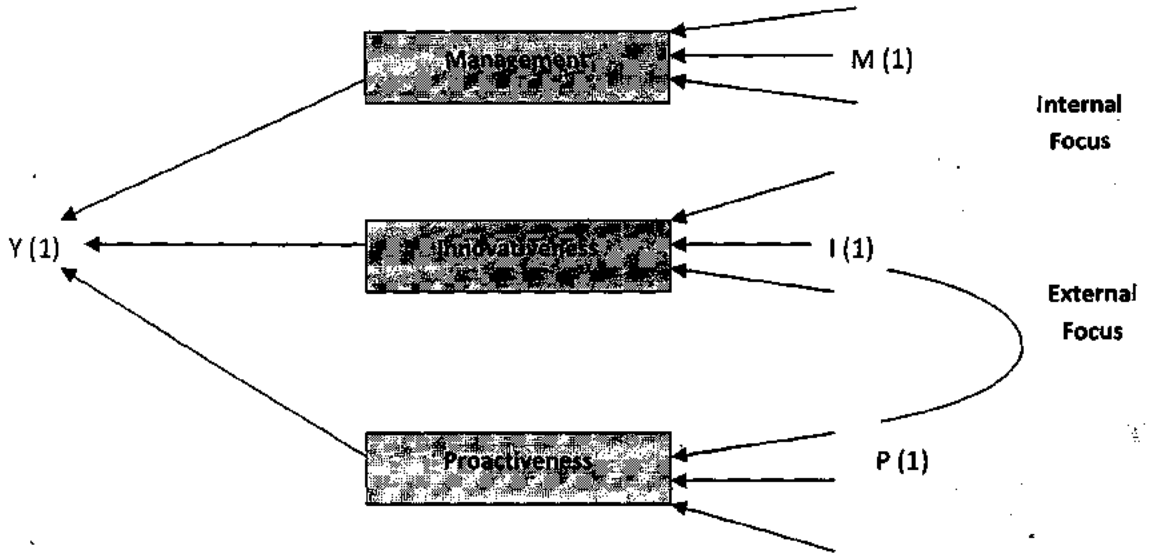


Fig 2.7 .The Model of Goosen, De Coning and Smit (2002)

Furthermore, they also included another concept i.e. 'new business venturing', which has been taken from Antocic and Hisrich (2001). In this model Y(1), I(1), M (1) and P(1) represent levels of corporate entrepreneurship, innovativeness, management and proactiveness respectively.

2.2.7. Public Sector Corporate Entrepreneurship Model (2007)

Kearney, Hisrich and Roche (2007) presented a model that can be implemented in public sector companies. They incorporated corporate entrepreneurship with its two antecedents. One is public sector organization and the other one is external environment. It also describes the impact of corporate entrepreneurship on organizational performance, both directly and indirectly. This model is shown in fig 2.8

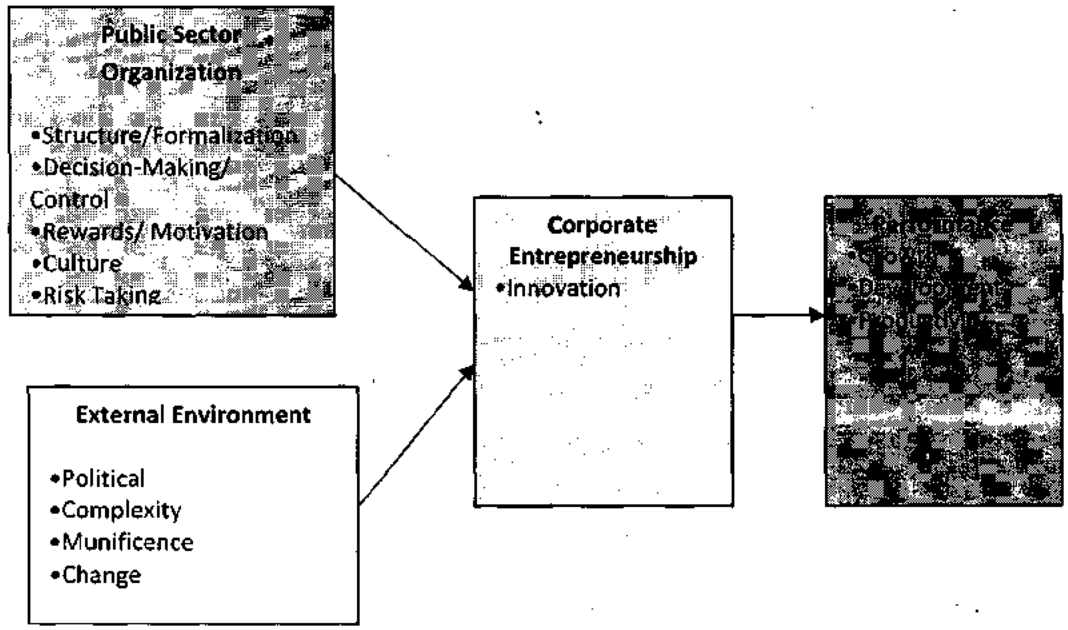


Fig. 2.8. Model of Public Sector Corporate Entrepreneurship (2007)

This model depicts that public sector organization is multi-dimensional, comprised of 'risk taking', 'proactiveness', 'structure/formalization', 'decision-making/control', 'culture' and 'rewards/motivation' while employing the entrepreneurial task.

2.3. Agency Cost

Nowadays, every organization faces agency problems that are rapidly growing (Henry, 2010), even it has been presented as special case in the current theory of firm (Jensen and Meckling, 1976). Agency theory was developed in the 1970s as "*a response to the problems that arise when one party, the principal, delegates work to another party (agent), innate to the public corporation*". (Jensen and Meckling, 1976). The major justification for these problems arising is that ownership interest may not be associated with managerial interest, which ultimately leads to agency costs (Jensen, 1986). Jensen and Meckling (1976) developed the concept of agency cost which comprises three variables i.e.

- The monitoring expenditures of the principle,
- The bonding expenditures by the agent and
- The residual loss.

The monitoring cost covers the charges for observing and controlling the behavior of agents. This monitoring cost can be external as well as internal. External monitoring cost is the amount paid for appointing an accountant who thoroughly checks the books of the firm in order to detect the managers' fraud and misallocation of resources, however, the internal monitoring cost is the cost paid for buying market tracker magazines or newspapers in order to analyze and compare the listings of industry. The best alternative to the monitoring cost is the bonding cost because it is an additional amount that the principal will pay to his agent for proper utilization of resources and it provides a guarantee for not taking any decision that will harm the principal's welfare. The third case, if an agent did harm to the principal, the remaining welfare after divergence is the residual loss (Peterson, 2007).

Moreover, according to the Jensen and Meckling (1976) model, agency cost has been defined as the 'zero-cost base' case, which refers to zero agency cost which means that a firm is owned by a single owner/manager, particularly seen in small and private organizations; however, large public limited companies can't be owned by single owner, attributable to financial constraints and other related issues. Therefore, low managerial ownership boosted up the agency cost (Ang, at, al, 2000). Additionally, the separation of ownership and control along with low managerial ownership enhances both managerial agency cost and equity agency (Ang, at, al, 2000; Fleming, et, al, 2005). Therefore, managerial agency cost is quite similar to equity agency cost in public limited companies.

Prior literature defined agency cost into three types. The first one is managerial agency cost which deals with the cost between firm managers and stock holders (Jensen and Meckling, 1976); the second one, is equity agency cost which deals with cost between firm managers and equity shareholders (Fleming,et, al 2005; Florackis, 2008); and thirdly, agency cost debt which deals with the cost between firm managers or shareholders and debt holders (Jensen and Meckling, 1976; Anderson, et, al, 2003). According to Jensen and Meckling (1976) model, the managerial agency costs take place with the 'separation of ownership and control', which is being measured through administrative expense ratio (Li,et. al, 2008). Equity shareholders monitor the management and other stake holders according to holding equity position in a company, indicating that equity shareholders are different from other types of shareholders (Grossman and Hart, 1988). Equity agency cost can be measured by two proxies for equity i.e. 'discretionary expense to sales ratio' and 'asset utilization ratio' (Ang et al., 2000; Florackis, 2008). All other operating expenses are called discretionary expenses. However, through discount rates for corporate securities and spread yields for fixed income debt securities, agency cost of debt can be measured (Anderson, et, al, 2003; Adams, 2005).

Moreover, agency cost is treated as a determinant of capital structure/ ownership structure, executive compensation, accounting policy choice and dividend policy (Fleming, at, al, 2005). The proxies for examining the impact of agency cost on the financial policies are bank size, earnings volatility, managers' portfolio diversification losses and standard deviation of bank equity returns (Mendez and Willey, 1995). Other proxies for agency costs are the frequency of board meetings and investment of free cash flows (Doukas, et, al, 2000; Yi, et, al, 2007)

Agency cost can be seen in various scenarios like managerial self interest behaviors usually concerned about rank, excessive profit consumption, making wrong decisions regarding a firm,

misallocation of resources and accounting fraud. Moreover, agency cost not only affects the shareholders' wealth but also other stakeholders' wealth like debt financers as well as the employee society (Henry, 2010). The consequences of agency cost forces towards the importance and implementation of effective monitoring systems, such as corporate control mechanism, institutional shareholders and codes of corporate governance, may dampen the agency cost (Henry, 2010)

Agency cost has a significant negative impact on firm performance (Xiao, 2012; Lemmon and Lins, 2003). Similarly, agency cost is also negatively related to manager's ownership and degree of external bank monitoring (Jensen,1993; Ang, et, al, 2000), however, agency cost is positively related to the number of shareholders and existence of outside managers (Ang, et, al, 2000). Moreover, managerial ownership has a positive nexus with corporate performance (Jensen and Meckling, 1976). Similarly, high outside director ownership reduces agency costs, and ultimately enhances firm performance (Yi, et, al, 2007). Additionally, higher internal governance dampens the agency cost. Moreover, there is a significant link between the agency cost levels and the 'extent and nature of directors' remunerations', 'the board's independence', 'corporate dividend policy', 'institutional share ownership and the existence of CEO-chairperson duality' .(Henry, 2010)

Agency cost can be reduced via some techniques. One technique is to engage stake holders i.e. family relatives and business associates in the business, particularly in small firms (Fama and Jensen, 1983) ; and concentrated equity shareholders, venture capital providers, banks and debt financers, in public sector companies (Ertugrul and Hegde, 2008)

The relationship between dimensions of corporate entrepreneurship and agency cost has been presented in the ensuing paragraphs

2.3.1. Risk Taking and Agency Cost

Risk-taking concerns the tendency of firms to allocate significant resources to projects involving a high probability of risk and return (Lumpkin and Dess, 1996). According to agency theory, the principals want to maximize their wealth preferring risk neutral behavior; however, agents possess risk aversive behavior, mainly attributable to employment security and fear of reputation damage (Donaldson, 1961; Williamson, 1963). Due to this 'risk differential', agency problems arise between managers and shareholders (Wiseman and Mejia, 1998).Agents avoid the risky investment decisions regarding firms (Williamson, 1963; Piron and Smith, 1995; Wiseman and Bromiley, 1996) that dampen the corporate entrepreneurship.

2.3.2. Innovativeness and Agency Cost

Innovativeness refers to the ability of a firm to engage in new ideas, products, services or technological processes (Miller, 1983) . According to agency theory, principals have risk neutral behavior and managers have risk aversive behavior (Donaldson, 1961). Due to this 'risk differential' between the principal and manager, agency costs arise (Wiseman and Mejia, 1998). Moreover, innovation can be costly in the presence of agency cost (Martimort and Verdier, 2004). The risk aversive nature of agents, who are not involved in innovative projects, can be an impediment to the transformation of knowledge, making innovation, and achieving competitive position and high market share. (Amour, 2004). Thus, corporate entrepreneurship decreases.

2.3.3. Proactiveness and Agency Cost

Proactiveness refers to the ability of a firm to seek opportunities (Lumpkin and Dess, 1996). A proactive firm takes aggressive and bold steps to take risks while performing different experiments in the competitive environment (Morris and Kuratko, 2002). Based on agency theory, the risk aversive behavior of agents prevents experimentation which reflects low proactiveness. (Piron and Smith, 1995; Wiseman and Bromiley, 1996) Therefore, corporate entrepreneurship diminishes.

2.3.4. Competitive Aggressiveness and Agency Cost

Competitive aggressiveness is the ability of firms to seek to protect and give response to threats (Lumpkin and Dess, 1996). Competitive advantage can be achieved whilst considering innovation and proactiveness (Tidd et al, 1999). Due to the risk aversive behavior of agents, they will not bring innovations that dampen competitive aggressiveness and ultimately corporate entrepreneurship (Amour, 2004).

Consequently, competitive advantage is a vital element whilst investigating the nexus between corporate entrepreneurship and agency cost, corporate entrepreneurship reduces agency cost and vice versa.

2.4. Financial Performance

In the context of corporate performance, the most central part has been on the financial side. The financial performance measures are comprised into two types. The first type refers to accounting based measures (i.e ROI and ROE, etc.), reflecting past performance of company however, the second type refers to market-based measures extracted from stock market values, based on valuation techniques. Firm performance can be computed through other financial

measures like revenue, cash flows, return on equity and return on assets (Haber and Reichel, 2005). Although these measures are essential, however, they fail to compute the overall firm performance (Aggarwal and Gupta, 2006). In order to comprehensively evaluate the overall firm performance, non financial measures have been used, like perceived market growth, brand equity, perceived market share and customer satisfaction. (Haber and Reichel, 2005). Furthermore, another approach has been used for computation of firm performance. It is comprised of internal measures, external measures, input measures and output measures. Those measures which are related to the shareholder's interest within the firm are called internal measures, however; those are related to customers, suppliers and competitors. Input factors are related to activities and tasks necessary for achieving organizational goals, whereas, output factors lead- to organizational goals and performance (Aggarwal and Gupta, 2006). In entrepreneurial orientation research, firm performance can be evaluated in terms of efficiency, growth and profit. Efficiency is concerned with asset turnover; growth is concerned with the market share; and profitability refers to the net profit margin; which is a component of ROA and ROE (Murphy et al., 1996)

Corporate Entrepreneurship enhances the firm's growth as well as firm profitability (Zahra, 1991), Similarly, Corporate Entrepreneurship is significantly positive related to firm performance (Aktan and Bulut , 2008). This relationship has been investigated in other economies as in the UK (Gartner and Birley, 2002); the United States, Canada, New Zealand, the Netherlands, Argentina, the Republic of Croatia, and Russia (McDougall and Oviatt, 2000) and China (Yang,et.al 2007)

2.5. Behavioral biases

Behavioral biases are the heuristics to think differently. They can lead to systematic deviation from standard outcomes. Moreover, behavioral biases are mental shortcuts used to make judgments (Simon et al., 1999), which help in effective decision making (Busenitz and Barney, 1997).Thus decisions can be made quickly by using these mental rules.

2.5.1. Background of Behavioral Biases

Behavioral biases are purely based on psychological background. Behavioral biases can be divided into decisional, social and error biases in psychological context (Baron, 2007; Kahneman and Tversky, 1972), whereas, the biases related to corporate entrepreneurial orientation are decisional biases. Moreover, decisional biases can be further divided into cognitive and emotional biases (Maccoun ,1998; Nickerson, 1998)

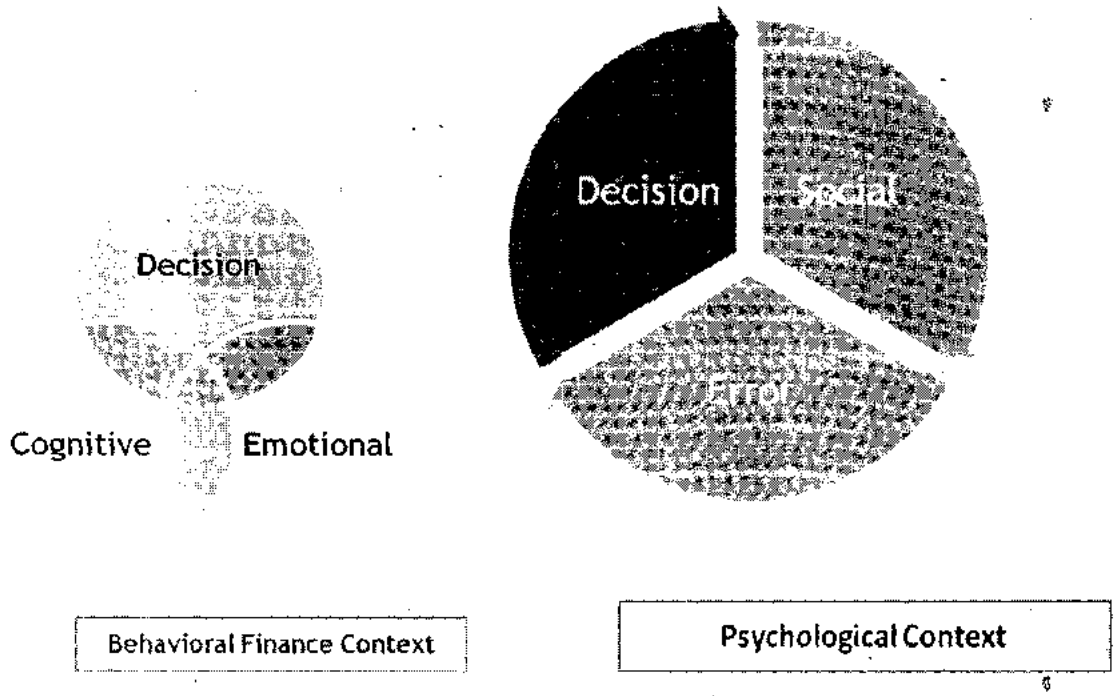


Fig 2.2: Behavioral Biases

Under the behavioral finance context, the basic rules or mental shortcuts that the brain uses while making decisions are decisional biases that can be cognitive or emotional, based on the cold and hot nature of information respectively. If the decisional biases have cold information or results from motivation, then these are called cognitive biases, such as if a thief wears a police uniform to pass the security check. The policeman at the check post thinks that he is real policeman. This is cognitive bias. However, those decisional biases, having hot and regretful information, are called emotional biases such as if a person bought a house and it burned. When he will buy a house in the future, he may feel regret. Thus, it can be inferred that this decision can be based upon feelings, irrespective of facts (Parker, 2013).

2.5.2. Types of Behavioral Biases

A list of decisional biases with complete description has been presented by researchers.

Name	Description
Ambiguity effect	*"The tendency to avoid options for which makes the information seem "unknown". (Baron,1994)*
Anchoring bias	*"The tendency to "anchor," on a piece of information while making decision" . (Zhang, eat, al,2007; Grant,et, al,2008)*
Attentional bias	*"The tendency of perception to be influenced by recurring ideas". (Bar-Haim.2007)*
Availability heuristic	*The tendency to overestimate the likelihood of events due to recent "availability" in memory. (Schwarz,1991)*
Availability cascade	*A self-reinforcing process in which "repeat something frequently that will become true" .(Kuran,1998)*
Base rate fallacy	*"The tendency to focus on specific information while ignoring base rate information. (Baron,1994)*
Bias blind spot	*"The tendency to identify more cognitive biases in others irrespective of individual . (Pronin,2007)*
Cheerleader effect	*"The tendency for people to appear more attractive in a group than in isolation." (Walker,2013)*

Choice-supportive bias	*"The tendency to remember one's choices". (Mather,2000)*
Confirmation bias	*"The extent to focus on information in a way that confirms one's previous beliefs. "(Oswald,2004)*
Conjunction fallacy	*"The extent to consider that specific information is more feasible than general ones". (Fish,2004)*
Conservatism bias	*"A state of mind where high likelihoods are overestimated however, low likelihoods is underestimated." (Martin,2012)*
Distinction bias	*"The degree to see two choices are more distinct while considering them simultaneously than separately".(Hsee, 2004)*
Endowment effect	*" People demand much more to give up an object through paying less. (Kahneman,et, al, 1991)*
Expectation bias	*"The tendency to certify, and publish data which agree with their expectations for the results. (Jeng,2006)*
Focusing effect	*"The tendency to much focus on one aspect of an event". (Kahneman,2006)*
Framing effect	*"Drawing different outcomes from the same information, depending on presentation of information". (Plous,1993)*
Gambler's fallacy	*"The extent to think that future probabilities are altered by past events, however they are unchanged in real"(Lehrer,2009)*
Hindsight bias	*" the extent to see past events as being predictable while happening those events"(Pohl, 2004)*
Hot-hand fallacy	*"extent to experienced success having a greater chance of further success while making additional attempts".(Raab,et,al, 2011)*
Illusion of control	*"The extent to overestimate one's degree of influence over situation". (Thompson,1999)*
Loss aversion	*"the fear of failure is greater than the gain through acquiring it"(Kahneman, et, al, 1991)*
Omission bias	*"The extent to judge harmful actions as worse. (Baron,1994)*
Optimism bias	*"The tendency to overestimate the pleasing outcomes" (Hardman,2009)*
Outcome bias	*"The tendency to judge a decision on the basis of eventual outcome irrespective of quality of the decision".(Francesca,et,al, 2009)*
Overconfidence effect	*"Excessive confidence in one's own answers to questions.(Martin,2012)*

Pessimism bias	*"The tendency to overestimate the likelihood of negative events"(Edelman,2010)*
Status quo bias	*"The tendency to like things to stay relatively the same"(Kahneman, et,al, 1991)*

2.6. How Behavioral Biases impact on Corporate Entrepreneurial Orientation

Cognition plays a crucial role while considering corporate entrepreneurial activities because it emphasizes how the entrepreneurs think differently, in order to use their knowledge for opportunity- seeking. (Barron, 1998; Ardichivillie,et, al, 2003). Entrepreneurs first think about resources and capabilities which are essential to entrepreneurial tasks, irrespective of nationalities (Mitchell, 2000). Moreover, entrepreneurs use more cognitive biases in corporate entrepreneurial orientation because they are essential for seeking opportunities, as compared to managers (Busenitz and Barney,1997). These behavioral biases are consistent across different economies (Mitchell, 2000). He developed a theory of entrepreneurial cognition in FY 2002, which states that the cognitive style of an individual has a direct attitude on entrepreneurship. Furthermore, he defined the concept of entrepreneurial cognitions as, "*these are knowledge structures which people normally use to make decisions and assessments regarding opportunity evaluation and venture creation*".

