CORPORATE ENTREPRENEURSHIP, AGENCY COST AND FIRM PERFORMANCE: AN EMPIRICAL STUDY FROM PAKISTANI STOCK MARKET

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The Faculty of Management Sciences,

International Islamic University, Islamabad.

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July, 2010

DEDICATION

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

(Acceptance by the Viva Voice Committee)

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ABSTRACT

The study aims to bridge the gap in literature by establishing the connection between corporate entrepreneurship and agency cost. It also examines the moderating role of agency cost on the relationship between corporate entrepreneurship and firm performance, to validate whether in the presence of agency cost the corporate entrepreneurship yields high profit or not. Beginning with theoretical background of corporate entrepreneurship and agency cost, this study proposes a model to test, empirically, the relationship between corporate entrepreneurship and agency cost. The validated construct has been adopted to measure the corporate entrepreneurship of Pakistani non-financial sector companies listed at KSE. The data for firm performance and agency cost has been taken from Balance Sheets Analyses (SBP Report), KSE website and Annual reports of companies on three yearly average bases (2006, 2007 and 2008). The findings highlight the significant negative relationship between corporate entrepreneurship and agency cost, while no moderating impact of agency cost has been found on the link between corporate entrepreneurship and firm performance. It also presents that the impact of corporate entrepreneurship is more negatively significant on agency cost reflecting that corporate entrepreneurship can act as an excellent technique in reducing agency problems within organizations that leads to high performance. This study provides a keystone for future studies; so it is highly expected that the relationship between corporate entrepreneurship and agency cost would be further investigated at home or abroad for incorporation in generalized studies.

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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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ACKNOWLEDGEMENT

All praises is attributed to "**The Allah Almighty**", the most beneficent and merciful who blessed me power of wisdom, encouraging family, sincere & kind teachers and supportive friends. His countless blessings enabled me to accomplish my MS dissertation. All respect to our Holy prophet **Hazrat Muhammad** (Peace Be Upon Him) who enabled us to recognize our creator Allah, and who is forever an excellent model for the guidance of whole mankind.

I would like to present my profound gratitude to my respected and worthy supervisor **Dr. Syed Zulfiqar Ali Shah** for his valuable guidance and encouraging feedback during completion of this dissertation. I also express my sincere appreciation for **Mr. Ikram Ullah Toor** for his consistent encouragement and support during my stay in IIUI. I am thankful to my respected teacher Mr. **Waseemullah** and other members of MS/PhD Committee for their guidance to enhance the quality of work of my thesis. I also convey my deep appreciation to my respected teachers especially **Mr. Mati Ur Rehman Mirza, Dr. Nauman Farooqi, Dr. Shahbaz Gill, Mr. Arshad Hasan, Mr. Mohammed Shafique** and my all other respective teachers for their contributions in my knowledge. I am exceedingly grateful to **Mr. Zafar Malik** (MS/PhD Program Manager) and **Mr. Raja Amjad** for their paramount support and cooperation in all academic activities.

Last but not the least, I am indebted to **My Parents** who supported me in every aspect of my life, especially my **father** who made it possible for me to personally visit different organizations of Pakistan, otherwise it was difficult for me to accomplish this task.

Nousheen Tariq Bhutta

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CHAPTER 1

INTRODUCTION

1.1. Introduction :

In recent years, the research on Corporate Entrepreneurship has fostered rapidly and it has been argued that Corporate Entrepreneurship escorts to firm financial performance. (Zahra, 1993).Corporate Entrepreneurship reflects the development and execution of novel ideas in organization (Hornsby et al., 2002) and it might be fundamental element of victorious organizations (Kanter, 1984) .Corporate entrepreneurship can be vital source for abasing and controlling threats (Peterson & Berger, 1971).The progress in corporate entrepreneurship tasks might facilitate the individuals to perform their entrepreneurial activities in such an organizational structure where they want (Burgelman,1983). For establishment of corporate entrepreneurship projects, crucial modification in organizational culture as well as in managerial style might be required (Zahra, 1991) and these modifications can not be attained without the powerful support of top managers & executives (Zahra & Covin, 1995). Corporate Entrepreneurship can heighten the shareholder's value by constructing the work environment that props up the individual and corporate growth, conferring employees an opportunity to exploit their creative skills and fabricating the organizational culture that enhance the market performance of company (Zahra,1991). But sometimes the managers want to maximum their self interest irrespective of not apt for principals that lead to agency problems arise between the shareholders and managers (Barnea, Haugen & Senbet, 1985). Firms having high agency costs are probable to face threats from other firms in a competitive environment (Jensen

& Ruback, 1983). Agency cost weakens the firm performance (Xiao, 2008), it might be a snag to executing the Corporate Entrepreneurship and financial firm performance.