The other factor that could be helpful is the environment in which individual behaves, because environment has a direct effect on individual's cognitive styles. Entrepreneurs use their skills and knowledge on the base of information they derive while interacting with other people in their environment; however, this is moderated by operational learning via four distinct processes, namely attentional, motivational, representational and behavioral production processes. Environment can facilitate and constrain the entrepreneurial behavior through the

effects of these four factors. Thus, it can be inferred that cognition biases as well as environment may impact the behavior of entrepreneurs while making corporate entrepreneurial decisions, and they use their knowledge and skills differently in response to opportunity seeking activities (Bandura, 1986).

From previous literature (Bulut, 2008) the four cognitive biases that affect corporate entrepreneurship have been presented in the following paragraphs:

2.6.1. Overconfidence

Overconfidence is a mental fault in which somebody is unable to find the exact limit of his knowledge (Russo and Schoemaker, 1992). Overconfident persons attribute their suppositions as real, that is, why entrepreneurs are more confident than managers (De Carolis and Saparito, 2006). Busenitz and Barney (1997) depicted that entrepreneurs exhibited a greater reliance on the overconfidence bias. Overconfidence bias is associated to both individual and contextual factors like individual age, firm decision comprehensiveness and external equity.(Forbes,2005). However, Baron (1998) argued that individual factors are not attributable to cognition bias in entrepreneurial behavior but instead entrepreneurs take cognitive bias as a response to organizational tasks like information overload, high uncertainty and high time pressure. Overconfident bias not only impacts entrepreneurial behavior but it may affect other managerial behavior that mostly entrepreneurs perform since the origin event to date (Willard et al., 1992), like forecasting (Hogarth and Makridakis, 1981) and negotiation (Bazerman and Neale, 1982).

2.6.2. Illusion of control

Illusion of control is the second cognitive bias which is the tendency for people to overestimate their ability to control events (Langer,1975). Entrepreneurs that seem to have control over people and situations (Keh, et. al, 2002). Simon, et.al (1999) showed differences between overconfidence and illusion of control bias; as overconfidence relates to an overestimation of one's certainty regarding current "facts" (i.e., information), while the illusion of control refers to an overestimation of one's skills and, consequently, his or her ability to cope with and predict future events. Managers having illusion of control bias may lead to risky decisions through performing overly optimistic estimates (Duhaime and Schwenk, 1985).

2.6.3. Representativeness

Representativeness is a third cognitive bias that means judging probabilities on the basis of resemblance (Tversky, et.al,1974; Grether, 1980). Wickham (2003) investigated the representativeness bias in the entrepreneurial context. Representativeness bias encourages overestimation of the probability of low likelihood events, it hinders the quality of managerial decision making especially for new ventures. Entrepreneurs consider much more representativeness than managers (Busenitz and Barney, 1997) Representativeness bias has considerable implications to investment decision making (Chen, et. al, 2007). Investors may misattribute product quality, high expected growth and capable managers, as a good sign of investment, which generate cognitive bias. These attributes may be quality products, capable managers, high expected growth. Lakonishok, et.al (1994) also concluded this stereotype as "glamour" companies normally perform poor investment

2.6.4. Status Quo bias

Status Quo bias is the fourth cognitive bias that defines the tendency to like things to stay relatively the same (Kahneman, et.al,1991).This bias may affect entrepreneurs because they are very inclined to status quo bias in their efficient decision making (Aldrich, 2001). This bias describes a behavioral tendency to decide for a status quo option disproportionately more often (Samuelson and Zeckhauser, 1988) .Status quo bias is consistent with reference dependence together with loss aversion according to prospect theory (Kahneman and Tversky, 1979; Tversky and Kahneman, 1991)

2.7. JUSTIFICATION OF THE STUDY

The above literature posits the gap in literature among four concepts i.e. corporate entrepreneurship, agency cost, firm performance and cognitive biases. So the purpose of the study is to explore this gap in literature, also to scrutinize the nexus between Corporate Entrepreneurship, agency cost and firm performance according to fundamental and behavioral approaches.

2.7.1. Fundamental Approach

A better understanding of the linkages between Corporate Entrepreneurship, agency cost and firm performance is important for a number of reasons. Firstly, Corporate Entrepreneurship is a strategic orientation in accomplishing the competitive advantage in a global milieu. (Drucker, 1985; Zahra and Covin, 1995), and qualified inside directors can more consistently evaluate the worth of Corporate Entrepreneurship projects (Baysinger and Hoskisson, 1990) while Lipton and Lorsch (1992) and Jensen (1993) proved that the more outsiders on a board increases the operational cost that leads to a negative impact on performance. Bathala and Rao

(1995) also confirmed the negative relationship between outside directors and growth opportunities. Raheja (2005) depicted that highly competitive industries are better aligned with the incentives of insiders than with its shareholders. He further elucidated that firms that have a high degree of inside ownership require smaller board sizes, also proving that small boards have the aptitude to save on coordination cost related to outsiders. Ang, et,al (2000) confirmed a positive relationship between agency cost and existence of outside managers. Within the agency cost perspective, the spat is that portrayal by outside directors will increase with the clash of interests between management and outside shareholders. Moreover outsiders, who are not generally as directly involved in the strategy formulation process as insiders, also may rely profoundly on financial controls, which may lower corporate entrepreneurship (Baysinger and Hoskisson, 1990).

Secondly, agency theory also accompanies the hypothesis that competitive environment firms with high levels of agency cost are liable to face threats from other firms (Jensen and Ruback, 1983). But through efficient competition, the agency cost can be reduced and managerial efficiency can be increased that would lead to performance benefits, by the market in the form of increased valuation (Udayasankar et al, 2008). From that, it can be inferred that the high agency cost reduces the competitive advantage and leads to lower corporate entrepreneurship and also inferred that competitive advantage reduces the agency cost and leads to high corporate entrepreneurship. Corporate entrepreneurship can be an efficient technique in reducing the agency cost within the organization (Bhutta and Shah, 2011).

Thirdly, Corporate entrepreneurship is significantly positive when related to firm performance (Covin and Zahra, 1995; Covin and Slevin, 1991; Aktan and Bulut, 2008). On the

contrary, agency cost is significantly negatively related to firm performance (Xiao, 2012). They both inversely affect firm performance.

So I propose the relationship among corporate entrepreneurship, agency cost and firm performance is inversely related but the relationship between corporate entrepreneurship and firm performance is positively related, confirmed by Zahra and Covin (1995).

H1 (a): Firms that pursue corporate entrepreneurship reduce agency cost,

H1(b): Firms having low agency cost generate high profits

Additionally, agency cost can act as mediator on the link between corporate entrepreneurship and firm performance because it directly affects the risk taking strategies (Piron & Smith, 1995; Wiseman & Bromiley, 1996) and risk taking is one of the dimensions of corporate entrepreneurship. Usually risk taking strategies involve higher return. According to agency theory principals are risk neutral however, agents are risk averse. Due to this risk differential managers can not invest in risking strategies that deters the corporate entrepreneurship. Moreover, agency cost impacts other dimensions of corporate entrepreneurship. The risk aversion nature of managers performing a hurdle while incorporating an innovation, ultimately competitive position has been lost (Amour, 2004). Competitive aggressiveness and proactiveness have been treated as synonyms (Antoncic, 2007). Hence, the proposed hypothesis is:

H1(c): Agency cost mediates the relationship between corporate entrepreneurship and firm performance

2.7.2. Behavioral Approach

A better understanding of how behavioural intentions impact the nexus between corporate entrepreneurship, agency cost and firm performance is presented in the following paragraphs

Relationship of Cognitive Biases and Corporate Entrepreneurship

Cognitive biases might affect the entrepreneurial behavior but with the mediation of risk perception (De Carolis and Saparito, 2006).

2.8. Risk Perception

Risk perception is the subjective judgment that people make about the characteristics and severity of a risk (Douglas, 1985)

2.8.1. Overconfidence and Risk Perception

Simon et al. (1999) firstly proved the relationship between overconfidence and risk perception that explains that overconfident persons treat the initial assumption as fact and make future decisions on this initial judgment and ignore future uncertainties. That is why overconfident entrepreneurs were less risk perceptive (Keh et al., 2002).

2.8.2. Illusion of Control Bias and Risk Perception

In the illusion of control bias, people overestimate their skills and seem to think that they have control over situations and peoples (Langer, 1975). Due to this optimistic behavior, entrepreneurs who perceive less risk believe that their skills can prevent negative events. (Keh et al., 2002).

2.8.3. Representativeness Bias and Risk Perception

Representativeness bias means judging probabilities on the basis of resemblance (Tversky,et.al,1974). Generally, people who consider a random sample which is representative of a whole population, entertain a higher possibility of certainty. Entrepreneurs need some prerequisites of considerable importance that show representativeness while making quick decisions (Busenitz and Barney, 1997). Therefore, entrepreneurs, who show less risk perception, may underestimate the possible losses or outcomes (Simon et al.,1999).

2.8.4. Status Quo Bias and Risk Perception

Status Quo bias defines the tendency to like things to stay relatively the same (Kahneman, et.al,1991). Entrepreneurs rely on initial decisions while considering other alternatives. No additional energy was invested while making earlier decisions (Kahneman et al., 1991); however, ignoring new information for particular scenarios may oversee the possible loss associated with that situation (Burmeister and Schade, 2007).

Therefore, proposed hypotheses on the basis of above discussion would be :

H2(a): Entrepreneurs who exhibit higher level of overconfidence perceive less risk

H2(b): Entrepreneurs who exhibit a stronger illusion of control perceive less risk

H2(c): Entrepreneurs who exhibit higher representativeness perceive less risk

H2(d): Entrepreneurs who exhibit higher status quo bias perceive less risk

2.9. Risk perception and Corporate Entrepreneurship

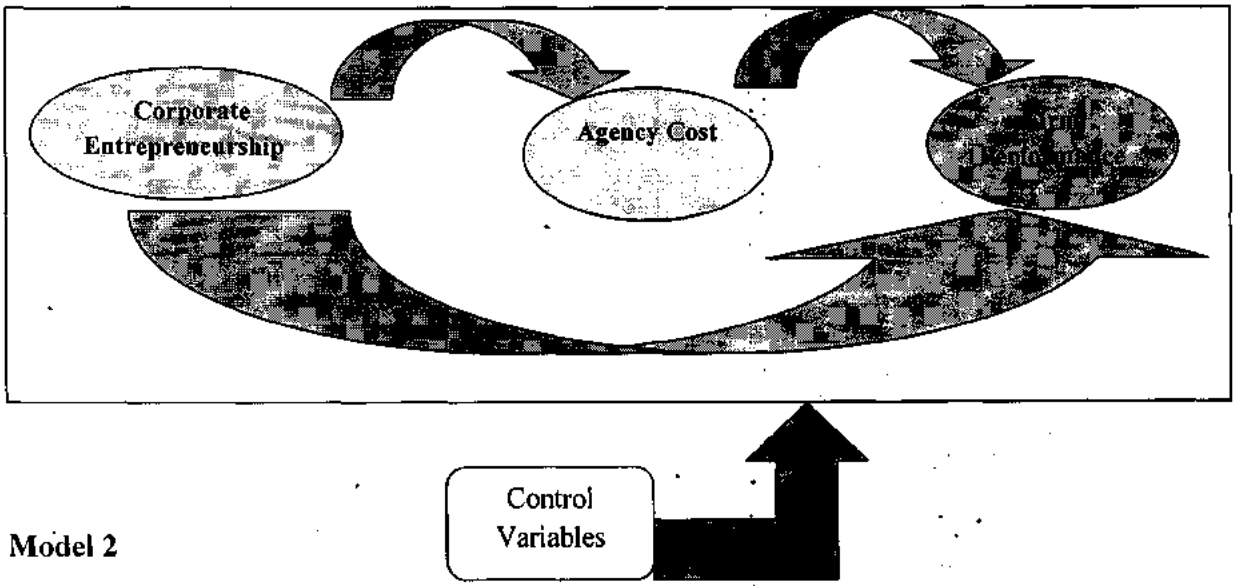
Exploring of entrepreneurial opportunities is risky action that is based upon risk perception (Norton and Moore,2006). Weber and Milliman (1997) depicted that less risk perception may encourage the entrepreneurial behavior because thresholds disappear associated with prospects which encourage risky action (Simon et al. ,1999). Keh et al. (2002) argued that while perceiving lower risk, entrepreneurs might be able to perceive lower probability of business failure. Additionally, it lowers financial loss that might empower the worthiness of entrepreneurial idea (Dè Carolis and Saparito, 2006). Entrepreneurial orientation is an evident form of risky action, because entrepreneurs are heavily pushed to deliver high performance. To behave entrepreneurially, one might perceive less risk, consequently leading to higher entrepreneurial orientation. (Hisrich, 1990). Corporate entrepreneurship is a concrète appearance of entrepreneurial behavior that could be a valid construct for entrepreneurs (Stull, 2005). Hence, a proposed hypothesis would be:

H3: A lower level of risk perception leads to higher levels of Corporate Entrepreneurship

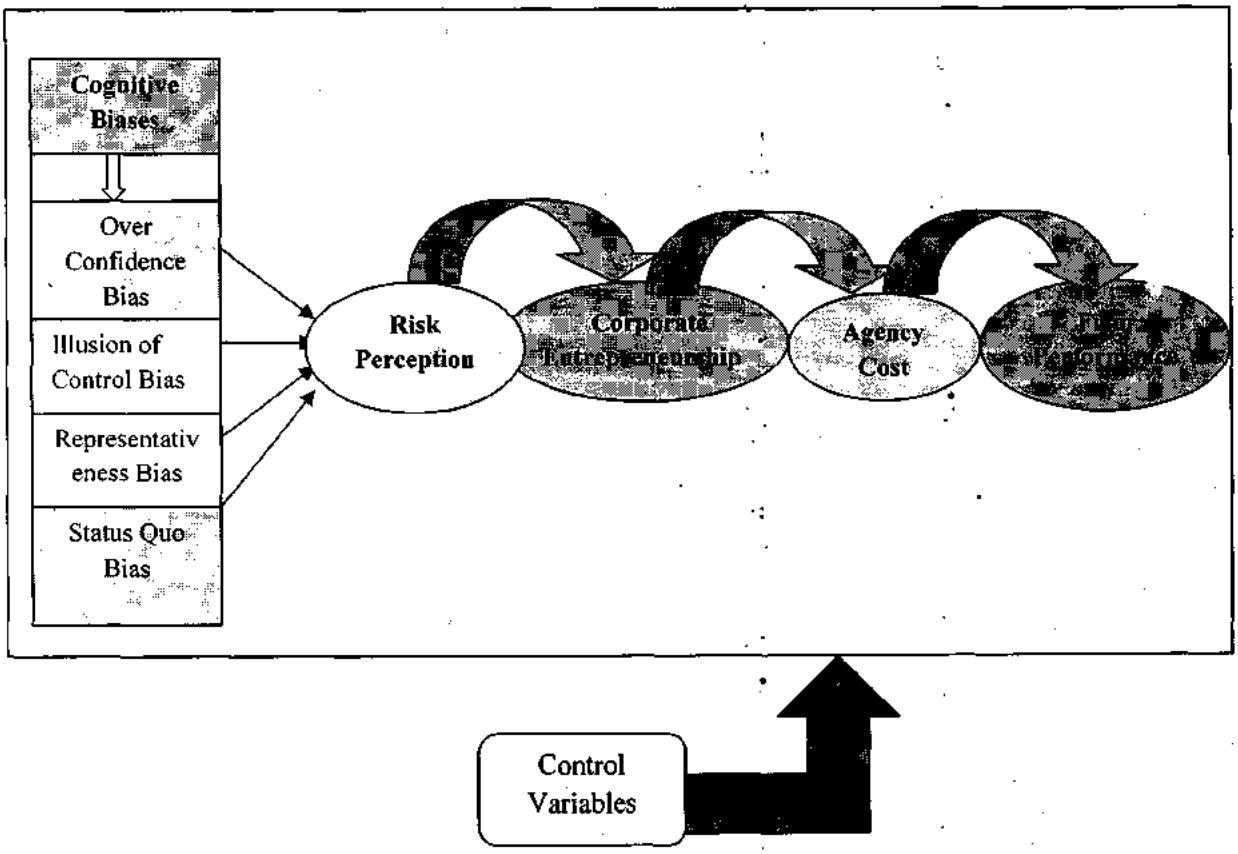
Note: By diagram, Model 2 looks like serial mediation model; however, there is no direct relationship between risk perception and agency cost according to previous literature. So, this model has been tested through one to one relationship.

2.10. Proposed Models

Model 1



Model 2



CHAPTER 3

MODEL AND DATA

Design of the Study: Cross-sectional design

3.1. Samples

The data for corporate entrepreneurship, risk perception and behavioural biases were collected from executives of organizations of non financial sectors in Pakistan listed at KSE (CEO or VP) through personal visits to these organizations, and from the USA listed at NYSE. To call for the research, invitation letters were sent to these firms. In the USA context, the researcher had received training for conducting research under the National Institute of Health, USA. Furthermore, she brought to the notice of authors of previous studies for using their scales in current research, in order to comply the plagiarism policy. Then, the questionnaire had been approved by University Review committee according to US rules & Regulations before sending it to USA companies and then sent via the university network. Data has been collected from the 257 USA companies and the 175 Pakistani companies listed at KSE and NYSE. Data for firm financial performance and agency cost will taken from Balance Sheet Analysis or Annual reports of companies on the average basis of three years. (F.Y 2009, 2010, 2011)

3.2. Sampling Technique

Convenient sampling technique was adopted for both economies because of constraints of resources and time duration. Other major reason behind choosing this sampling technique is absence of proper organizational structures in organizations in a country like Pakistan.

3.3. Model 1 Specification

- Corporate Entrepreneurship (CE) was taken as independent variable , Firm Performance (PF) as dependent variable and Agency Cost(AGC) as Mediator.

$$FP_i = \alpha + \beta_1(CE_i) + \beta_2(AGC_i) + \beta_1(Gen_i) + \beta_2(Exp_i) + \beta_3(CS_i) + \beta_4(CST_i) + \beta_5(Rpro_i) + \varepsilon$$

3.4. Model 2 Specification

- I took behavioral biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Firm performance in Model 2. Reference to Note on Page.46, this model had been investigated on the basis of one to one relationship.

$$FP_i = \alpha + \beta_1(OC_i) + \beta_2(IC_i) + +\beta_3(RB_i) + \beta_4(SQ_i) + \beta_5(RP_i) + \beta_6(CE_i) + \beta_7(AGC_i) + \beta_1(Gen_i) + \beta_2(Exp_i) + \beta_3(CS_i) + \beta_4(CST_i) + \beta_5(Rpro_i) + \varepsilon$$

3.5. Model 3 Specification

I took behavioral biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Firm performance across economies. I used USA and Pakistan as developed and developing economies respectively.

$$FP_i = \alpha + \beta_1(OC_i) + \beta_2(IC_i) + +\beta_3(RB_i) + \beta_4(SQ_i) + \beta_5(RP_i) + \beta_6(CE_i) + \beta_7(AGC_i) + \beta_8(Eco_i) + \beta_1(Gen_i) + \beta_2(Exp_i) + \beta_3(CS_i) + \beta_4(CST_i) + \beta_5(Rpro_i) + \varepsilon$$

Where

α = Overall intercept term

β = Sensitivity of risk regarding to specific factor

CE=Corporate Entrepreneurship

AGC= Agency Cost

FP=Firm Performance

OC=Overconfidence Bias

IC=Illusion of Control Bias

RB=Representative Bias

SQ=Status Quo Bias

RP=Risk perception

Eco =Economies

Gen=Gender

Exp=Experience

CS=Company Size

CST= Company Sector

Rpro= Risk Propensity

ε = Error term or Residual

3.6. Data Collection Instrument and Measures

3.6.1. Corporate Entrepreneurship

20-Item scales (Aktan and Bulut, 2008) was used to measure Corporate Entrepreneurship (CE). Past research demonstrated the adequate levels of reliability and construct validity i.e. Alpha= .86.All scale employed for Corporate Entrepreneurship dimensions will measured on Five -point Likert scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The composite value of corporate entrepreneurship had derived through using imputation method and confirmatory factor analysis in AMOS. The detail of 20-items had been presented in table 3.1

Table 3.1- Corporate Entrepreneurship	
1	Relative to our competitors, our company has higher propensity to take risks
2	Our company has shown a great deal of tolerance for high risk projects
3	In general, the top managers of my firm favor, a bold, aggressive posture in order to maximize the probability of exploiting potential when faced with uncertainty
4	Most people in this organization are willing to take risks
5	This organization supports many small and experimental projects realizing that some will undoubtedly fail
6	The term "risk taker" is considered a positive attribute for people
7	People are often encouraged to take calculated risks with new ideas around here
8	Our company frequently tries out new ideas
9	Our company is creative in its methods of operation
10	Our company seeks out new ways to do things
11	My company emphasizes development of new products
12	My company spends on new product development activities
13	My company invests in developing proprietary Technologies
14	Typically my company proactively initiates actions before our competitors
15	In dealing with its competitors, my firm has a strong tendency to be ahead of other competitors in introducing novel idea or products
16	My company is very often the first firm to introduce new products/services and operating technologies
17	Our firm shapes the environment by introducing new products, technologies, administrative techniques
18	Owing to the nature of the environment, bold, wide ranging acts are necessary to achieve the firm's objectives
19	My company typically adopts a very competitive, 'undo-the-competitor' posture
20	My firm has a strong tendency to increase the market share by eliminating the competitors'

3.6.2. Agency Cost

The scale for measuring agency cost was taken from previous literature by Li, Wang and Deng (2007) and Florackis (2008) which were:

- Administrative Expenses Ratio (A.E.R) = Administrative Expenses/Sales
- Asset utilization Ratio(A.U.R) =Total Revenue/Total Assets

Agency cost was calculated through AMOS imputation method; however individual analysis of both components i.e AUR and AER were also presented separately in result section under individual analysis heading.