1.2. Purpose of the Study:

The purport of the study is to bridge the gap in literature by corroborating relationship between Corporate Entrepreneurship and Agency cost. Secondly, this study examines the moderating role of agency cost on the relationship between corporate entrepreneurship and firm performance for validating, whether the corporate entrepreneurship yields high profit in the presence of agency cost or otherwise. So the specialty of this research is to explore the link between corporate entrepreneurship and agency cost as well as investigating moderating role of agency cost on the link between corporate entrepreneurship and firm performance.

1.3. Statement of the Problem:

"To explore the relationship between corporate entrepreneurship and agency cost, also to scrutinize the moderating role of agency cost on the relationship between corporate entrepreneurship and firm performance"

1.4. Objectives of the Research:

- This study addresses the gap in literature by establishing connection between two well researched rivulets; i.e. Corporate Entrepreneurship and Agency Cost. Albeit extensive research on corporate entrepreneurship (Miller & Friesen, 1978; 1982; Pinchot,1985; Drucker, 1985; Zahra & Covin,1995; Lumpkin & Dess, 1996; Sharma & Chrisman,1999; Hitt et al,2001; Pittaway,2001; Dess et al., 2003) and Agency Cost(Jensen & Meckling, 1976; Jensen, 1986; Jensen,1993; Ang, Cole & Lin, 2000; Doukas, Kim & Pantzalis, 2000; Xiao, 2008) exists but up to the

knowledge & understanding of author, link between Corporate Entrepreneurship and Agency Cost remains unexplored. So prime objective of this study is to explore the relationship between corporate entrepreneurship and agency cost.

- Available literature (Covin & Zahra, 1995; Knight, 1997; McDougall & Oviatt, 2000; Gartner & Birley, 2002; Luo et al., 2005; Yang, Li-Hua, Zhang & Wang,2007; Aktan & Bulut , 2008; Zahra, 2008) enunciates positive relationship between corporate entrepreneurship and firm performance, showing corporate entrepreneurship leads to high profit. But in the presence of agency cost whether corporate entrepreneurship yields performance or not, remains unanswered. So the second objective of this study is to scrutinize the moderating role of agency cost on the relation between corporate entrepreneurship and firm performance.

1.5. Significance of Research:

The present study is aimed to contribute literature on Corporate Entrepreneurship in many ways. Firstly, it is an endeavour to viaduct a significant gap in literature by authenticating nexus between Corporate Entrepreneurship and Agency Cost. Although extensive research on corporate entrepreneurship and agency cost exists but there is no research study till date that investigates the relationship between corporate entrepreneurship and agency cost. So the sphere of the study is to explore and attract the attention of 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 in Pakistan, as Pakistan needs these activities to achieve competitive position in the global environment. Thirdly, this

study assumes that Corporate Entrepreneurship can be an efficient technique in removing agency problems within organizations.

1.6. Research Questions:

This study addresses four research questions, given here below:-

Q1. What possible relations could be built among Corporate Entrepreneurship and Agency Cost, and what will be the direction of relations?

Q2. Does Agency cost has any significant impact on the Corporate Entrepreneurship of the organization?

Q3. Which Corporate Entrepreneurship dimension can directly affect the Agency cost?

Q4.Does Agency cost moderate the relationship between Corporate Entrepreneurship and Firm Performance?

This thesis is organized in a way that the first section describes the introduction and rationale of the study followed by literature review to build theoretical framework. The next one delineates the methodology, trailed by discussion of the results and conclusion, the last section discusses the managerial implications and future research direction.

One important point in stating propositions is that either there is no or very weak support available in literature regarding this proposition, they are stated on the basis of wisdom gained from literature and are subject to great empirical testing for support.

CHAPTER 2

LITERATURE REVIEW

2.1. Corporate Entrepreneurship:

The concept of Corporate Entrepreneurship was created and established by Pinchot (1985). Corporate Entrepreneurship, also presented as an 'intrapreneurship' (Pinchot, 1985; Antoncic & Hisrich, 2001), corporate venturing (Vesper, 1990) and internal corporate entrepreneurship (Jones & Butler, 1992). Many research scholars defined Corporate Entrepreneurship as "a process by *which individuals inside organizations pursue opportunities independent of the resources they currently control*" (Stevenson & Jarillo, 1990); "*doing new things and departing from the customary to pursue opportunities*" (Vesper 1990); " 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 & Chrisman,1999); *"activities in a large firm resulted in diversified products and markets, as well as being instrumental to producing "impressive financial results"*(Kuratko, Ireland & Hornsby, 2001); "*a spirit of entrepreneurship within the existing organization*" (Hisrich & Peters, 2007). Other definitions of corporate entrepreneurship by research scholars are given in Table 2.1, quoted by Adonisi (2003); Davis (2006); Kearney, Hisrich & Roche (2007); and Antoncic & Prodan (2008)

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 & 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 & Slevin (1989).	"Corporate Entrepreneurship encourages leaders to promote innovativeness, pro-activeness and risk taking among the members within a larger organizational context"
Guth & 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 & Slevin (1991)	"Corporate entrepreneurship involves extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations (p. 7)"
Jones & Butler (1992)	"Internal Corporate Entrepreneurship refers to entrepreneurial behaviour within one firm (p. 734)"
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)"
Chung & Gibbons (1997)	"Corporate entrepreneurship is an organizational process for transforming individual ideas into collective actions through the management of uncertainties (p. 14)"
Antoncic & 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, & 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)."

While reviewing the different definitions of corporate entrepreneurship, it has been found that some authors used the same terminologies for highlighting different concepts,

whereas some researchers used different terminologies for emphasizing the same concept. Some general themes relating to corporate entrepreneurship are inferred from the above Table 2.1; those confer the key conceptualization of corporate entrepreneurship are followed by:

- The establishment of new business within the existing enterprise.
- Strategic renewal of organization and its structure & culture.
- Bringing innovation within the existing organization.
- Vitality of corporate entrepreneurship for small and large organizations.

Many scholars mixed the terminology of corporate entrepreneurship with entrepreneurship; however there was difference between them. Entrepreneurship is originator driven firm and grounded at theoretical background of economics, sociology & psychology (Stevenson & Jarillo, 1990), while corporate entrepreneurship referred that the behavior of large organization in an entrepreneurial way (Covin & Slevin, 1991). Dess, Lumpkin & McGee (1999) depicted that corporate entrepreneurship was more complex than entrepreneurship, as it considered organizational structures, strategies, processes and key challenges. Christensen (2004) presented the relationship of corporate entrepreneurship & entrepreneurship in Fig 2.1

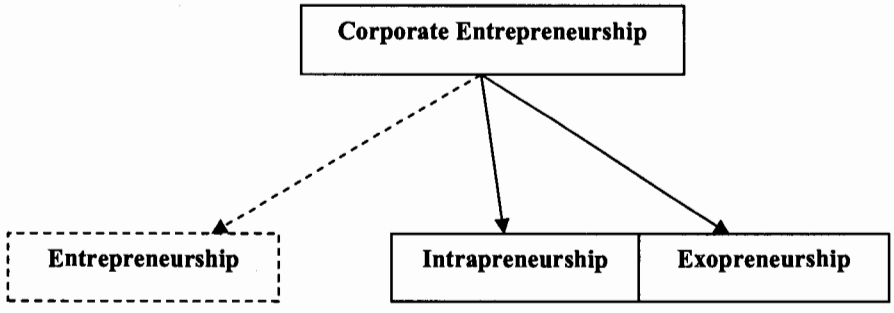


Fig 2.1: Relationship between Corporate Entrepreneurship, Entrepreneurship, Intrapreneurship, and Exopreneurship

He explained the dotted line as it might be a relationship between existing company and new independent business because many entrepreneurs developed their capabilities and skills within existing company before establishing the new venture (Pinchot, 1985). While Intrapreneurship referred as entrepreneurship within existing organization (Morris & Kuratko, 2002) and Exopreneurship as entrepreneurship through external networks (Chang, 1998).