3.6.3. Firm Performance

The scale of financial performance been created from the existing literature (Aktan and Bulut, 2008) and chosen among the most frequently used financial criteria, which are

- Market Share Growth(MSG) = Company sales/total industry sales
- Return on Assets = Net income /total asset
- Return on Sales = Net income before interest and tax/sales
- Profitability(PF) = Net income /total equity

Firm performance was calculated through AMOS imputation method; however individual analysis of four components i.e MSG, ROA, ROE and NPM were also presented separately in result section under individual analysis heading.

3.6.4. Behavioral Biases Proxies

3.6.4.1. Overconfidence Bias:

A seven-item scale was used to measure the overconfidence bias, which had adapted from Simon (1999) and Bulut (2008). Each question has only one correct answer the i.e. 90% sure. There were upper and lower limits given for each question. Every correct answer which fell outside the limit was scored one instead of zero; however if the respondent states within a limit, it means it is not overconfident. The overall confidence level is obtained by summing up all the scores. The maximum score is 7

3.6.4.2. Illusion of Control

To measure illusion of control the three-item scale was adopted from Bulut (2008). All questions were close ended and measured on a 5 point Likert scale. The Cronbach's alpha is 0.80.

3.6.4.3. Representativeness Bias

A short business case for starting a new venture was adapted from Bulut (2008) to measure the representative bias. At the end of the case study, three questions have been asked. Responses were coded 1 for providing answer which exhibits representative and coded -1 for providing answer which exhibits non representative In order the single variable for representativeness. All responses were added that contained values ranging from -3 to +3.

3.6.4.4. Status Quo Bias

Adopted from Bulut (2008), four business scenarios were used to measure the status quo bias. There were three choices given for each scenario. The first choice refers to status quo,

which coded as 1 and others as 0. To get a single variable of status quo bias, all responses were added. The maximum score for this bias is 4, exhibits this respondent has this bias.

3.6.5. Risk Perception

A business scenario was used to measure the risk perception of business, which was adopted from Bulut (2008). The risk perception has been measured in the same manner as representativeness bias was measured through using same business study. Responses were measured on the 5-point Likert Scale.

3.6.6. Control variables

I took company size and company sector as control variables

- Company size (CS) = LN of total Assets
- For Company Sector, I assigned value from 1 to 14, to each sector to both economies

In addition to these afore mentioned two more control variables were taken for behavioral approach (Bulut, 2008)

- The demographics of respondents were taken as control variable.
- Moreover, risk propensity of business was taken as control variable because every company has some risks like business risk and financing risk. Therefore, a five item scales was adopted from Bulut (2008) to measure the risk propensity which hold equal tolerance for all types of risks. According to them risk propensity might not be effective among entrepreneurs because they faced other risks as well. Each question has two

options; one is for vast amount that is sure and second is for higher percentage. The maximum score would be 5 indicating high level of risk propensity.

3.7. DATA ANALYSIS TOOLS

Data analysis was done by using AMOS 21 and SPSS 21 softwares to validate the results. Following tests were applied on the data.

1. Descriptive to highlight the main features of sample
2. Reliability test for checking the validity of constructs
3. Correlation Analysis to find out inter-correlation among variables
4. Confirmatory Factor analysis of three constructs Corporate Entrepreneurship, Illusion of Control and Risk Perception, as cited in previous studies. It is multivariate analysis to check how well the measured variables represent the number of constructs
5. Mediations Regression Analysis and Path Analysis to test the hypotheses. Path analysis was done because it deals with the observed variables. It has been applied when the data are in sequential form, exhibiting one to one relationship. Moreover, path analysis assumes the all data are measured without errors.

Note: Individual analysis of all variables and composite analysis had been presented under separate heading. Composite Path Analysis for Model 1 starts from Page 65 to Page 74 and for Model 2 from Page 91 to Page 105 and Individualistic Path Analysis for Model 1 from Page 75 to Page 87 and for Model 2 from Page 106 to Page 121. Mediation Regression Analysis for Model 1 has been given on Page 88 to Page 90

CHAPTER 4

RESULTS

4.1. Descriptive Statistics

The descriptive statistics of USA show that Overconfidence bias has highest mean value i.e. 17.37 while in the context of Pakistan FP has highest mean value i.e.83.75. In case of volatility, Overconfidence bias has highest standard deviation i.e.7.47. in USA while regarding Pakistan FP has variance of 1431 .

Table 4.1 (a) Descriptive Statistics-USA

	N	Minimum	Maximum	Mean	Std. Deviation
Overconfidence	257	0	31	17.37	7.473
IllusionControl	257	1	4	2.84	1.000
Representative	257	-1	3	2.91	.605
StatusQuo	257	0	4	1.49	.981
Riskperception	257	0	0	-.19	.129
CE	257	2	4	2.90	.542
Agency	257	.07	2.36	.5440	.30155
FP	257	-24.26	3.47	-.0254	1.54083
Valid N (listwise)	257				

Table 4.1 (b) Descriptive Statistics-Pakistan

	N	Minimum	Maximum	Mean	Std. Deviation
Overconfidence	175	-.09	.02	-.0289	.04229
IllusionofControl	175	1.00	2.49	2.0453	.31250
Representative	175	-.08	.90	.5673	.37898
StatusQuo	175	.00	.84	.5521	.31256
Riskperception	175	.91	4.54	2.8044	.96423
CE	175	-7.66	3.98	.0000	1.93604
Agency	175	0	727	4.77	54.872
FP	175	-4482	18376	83.75	1431.703
Valid N (listwise)	175				

4.2. Reliability Test

The overall reliability of the constructs is 77% and the response rate for research invitation is 43% in USA while the overall reliability of constructs in Pakistan is 85% with response rate is 41% .

Table 4.2 (a) - Cronbach's Alpha-USA	
Corporate Entrepreneurship	0.771
• **Risk Taking**	0.793
• **Innovativeness**	0.658
• **Proactiveness**	0.783
• **Competitive Aggressiveness**	0.689
Illusion of Control Bias	0.895
Risk Perception	0.548

Table 4.2 (b) Cronbach's Alpha-Pakistan	
Corporate Entrepreneurship	0.845
• **Risk Taking**	0.672
• **Innovativeness**	0.601
• **Proactiveness**	0.684
• **Competitive Aggressiveness**	0.793
Illusion of Control Bias	0.587
Risk Perception	0.919

4.3. Correlation

The following tables show the correlation among variables in USA and Pakistan. Correlation test has used to find out the interrelationship between the variables. When correlation was applied between variables for USA, it has been found that RT is significantly positively related to IN only; and insignificant relationship with ROA, ROE and NPM, while it is significant negative relation with PN, CA, AER and insignificant negative relation with AUR, MSG and RP. IN has significant positive relation with PN and RP; and insignificant relation with AUR and MSG; however, it has insignificant negative relation with CA and AER, ROA, ROE and NPM. PN is significant positive relation with CA; insignificant relation with AER, while it has insignificant negative relationship with AUR, MSG, ROA, ROE, NPM and RP. CA is significantly negative related with AUR and MSG; insignicant negative relation with ROA, ROE and NPM whereas it has insignificant positive relationship with AER and RP. AER has insignificant negative relation with AUR, MSG, ROA, ROE and NPM; and insignificant positive relation with RP. AUR has significant negative relation with NPM; and insignificant negative relation with MSG, ROA, ROE and RP. MSG is insignificant positive relation with ROA, ROE, NPM and risk perception. ROA is significantly positive related with ROE and NPM; and insignificant negative relation with RP. ROE is significantly positive related with NPM and insignificant negative relation with RP. NPM is insignificant negative related with RP. RP is insignificant negative related with RB and IC, AGC and FP; and insignificant negative relation with OC and SQ.

However, when the correlation analysis was done for Pakistani companies, it has been found that RN is significantly positive related to IN, PN and CA and insignificant positive relation with AER, AUR, ROA and NPM, while it is insignificant negative related with RP,

MSG and ROE. IN is significantly positive related PN and CA, and insignificant positive relation with AER, ROA and NPM; whereas IN has significant negative relation with MSG, and insignificant negative related AUR, RP and ROE. Similarly, PN has significant positive related with CA, and insignificant positive relation with AER, ROA and NPM; however, it has insignificant negative relation with RP, MSG, ROE and AUR.

Regarding, variables of agency cost, AER is insignificant positive related to NPM; while it has insignificant negative related to MSG, ROA and ROE. AUR is significantly positive related to MSG, and insignificant positive related with ROE and NPM; and significant negative relation with ROA. In case of variables of firm performance, MSG is insignificantly positive related with ROE and NPM and negative relation with ROA. ROA is insignificant positive related with ROE and NPM; and ROE has insignificant positive relation with NPM.

Table 4. 3 (a) - Correlations-USA

		Gender	Experience	Sector	Company S	AER	AUR	MSG	ROA	ROE	NPM	Control	Percep	Overeonfi	Status	Repre	propen	CE	Agency	FP
Gender	Pearson Correlation	1																		
	Sig. (2-tailed)																			
	N	257																		
Experience	Pearson Correlation	.366**	1																	
	Sig. (2-tailed)	.000																		
	N	257	257																	
Sector	Pearson Correlation	-.009	.044	1																
	Sig. (2-tailed)	.889	.478																	
	N	257	257	257																
Company S	Pearson Correlation	-.025	-.054	.111	1															
	Sig. (2-tailed)	.695	.389	.076																
	N	257	257	257	257															
AER	Pearson Correlation	.203**	.040	.127*	-.077	1														
	Sig. (2-tailed)	.001	.522	.041	.219															
	N	257	257	257	257	257														
AUR	Pearson Correlation	-.074	.070	.025	-.186**	-.023	1													
	Sig. (2-tailed)	.237	.267	.694	.003	.713														
	N	257	257	257	257	257	257													
MSG	Pearson Correlation	-.048	-.072	-.042	.646**	-.075	-.017	1												
	Sig. (2-tailed)	.442	.251	.505	.000	.232	.787													
	N	257	257	257	257	257	257	257												
ROA	Pearson Correlation	.011	-.052	.074	.232**	-.019	-.020	.029	1											
	Sig. (2-tailed)	.863	.408	.239	.000	.758	.754	.641												
	N	257	257	257	257	257	257	257	257											
ROE	Pearson Correlation	.026	-.066	.052	.070	-.027	-.078	.008	.510*	1										
	Sig. (2-tailed)	.681	.291	.403	.263	.662	.215	.902	.000											
	N	257	257	257	257	257	257	257	257	257										
NPM	Pearson Correlation	.046	.001	.004	.257**	-.089	-.209**	.017	.687*	.207**	1									
	Sig. (2-tailed)	.467	.984	.950	.000	.155	.001	.786	.000	.001										
	N	257	257	257	257	257	257	257	257	257	257									
Control	Pearson Correlation	.091	.065	-.053	-.048	-.020	-.008	-.040	-.045	-.089	-.021	1								
	Sig. (2-tailed)	.147	.299	.396	.445	.755	.893	.522	.475	.154	.732									
	N	257	257	257	257	257	257	257	257	257	257	257								
Riskperce	Pearson Correlation	.064	.012	-.012	.042	.016	-.024	.048	-.032	-.080	-.017	-.015	1							

ption	Sig. (2-tailed)	.304	.851	.844	.505	.799	.704	.446	.613	.199	.785	.808								
	N	257	257	257	257	257	257	257	257	257	257	257	257							
Overconfidence	Pearson Correlation	.041	.101	.625**	.125*	.087	.076	.070	-.038	-.036	-.025	-.009	.037	1						
	Sig. (2-tailed)	.517	.106	.000	.045	.163	.227	.266	.541	.562	.689	.886	.554							
	N	257	257	257	257	257	257	257	257	257	257	257	257	257						
StatusQuo	Pearson Correlation	.112	.394**	.037	-.054	.028	.061	.006	-.069	-.027	-.088	.010	.096	.087	1					
	Sig. (2-tailed)	.073	.000	.552	.384	.653	.330	.918	.273	.661	.160	.871	.124	.165						
	N	257	257	257	257	257	257	257	257	257	257	257	257	257	257					
Representative	Pearson Correlation	.066	-.132*	-.049	-.009	.054	-.076	.047	.002	.001	.021	-.046	-.065	-.141*	-.080	1				
	Sig. (2-tailed)	.289	.035	.436	.891	.389	.224	.453	.979	.985	.737	.464	.300	.024	.202					
	N	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257				
Riskpropensity	Pearson Correlation	-.219**	-.351**	.014	-.020	.039	-.053	-.060	.005	.028	.013	.274*	-.208**	-.061	-.219**	-.066	1			
	Sig. (2-tailed)	.000	.000	.825	.754	.538	.396	.336	.931	.657	.830	.000	.001	.331	.000	.295				
	N	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257			
CE	Pearson Correlation	.125*	.082	-.248**	-.043	-.040	-.089	-.061	-.054	-.091	.018	.680**	.121	-.256**	.011	-.025	.120	1		
	Sig. (2-tailed)	.045	.188	.000	.488	.521	.155	.328	.390	.146	.776	.000	.052	.000	.866	.690	.055			
	N	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257		
Agency	Pearson Correlation	-.012	.079	.061	-.202**	.270**	.956**	-.038	-.025	-.083	-.227**	-.014	-.018	.098	.067	-.057	-.040	-.097	1	
	Sig. (2-tailed)	.849	.209	.330	.001	.000	.000	.542	.695	.186	.000	.826	.770	.116	.285	.359	.524	.021*		
	N	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	
FP	Pearson Correlation	.026	-.067	.052	.090	-.031	-.082	.027	.533**	.999**	.236**	-.090	-.079	-.036	-.030	.002	.027	-.091	-.088	1
	Sig. (2-tailed)	.682	.282	.406	.150	.624	.191	.668	.000	.000	.000	.151	.205	.570	.634	.968	.670	.144	.161	.
	N	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.3 (b)- Correlations-Pakistan

		Gender	Exp	Sector	CompS	Propen	Status	Rep	Overcon	Illusion	Perception	AER	AUR	MSG	ROA	ROE	NPM	CE	Agency	FP
Gender	Pearson Corr	1																		
	Sig. (2-tailed)																			
	N	175																		
Experience	Pearson Corr	.080	1																	
	Sig. (2-tailed)	.293																		
	N	175	175																	
Sector	Pearson Corr	.102	-.052	1																
	Sig. (2-tailed)	.178	.496																	
	N	175	175	175																
CompanyS	Pearson Corr	.161*	-.233**	.148	1															
	Sig. (2-tailed)	.033	.002	.051																
	N	175	175	175	175															
propensity	Pearson Corr	.050	-.010	-.180*	-.012	1														
	Sig. (2-tailed)	.512	.898	.017	.872															
	N	175	175	175	175	175														
StatusQuo	Pearson Corr	-.024	-.023	-.206**	-.152*	.275**	1													
	Sig. (2-tailed)	.754	.765	.006	.044	.000														
	N	175	175	175	175	175	175													
Representative	Pearson Corr	.039	-.111	-.206**	-.017	.227**	.338**	1												
	Sig. (2-tailed)	.605	.145	.006	.822	.003	.000													
	N	175	175	175	175	175	175	175												
Overconfidence	Pearson Corr	-.184*	.077	-.604**	-.120	.024	.169*	.074	1											
	Sig. (2-tailed)	.015	.308	.000	.115	.750	.025	.329												
	N	175	175	175	175	175	175	175	175											
IllusionofControl	Pearson Corr	.018	.062	-.079	-.032	.286**	.148	.031	-.042	1										
	Sig. (2-tailed)	.809	.413	.299	.674	.000	.050	.683	.579											
	N	175	175	175	175	175	175	175	175	175										
Riskperception	Pearson Corr	-.001	-.091	.247**	.015	-.214**	-.100	-.114	-.146	-.094	1									
	Sig. (2-tailed)	.995	.232	.001	.844	.004	.186	.135	.055	.218										
	N	175	175	175	175	175	175	175	175	175	175									
AER	Pearson Corr	-.026	.009	-.074	-.137	-.120	.069	-.131	.075	-.042	.100	1								
	Sig. (2-tailed)	.735	.906	.333	.070	.113	.362	.085	.325	.579	.188									
	N	175	175	175	175	175	175	175	175	175	175	175								
AUR	Pearson Corr	.174*	.115	.065	-.033	-.069	-.042	-.023	-.027	.028	.101	-.119	1							

	Sig. (2-tailed)	.021	.130	.395	.668	.367	.582	.759	.727	.713	.185	.117								
	N	175	175	175	175	175	175	175	175	175	175	175	175							
	Pearson Corr	.262**	-.033	.172*	.475**	-.107	-.152*	-.099	-.033	-.116	.030	-.024	.329**	1						
MSG	Sig. (2-tailed)	.000	.667	.023	.000	.159	.045	.194	.668	.128	.692	.755	.000							
	N	175	175	175	175	175	175	175	175	175	175	175	175	175						
	Pearson Corr	-.025	-.097	-.073	.034	.104	.060	.067	.081	.064	-.078	-.006	-.001	-.012	1					
ROA	Sig. (2-tailed)	.738	.202	.334	.650	.170	.431	.380	.287	.404	.305	.938	.989	.875						
	N	175	175	175	175	175	175	175	175	175	175	175	175	175	175					
	Pearson Corr	.004	-.072	.082	.031	-.193*	-.136	.020	-.157*	-.174*	-.030	-.048	.143	.043	.013	1				
ROE	Sig. (2-tailed)	.960	.347	.280	.684	.010	.072	.792	.038	.021	.690	.525	.060	.570	.860					
	N	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175				
	Pearson Corr	.027	-.120	-.140	.087	-.066	-.040	.066	.046	-.067	-.070	.006	.063	.025	.006	.010	1			
NPM	Sig. (2-tailed)	.719	.114	.065	.253	.385	.603	.385	.547	.377	.357	.941	.410	.742	.938	.894				
	N	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175			
	Pearson Corr	-.107	.109	-.373**	-.155*	.111	.132	.119	.188*	.161*	-.082	.072	.017	-.093	-.015	-.050	.158*	1		
CE	Sig. (2-tailed)	.158	.150	.000	.041	.145	.081	.118	.013	.033	.280	.342	.819	.222	.846	.515	.036			
	N	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175		
	Pearson Corr	-.025	.010	-.073	-.138	-.121	.069	-.131	.075	-.042	.101	1.000**	-.112	-.022	-.006	-.047	.006	.072	1	
Agency	Sig. (2-tailed)	.747	.897	.335	.069	.112	.363	.084	.326	.580	.185	.000	.140	.777	.938	.533	.936	.341		
	N	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	
	Pearson Corre	-.018	-.123	-.103	.054	.083	.047	.081	.087	.044	-.093	-.005	.016	-.005	.971**	.027	.243**	.023	-.005	1
FP	Sig. (2-tailed)	.812	.104	.174	.474	.274	.536	.289	.250	.567	.223	.948	.838	.947	.000	.720	.001	.766	.949	
	N	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

4.4. Confirmatory Factor Analysis

Confirmatory factor analysis was done among corporate entrepreneurship, risk perception and illusion of control in USA and Pakistani context, to check how well the measured variables represent the number of constructs. Previous studies also have done this analysis among the said variables.