Corporate Entrepreneurship has become an imperative area of management research for the last three decades as a strategic orientation to conquer external adaptation problems firms face in search for sustained competitive advantage in the global competition (Miller & Friesen1978; 1982). Hitt et al. (2001) demonstrated that Corporate Entrepreneurship is an effective method for wealth creation. Antoncic & Hisrich (2001) authenticated that the notion of intrapreneurship (corporate entrepreneurship) is an important factor of firm growth and it may be significant for the profitability of existing organization.

Corporate entrepreneurship enhances the firm performance that escorts to significant competitive advantage (Antoncic & Hisrich, 2001), reflecting the tangible outcomes, while other researchers argued that corporate entrepreneurship also leads to intangible outcomes i.e. skill development and knowledge development (Schildt, Maula, & Keil, 2005). Briefly, corporate entrepreneurship is positively related to tangible and intangible outcomes (Davis, 2006).

Zahra & Covin (1995) confirmed that Corporate Entrepreneurship is an efficient technique for firms that operate in hostile environment. . Pittaway (2001) inspected the changing nature of hospitality organization by using the lens of Corporate Entrepreneurship, rather than organizational structure. He also explained particular steps

that firms can take to promote innovation in existing environment. Covin & Slevin (1989) investigated the impact of effective strategic response to environmental hostility among small firms. They proved that firms are positively related to an entrepreneurial strategic stance, an organic structure, a competitive contour revealing a long-term orientation, high product prices and a concern for predicting industry trends in hostile environment.

Most of these studies have elucidated that Corporate Entrepreneurship has a multidimensional structure i.e. Risk-taking, Innovativeness, Proactiveness and Competitive Aggressiveness (Lumpkin & Dess, 1996; Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003). Miller (1983) presented innovativeness as ability of organization to engage in new business; Proactiveness as ability of organization to lead in seeking of opportunities; Risk-taking as ability of organization to employ risky projects along with high chances of return. Competitive Aggressiveness as an ability of organization to compete with its competitors to achieve high market share (Lumpkin & Dess, 1996) Drucker (1985) depicted that innovation is the element of Corporate Entrepreneurship and through innovation competitive success can be achieved.

Many scholars identified several factors that encourage the entrepreneurial activities within an enterprise like Zahra (1986) recognized environmental, strategic and organizational factors as the antecedents of corporate entrepreneurship. Environmental factors are extrinsic aspects of organization namely 'dynamism, industry growth, customer demands and external technological development'; strategic factors that refer to organizational competitiveness like 'growth, stability and retrenchment strategies'; organizational factors are intrinsic aspects of organization like 'organizational structure, culture and managerial support'. Antoncic and Hisrich (2004) depicted that

organizational factors are more attributable to initiating the entrepreneurial activities in an enterprise because these are directly linked to managers and leaders. Schuler (1986) demonstrated that whilst fostering the Corporate Entrepreneurship, not only structural policies and practices, but also Human Resource Practices (HRM) are also important.

Corporate entrepreneurship is crucial for all types (both private and public limited companies) and all sizes of organizations for sustaining competitive in the global milieu (Davis, 2006; Burgelman, 1983). Private sector organizations are usually small, encouraging corporate entrepreneurship with apparent goals, flexible organizational culture and control over resources while in large public sector organizations these aspects are unique and less considerable(Sadler, 2000). Previously, innovation treated as vital component for growth and profitability in private sector organizations whereas in public sector organizations' innovation can not be considered because public sector theory depicts that public sector firms are monopolies and do not need to innovate (Borins, 2002). Due to bureaucratic structure, large organizations discourage the entrepreneurial activities at both individual level and organizational level. At individual level entrepreneurial activities can not be flourished without the supportive leadership aptitude and organizational culture, and if theses both characteristics are missing in organization structure, loss in the enthusiasm of creative employees usually occurs. However, at organizational level, firms do not show entrepreneurial behavior (Singer, Alpeza & Balkic, 2009). Some researchers criticized the above findings that public sector organizations are less innovative than private organizations. Baldridge & Burnham (1975) depicted that public sector organizations, such as government ministries are more probable to be innovative than private sector organizations. Corporate entrepreneurship leads to high organizational performance in public sector organizations which transpires that corporate

entrepreneurship can also be applicable to the public sector organizations, but the primary challenge of manager in public sector organizations is to recognize entrepreneurial activities and to generate significant organizational outcomes. Hence, implementation of corporate entrepreneurship in public sector organization is challengeable but advantageous (Kearney, Hisrich & Roche, 2007)