Table 4.4 (a)- Confirmatory Factor Analysis - USA

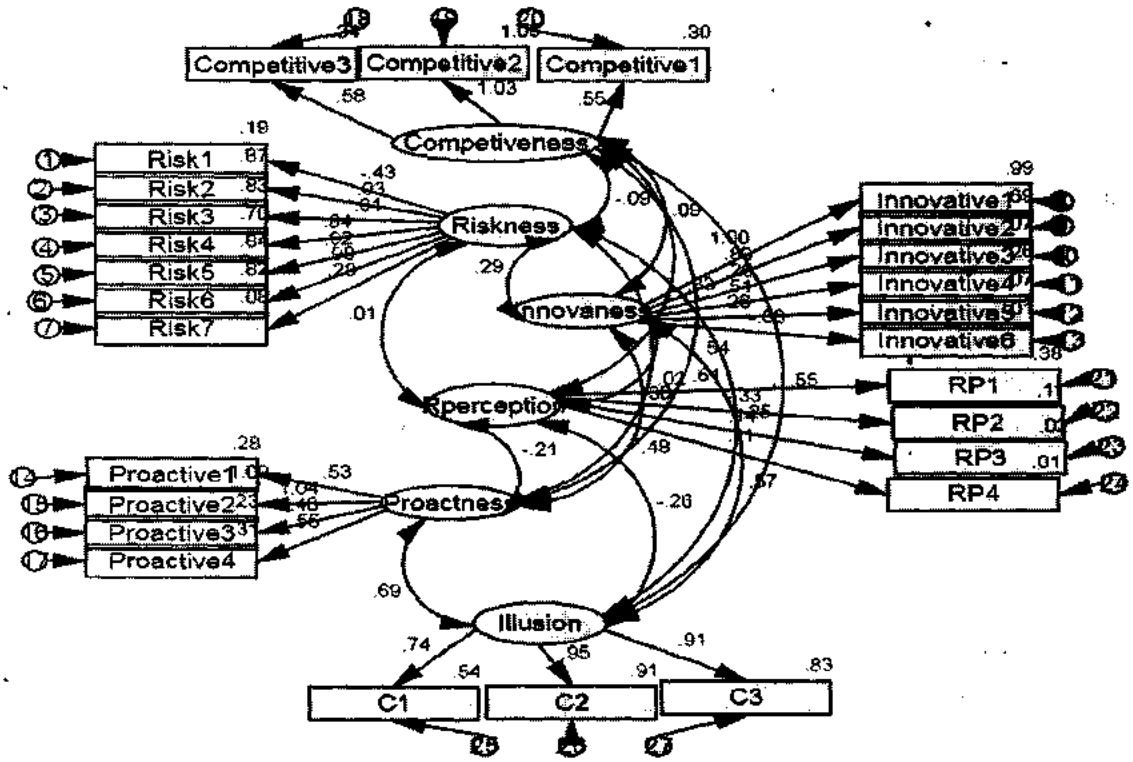
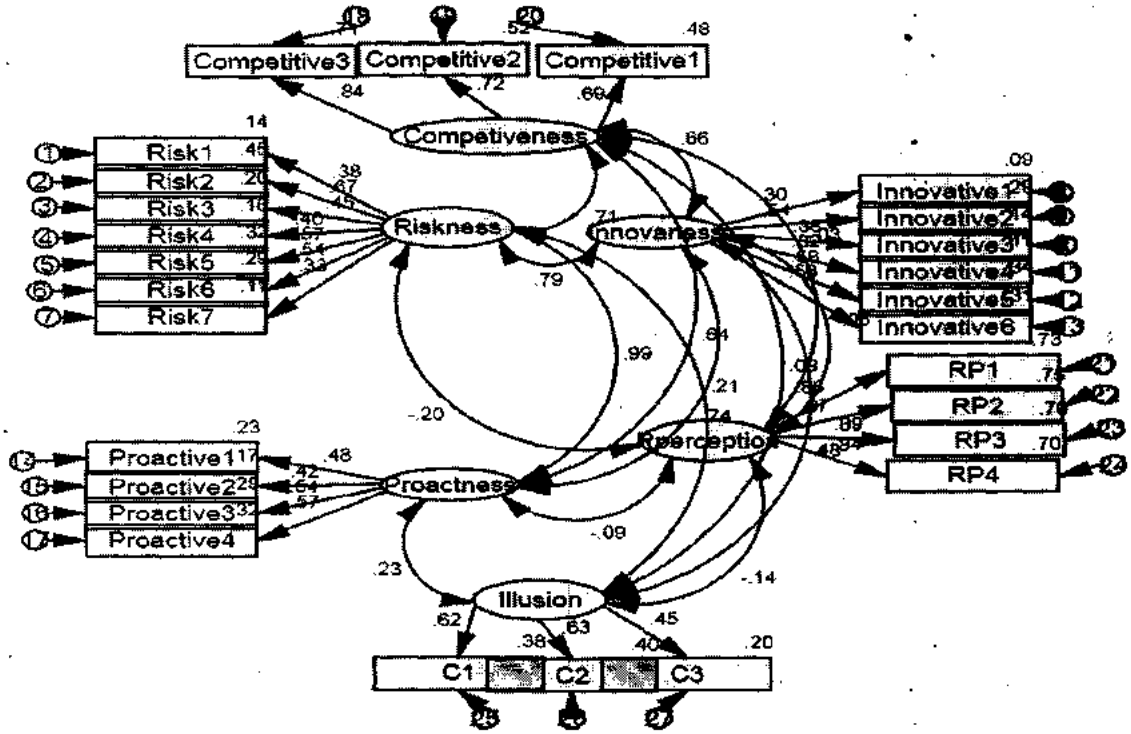


Table 4.4 (b)- Confirmatory Factor Analysis - Pakistan



4.5. Path Analysis

Composite Analysis of MODEL 1

4.5. Relationship between Corporate Entrepreneurship, Agency Cost and Firm Performance

$$FP_i = \alpha + \beta_1(CE_i) + \beta_2(AGC_i) + \beta_1(Gen_i) + \beta_2(Exp_i) + \beta_3(CS_i) + \beta_4(CST_i) + \beta_5(Rpro_i) + \varepsilon$$

Table 4.5 (a)- Regression Table- USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	-.106	-2.749	.021	.054
FP <--- Agency	-.088	-1.411	.158	0.008
Measurement Model Data				
Variable=8, exogenous =6, endogenous=2				
Total degree of freedom=1		Sample size=175		
Proposed Model :chi square		Df=1	P=.106	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		2.613		
Goodness of Fit Index		0.993		
Incremental Measures				
Truker-Lewis Index		0.791		
Normed Fit Index		0.629		
Incremented Fit Index		0.733		
Non centrality Based Measure				
RMESA		0.079		
Comparative Fit Index		0.600		
Parsimonious Measures				
Normed Chi- Square		2.613		
Parsimonious Normed Fit Index		0.210		
Relative Fit Index		-.114		

When path analysis was done between corporate entrepreneurship, agency cost and firm performance in USA, it has been found that corporate entrepreneurship has negative path with agency cost with coefficient 0.106, has p-value 0.021 reveals that CE has significant relationship with agency cost. However, agency cost has insignificant negative relationship with firm performance having

coefficient of 0.088 with p-value 0.158. The Square Multiple Correlation for both models are 5.4% and 0.8% respectively. The other statistics shows the marginal model fit.

However, in Pakistani context, the path analysis was done among the afore mentioned variables. It has been found that corporate entrepreneurship has insignificant positive relationship with agency cost with coefficient 0.72, has p-value 0.338 while agency cost has insignificant negative relationship with firm performance having coefficient of -.005 with p-value 0.949. The other statistics shows the good model fit.

Table 4.5 (b)- Regression Table-Pakistan				
	Adjusted Estimate	CR	P value	Square Multiple Correlation
Agency <--- CE	.072	.958	.338	0.005
FP <--- Agency	-.005	-.064	.949	0.000
Measurement Model Data				
10 variables, 8 exogenous 2 endogenous				
Total degree of freedom=16		Sample size=175		
Proposed Model :chi square		Df=16	P=.761	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		.092		
Goodness of Fit Index		.998		
Incremental Measures				
Truker-Lewis Index		-.370		
Normed Fit Index		.909		
Incremented Fit Index		1.000		
Non centrality Based Measure				
RMESA		0.008		
Comparative Fit Index		0.000		
Parsimonious Measures				
Normed Chi- Square		.092		
Parsimonious Normed Fit Index		.303		
Relative Fit Index		.726		

4.6. Relationship between Corporate Entrepreneurship, Agency Cost and Market Share Growth

When path analysis was run between corporate entrepreneurship, agency cost and market share growth in USA, it has been found that corporate entrepreneurship has negative path with agency cost with coefficient 0.106, has p-value 0.021 reveals that CE has significant relationship with agency cost. Similarly, agency cost has positive relationship with market share growth having coefficient of 0.096 with p-value 0.047 that reveals the significant link between them. The Square Multiple Correlation for both models are 5.4% and 0.54% respectively. The other statistics shows the good model fit.

Table 4.6 (a)-Regression Table-USA

	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	-.106	-2.749	.021	.054
MSG <--- Agency	.096	1.987	.047	0.054
Measurement Model Data				
Variable=8, exogenous =6, endogenous=2				
Total degree of freedom=1		Sample size=175		
Proposed Model :chi square		Df=1	P=0.296	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1.094		
Goodness of Fit Index		0.999		
Incremental Measures				
Truker-Lewis Index		1.025		
Normed Fit Index		0.995		
Incremented Fit Index		1.008		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		1.094		
Parsimonious Normed Fit Index		0.332		
Relative Fit Index		0.986		

However, path analysis was done, it has been seen that the corporate entrepreneurship has insignificant positive relationship with agency cost with coefficient 0.72, has p-value 0.338. Similarly,

agency cost has insignificant positive relationship with market share growth having coefficient of 0.050 with p-value 0.438. The Square Multiple Correlation of model between corporate entrepreneurship and agency cost is 0.05% while the Square Multiple Correlation for model between agency cost and market share growth is 27.6%. The other statistics reveals the good model fit.

Table 4.6 (b)- Regression Table –Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	.072	.958	.338	0.005
MSG <--- Agency	.050	.775	.438	0.276
Measurement Model Data				
Variables= 8, exogenous= 6 and endogenous=2				
Total degree of freedom=4		Sample size=175		
Proposed Model :chi square		Df=4	P=0.506	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		3.321		
Goòdness of Fit Index		0.994		
Incremental Measures				
Truker-Lewis Index		1.031		
Normed Fit Index		0.966		
Incremented Fit Index		1.007		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		0.830		
Parsimonious Normed Fit Index		0.966		
Relative Fit Index		.258		

4.7. Relationship between Corporate Entrepreneurship, Agency Cost and Return on Assets

When path analysis was done among corporate entrepreneurship, agency cost and return on assets for USA, it has been found that corporate entrepreneurship has negative path with agency cost with coefficient 0.106, has p-value 0.021 reveals that CE has significant relationship with agency cost. However, agency cost has insignificant positive relationship with return on assets having coefficient of 0.023 with p-value 0.709. The Square Multiple Correlation for both models is 5.4% . The other statistics shows the good model fit.

Table 4.7 (a) - Regression Table USA

	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	-.106	-2.749	.021	0.054
ROA <--- Agency	.023	.373	.709	0 .054
Measurement Model Data				
Variable=8, exogenous =6, endogenous=2				
Total degree of freedom=1		Sample size=175		
Proposed Model :chi square		Df=1	P=0.621	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		.952		
Goodness of Fit Index		0.998		
Incremental Measures				
Truker-Lewis Index		1.137		
Normed Fit Index		.967		
Incremented Fit Index		1.039		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		.952		
Parsimonious Normed Fit Index		0.322		
Relative Fit Index		0.901		

When the path analysis was run for Pakistani sample, it has been seen that the corporate entrepreneurship has insignificant positive relationship with agency cost with coefficient 0.72, has p-value 0.338. However, agency cost has insignificant negative relationship with return on assets having coefficient of -0.006 with p-value of 0.938. The Square Multiple Correlation of model between

corporate entrepreneurship and agency cost is 0.05%. The Square Multiple Correlation for model between agency cost and market share growth is 0%. The other statistics reveals the marginal model fit.

Table 4.7 (b)- Regression Table-Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	.072	.958	.338	0.005
ROA<--- Agency	-.006	-.078	.938	0.000
Measurement Model Data				
Variables= 8, exogenous= 6 and endogenous=2				
Total degree of freedom=		Sample size		
Proposed Model :chi square		Df=15	P= 0.850	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		0.036		
Goodness of Fit Index		1.000		
Incremental Measures				
Truker-Lewis Index		-.416		
Normed Fit Index		.962		
Incremented Fit Index		1.000		
Non centrality Based Measure				
RMESA		.000		
Comparative Fit Index		0		
Parsimonious Measures				
Normed Chi- Square		.036		
Parsimonious Normed Fit Index		.321		
Relative Fit Index		.887		

4.8. Relationship between Corporate Entrepreneurship, Agency Cost and Return on Equity

When path analysis was done among corporate entrepreneurship, agency cost and return on equity for USA, it has been found that corporate entrepreneurship has negative path with agency cost with coefficient 0.106, having p-value 0.021 reveals that CE has significant relationship with agency cost. Similarly, agency cost has insignificant relationship with return on equity having coefficient of -0.083 with p-value 0.184. The Square Multiple Correlation for both models are 5.4% and 0.07%. The other statistics shows the good model fit.

Table 4.8 (a)- Regression Table USA

	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	-.106	-2.749	.021	0.054
ROE <--- Agency	-.083	-1.329	.184	0.007
Measurement Model Data				
Variable=8, exogenous =6, endogenous=2				
Total degree of freedom=3		Sample size=257		
Proposed Model :chi square		Df=3	P=0.301	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		3.656		
Goodness of Fit Index		0 .993		
Incremental Measures				
Truker-Lewis Index		.900		
Normed Fit Index		0.808		
Incremented Fit Index		0.959		
Non centrality Based Measure				
RMESA		0.029		
Comparative Fit Index		0.950		
Parsimonious Measures				
Normed Chi- Square		1.219		
Parsimonious Normed Fit Index		0.404		
Relative Fit Index		0.617		

When the path analysis was run for Pakistani sample, it has been seen that the corporate entrepreneurship has insignificant positive relationship with agency cost with coefficient 0.72, has p-value 0.338. However, agency cost has significant negative relationship with return on equity having coefficient of -0.072with p-value of 0.007. The Square Multiple Correlation of model between

corporate entrepreneurship and agency cost is 0.05%. while the Square Multiple Correlation for model between agency cost and market share growth is 4.6%. The other statistics reveals the marginal model fit

Table 4.8 (b) -Regression Table- Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	.072	.958	.338	0.005
ROE <--- Agency	-.072	-2.721	0.007	0.046
Measurement Model Data				
Variables= 8, exogenous= 6 and endogenous=2				
Total degree of freedom=2		Sample size=175		
Proposed Model :chi square		Df=2	P= .218	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		3.046		
Goodness of Fit Index		.991		
Incremental Measures				
Truker-Lewis Index		.590		
Normed Fit Index		.777		
Incremented Fit Index		.910		
Non centrality Based Measure				
RMESA		.055		
Comparative Fit Index		.863		
Parsimonious Measures				
Normed Chi- Square		1.523		
Parsimonious Normed Fit Index		.259		
Relative Fit Index		.330		

4.9. Relationship between Corporate Entrepreneurship, Agency Cost and Net Profit Margin

When path analysis was done among corporate entrepreneurship, agency cost and net profit margin for USA, it has been found that corporate entrepreneurship has a significant negative path with agency cost with coefficient 0.106 and p-value of 0.021. Similarly, agency cost has significant positive relationship with net profit margin having coefficient of -0.183 with p-value 0.003. The Square Multiple Correlation for both models is 5.4%. The other statistics shows the good model fit.

Table 4.9(a)- Regression Table USA

	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	.072	-2.749	.021	0.054
NPM <--- Agency	-.183	-3.013	.003	0.054
Measurement Model Data				
Variable=8, exogenous =6, endogenous=2				
Total degree of freedom=2		Sample size =257		
Proposed Model :chi square		Df=2	P=0.775	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		.511		
Goodness of Fit Index		.999		
Incremental Measures				
Truker-Lewis Index		1.129		
Normed Fit Index		.987		
Incremented Fit Index		1.039		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		.255		
Parsimonious Normed Fit Index		0.329		
Relative Fit Index		0.962		

When the path analysis was run for Pakistani sample, it has been seen that the corporate entrepreneurship has insignificant positive relationship with agency cost with coefficient 0.72, has p-value 0.338. However, agency cost has insignificant positive relationship with net profit margin having coefficient of 0.006 with p-value 0.936. The Square Multiple Correlation of model between

corporate entrepreneurship and agency cost is 0.05%. while the Square Multiple Correlation for model between agency cost and market share growth is 0%. The other statistics reveals the marginal model fit

Table 4.9 (b)- Regression Table-Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
Agency <--- CE	0.072	.958	.338	0.005
NPM<--- Agency	0.006	.080	.936	0.000
Measurement Model Data				
Variables= 8, exogenous= 6 and endogenous=2				
Total degree of freedom=1		Sample size=175		
Proposed Model :chi square		Df=1	P=0.036	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		4.412		
Goodness of Fit Index		.984		
Incremental Measures				
Truker-Lewis Index		-3.386		
Normed Fit Index		.173		
Incremented Fit Index		.213		
Non centrality Based Measure				
RMESA		.067		
Comparative Fit Index		0.729		
Parsimonious Measures				
Normed Chi- Square		4.412		
Parsimonious Normed Fit Index		.058		
Relative Fit Index		-1.482		

Individual Analysis of MODEL 1

4.10. Relationship between components of corporate entrepreneurship, agency cost and market share growth

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for USA sample, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 0.032, having p-value 0.623; and asset utilization ratio with coefficient of 0.117, having p-value 0.065 reveals insignificant impact. Whereas, innovativeness has insignificant negative impact on administrative expense ratio, having coefficient of 0.062 with p-value of 0.358, however, it has insignificant positive effect on asset utilization ratio with coefficient of 0.084, having p-value 0.065. Proactiveness has insignificantly positive impact on administrative expense ratio having coefficient of 0.009 with p-value of 0.91. Similarly, competitive aggressiveness has insignificant positive impact on administrative expense ratio with coefficient of 0.019, having p-value 0.800 respectively, however Proactiveness has insignificant negative impact on asset utilization ratio having coefficient of -0.002 with p-value of 0.979, and competitive aggressiveness has significant negative impact on asset utilization ratio with coefficient of 0.187, having p-value of 0.010.

Moreover, administrative expense ratio has insignificant negative impact on market share growth having coefficient of 0.021with p-value 0.654, whereas asset utilization ratio has significantly positive impact on market share growth having coefficient of 0.107 with p-value of 0.027. The square multiple correlations are 5.6%, 9% and 42.6 %. The other statistics shows the good model fit.

Table 4.10 (a)- Regression Table – USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	-.032	-.492	.623	.056
AER <--- Innovativeness	-.062	-.919	.358	.056
AER <--- Proactiveness	.009	.112	.911	.056
AER<---Competitiveness	.019	.253	.800	.056
AUR <--- Riskiness	-.117	-1.844	.065	.090
AUR <--- Innovativeness	.084	1.271	.204	.090
AUR <--- Proactiveness	-.002	-.026	.979	.090
AUR <--- Competitiveness	-.187	-2.568	.010	.090
MSG <--- AER	-.021	-.448	.654	.426
MSG <--- AUR	.107	2.210	0.027	.426
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=5		Sample size=257		
Proposed Model :chi square		Df=5	P=0.092	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		9.453		
Goodness of Fit Index		.990		
Incremental Measures				
Truker-Lewis Index		.878		
Normed Fit Index		0.946		
Incremented Fit Index		0.974		
Non centrality Based Measure				
RMESA		0.068		
Comparative Fit Index		0.971		
Parsimonious Measures				
Normed Chi- Square		1.891		
Parsimonious Normed Fit Index		0.225		
Relative Fit Index		0.773		

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for Pakistani companies, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 1.087, having p-value 0. 338; and asset utilization ratio with coefficient of 0.710, having p-value of 0.814 reveals insignificant impact. Whereas, innovativeness has no impact on administrative expense ratio, having coefficient of 0.000 with p-value of 1, however, it has insignificant negative effect on asset utilization ratio with coefficient of 0.125, having p-value 0.613. Proactiveness has insignificant positive impact on administrative expense ratio having coefficient of .009 with p-value of 0.91, and asset utilization ratio with coefficient of 0.619, having p-value 0.811. Similarly, competitive aggressiveness has insignificant positive impact on administrative expense ratio having coefficient of 0. 296 with p-value of 0.431, and asset utilization ratio with coefficient of 0.257, having p-value of 0.496.

Moreover, administrative expense ratio has insignificant positive impact on market share growth having coefficient of 0.090 with p-value 0.134. Similarly, asset utilization ratio has significant positive impact on market share growth having coefficient of 0.34 with p-value of 0.000. The square multiple correlation are 1.3%, 1.2% and 37.7% . The other statistics shows the good model fit.

Table 4.10 (b)- Regression Table – Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	-1.087	-.360	.338	.013
AER <--- Innovativeness	.000	.000	1.000	.013
AER <--- Proactiveness	.901	.348	.728	.013
AER<---Competitiveness	.296	.788	.431	.013
AUR <--- Riskiness	-.710	-.235	.814	.012
AUR <--- Innovativeness	-.125	-.506	.613	.012
AUR <--- Proactiveness	.619	.239	.811	.012
AUR <--- Competitiveness	.257	.681	.496	.012
MSG <--- AER	.090	1.497	.134	.377
MSG <--- AUR	.345	5.770	***	.377
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=11		Sample size=175		
Proposed Model :chi square		Df=11	P= .040	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		20.443		
Goodness of Fit Index		.978		
Incremental Measures				
Truker-Lewis Index		.979		
Normed Fit Index		.989		
Incremented Fit Index		.995		
Non centrality Based Measure				
RMESA		.070		
Comparative Fit Index		.995		
Parsimonious Measures				
Normed Chi- Square		1.858		
Parsimonious Normed Fit Index		.242		
Relative Fit Index		.955		

4.11. Relationship between components of corporate entrepreneurship, agency cost and return on assets

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for USA sample, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 0.032, having p-value 0.623; and asset utilization ratio with coefficient of 0.117, having p-value 0.065 reveals insignificant impact. Whereas, innovativeness has insignificant negative impact on administrative expense ratio, having coefficient of 0.062 with p-value of 0.358, however, it has insignificant positive effect on asset utilization ratio with coefficient of 0.084, having p-value 0.065. Proactiveness and competitive aggressiveness has insignificantly positive impact on administrative expense ratio having coefficient of .009 with p-value of 0.91, and asset utilization ratio with coefficient of 0.019, having p-value 0.800, however Proactiveness has insignificant negative impact on asset utilization ratio having coefficient of -0.002 with p-value of 0.979, and competitive aggressiveness has significant negative impact on asset utilization ratio with coefficient of 0.187, having p-value of 0.010.

Moreover, administrative expense ratio has insignificant negative impact on return on assets having coefficient of 0.001 with p-value 0.993, whereas asset utilization ratio has insignificantly positive impact on return on assets having coefficient of 0.024 with p-value of 0.694. The Square Multiple Correlations are 5.6%, 9% and 5.4%. The other statistics shows the good model fit.

Table 4.11 (a)- Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	-.032	-.492	.623	.056
AER <--- Innovativeness	-.062	-.919	.358	.056
AER <--- Proactiveness	.009	.112	.911	.056
AER<---Competitiveness	.019	.253	.800	.056
AUR <--- Riskiness	-.117	-1.844	.065	.090
AUR <--- Innovativeness	.084	1.271	.204	.090
AUR <--- Proactiveness	-.002	-.026	.979	.090
AUR <--- Competitiveness	-.187	-2.568	.010	.090
ROA <--- AER	-.001	-.009	.993	.054
ROA <--- AUR	.024	.394	.694	.054
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=5		Sample size=257		
Proposed Model :chi square		Df=5	P=0.766	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		2.568		
Goodness of Fit Index		0.997		
Incremental Measures				
Truker-Lewis Index		1.070		
Normed Fit Index		0.985		
Incremented Fit Index		1.015		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		.514		
Parsimonious Normed Fit Index		0.935		
Relative Fit Index		0.234		

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for Pakistani companies, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 1.087, having p-value 0. 338; and asset utilization ratio with coefficient of 0.710, having p-value of 0.814 reveals insignificant impact. Whereas, innovativeness has no impact on administrative expense ratio, having coefficient of 0.000 with p-value of 1, however, it has insignificant negative effect on asset utilization ratio with coefficient of 0.125, having p-value 0.613. Proactiveness has insignificant positive impact on

administrative expense ratio having coefficient of .009 with p-value of 0.91, and asset utilization ratio with coefficient of 0.619, having p-value 0.811. Similarly, competitive aggressiveness has insignificant positive impact on administrative expense ratio having coefficient of 0. 296 with p-value of 0.431, and asset utilization ratio with coefficient of 0.257, having p-value of 0.496.

Table 4.11 (b)- Regression Table –Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	. -1.087	-.360	.719	.013
AER <--- Innovativeness	.000	.000	1.000	.013
AER <--- Proactiveness	.901	.348	.728	.013
AER<---Competitiveness	.296	.788	.431	.013
AUR <--- Riskiness	-1.247	-.422	.673	.057
AUR <--- Innovativeness	-.124	-.512	.609	.057
AUR <--- Proactiveness	1.086	.429	.668	.057
AUR <--- Competitiveness	.364	.990	.322	.057
ROA <--- AER	-.006	-.081	.935	.000
ROA <--- AUR	-.002	-.024	.981	.000
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=11		Sample size=175		
Proposed Model :chi square		Df=11	P= .407	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		11.438		
Goodness of Fit Index		.984		
Incremental Measures				
Truker-Lewis Index		.999		
Normed Fit Index		.993		
Incremented Fit Index		1.000		
Non centrality Based Measure				
RMESA		0.068		
Comparative Fit Index		.015		
Parsimonious Measures				
Normed Chi- Square		1.040		
Parsimonious Normed Fit Index		.390		
Relative Fit Index		.983		

Moreover, administrative expense ratio has insignificant negative impact on return on assets having coefficient of 0.006 with p-value 0.935. Similarly, asset utilization ratio has significant

negative impact on return on assets having coefficient of 0.002 with p-value of 0.981. The square multiple correlation are 1.3%, 5.7% and 0 . The other statistics shows the good model fit.

4.12. Relationship between components of corporate entrepreneurship, agency cost and return on equity

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for USA sample, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of -0.032, having p-value 0.623; and asset utilization ratio with coefficient of -0.117, having p-value 0.065 reveals insignificant impact. Whereas, innovativeness has insignificant negative impact on administrative expense ratio, having coefficient of -0.062 with p-value of 0.358, however, it has insignificant positive effect on asset utilization ratio with coefficient of 0.084, having p-value 0.065. Proactiveness and competitive aggressiveness has insignificantly positive impact on administrative expense ratio having coefficient of .009 with p-value of 0.91, and asset utilization ratio with coefficient of 0.019, having p-value 0.800, however Proactiveness has insignificant negative impact on asset utilization ratio having coefficient of -0.002 with p-value of 0.979, and competitive aggressiveness has significant negative impact on asset utilization ratio with coefficient of 0.187, having p-value of 0.010.

Moreover, administrative expense and asset utilization ratio have insignificant negative impact relationship on return on equity having coefficient of 0.029 with p-value 0.640 and coefficient of 0.079 with p-value of 0.207, respectively. The Square Multiple Correlations are 5.6%, 9% and 0.7%. The other statistics shows the good model fit.

Table 4.12 (a)- Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	-.032	-.492	.623	.056
AER <--- Innovativeness	-.062	-.919	.358	.056
AER <--- Proactiveness	.009	.112	.911	.056
AER<---Competitiveness	.019	.253	.800	.056
AUR <--- Riskiness	-.117	-1.844	.065	.090
AUR <--- Innovativeness	.084	1.271	.204	.090
AUR <--- Proactiveness	-.002	-.026	.979	.090
AUR <--- Competitiveness	-.187	-2.568	.010	..090
ROE <--- AER	-.029	-.467	.640	.007
ROE <--- AUR	-.079	-1.262	.207	.007
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=5		Sample size=257		
Proposed Model :chi square		Df=5	P=0.469	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		4.585		
Goodness of Fit Index		0.995		
Incremental Measures				
Truker-Lewis Index		1.012		
Normed Fit Index		.973		
Incremented Fit Index		1.003		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		.917		
Parsimonious Normed Fit Index		.232		
Relative Fit Index		.887		

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for Pakistani companies, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 1.087, having p-value 0.719; and asset utilization ratio with coefficient of 0.710, having p-value of 0.814 reveals insignificant impact. Whereas, innovativeness has no impact on administrative expense ratio, having coefficient of 0.000 with p-value of 1, however, it has insignificant negative effect on asset utilization ratio with coefficient of 0.124, having p-value 0.609. Proactiveness has insignificant positive impact on

administrative expense ratio having coefficient of 0.901 with p-value of 0. 728, and asset utilization ratio with coefficient of 0.619, having p-value 0.668. Similarly, competitive aggressiveness has insignificant positive impact on administrative expense ratio having coefficient of 0. 296 with p-value of 0.431, and asset utilization ratio with coefficient of 0.364, having p-value of 0.322.

Table 4.12 (b)-Regression Table-Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	-1.087	-.360	.719	.013
AER <--- Innovativeness	.000	.000	1.000	.013
AER <--- Proactiveness	.901	.348	.728	.013
AER<---Competitiveness	.296	.788	.431	.013
AUR <--- Riskiness	-1.247	-.422	.673	.057
AUR <--- Innovativeness	-.124	-.512	.609	.057
AUR <--- Proactiveness	.619	.429	.668	.057
AUR <--- Competitiveness	.364	.990	.322	.057
ROE <--- AER	-.057	-.771	.441	.055
ROE <--- AUR	.123	1.675	.094	.055
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=17		Sample size=175		
Proposed Model :chi square		Df=17	P= .001	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		39.926		
Goodness of Fit Index		.954		
Incremental Measures				
Truker-Lewis Index		.972		
Normed Fit Index		.978		
Incremented Fit Index		.987		
Non centrality Based Measure				
RMESA		.088		
Comparative Fit Index		.987		
Parsimonious Measures				
Normed Chi- Square		2.349		
Parsimonious Normed Fit Index		.462		
Relative Fit Index		.953		

Moreover, administrative expense ratio has insignificant negative impact relationship on return on equity having coefficient of 0.057 with p-value 0.441. Similarly, asset utilization ratio has insignificant positive impact on return on equity having coefficient of 0.123 with p-value of 0.094. The square multiple correlations are 1.3%, 5.7% and 5.5%. The other statistics shows the good model fit.

4.13. Relationship between components of corporate entrepreneurship, agency cost and net profit margin

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for USA sample, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 0.032, having p-value 0.623; and asset utilization ratio with coefficient of -0.117, having p-value 0.065 reveals insignificant impact. Whereas, innovativeness has insignificant negative impact on administrative expense ratio, having coefficient of 0.062 with p-value of 0.358, however, it has insignificant positive effect on asset utilization ratio with coefficient of 0.084, having p-value 0.204. Proactiveness has insignificantly positive impact on administrative expense ratio having coefficient of .009 with p-value of 0.911. Similarly, competitive aggressiveness has insignificantly positive impact on administrative expense ratio with coefficient of 0.019, having p-value 0.800, however Proactiveness has insignificant negative impact on asset utilization ratio having coefficient of -0.002 with p-value of 0.979, and competitive aggressiveness has significant negative impact on asset utilization ratio with coefficient of 0.187, having p-value of 0.010.

Moreover, administrative expense ratio has insignificant negative impact on net profit margin, having coefficient of 0.076 with p-value 0.202, whereas asset utilization ratio has significantly positive impact on net profit margin having coefficient of 0.170 with p-value of 0.005. The Square Multiple Correlation are 5.6%, 9% and 9.8%. The other statistics shows the good model fit

Table 4.13 (a)- Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
AER <--- Riskiness	-.032	-.492	.623	.056
AER <--- Innovativeness	-.062	-.919	.358	.056
AER <--- Proactiveness	.009	.112	.911	.056
AER<---Competitiveness	.019	.253	.800	.056
AUR <--- Riskiness	-.117	-1.844	.065	.090
AUR <--- Innovativeness	.084	1.271	.204	.090
AUR <--- Proactiveness	-.002	-.026	.979	.090
AUR <--- Competitiveness	-.187	-2.568	.010	..090
NPM <--- AER	-.076	-1.276	.202	.098
NPM <--- AUR	-.170	-2.809	.005	.098
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=5		Sample size=257		
Proposed Model :chi square		Df=5	P=0.980	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		.753		
Goodness of Fit Index		0.999		
Incremental Measures				
Truker-Lewis Index		1.113		
Normed Fit Index		0.996		
Incremented Fit Index		1.025		
Non centrality Based Measure				
RMESA		0.000		
Comparative Fit Index		1.000		
Parsimonious Measures				
Normed Chi- Square		.151		
Parsimonious Normed Fit Index		0.237		
Relative Fit Index		0.982		

When path analysis was done among the individual variables of corporate entrepreneurship, agency cost and firm performance, for Pakistani companies, it has been found that Riskiness has negative impact on administrative expense ratio with coefficient of 1.087, having p-value 0.719; and asset utilization ratio with coefficient of 1.247, having p-value of 0. 673 reveals insignificant impact. Whereas, innovativeness has no impact on administrative expense ratio, having coefficient of 0.000 with p-value of 1, however, it has insignificant negative effect on asset utilization ratio with coefficient of 0.124, having p-value 0.609. Proactiveness has insignificant positive impact on

administrative expense ratio having coefficient of 0.901 with p-value of 0.728, and asset utilization ratio with coefficient of 1.086, having p-value 0. 668. Similarly, competitive aggressiveness has insignificant positive impact on administrative expense ratio having coefficient of 0. 296 with p-value of 0.431, and asset utilization ratio with coefficient of 0. 364, having p-value of 0. 322.

Table 4.13 (b)- Regression Table- Pakistan

	Adjusted Estimate	CR	P value	Square Multiple Correlation
AER <--- Riskiness	-1.087	-.360	.719	.013
AER <--- Innovativeness	.000	.000	1.000	.013
AER <--- Proactiveness	.901	.348	.728	.013
AER<---Competitiveness	.296	.788	.431	.013
AUR <--- Riskiness	-1.247	-.422	.673	.057
AUR <--- Innovativeness	-.124	-.512	.609	.057
AUR <--- Proactiveness	1.086	.429	.668	.057
AUR <--- Competitiveness	.364	.990	.322	.057
NPM <--- AER	.013	.176	.861	.004
NPM <--- AUR	.065	.853	.394	.004
Measurement Model Data				
Variable=12, exogenous =9, endogenous=3				
Total degree of freedom=11		Sample size=175		
Proposed Model :chi square		Df=11	P= .245	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		13.786		
Goodness of Fit Index		.981		
Incremental Measures				
Truker-Lewis Index		.996		
Normed Fit Index		.992		
Incremented Fit Index		.998		
Non centrality Based Measure				
RMESA		.038		
Comparative Fit Index		.998		
Parsimonious Measures				
Normed Chi- Square		1.253		
Parsimonious Normed Fit Index		.390		
Relative Fit Index		.980		

Moreover, administrative expense ratio has insignificant positive impact on net profit margin having coefficient of 0.013 with p-value 0.861. Similarly, asset utilization ratio has insignificant positive impact on net profit margin having coefficient of 0.065 with p-value of 0.394. The square multiple correlation are 1.3%, 5.7 and 0.4%. The other statistics shows the good model fit.

4.14. Mediation Regression Analysis-MODEL 1

Agency Cost as Mediator between corporate Entrepreneurship and Firm Performance

$$FP_i = \alpha + \beta_1(CE_i) + \beta_2(AGC_i) + \beta_1(Gen_i) + \beta_2(Exp_i) + \beta_3(CS_i) + \beta_4(CST_i) + \beta_5(Rpro_i) + \varepsilon$$

When Mediation Regression analysis was done through using Preacher and Hayes (2008), it has been found that agency cost does not mediate the relationship between corporate entrepreneurship and firm performance in both USA and Pakistan. The results of mediation regression analyses have been presented in ensuing tables.

Table 4.14 (a)-Mediation Regression Analysis –USA

Dependent, Independent, and Proposed Mediator Variables:
DV = FP, IV = CE, MEDS = Agency
Statistical Controls:
CONTROL= Gender, Experien, Sector, CompanyS, Riskprop
Sample size: 257

	Coeff	SE	T	P
IV to Mediators (a paths)				
Agency	.0516	.0362	-1.4267	.0154
Direct Effects of Mediators on DV (b paths)				
Agency	-.4010	.3293	-1.2176	.2245
Total Effect of IV on DV (c path)				
CE	-.2506	.1885	-1.3298	.1848
Direct Effect of IV on DV (c' path)				
CE	-.2713	.1891	-1.4351	.1525

Partial Effect of Control Variables on DV				
	Coeff	SE	T	P
Gender	.2926	.2884	1.0146	.3113
Experience	-.0854	.0912	-.9359	.3502
Sector	.0107	.0241	.4451	.6566
CompanyS	.0660	.0649	1.0165	.3104
Risk propensity	.0454	.1121	.4049	.6859

Model Summary for DV Model					
R-sq	Adj R-sq	F	df1	df2	P
.0300	.0027	1.1000	7.0000	249.0000	.3636

BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)				
	Data	Boot	Bias	SE
TOTAL	.0207	.0219	.0012	.0291
Agency	.0207	.0219	.0012	.0291

Bias Corrected and Accelerated Confidence Intervals		
	Lower	Upper
TOTAL	-.0005	.1752
Agency	-.0005	.1752

Level of Confidence for Confidence Intervals:95

Number of Bootstrap Resamples:5000

Table 4.14 (b)- Mediation Regression Analysis –Pakistan

Dependent, Independent, and Proposed Mediator Variables:
DV = FP, IV = CE, MEDS = Agency
Statistical Controls:
CONTROL= Gender, Experien, Sector, CompanyS, Riskprop
Sample size: 175

	Coeff	SE	T	P
IV to Mediators (a paths)				
Agency	1.3889	2.3352	.5948	.5528
Direct Effects of Mediators on DV (b paths)				
Agency	.0705	2.0291	.0348	.9723
Total Effect of IV on DV (c path)				
CE	-3.7852	61.2347	-.0618	.9508
Direct Effect of IV on DV (c' path)				
CE	-3.8832	61.4821	-.0632	.9497

Partial Effect of Control Variables on DV				
	Coeff	SE	T	P
Gender	-42.3572	368.3480	-.1150	.9086
Experience	-116.0434	78.9703	-1.4695	.1436
Sector	-46.5262	37.0635	-1.2553	.2111
CompanyS	36.2911	65.8654	.5510	.5824
Risk propensity	366.0034	442.0163	.8280	.4088

Model Summary for DV Model					
R-sq	Adj R-sq	F	df1	df2	P
.0331	-.0075	.8159	7.0000	167.0000	.5753

BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)				
	Data	Boot	Bias	SE
TOTAL	.0980	.7585	.6605	2.3083
Agency	.0980	.7585	.6605	2.3083

Bias Corrected and Accelerated Confidence Intervals		
	Lower	Upper
TOTAL	-8.8101	2.9097
Agency	-8.8101	2.9097

Level of Confidence for Confidence Intervals:95
Number of Bootstrap Resamples: 5000

4.15. Path Analysis

Composite Analysis of Model 2

Relationship between Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Firm Performance

$$FP_i = \alpha + \beta_1(OC_i) + \beta_2(IC_i) + +\beta_3(RB_i) + \beta_4(SQ_i) + \beta_5(RP_i) + \beta_6(CE_i) + \beta_7(AGC_i) + \beta_1(Gen_i) + \beta_2(Exp_i) + \beta_3(CS_i) + \beta_4(CST_i) + \beta_5(Rpro_i) + \varepsilon$$

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.744, 0.658 and 0.950 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.643, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.111, having p-value 0.063. However, corporate entrepreneurship has significant negative impact on agency cost having coefficient of 0.106 with p-value 0.02, which also leads to insignificantly negative path to firm performance having coefficient of .088 with p-value 0.158. The Square Multiple Correlation for both models are 5.5%, 8.8%, 5.3% and 0.8% . The other statistics shows the marginal model fit.

Table 4.15 (a)-Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.744	.055
RP <--- IC	.040	.653	.658	.055
RP <--- RB	-.072	-1.173	.643	.055
RP <---SQ	.042	. .691	.950	.055
CE <--- RP	.111	1.856	.063	.088
AGC<--- CE	-.106	-2.747	.021	.053
FP <--- AGC	-.088	-1.410	.158	.008
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=		Sample size		
Proposed Model :chi square		Df=43	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		376.825		
Goodness of Fit Index		0.839		
Incremental Measures				
Truker-Lewis Index		-.316		
Normed Fit Index		0.172		
Incremented Fit Index		0.190		
Non centrality Based Measure				
RMESA		0.174		
Comparative Fit Index		0.143		
Parsimonious Measures				
Normed Chi- Square		8.763		
Parsimonious Normed Fit Index		0.112		
Relative Fit Index		-.270		

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani companies, it has been found that overconfidence bias , illusion of control and representative bias have insignificant negative impact on risk perception with p-value of 0.744, 0.658 and 0.643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.008, having p-value 0.910. Moreover, corporate entrepreneurship has insignificant positive impact on agency cost having coefficient of 0.072 with p-value 0.338, which also leads to insignificantly negative path to firm performance having coefficient of 0.005 with p-value 0.949. The Square

Multiple Correlation for both models are 7.9%,14.9%, 0.5% and 0 . The other statistics shows the marginal model fit.

Table 4.15 (b)-Regression Table- Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <---SQ	.005	.062	.950	.079
CE <--- RP	.008	.113	. 910	.149
AGC<--- CE	.072	.958	. 338	.005
FP <--- AGC	-.005	-.064	.949	.000
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=15		Sample size=175		
Proposed Model :chi square		Df=15	P= .047	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		25.224		
Goodness of Fit Index		.966		
Incremental Measures				
Truker-Lewis Index		.494		
Normed Fit Index		.616		
Incremented Fit Index		.444		
Non centrality Based Measure				
RMESA		.133		
Comparative Fit Index		.729		
Parsimonious Measures				
Normed Chi- Square		1.682		
Parsimonious Normed Fit Index		.330		
Relative Fit Index		.284		

4.16. Relationship between Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and market share growth

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.744, 0.658 and 0.950 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.643, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.111, having p-value 0.063. However, corporate entrepreneurship has significant negative impact on agency cost having coefficient of 0.106 with p-value 0.021, which also leads to insignificantly positive path to market share growth having coefficient of 0.050 with p-value 0.438. The Square Multiple Correlation for both models are 5.5%, 8.8%, 5.3% and 42.6% . The other statistics shows the marginal model fit

Table 4.16 (a)- Regression Table-USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.744	.055
RP <--- IC	.040	.653	.658	.055
RP <--- RB	-.072	-1.173	.643	.055
RP <---SQ	.042	. .691	.950	.055
CE <--- RP	.111	1.856	.063	.088
AGC<--- CE	-.106	-2.747	.021	.053
MSG <--- AGC	.050	.775	.438	.426
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=42		Sample size=257		
Proposed Model :chi square		Df=42	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		381.871		
Goodness of Fit Index		0.837		
Incremental Measures				
Truker-Lewis Index		.001		
Normed Fit Index		0.364		
Incremented Fit Index		0.799		
Non centrality Based Measure				
RMESA		.178		
Comparative Fit Index		0.364		
Parsimonious Measures				
Normed Chi- Square		9.092		
Parsimonious Normed Fit Index		0.232		
Relative Fit Index		0.001		

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani companies, it has been found that overconfidence bias , illusion of control and representative bias have insignificant negative impact on risk perception with p-value of 0.744, 0.658 and 0.643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.008, having p-value 0.910. Moreover, corporate entrepreneurship has insignificant positive impact on agency cost having coefficient of 0.072 with p-value 0.338, which also leads to insignificantly positive

path to market share growth having coefficient of 0.050 with p-value 0.438. The Square Multiple Correlation for both models are 7.9%, 14.9%, 0.5% and 27.6% . The other statistics shows the marginal model fit

Table 4.16 (b)-Regression Table – Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <---SQ	.005	.062	.950	.079
CE <--- RP	.008	.113	. 910	.149
AGC<--- CE	.072	.958	. 338	.005
MSG <--- AGC	.050	.775	.438	.276
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=15		Sample size=175		
Proposed Model :chi square		Df= 15	P=0.019	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		28.376		
Goodness of Fit Index		.961		
Incremental Measures				
Truker-Lewis Index		.391		
Normed Fit Index		.589		
Incremented Fit Index		.752		
Non centrality Based Measure				
RMESA		.072		
Comparative Fit Index		.674		
Parsimonious Measures				
Normed Chi- Square		1.892		
Parsimonious Normed Fit Index		.315		
Relative Fit Index		.232		

4.17. Relationship between Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Return on Assets

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.744, 0.658 and 0.950 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.643, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.111, having p-value 0.063. However, corporate entrepreneurship has significant negative impact on agency cost having coefficient of 0.106 with p-value 0.021, which also leads to insignificantly positive path to return on assets, having coefficient of 0.050 with p-value 0.438. The Square Multiple Correlation for both models are 5.5%, 8.8%, 5.3% and 27.6% . The other statistics shows the marginal model fit

Table 4.17 (a) - Regression Table USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.744	.055
RP <--- IC	.040	.653	.658	.055
RP <--- RB	-.072	-1.173	.643	.055
RP <---SQ	.042	. .691	.950	.055
CE <--- RP	.111	1.856	.063	.088
AGC<--- CE	-.106	-2.747	.021	.053
ROA <--- AGC	.050	.775	.438	.276
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=		Sample size		
Proposed Model :chi square		Df=42	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		374.725		
Goodness of Fit Index		0.841		
Incremental Measures				
Truker-Lewis Index		-.309		
Normed Fit Index		0.195		
Incremented Fit Index		0.214		
Non centrality Based Measure				
RMESA		.176		
Comparative Fit Index		0.167		
Parsimonious Measures				
Normed Chi- Square		8.922		
Parsimonious Normed Fit Index		0.124		
Relative Fit Index		-.265		

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani companies, it has been found that overconfidence bias , illusion of control and representative bias have insignificant negative impact on risk perception with p-value of 0.744, 0.658 and 0.643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.008, having p-value 0.910. Moreover, corporate entrepreneurship has insignificant positive impact on agency cost having coefficient of 0.072 with p-value 0.338, which leads to insignificantly negative path to return on assets having coefficient of 0.006 with p-value 0.938. The Square Multiple

Correlation for both models are 7.9%, 14.9%, 0.5% and 0 . The other statistics shows the marginal model fit

Table 4.17 (b)-Regression Table – Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <---SQ	.005	.062	.950	.079
CE <--- RP	.008	.113	. 910	.149
AGC<--- CE	.072	.958	. 338	.005
ROA <--- AGC	-.006	-.078	.938	.000
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=15		Sample size=175		
Proposed Model :chi square		Df= 15	P=0.046	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		25.268		
Goodness of Fit Index		.966		
Incremental Measures				
Truker-Lewis Index		.493		
Normed Fit Index		.616		
Incremented Fit Index		.798		
Non centrality Based Measure				
RMESA		.063		
Comparative Fit Index		.728		
Parsimonious Measures				
Normed Chi- Square		1.685		
Parsimonious Normed Fit Index		.330		
Relative Fit Index		.283		