Corporate entrepreneurship not only heightens organizational performance but also the economy by creating new market, enhancing compatibility and productivity (Wennekers and Thurik, 1999). So Pakistani public limited companies listed at Karachi Stock Exchange were considered for this dissertation.

2.2. Corporate Entrepreneurship(CE) Conceptual Models:

Existing theories and models of corporate entrepreneurship highlight the collaboration between entrepreneurial's personality and organizational environment (Gartner, 1988). Some models of corporate entrepreneurship are presented below:

2.2.1. Model of Guth and Ginsberg(1990):

Guth and Ginsberg (1990) developed the conceptual model of corporate entrepreneurship. They hypothesized that corporate entrepreneurship comprises of two phenomena; primarily 'the birth of new businesses within existing organization' and secondly 'the transformation of organization through renewal'. Guth and Ginsberg (1990)'s model identifies the environment, strategic leadership, organizational form and organizational performance as antecedents of corporate entrepreneurship, while the outcomes of corporate entrepreneurship are innovation/venturing and strategic renewal. The drawback of this model is the absence of feedback loop between the factors except the organizational performance, reflecting the unjustified assumption in this model

(Adnosi, 2003). The model of Guth and Ginsberg (1990), depicting corporate entrepreneurship from strategic renewal perspective is shown in fig 2.2.1

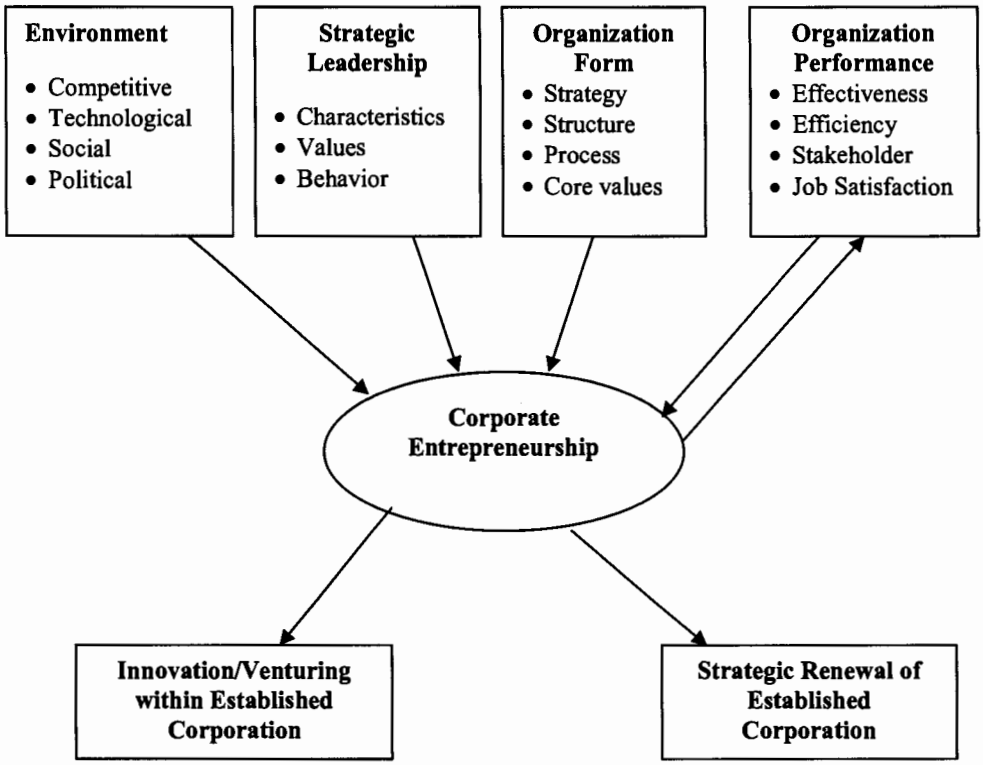


Fig 2.2.1.A strategic management perspective model of CE by Guth and Ginsberg (1990)