4.18. Relationship between Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Return on Equity

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.744, 0.658 and 0.950 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.643, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.111, having p-value 0.063. However, corporate entrepreneurship has significant negative impact on agency cost having coefficient of 0.106 with p-value 0.021, which also leads to insignificantly negative path on return on equity , having coefficient of 0.083 with p-value 0.184. The Square Multiple Correlation for both models are 5.5%, 8.8%, 5.3% and 0.7% . The other statistics shows the marginal model fit

Table 4.18 (a)- Regression Table-USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.744	.055
RP <--- IC	.040	.653	.658	.055
RP <--- RB	-.072	-1.173	.643	.055
RP <---SQ	.042	. .691	.950	.055
CE <--- RP	.111	1.856	.063	.088
AGC<--- CE	-.106	-2.747	.021	.053
ROE <--- AGC	-.083	-1.329	.184	.007
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=43		Sample size=257		
Proposed Model :chi square		Df=43	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		376.226		
Goodness of Fit Index		0.840		
Incremental Measures				
Truker-Lewis Index		-.316		
Normed Fit Index		0.172		
Incremented Fit Index		0.190		
Non centrality Based Measure				
RMESA		0.068		
Comparative Fit Index		0.729		
Parsimonious Measures				
Normed Chi- Square		8.749		
Parsimonious Normed Fit Index		0.112		
Relative Fit Index		-.270		

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani companies, it has been found that overconfidence bias , illusion of control and representative bias have insignificant negative impact on risk perception with p-value of 0.744, 0.658 and 0.643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.008, having p-value 0.910. Moreover, corporate entrepreneurship has insignificant positive impact on

agency cost having coefficient of 0.072 with p-value 0.338, however, which leads to insignificantly negative path to return on equity having coefficient of 0.072 with p-value 0.333. The Square Multiple Correlation for both models are 6.9%, 14%, 0.5% and 4.6% . The other statistics shows the marginal model fit

Table 4.18 (b)- Regression Table – Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.069
RP <--- IC	-.033	-.442	.658	.069
RP <--- RB	-.036	-.464	.643	.069
RP <---SQ	.005	.062	.950	.069
CE <--- RP	.008	.113	.910	.140
AGC<--- CE	.072	.953	.341	.005
ROE <--- AGC	-.072	-.967	.333	.046
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=15		Sample size=175		
Proposed Model :chi square		Df=15	P=.003	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		34.845		
Goodness of Fit Index		.954		
Incremental Measures				
Truker-Lewis Index		.224		
Normed Fit Index		.540		
Incremented Fit Index		.673		
Non centrality Based Measure				
RMESA		.087		
Comparative Fit Index		.584		
Parsimonious Measures				
Normed Chi- Square		2.323		
Parsimonious Normed Fit Index		.289		
Relative Fit Index		.141		

4.19. Relationship between Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Net Profit Margin

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.744, 0.658 and 0.950 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.643, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.111, having p-value 0.063. However, corporate entrepreneurship has significant negative impact on agency cost having coefficient of 0.106 with p-value 0.021, which also leads to significantly positive path to net profit margin, having coefficient of 0.183 with p-value 0.003. The Square Multiple Correlation for both models are 5.5%, 8.8% , 5.3% and 9.8% . The other statistics shows the marginal model fit

Table 4.19 (a)-Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.744	.055
RP <--- IC	.040	.653	.658	.055
RP <--- RB	-.072	-1.173	.643	.055
RP <---SQ	.042	. .691	.950	.055
CE <--- RP	.111	1.856	.063	.088
AGC<--- CE	-.106	-2.747	.021	.053
NPM <--- AGC	-.183	-3.013	.003	.098
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=42		Sample size=257		
Proposed Model :chi square		Df=42	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		370.622		
Goodness of Fit Index		0.842		
Incremental Measures				
Truker-Lewis Index		-.267		
Normed Fit Index		0.217		
Incremented Fit Index		0.239		
Non centrality Based Measure				
RMESA		.175		
Comparative Fit Index		0.194		
Parsimonious Measures				
Normed Chi- Square		8.824		
Parsimonious Normed Fit Index		0.138		
Relative Fit Index		-.230		

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani companies, it has been found that overconfidence bias , illusion of control and representative bias have insignificant negative impact on risk perception with p-value of 0.744, 0.658 and 0.643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950, which leads to positive path between risk perception and corporate entrepreneurship with coefficient 0.008, having p-value 0.910. Moreover, corporate entrepreneurship has insignificant positive impact on

agency cost having coefficient of 0.072 with p-value 0.338, which leads to insignificantly negative path to net profit margin having coefficient of 0.006 with p-value 0.936. The Square Multiple Correlation for both models are 6.9%,14%, 0.5% and 0 . The other statistics shows the marginal model fit

Table 4.19 (b)-Regression Table –Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.069
RP <--- IC	-.033	-.442	.658	.069
RP <--- RB	-.036	-.464	.643	.069
RP <---SQ	.005	.062	.950	.069
CE <--- RP	.008	.113	. 910	.140
AGC<--- CE	.072	.953	.341	.005
NPM <--- AGC	0.006	080	.936	.000
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=15		Sample size=175		
Proposed Model :chi square		Df=15	P=.013	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		29.740		
Goodness of Fit Index		.961		
Incremental Measures				
Truker-Lewis Index		.349		
Normed Fit Index		.577		
Incremented Fit Index		0.733		
Non centrality Based Measure				
RMESA		.075		
Comparative Fit Index		.651		
Parsimonious Measures				
Normed Chi- Square		1.983		
Parsimonious Normed Fit Index		.309		
Relative Fit Index		.210		

Individual Analysis of MODEL 2

4.20. Relationship between individual components of Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Market share growth

When path analysis was done among individual variables of corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.864, 0.514 and 0.490 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.241. Risk perception has negative path to riskiness and Proactiveness, having p-values of 0.666 and 0.872, while it has positive significant path with innovativeness and insignificant path with competitive aggressiveness, having p-values of 0.002 and 0.169 respectively. Riskiness and innovativeness have negative impact on administrative expense ratio with p-values of 0.688 and 0.053 respectively; however, Proactiveness and competitive aggressiveness have positive impact on administrative expense ratio with p-values of 0.889 and 0.763 respectively. Moreover, Riskiness and Proactiveness have insignificant negative impact on asset utilization ratio having p-values of 0.053 and 0.974 respectively; and significant negative impact on asset utilization ratio having p-values of 0.002 , however innovativeness has insignificant positive impact on asset utilization ratio having p-values of 0.161.

Administrative expense ratio has insignificant negative path with market share growth having p-value of 0.653, however, asset utilization ratio has significantly positive impact on market share growth.

Table 4.20 (a)- Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.864	.055
RP <--- IC	.040	.653	.514	.055
RP <--- RB	-.072	-1.173	.241	.055
RP <--- SQ	.042	.691	.490	.055
RN <--- RP	-.021	-.432	.666	.412
IN <--- RP	.191	3.160	.002	.063
PN <--- RP	-.010	-.162	.872	.044
CA <--- RP	.083	1.374	.169	.066
AER <--- RN	-.032	-.402	.688	.062
AER <--- IN	-.062	-1.004	.315	.062
AER <--- PN	.009	.139	.889	.062
AER <--- CA	.019	.302	.763	.062
AUR <---RN	-.117	-1.935	.053	.092
AUR <--- IN	.084	1.400	.161	.092
AUR <--- PN	-.002	-.033	.974	.092
AUR <--- CA	-.187	-3.139	.002	.092
MSG<--- AER	-.021	-.449	.653	.427
MSG <--- AUR	.107	2.217	.027	.427
Measurement Model Data				
Variable=17, exogenous =9, endogenous=8				
Total degree of freedom=92		Sample size=257		
Proposed Model :chi square		Df=92	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1070.939		
Goodness of Fit Index		0.764		
Incremental Measures				
Truker-Lewis Index		-.034		
Normed Fit Index		0.303		
Incremented Fit Index		0.322		
Non centrality Based Measure				
RMESA		0.204		
Comparative Fit Index		0.301		
Parsimonious Measures				
Normed Chi- Square		11.641		
Parsimonious Normed Fit Index		0.205		
Relative Fit Index		-.031		

When path analysis was done among individual variables of corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for

Pakistani sample, it has been found that overconfidence bias, illusion of control and representative bias has insignificant negative impact on risk perception with p-value of 0.744, 0. 658 and 0. 643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950. Risk perception has positive path to innovativeness and competitive aggressiveness, having p-values of 0.849 and 0.558, and null path with riskiness, having p-value of 0, while it has negative insignificant path with Proactiveness, having p-values of 0.967. Riskiness has significant negative impact on administrative expense ratio and asset utilization ration with p-values of 0.000 and 0.000 respectively; however, Proactiveness and competitive aggressiveness have significant positive impact on administrative expense ratio and asset utilization ratio. Innovativeness has null impact on administrative expense ratio with p-value of 0.999 and negative path with asset utilization ratio having p-value of 0.099.

Moreover, administrative expense ratio has insignificant positive path with market share growth having p-value of 0. 074, however, asset utilization ratio has significantly positive impact on market share growth, having p-value of 0.000.

Table 4.20 (b)- Regression Table- Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <---SQ	.005	.062	.950	.079
RN <--- RP	.000	-.005	.996	.170
IN <--- RP	0.014	.191	.849	.117
PN <--- RP	-0.003	-.042	.967	.172
CA.<--- RP	.043	.586	.558	.124
AER <---RN	-0.659	-14.041	***	.637
AER <--- IN	0.000	.002	.999	.637
AER <--- PN	0.547	11.642	***	.637
AER <--- CA	0.180	3.867	***	.637
AUR <---RN	-0.678	-16.480	***	.721
AUR <--- IN	-0.067	-1.648	.099	.721
AUR <--- PN	0.591	14.351	***	.721
AUR <--- CA	0.198	4.858	***	.721
MSG<--- AER	.121	1.788	.074	.564
MSG <--- AUR	0.505	7.417	***	.564
Measurement Model Data				
Variable=17, exogenous =9, endogenous=8				
Total degree of freedom=74		Sample size=175		
Proposed Model :chi square		Df=74	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1854.325		
Goodness of Fit Index		.607		
Incremental Measures				
Truker-Lewis Index		-.443		
Normed Fit Index		0.126		
Incremented Fit Index		0.130		
Non centrality Based Measure				
RMESA		0.372		
Comparative Fit Index		0.110		
Parsimonious Measures				
Normed Chi- Square		25.058		
Parsimonious Normed Fit Index		.077		
Relative Fit Index		-0.418		

4.21. Relationship between individual components of Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Return on Assets

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias, illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.864, 0.514 and 0.490 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.241. Risk perception has negative path to riskiness and Proactiveness, having p-values of 0.666 and 0.872, while it has positive significant path with innovativeness and insignificant path with competitive aggressiveness, having p-values of 0.002 and 0.169 respectively. Riskiness and innovativeness have negative impact on administrative expense ratio with p-values of 0.688 and 0.053 respectively; however, Proactiveness and competitive aggressiveness have positive impact on administrative expense ratio with p-values of 0.889 and 0.763 respectively. Moreover, Riskiness and Proactiveness have insignificant negative impact on asset utilization ratio having p-values of 0.053 and 0.974 respectively; and significant negative impact on asset utilization ratio having p-values of 0.002 , however. innovativeness has insignificant positive impact on asset utilization ratio having p-values of 0.161.

Administrative expense ratio has insignificant negative path with return on assets having p-value of 0.993, however, asset utilization ratio has significantly positive impact on return on assets having p-value of 0.693

4.21. Relationship between individual components of Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Return on Assets

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias, illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.864, 0.514 and 0.490 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.241. Risk perception has negative path to riskiness and Proactiveness, having p-values of 0.666 and 0.872, while it has positive significant path with innovativeness and insignificant path with competitive aggressiveness, having p-values of 0.002 and 0.169 respectively. Riskiness and innovativeness have negative impact on administrative expense ratio with p-values of 0.688 and 0.053 respectively; however, Proactiveness and competitive aggressiveness have positive impact on administrative expense ratio with p-values of 0.889 and 0.763 respectively. Moreover, Riskiness and Proactiveness have insignificant negative impact on asset utilization ratio having p-values of 0.053 and 0.974 respectively; and significant negative impact on asset utilization ratio having p-values of 0.002 , however innovativeness has insignificant positive impact on asset utilization ratio having p-values of 0.161.

Administrative expense ratio has insignificant negative path with return on assets having p-value of 0.993, however, asset utilization ratio has significantly positive impact on return on assets having p-value of 0.693

Table 4.21 (a)- Regression Table-USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.864	.055
RP <--- IC	.040	.653	.514	.055
RP <--- RB	-.072	-1.173	.241	.055
RP <---SQ	.042	.691	.490	.055
RN <--- RP	-.021	-.432	.666	.412
IN <--- RP	.191	3.160	.002	.063
PN <--- RP	-.010	-.162	.872	.044
CA <--- RP	.083	1.374	.169	.066
AER <---RN	-.032	-.402	.688	.062
AER <--- IN	-.062	-1.004	.315	.062
AER <--- PN	.009	.139	.889	.062
AER <--- CA	.019	.302	.763	.062
AUR <---RN	-.117	-1.935	.053	.092
AUR <--- IN	.084	1.400	.161	.092
AUR <--- PN	-.002	-.033	.974	.092
AUR <--- CA	-.187	-3.139	.002	.092
ROA<--- AER	-.001	-.009	.993	.054
ROA <--- AUR	.024	.395	.693	.054
Measurement Model Data				
Variable=17, exogenous =9, endogenous=8				
Total degree of freedom=92		Sample size=257		
Proposed Model :chi square		Df=92	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1061.186		
Goodness of Fit Index		0.766		
Incremental Measures				
Truker-Lewis Index		-.136		
Normed Fit Index		0.240		
Incremented Fit Index		0.257		
Non centrality Based Measure				
RMESA		0.203		
Comparative Fit Index		0.231		
Parsimonious Measures				
Normed Chi- Square		11.535		
Parsimonious Normed Fit Index		0.163		
Relative Fit Index		-.123		

When path analysis was done among individual variables of corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for

Pakistani sample, it has been found that overconfidence bias, illusion of control and representative bias has insignificant negative impact on risk perception with p-value of 0.744, 0. 658 and 0. 643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950. Risk perception has positive path to innovativeness and competitive aggressiveness, having p-values of 0.849 and 0.558, and null path with riskiness, having p-value of 0, while it has negative insignificant path with Proactiveness, having p-values of 0.967. Riskiness has significant negative impact on administrative expense ratio and asset utilization ration with p-values of 0.000 and 0.000 respectively; however, Proactiveness and competitive aggressiveness have significant positive impact on administrative expense ratio and asset utilization ratio. Innovativeness has null impact on administrative expense ratio with p-value of 0.999 and negative path with asset utilization ratio having p-value of 0.099.

Moreover, administrative expense ratio and asset utilization ratio have insignificant negative path with return on assets having p-value of 0. 074 and 0.921 respectively.

Table 4.21 (b)-Regression Table –Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <--- SQ	.005	.062	.950	.079
RN <--- RP	.000	-.005	.996	.170
IN <--- RP	0.014	.191	.849	.117
PN <--- RP	-0.003	-.042	.967	.172
CA <--- RP	.043	.586	.558	.124
AER <---RN	-0.659	-14.041	***	.637
AER <--- IN	0.000	.002	.999	.637
AER <--- PN	0.547	11.642	***	.637
AER <--- CA	0.180	3.867	***	.637
AUR <---RN	-0.678	-16.480	***	.721
AUR <--- IN	-0.067	-1.648	.099	.721
AUR <--- PN	0.591	14.351	***	.721
AUR <--- CA	0.198	4.858	***	.721
ROA<--- AER	-.010	-.099	.921	.000
ROA <--- AUR	-.003	-.033	.974	.000
Measurement Model Data				
Variable=17, exogenous =9, endogenous=8				
Total degree of freedom=77		Sample size=175		
Proposed Model :chi square		Df=77	P=24.002	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1848.118		
Goodness of Fit Index		.608		
Incremental Measures				
Truker-Lewis Index		-.443		
Normed Fit Index		.091		
Incremented Fit Index		0.095		
Non centrality Based Measure				
RMESA		0.364		
Comparative Fit Index		0.729		
Parsimonious Measures				
Normed Chi- Square		24.002		
Parsimonious Normed Fit Index		0.058		
Relative Fit Index		-.417		

4.22. Relationship between individual components of Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Return on equity

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias and status quo bias has insignificant positive impact on risk perception with p-value of 0.735 and 0.149 respectively, however, representative bias and illusion of control bias have insignicant negative impact on risk perception with p-value of 0.766 and 0.377 respectively. Risk perception has negative path to riskiness and Proactiveness, having p-values of 0.838 and 0.842, while it has positive significant path with innovativeness and insignificant path with competitive aggressiveness, having p-values of 0.002 and 0.123 respectively. Riskiness and innovativeness have negative impact on administrative expense ratio with p-values of 0.103 and 0.492 respectively; however, Proactiveness and competitive aggressiveness have positive impact on administrative expense ratio with p-values of 0.950 and 0.264 respectively. Moreover, Riskiness has insignificant negative impact on asset utilization ratio having p-values of 0.114; and competitive aggressiveness has significant negative impact on asset utilization ratio having p-values of 0.004, however innovativeness and Proactiveness have insignificant positive impact on asset utilization ratio having p-values of 0.259 and 0.961.

Both Administrative expense ratio and asset utilization ratio have insignificant negative path with return on equity having p-value of 0.653 and 0.208 respectively.

Table 4.22 (a)- Regression Table-USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.021	.338	.735	.055
RP <--- IC	-.019	-.298	.766	.055
RP <--- RB	-.056	-.883	.377	.055
RP <--- SQ	.090	1.443	.149	.055
RN <--- RP	-.013	-.205	.838	.412
IN <--- RP	.193	3.146	.002	.063
PN <--- RP	-.012	-.199	.842	.044
CA <--- RP	.096	1.542	.123	.066
AER <---RN	-.101	-1.630	.103	.062
AER <--- IN	-.043	-.688	.492	.062
AER <--- PN	.004	.062	.950	.062
AER <--- CA	.069	1.118	.264	.062
AUR <---RN	-.096	-1.579	.114	.092
AUR <--- IN	.069	1.129	.259	.092
AUR <--- PN	.003	.048	.961	.092
AUR <--- CA	-.176	-2.881	.004	.092
ROE<--- AER	-.029	-.468	.640	.007
ROE <--- AUR	-.078	-1.260	.208	.007
Measurement Model Data				
Variable=17, exogenous =9, endogenous=8				
Total degree of freedom=42		Sample size=257		
Proposed Model :chi square		Df=42	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		927.563		
Goodness of Fit Index		0.740		
Incremental Measures				
Truker-Lewis Index		-.540		
Normed Fit Index		0.043		
Incremented Fit Index		0.045		
Non centrality Based Measure				
RMESA		.287		
Comparative Fit Index		0.020		
Parsimonious Measures				
Normed Chi- Square		22.085		
Parsimonious Normed Fit Index		0.028		
Relative Fit Index		-.504		

When path analysis was done among individual variables of corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani sample, it has been found that overconfidence bias, illusion of control and representative bias has insignificant negative impact on risk perception with p-value of 0.744, 0.658 and 0.643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950. Risk perception has positive path to innovativeness and competitive aggressiveness, having p-values of 0.849 and 0.558, and null path with riskiness, having p-value of 0.996, while it has negative insignificant path with Proactiveness, having p-values of 0.967. Riskiness has significant negative impact on administrative expense ratio and asset utilization ration with p-values of 0.000 and 0.000 respectively; however, Proactiveness and competitive aggressiveness have significant positive impact on administrative expense ratio and asset utilization ratio. Innovativeness has null impact on administrative expense ratio with p-value of 0.999 and negative path with asset utilization ratio having p-value of 0.099.

Administrative expense ratio has insignificant negative path with net profit margin having p-value of 0.200, however, asset utilization ratio has significantly positive impact on market share growth having p-value of 0.005.

Table 4.22 (b)- Regression Table –Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <--- SQ	.005	.062	.950	.079
RN <--- RP	.000	-.005	.996	.170
IN <--- RP	0.014	.191	.849	.117
PN <--- RP	-0.003	-.042	.967	.172
CA <--- RP	.043	.586	.558	.124
AER <---RN	-0.659	-14.041	***	.637
AER <--- IN	0.000	.002	.999	.637
AER <--- PN	0.547	11.642	***	.637
AER <--- CA	0.180	3.867	***	.637
AUR <---RN	-0.678	-16.480	***	.721
AUR <--- IN	-0.067	-1.648	.099	.721
AUR <--- PN	0.591	14.351	***	.721
AUR <--- CA	0.198	4.858	***	.721
ROE<--- AER	-.093	-.944	.345	.068
ROE <--- AUR	.225	2.286	.022	.068
Measurement Model Data				
Variable=13, exogenous =9, endogenous=4				
Total degree of freedom=74		Sample size=175		
Proposed Model :chi square		Df=76	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1861.417		
Goodness of Fit Index		0.607		
Incremental Measures				
Truker-Lewis Index		-.456		
Normed Fit Index		0.095		
Incremented Fit Index		0.099		
Non centrality Based Measure				
RMESA		0.068		
Comparative Fit Index		0.078		
Parsimonious Measures				
Normed Chi- Square		24.492		
Parsimonious Normed Fit Index		0.060		
Relative Fit Index		-.429		

4.23. Relationship between individual components of Behavioral Biases, Risk Perception, Corporate Entrepreneurship, Agency Cost and Net profit margin

When path analysis was done among corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for USA sample, it has been found that overconfidence bias , illusion of control and status quo bias has insignificant positive impact on risk perception with p-value of 0.864, 0.514 and 0.490 respectively, however, representative bias has insignicant negative impact on risk perception with p-value of 0.241. Risk perception has negative path to riskiness and Proactiveness, having p-values of 0.666 and 0.872, while it has positive significant path with innovativeness and insignificant path with competitive aggressiveness, having p-values of 0.002 and 0.169 respectively. Riskiness and innovativeness have negative impact on administrative expense ratio with p-values of 0.688 and 0.315 respectively; however, Proactiveness and competitive aggressiveness have positive impact on administrative expense ratio with p-values of 0.889 and 0.763 respectively. Moreover, Riskiness and Proactiveness have insignificant negative impact on asset utilization ratio having p-values of 0.053 and 0.974 respectively; and significant negative impact on asset utilization ratio having p-values of 0.002 , however innovativeness has insignificant positive impact on asset utilization ratio having p-values of 0.161.

Administrative expense ratio has insignificant negative path with net profit margin having p-value of 0.200, however, asset utilization ratio has significantly positive impact on market share growth having p-value of 0.005.

Table 4.23 (a)-Regression Table –USA				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	.011	.172	.864	.055
RP <--- IC	.040	.653	.514	.055
RP <--- RB	-.072	-1.173	.241	.055
RP <--- SQ	.042	.691	.490	.055
RN <--- RP	-.021	-.432	.666	.412
IN <--- RP	.191	3.160	.002	.063
PN <--- RP	-.010	-.162	.872	.044
CA <--- RP	.083	1.374	.169	.066
AER <---RN	-.032	-.402	.688	.062
AER <--- IN	-.062	-1.004	.315	.062
AER <--- PN	.009	.139	.889	.062
AER <--- CA	.019	.302	.763	.062
AUR <---RN	-.117	-1.935	.053	.092
AUR <--- IN	.084	1.400	.161	.092
AUR <--- PN	-.002	-.033	.974	.092
AUR <--- CA	-.187	-3.139	.002	.092
NPM<--- AER	-.076	-1.280	.200	.098
NPM <--- AUR	-.171	-2.818	.005	.098
Measurement Model Data				
Variable=17, exogenous =9, endogenous=8				
Total degree of freedom=92		Sample size=257		
Proposed Model :chi square		Df=92	P=0.000	
Absolute Fit Measures				
Likelihood Ratio Chi Statistics		1058.276		
Goodness of Fit Index		0.767		
Incremental Measures				
Truker-Lewis Index		-.124		
Normed Fit Index		0.248		
Incremented Fit Index		0.265		
Non centrality Based Measure				
RMESA		0.068		
Comparative Fit Index		0.239		
Parsimonious Measures				
Normed Chi- Square		.203		
Parsimonious Normed Fit Index		0.167		
Relative Fit Index		-.112		

When path analysis was done among individual variables of corporate entrepreneurship, agency cost and firm performance in the presence of behavioral biases and risk perception for Pakistani sample, it has been found that overconfidence bias, illusion of control and representative bias has insignificant negative impact on risk perception with p-value of 0.744, 0. 658 and 0. 643 respectively, however, status quo bias has insignicant positive impact on risk perception with p-value of 0.950. Risk perception has positive path to innovativeness and competitive aggressiveness, having p-values of 0.849 and 0.558, and null path with riskiness, having p-value of 0, while it has negative insignificant path with Proactiveness, having p-values of 0.967. Riskiness has significant negative impact on administrative expense ratio and asset utilization ration with p-values of 0.000 and 0.000 respectively; however, Proactiveness and competitive aggressiveness have significant positive impact on administrative expense ratio and asset utilization ratio. Innovativeness has null impact on administrative expense ratio with p-value of 0.999 and negative path with asset utilization ratio having p-value of 0.099.

Moreover, administrative expense ratio and asset utilization ratio have insignificant positive path with net profit margin having p-value of 0.830 and 0.244.

Table 4.23 (b)- Regression Table- Pakistan				
	Adjusted Estimate	**CR**	**P value**	**Square Multiple Correlation**
RP <--- OC	-.024	-.326	.744	.079
RP <--- IC	-.033	-.442	.658	.079
RP <--- RB	-.036	-.464	.643	.079
RP <---SQ	.005	.062	.950	.079
RN <--- RP	.000	-.005	.996	.170
IN <--- RP	0.014	.191	.849	.117
PN <--- RP	-0.003	-.042	.967	.172
CA <--- RP	.043	.586	.558	.124
AER <---RN	-0.659	-14.041	***	.637
AER <--- IN	0.000	.002	.999	.637
AER <--- PN	0.547	11.642	***	.637
AER <--- CA	0.180	3.867	***	.637
AUR <---RN	-0.678	-16.480	***	.721
AUR <--- IN	-0.067	-1.648	.099	.721
AUR <--- PN	0.591	14.351	***	.721
AUR <--- CA	0.198	4.858	***	.721
NPM<--- AER	.022	.215	.830	.018
NPM <--- AUR	.118	1.164	.244	.018

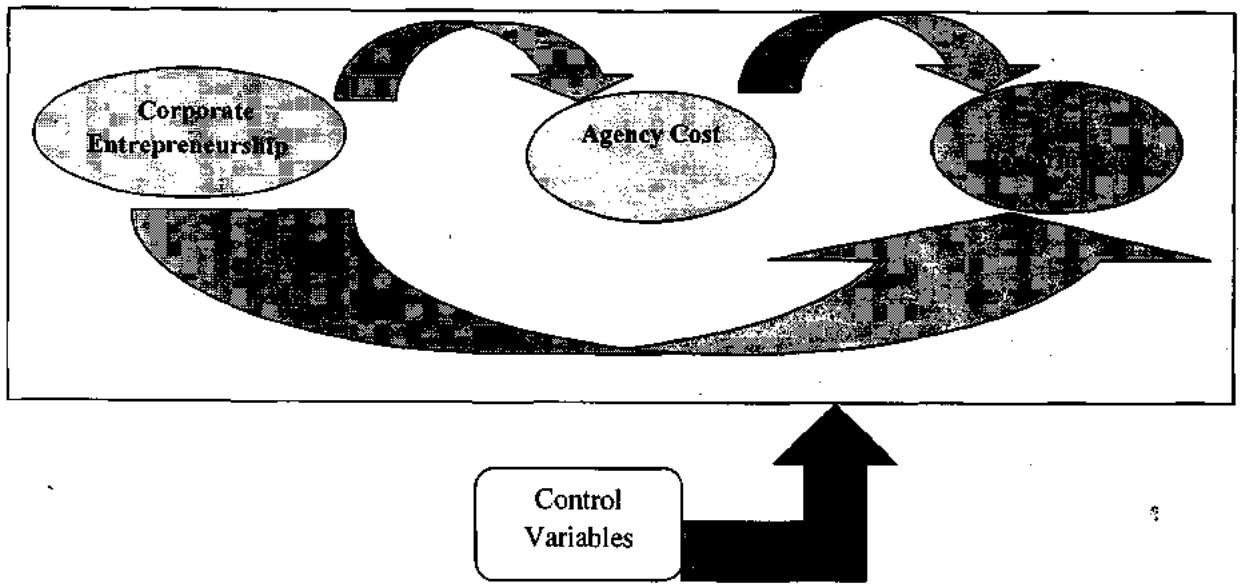
Measurement Model Data		
Variable=13, exogenous =9, endogenous=4		
Total degree of freedom=77	Sample size=175	
Proposed Model :chi square	Df=77	P=0.000
Absolute Fit Measures		
Likelihood Ratio Chi Statistics	1854.805	
Goodness of Fit Index	0.604	
Incremental Measures		
Truker-Lewis Index	-.443	
Normed Fit Index	0.091	
Incremented Fit Index	0.095	
Non centrality Based Measure		
RMESA	0.068	
Comparative Fit Index	0.074	
Parsimonious Measures		
Normed Chi- Square	24.088	
Parsimonious Normed Fit Index	0.364	
Relative Fit Index	-.417	

CHAPTER 5

DISCUSSION and CONCLUSION

5.1. Summary of Major Findings:

MODEL 1



5.1.1. USA

Composite Path Analysis

- Corporate entrepreneurship has significant negative path with agency cost
- Agency cost has insignificant negative relationship with firm performance
- Agency cost has significant positive relationship with market share growth
- Agency cost has insignificant positive relationship with return on assets
- Agency cost has insignificant negative relationship with return on equity

- Agency cost has significant positive relationship with net profit margin

Individual Path Analysis

- Riskiness has insignificant negative impact on administrative expense ratio and asset utilization ratio
- Innovativeness has insignificant negative impact on administrative expense ratio and insignificant positive effect on asset utilization ratio
- Proactiveness has insignificantly positive impact on administrative expense ratio and insignificant negative impact on asset utilization ratio
- Competitive aggressiveness has insignificant positive impact on administrative expense ratio and has significant negative impact on asset utilization ratio (It is attributable to cash)
- Administrative expense ratio has insignificant negative impact on market share growth
- Asset utilization ratio has significantly positive impact on market share growth
- Administrative expense ratio has insignificant negative impact on return on assets
- Asset utilization ratio has insignificantly positive impact on return on assets
- Administrative expense ratio and asset utilization ratio has insignificant negative impact relationship on return on equity
- Administrative expense ratio has insignificant negative impact on net profit margin
- Asset utilization ratio has significantly positive impact on net profit margin

5.1.2. Pakistan

Composite Path Analysis

- Corporate entrepreneurship has insignificant positive relationship with agency cost
- Agency cost has insignificant negative relationship with firm performance
- Agency cost has insignificant positive relationship with market share growth
- Agency cost has insignificant negative relationship with return on assets
- Agency cost has significant negative relationship with return on equity
- Agency cost has insignificant positive relationship with net profit margin

Individual Path Analysis

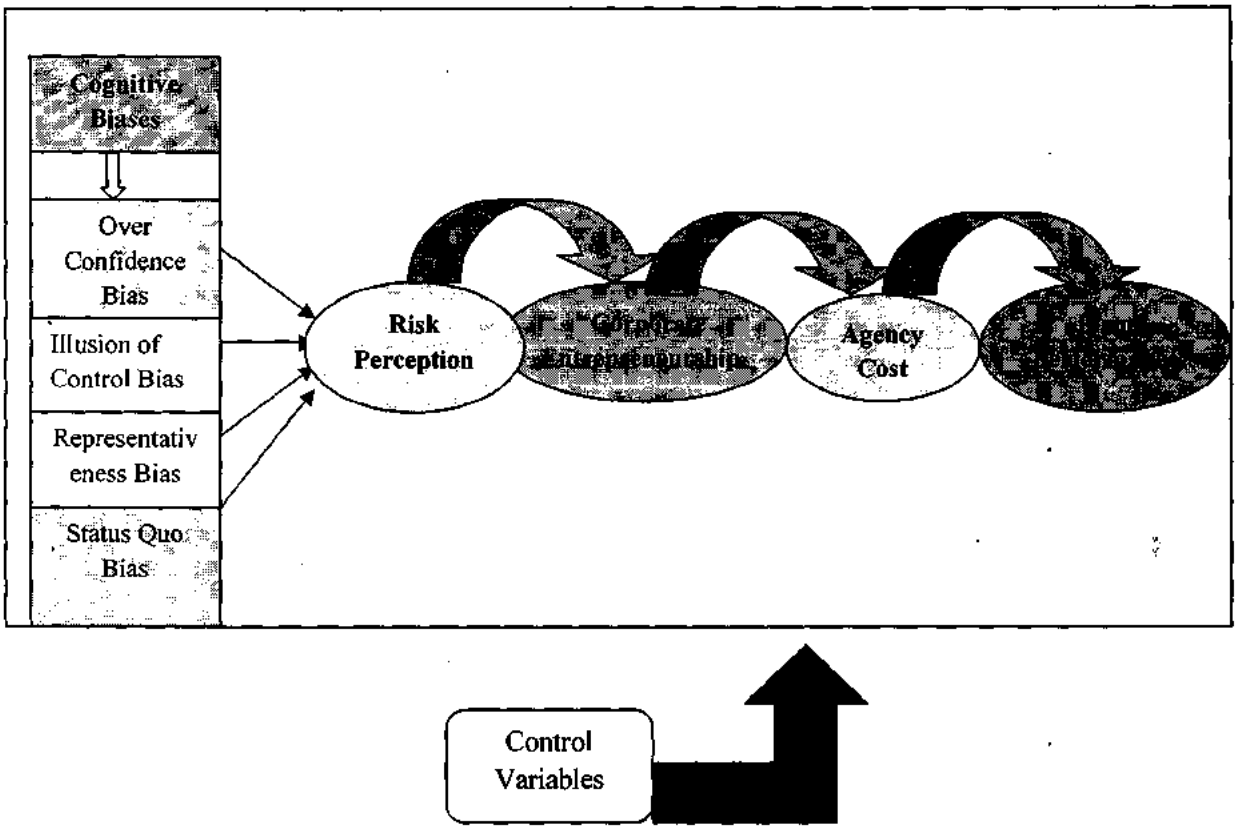
- Riskiness has insignificant negative impact on administrative expense ratio and asset utilization ratio
- Innovativeness has no impact on administrative expense ratio and insignificant negative effect on asset utilization ratio
- Proactiveness has insignificant positive impact on administrative expense ratio and asset utilization ratio
- Competitive aggressiveness has insignificant positive impact on administrative expense ratio and asset utilization ratio
- Administrative expense ratio has insignificant positive impact on market share growth

- Asset utilization ratio has significant positive impact on market share growth
- Administrative expense ratio has insignificant negative impact on return on assets
- Asset utilization ratio has significant negative impact on return on assets
- Administrative expense ratio has insignificant negative impact relationship on return on equity and asset utilization ratio has insignificant positive relationship
- Administrative expense ratio and asset utilization ratio has insignificant positive impact on net profit margin

5.1.3. Mediation Regression Analysis

- Agency cost does not mediate the relationship between corporate entrepreneurship and firm performance in USA and Pakistan

MODEL 2



5.1.4. USA

Composite Path Analysis

- Overconfidence bias , illusion of control and status quo bias have insignificant positive impact on risk perception
- Representative bias has insignicant negative impact on risk perception
- Insignificant positive path between risk perception and corporate entrepreneurship

Individual Path Analysis

- Risk perception has insignificant negative impact on riskiness and Proactiveness
- Risk perception has significant positive impact on innovativeness
- Risk perception has insignicant positive impact on competitive aggressiveness

5.1.5. Pakistan

Composite Path Analysis

- Overconfidence bias , illusion of control and representative bias have insignificant negative impact on risk perception
- Status quo bias has insignicant positive impact on risk perception
- Positive insignificant path between risk perception and corporate entrepreneurship

Individual Path Analysis

- Risk perception has null effect on riskiness
- Risk perception has insignificant negative impact on Proactiveness
- Risk perception has insignicant positive impact on innovativeness and competitive aggressiveness

5.2. Discussion of Results

When the path analysis was done among corporate entrepreneurship, agency cost and firm performance in USA, it was found that corporate entrepreneurship has a significant negative impact on agency cost. From individual analysis, it was seen that only competitive aggressiveness has significant negative impact on asset utilization ratio, which is attributable to cash generating units. They lose their capability with the passage of time, leading to low revenue. So in order to generate higher revenues, a firm should be competitive among other rival firms. However, riskiness, innovativeness and proactiveness are unable to generate revenues, thus their impacts are insignificant. Whereas, agency cost has an insignificant negative impact on firm performance. From individual analysis, it has been seen that administrative expense ratio has an insignificant negative impact on market share growth, return on assets, return on equity and net profit margin, depicting that high costs lead to lower profits. However, asset utilization ratio has a significant positive impact on market share growth and net profit margin. Main logic is that effective utilization of asset generates profits that lead to high market share.

However, in case of Pakistan companies when path analysis was run, it was seen that corporate entrepreneurship has an insignificant positive impact on agency cost. From individual analysis, it was found that riskiness and innovativeness has an insignificant negative impact on asset utilization ratio; however, Proactiveness and competitive aggressiveness have an insignificant positive impact on asset utilization ratio and administrative expense ratio. While, agency cost has an insignificant negative impact on firm performance. From individual analysis, it was observed that asset utilization ratio has a significantly positive impact on market share growth and return on assets.

Regarding hypothesis 1(a) confirms that corporate entrepreneurship has a negative significant impact on agency cost in USA, however, in Pakistan it has an insignificant positive impact on agency

cost. The main justification is that firms paid higher costs for their efficient working of assets, so it is not possible for Pakistani firms to locate funds for entrepreneurial activities in FY 2009 to FY 2011. In other words, cash generating units had been depleted because of negligence or not used properly due to electricity shortage, did not generate much revenue, or were unable to be involved in corporate entrepreneurship. The second explanation is that people of both countries think differently, as Pakistani people think that entrepreneurial activities demand cost, irrespective of benefits, so they treat them equally as administrative costs. Thirdly, Pakistan had severe economic losses due to past governments that did not emphasize investment activities in major sectors. Due to this reason, almost all sectors bear colossal losses in their infrastructures. Whereas, USA citizens prefer to lead in market through entrepreneurial activities, that increase revenue and profitability, automatically reduce agency cost. So due to these reasons, the above mentioned relationship is not supported in Pakistan. However, in the USA as a developed economy, it confirms that corporate entrepreneurship can be an effective technique for reducing agency cost within the organization.

In case of hypotheses 1(b), agency cost has insignificant negative impact on firm performance on composite basis; however, a significant relationship has been seen from individual components of firm performance. Both countries have confirmed that significant relationship. From individual analysis, it has been found that in the USA, the asset utilization ratio is a significantly positive impact on market share growth and net profit margin, showing that more cash generating units generate high profits that lead to market share growth. In case of Pakistan, AUR has a significant impact on market share growth depicting that investment and effective use of cash generating units lead to high market share, however, it has a negative impact on ROA, which is attributable to depreciation of fixed assets. In recent years, a firm may be negative or zero ROA, but gradually it becomes positive which leads to high market share. Based on these findings, the hypothesis 1(b) is also confirmed in both economies

Moreover, when mediation regression was done through using Preacher and Hynes (2008) test, it has been found that agency cost does not mediate the relationship between corporate entrepreneurship and firm performance, which rejects the hypothesis 1 (c)

According to Model 2, when the path analysis was run among behavioral biases, risk perception, corporate entrepreneurship, agency cost and firm performance, it was seen that overconfidence bias, illusion of control bias and status quo bias have an insignificant positive impact on risk perception while representative bias has an insignificant negative impact on risk perception. However, in case of Pakistan overconfidence bias, illusion of control and representative bias have insignificant negative impacts on risk perception while status quo bias has an insignificant positive impact on risk perception. The Hypotheses 2(a) and 2 (b) i.e overconfidence bias and illusion of control bias perceive less risk rejection in the USA and Pakistan. Hypothesis 2(c) also rejects that representative bias leads to low risk perception both in the USA and Pakistan, whereas, hypothesis 2(d) is rejected in both countries, exhibiting an insignificant positive relationship with risk perception.

Furthermore, risk perception has an insignificant positive impact on corporate entrepreneurship in the USA and Pakistan. From individual analysis, it was seen that risk perception has a significant positive impact on innovativeness in USA, depicting that USA companies are more concerned with launching innovative products because they want to take the competitive edge based on innovations and achieve market share irrespective of other things, however risk perception is independent of risk taking and proactive strategies, showing that they perceive less risk while moving towards risky projects and proactive strategies. Moreover, USA companies take second priority to competitive activities after innovation. However, in Pakistani companies, risk perception has an insignificant positive impact on innovativeness and competitive aggressiveness, which depicts that Pakistani companies perceive risk while launching innovations. Like the USA, Pakistani companies perceive

less risk while playing a proactive role in the market, while they don't invest in risky projects attributable to fear of failure. Hypothesis 3 is supported in the USA where risk perception has significant impact on innovativeness. However, on the composite basis, model 2 didn't receive significant support in both economies.

5.3. Alternate Model:

Table 5.1. Alternate Model

	Regression Table –USA			Regression Table –Pakistan		
	Adjusted Estimate	**CR**	**P value**	**Adjusted Estimate**	**CR**	**P value**
RP <--- OC	.021	-.343	.732	-.138	-1.848	.065
RP <--- IC	-.019	-.298	.766	-.092	-1.234	.217
RP <--- RB	-.056	-.895	-.895	-.089	1.202	.229
RP <---SQ	.090	1.452	.146	-.034	-.453	.651
CE <--- RP	.139	3.271	.001	-.028	-.371	.710
CE <--- OC	-.259	-6.139	***	.178	2.403	.016
CE <--- IC	.680	16.123	***	.157	2.140	.032
CE <--- RB	-.020	-.484	.629	.081	1.106	.269
CE <--- SQ	.011	.264	.792	.049	.672	.501
AGC <--- CE	-.137	-1.491	.036	.081	1.026	.305
AGC <--- OC	.053	.799	.424	.063	.664	.507
AGC <--- IC	.077	.875	.382	-.056	-.867	.386
AGC <--- RB	-.046	-.741	.459	-.173	-2.462	.014
AGC <--- SQ	.061	.976	.329	.124	1.640	.101
AGC <--- RP	-.011	-.179	.858	.103	1.385	.166
FP <--- AGC	-.085	-1.370	.171	.000	.001	.999
FP <--- OC	-.028	-.448	.654	.084	1.110	0.267
FP <--- IC	-.092	-1.478	.139	.045	.592	.554
FP<--- RB	-.012	-.198	.843	.072	.948	.343
FP <--- SQ	-.022	-.351	.726	.002	.024	.981

When the alternate analysis has been done to test the possible relationship in Model 2, it has been found that corporate entrepreneurship has significant positive relationship with illusion of control bias in both USA and Pakistani context. Overconfidence bias has significant negative relationship with corporate entrepreneurship in USA while it has significant positive relationship with corporate entrepreneurship in Pakistan. Corporate entrepreneurship has significant negative relationship with

agency cost; and significant positive relationship with risk perception in USA companies. Representativeness is significant negative relationship with agency cost in Pakistan.

From further econometrics analysis, the following results have been found:-.

Riskiness and Innovativeness have a negative impact on administrative expense ratio in USA and Pakistan depicts that those firms who bear high costs are independent enough to invest in risky projects.

Innovativeness has an insignificant positive effect on asset utilization ratio in the USA; however, innovativeness has an insignificant negative effect on asset utilization ratio. The main logic is that USA companies can generate higher returns through introducing new technology in the market; however, Pakistani firms don't become involved in innovative products due to fear of failure. Insignificant relationship is due to inefficiency of human capital.

Proactiveness and Competitive aggressiveness have insignificantly positive impacts on administrative expense ratio and an insignificant negative impact on asset utilization ratio in the USA, depicting that firms involved in entrepreneurial activities may only lead to high cost, irrespective of generation of higher returns because they already have initiative development activities in their country; whereas Proactiveness and Competitive aggressiveness have insignificant positive impacts on administrative expense ratio and asset utilization ratio in Pakistan. This depicts that firms involved in entrepreneurial activities lead to higher costs through launching innovative products in the market to better generate higher returns.

Administrative expense ratio has an insignificant negative impact on market share growth and Return on Assets, Return on Equity and Net Profit Margin in USA, while an insignificant negative impact on return on assets and return on equity; and an insignificant positive impact on market share growth and Net profit Margin in Pakistan. The main logic is that higher cost leads to low profit. In

initial years, ROA and ROE may be negative in short run; however, they become positive through financial modeling in the long run. Pakistan firms bear higher costs as the result of innovative projects, and achieve the higher market share and higher profits. Insignificant relationship depicts the non availability of adequate resources.

Asset utilization ratio has significant positive impacts on market share growth, ROA and net profit margin in the USA and Pakistan; however negative impacts on Return on Equity depict that cash generating units lead to high profits in the long run, however, previous losses still persist in equity that lead to negative returns.

Risk perception has insignificant negative impacts on riskiness in the USA; however, it has insignificant negative impacts on Proactiveness in the USA and Pakistan, depicts that proactive firms are less perceptive, generally involved in risky projects. Moreover, it has a positive impact on competitive aggressiveness in the USA, and Pakistan depicts that firms having more risk perception are better able to compete in the global environment.

Risk perception has significant positive impacts on innovativeness in USA; however, insignificant relationship in Pakistan are mainly attributable to firms which are more risk perceptive because they are able to launch latest technologies in the market, and they don't underestimate their risks while investing in risky projects

5.4. Implications for Research

Being a first endeavor to investigate the relationship of corporate entrepreneurship, agency cost and firm performance in the context of standard finance and behavioral finance approaches , this study provides a milestone for future studies. It confirms that corporate entrepreneurship acts as an efficient technique for removing the agency cost within organizations in the USA context. Entrepreneurs bring novel ideas into organizations through being involved in entrepreneurial activities. Entrepreneurs can

transform plans at their interest and get used to them according to changing scenarios (Stevenson and Gumpert, 1985). Entrepreneurs can perform value creation activities through actively participating in strategic processes, irrespective of relying on managers that eliminate managerial self interest to a significant extent. Secondly, if entrepreneurs create watchdogs for examining the behavior of managers through leverage financing, then this also serves as the best alternative for reducing managerial self interest (Crutehley and Hansen, 1989). Ultimately, corporate entrepreneurship reduces agency cost in organizations that leads to firm performance. However, behavioral biases are not helpful in entrepreneurial decision making because of possible individualistic characteristics. Some studies also found behavioral biases outcomes don't comply with the existing theoretical evidence; sometimes that shows different results even in the same context. So the practical implication of this study is that the organizations should focus on the standard finance approach while incorporating entrepreneurial activities. There is no significant role of behavioral approach in both economies that may be attributable to individualistic features of entrepreneurs. As this research contributes to dual economies, policy makers should be concerned with the following steps towards the effective making of strategic policies:

- They should be unbiased because they are pre-determined about certain issues.
- Policies should present the element of sincerity, never lead to loss of nation, clearly focusing on the principle of equity.

5.5. Future Directions/Limitations:

All economies need corporate entrepreneurship in real terms for achieving competitive advantage; however, behavioral biases did not provide any support that may impact on entrepreneurial activities. So it is highly appreciable that in future studies, the behavioral biases

would be re-examined in entrepreneurial settings while controlling more factors. Secondly, the relationship between corporate entrepreneurship, agency cost, firm performance and behavioral biases would be investigated in the presence of other possible variables.

5.6. Conclusion

This study bridges the gap in literature by extending the relationship between corporate entrepreneurship and agency cost, to firm performance. In addition to the standard finance approach, this model has been further tested in the presence of behavioral biases. Finally, this study presents the outcomes in developed (USA) and developing (Pakistan) economies. So, the contributions of this study are to consider both the standard and behavior finance approaches and two different economies. From the analysis of Model 1, significant support has been met in the USA companies, however, Pakistan companies didn't show the significant relationship between corporate entrepreneurship. Possible explanations include the high cost for effective and proper working of cash generating units which leads these firms to not having enough funds to be involved in entrepreneurial activities for the period of FY 2009 to FY 2011. Moreover, cash generating units had not been properly used due to electricity shortage, unable to earn much revenue, which resists the involvement in corporate entrepreneurship. Furthermore, Pakistan had been in severe economic losses due to its past government, which neglected the investment opportunities in various sectors, leading to huge colossal losses in their infrastructures. (Saeed, 2013 and Economic Survey of Pakistan, 2012-2013).

Additionally, researcher also found that people of both countries think differently, as Pakistani people think that entrepreneurial activities demand high cost, irrespective of considering its merits, so they treat entrepreneurial activities as equally as administrative costs. Whereas, the USA citizens prefer to lead in market through entrepreneurial activities that automatically reduce costs. Based on

these reasons, the above mentioned relationship does not support itself in Pakistan. However, the USA, as a developed economy, confirms that corporate entrepreneurship can be an efficient technique for reducing agency cost within the organization, which supports Bhutta and Shah' s Model.(2011,a)

When the above mentioned relationship has been tested in behavioral finance perspective, in model 2, it has been found that behavioral biases have insignificant relationship on corporate entrepreneurial activities through risk perception in both the USA and Pakistan. This is attributable to the fact that behavioral biases are independent of corporate entrepreneurial activities. However, the researcher personally visited both countries and found the differences in the behavior of people, generally. Previous research shows that behavioral biases are not consistent over time, usually impact entrepreneurial activities differently, and at different points of time. Simon, et, al (1999) found significant impact of overconfidence on risk perception; and Keh, et, al (2002) found the significant impact of illusion of control bias on risk perception while they didn't find any impact of overconfidence and representativeness on risk perception. Similarly, Bulut (2008) found the significant impact of overconfidence bias, illusion of control and representativeness on risk perception; however, they failed to identify the impact of status quo bias on risk perception, stills demands to execute them in more entrepreneurial setting.

From the above discussion, it has been concluded that corporate entrepreneurship can act as an efficient technique for reducing agency problems within the organization. While being involved in entrepreneurial activities, tangible outcomes as well as intangible outcomes can be achieved (Davis, 2006). Corporate entrepreneurship can be advantageous if it is implemented effectively, which can't be achieved without individualistic support and organizational support. In this essence, executives play a crucial role through incorporating corporate entrepreneurship; they can participate actively in innovation as well as wealth creation. Additionally, entrepreneurs don't depend on managers' deeds

while achieving organizational goals, which cause managers to demand excessive returns without taking any action against the executive's reputation because of their job security. Meanwhile, both entrepreneurs and managers cooperate in strategic orientation. The effective implementation of corporate entrepreneurship can be worthwhile through the mutual cooperation of both entrepreneurs and managers within firms; otherwise, it could deteriorate entrepreneurial activities.

5.7. Recommendations:

- Corporate entrepreneurship should be introduced and implemented in companies, emphasizing individualistic support as well as organizational support.
- Secondly, top management should trigger corporate entrepreneurship in strategic policies and operations
- Providing an effective environment to the enthusiastic and hard working person, so that they can perform while using their cognitive behavior in opportunity seeking.

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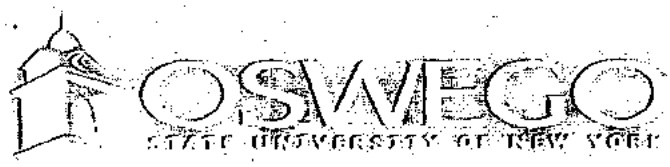
Appendix-Questionnaire for USA



Research Questionnaire

*Q. No.*_____

Dear Executive,

I am a visiting scholar in the School of Business at SUNY Oswego. I am conducting my study titled, "Corporate Entrepreneurship, Agency Cost and Firm Performance: Evidence from Developed and Developing Economies", which is a part of my PhD research. The study explores corporate entrepreneurs' behavioral biases that would impact their decision making abilities , ultimately reflecting in their firms' performance.

For this purpose, I am conducting this survey of selected company executives from US firms listed at New York Stock Exchange. Please complete the attached questionaire (which will take approximately 15 minutes) and return.

Your responses will be held in strictest anonymity and the study results will be reported in aggregate.

If you have any questions, please feel free to contact me nousheen.bhutta@oswego.edu Thank you for agreeing to participate in this educational endeavor .

Best Regards,

Nousheen T. Bhutta, MS
Visiting Scholar
School of Business
SUNY-Oswego
Oswego, NY 13026

Sarfraz A. Mian, PhD
Chair, Marketing & Management
School of Business
SUNY-Oswego, Oswego, NY 13126
(Research Supervisor of Ms. Bhutta)

Part 1: For each of the following items please select an option (A or B) you feel most comfortable with

1A	Receiving $ 32,000 for sure.		1 B	An 80% probability of getting $ 40,000	
2A	Receiving $ 30,000 for sure.		2 B	A 20% probability of getting $ 150,000	
3 A	Receiving $ 180,000 for sure.		3 B	A 90% probability of getting $ 200,000	
4 A	Receiving $ 16,000 for sure.		4 B	A 10% probability of getting $ 160,000	
5 A	Receiving $ 25,000 for sure		5 B	A 50% probability of getting $ 50,000	

Part 2: **Please indicate to what extent you agree with the statements in the table below by selecting the appropriate box against each statement You are a person who:**

1	Strongly Disagree	2	Disagree	3	Neutral	4	Agree	5	Strongly Agree

	Corporate Entrepreneurship					
1.	Relative to our competitors, our company has higher propensity to take risks	1	2	3	4	5
2.	Our company has shown a great deal of tolerance for high risk projects	1	2	3	4	5
3.	In general, the top managers of my firm favor, a bold, aggressive posture in order to maximize the probability of exploiting potential when faced with uncertainty	1	2	3	4	5
4.	Most people in this organization are willing to take risks	1	2	3	4	5
5.	This organization supports many small and experimental projects realizing that some will undoubtedly fail	1	2	3	4	5
6.	The term "risk taker" is considered a positive attribute for people	1	2	3	4	5
7.	People are often encouraged to take calculated risks with new ideas around here	1	2	3	4	5
8.	Our company frequently tries out new ideas	1	2	3	4	5
9.	Our company is creative in its methods of operation	1	2	3	4	5
10.	Our company seeks out new ways to do things	1	2	3	4	5
11.	My company emphasizes development of new products	1	2	3	4	5
12.	My Company spends on new product development activities	1	2	3	4	5
13.	My Company invests in developing proprietary Technologies	1	2	3	4	5
14.	Typically my company initiates actions before our competitors	1	2	3	4	5
15.	In dealing with its competitors, my firm has a strong tendency to be ahead of other competitors in introducing novel idea or products	1	2	3	4	5
16.	My company is very often the first firm to introduce new products/services and operating technologies.	1	2	3	4	5
17.	Our firm shapes the environment by introducing new products, technologies, administrative techniques.	1	2	3	4	5
18.	Owing to the nature of the environment, bold, wide ranging acts are necessary to achieve the firm's objectives	1	2	3	4	5
19.	My company typically adopts a very competitive, 'undo-the-competitor' posture	1	2	3	4	5
20.	My firm has a strong tendency to increase the market share by reducing the competitors'.	1	2	3	4	5
	Illusion of Control					
1.	We can accurately estimate the total demand for my business	1	2	3	4	5
2.	We can accurately predict when larger competitors will enter the market	1	2	3	4	5
3.	We can be a successful business, even other may fail.	1	2	3	4	5

Part 3: Overconfidence

Please answer the following questions. While deciding the possible range, please use your instant judgment

		If You are Not Sure		90% Sure
		Lower Limit	Upper Limit	
	Example: what is the total population of USA?	290 mln	320 mln	
1	What is GDP per Capita in USA?			
2	What is Inflation rate in USA?			
3	What is the unemployment rate in USA ?			
4	What is the literacy rate in USA?			
5	What is the minimum wage per week of US workers?			
6	What percentage of Population in USA lives below poverty line?			
7	What is the distance (in miles) from New York City to Oswego, NY?			

Part 4: Risk Perception and Representativeness

Please read the following case, which is about a new business opportunity for Mr. John. The aim of this part is to judge the risk associated with bringing the new product to market. For the moment, put yourself in the position of Mr. John.

John is a successful manager at JC Penny in New York State. He has five years of experience and has a secure position in the company. He wants to setup his own business however, John is exploring whether his idea is sensible or not. John has not carried out market research in order to investigate whether his idea is worth pursuing or not. However, he has consulted with some professionals colleagues , and they gave him a positive feedback . John is very eager about this new business idea, although he has no experience in launching his own business. He is also uncertain whether his business market will grow or not.

John thinks that he requires 300,000 USD in order to launch his new business, but currently he has only 170,000 USD in his bank account. So he has to arrange for the remaining funds for the launch.

1	Strongly Disagree	2	Disagree	3	Neutral	4	Agree	5	Strongly Agree

1	The overall risk of this business is high.	1	2	3	4	5
2	The probability of failure is high.	1	2	3	4	5
3	The founder stands to lose a lot financially.	1	2	3	4	5
4	There is a lot uncertainty when predicting how well the business will do.	1	2	3	4	5

Please state three reasons that influenced your view on whether Mr. John should start the above described business. Keep it simple and short .

A.	B.	C.

Part 5: Status Quo

You are executive of a company dealing with investment decisions. Please choose one alternative for each of the following 4 questions.

1	***You are planning on buying a new MP3 player. Which model are you going to select?***		
A	Panasonic (256 GB memory, $ 2940).	B	iRiver (5 GB memory, $ 264).
C	Samsung (5 GB memory, $ 161).	D	Not Sure
2	***Which office accommodation will you choose?***		
A	Average location, average layout, high cost.	B	Bad location, good layout, medium cost.
C	Good location, inconvenient layout, good cost.	D	Not Sure
3	***What camera are you like to buy?***		
A	Sony 16.7 megapixel, $ 700	B	Nikon 14.2 megapixel, $ 450
C	Canon 12.8 megapixel, $ 330	D	Not Sure
4.	***Which car will you prefer?***		
A.	The original *grey Mercedes-Benz E-Class*	B	Toyata Avalon
C	Hundai Sonata	D	Not Sure

BACKHROUND INFORMATION

Part 6: Please tick the appropriate checkbox below.

1. Gender ☐ Male ☐ Female
2. Age: ☐ 20 yrs -30yrs; ☐ 31yrs- 40yrs; ☐ 41yrs -50yrs; ☐ 51yrs-60yrs; ☐ 61yrs-80yrs ; ☐ Older than 80
3. Name of organization you are currently working in? _____
4. Education *(highest degree or certificate attained)* _____
5. Total work experience? *Years* _____ *Months* _____

Thank you for your time and attention.

Appendix II-Questionnaire for Pakistan

International Islamic University, Islamabad.

Faculty of Management Science

Dear Participant, *Q. No.*_____

Thank you for agreeing to fill out this questionnaire.
I am a PHD Scholar at FMS, International Islamic University, Islamabad.
I am conducting a study for my thesis ***"Corporate Entrepreneurship, Agency Cost and Firm Performance"***.
You could help me in my research by filling out this questionnaire. I assure you that your responses will be held in strictest anonymity and resulting data will be summarized on a general basis.
Please read the instructions carefully and answer all the questions. There are no "trick" questions, so it is important that all questions be answered.
I once again thank you for your cooperation.

Sincerely,
Nousheen Tariq Bhutta

Dr. Syed Zulfiqar Ali Shah,
Deputy Dean & HOD Finance, IIUI
(Research Supervisor of Ms. Bhutta)

Part 1: Demographics and Control Variable

A. Please tick the appropriate checkbox below.

1. Gender ☐ Male ☐ Female
2. Age: ☐ 20 yrs -30yrs; ☐ 31yrs- 40yrs; ☐ 41yrs -50yrs; ☐ 51yrs-60yrs; _ 61yrs-80yrs ; _ Older than 80
3. Name of organization you are currently working in? _____
4. Education *(highest degree or certificate attained)* _____
5. Total work experience? *Years* _____ *Months* _____

B. Please answer the following items by choosing one alternative you feel most comfortable with.

1A	Receiving Rs.32,000 for sure.		1 B	An 80% chance of getting **Rs.** 40,000.	
2A	Receiving Rs. 30,000 for sure.		2 B	A 20% chance of getting **Rs.** 150,000.	
3 A	Receiving Rs. 180,000 for sure.		3 B	A 90% chance of winning **Rs.** 200,000	
4 A	Receiving Rs. 16,000 for sure.		4 B	A 10% chance of getting **Rs.** 160,000.	
5 A	Receiving Rs. 25,000 for sure		5 B	A 50% chance of getting Rs. 50,000	

Part 2: Corporate Entrepreneurship

Please circle the appropriate number against each statement, according to the scale given below.You are a person who:

1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

	Corporate Entrepreneurship					
1.	Relative to our competitors, our company has higher propensity to take risks	1	2	3	4	5
2.	Our company has shown a great deal of tolerance for high risk projects	1	2	3	4	5
3.	In general, the top managers of my firm favor, a bold, aggressive posture in order to maximize the probability of exploiting potential when faced with uncertainty	1	2	3	4	5
4.	Most people in this organization are willing to take risks	1	2	3	4	5
5.	This organization supports many small and experimental projects realizing that some will undoubtedly fail	1	2	3	4	5
6.	The term "risk taker" is considered a positive attribute for people	1	2	3	4	5
7.	People are often encouraged to take calculated risks with new ideas around here	1	2	3	4	5
8.	Our company frequently tries out new ideas	1	2	3	4	5
9.	Our company is creative in its methods of operation	1	2	3	4	5
10.	Our company seeks out new ways to do things	1	2	3	4	5
11.	My company emphasizes development of new products	1	2	3	4	5
12.	My Company spends on new product development activities	1	2	3	4	5
13.	My Company invests in developing proprietary Technologies	1	2	3	4	5
14.	Typically my company initiates actions before our competitors	1	2	3	4	5
15.	In dealing with its competitors, my firm has a strong tendency to be ahead of other competitors in introducing novel idea or products	1	2	3	4	5
16.	My company is very often the first firm to introduce new products/services and operating technologies.	1	2	3	4	5
17.	Our firm shapes the environment by introducing new products, technologies, administrative techniques.	1	2	3	4	5
18.	Owing to the nature of the environment, bold, wide ranging acts are necessary to achieve the firm's objectives	1	2	3	4	5
19.	My company typically adopts a very competitive, 'undo-the-competitor' posture	1	2	3	4	5
20.	My firm has a strong tendency to increase the market share by reducing the competitors'.	1	2	3	4	5
	Illusion of Control					
1	We can accurately estimate the total demand for my business	1	2	3	4	5
2	We can accurately predict when larger competitors will enter the market	1	2	3	4	5
3	We can be a successful business, even other may fail.	1	2	3	4	5

Part 3: Overconfidence

Please answer the following items, by deciding the ranges, which the right answers may be in. Please fill in the questions as quick as possible, on the basis of what you know at the moment. It does not matter whether or not you state the correct interval.

		Lower Limit	Upper Limit	90% Sure
	Example: what is the total population of Pakistan?	165 mln	190 mln	187mln
1	What is GDP per Capita in Pakistan?			
2	What is Inflation rate in Pakistan?			
3	What is the unemployment rate in Pakistan?			
4	What is the literacy rate in Pakistan?			
5	What is the minimum wages per week of Pakistani workers?			
6	What percentage of Population in Pakistan lives below poverty line?			
7	What is the distance (in miles) from Islamabad to Lahore?			

Part 4:Risk Perception and Representativeness

Please read the following case, which is about a new business opportunity for Mr Ahmed. For the moment, shift yourself to the position of Mr Ahmed.

Mr. Ahmed is a successful manager at OGDCL. He has five years of experience at this company and has a high ranked position there. He wants to start his own company

Mr Ahmed is checking whether his new business idea is realistic or not. He has no money to carry out market research in order to check if his business idea is worth considering. He spoke to some well informed potential customers and they gave Mr Ahmed positive feedback. Mr Ahmed is very enthusiastic about his business idea even he has no experience in this industry or starting an own company. He feels that he can earn a lot of money in starting this business, based on the recommendations of potential customers and his friends. He is not sure whether this market will grow or not.

Mr Ahmed thinks that he needs Rs. 300,000 to finance the new business, but he has only Rs.170, 000 at his bank account. So he has to borrow the rest or ask others to help him financially

1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Use this Table

1	The overall risk of this business is high.	1	2	3	4	5
2	The probability of failure is high.	1	2	3	4	5
3	The founder stands to lose a lot financially.	1	2	3	4	5
4	There is a lot uncertainty when predicting how well the business will do.	1	2	3	4	5

Please state three issues that influenced your view on whether Mr Ahmed should start the above described business. Keep it short and simple.

A.	B.	C.

Part 5: Status Quo

1	***You are planning on buying a new one. Which model are you going to buy?***	
A	Panasonic (256 GB memory, Rs. 290,000).	
B	iRiver (5 GB memory, Rs. 26,000).	
C	Samsung (5 GB memory, Rs. 16,000).	
2	***Your current four offices are located in an average area. Which office space will you rent?***	
A	Average location, average layout, high cost	
B	Bad location, good layout, medium cost	
C	Good location, inconvenient layout, good cost	
3	***You decide to immediately buy a new camera. What camera are you going to buy?***	
A	Sony camera 16.7 megapixel, Rs. 69,999	
B	Nikon 14.2 megapixel, Rs. 51,499	
C	Canon camera 12.8 megapixel, Rs. 46,990	
4.	***Which car will you choose?***	
A.	The original *grey* Honda City.	
B	A *blue* Suzuki	
C	A *white* Margalla	

Comments

If you have comments regarding this research, please specify it here.

Thank You for Your Cooperation