2.2.2. Model of Covin and Slevin (1991):

The model of Covin and Slevin (1991) focuses on entrepreneurial orientation. It also demonstrates the connection between company's entrepreneurial posture and its three factors, namely external environment, strategic variables, internal variables and organizational performance. According to this model, entrepreneurial orientation leads to external environment, strategic variables and internal variables even with a weaker extent, but it shows a strong relationship with organizational performance. These three factors have moderating role on the relation between entrepreneurial orientation and firm

performance. Fig 2.2.2 shows Covin and Slevin (1991) model for corporate entrepreneurship

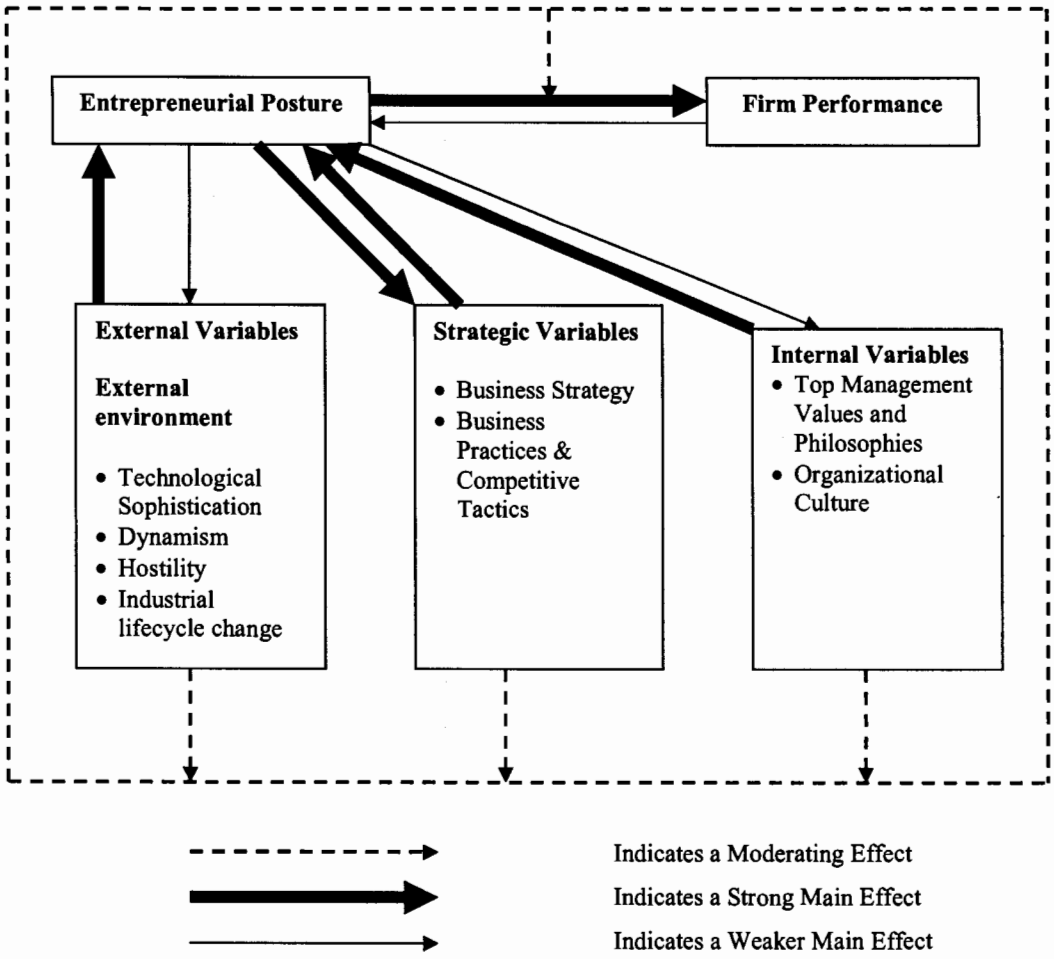


Fig: 2.2.2 The Covin and Slevin (1991) model for Corporate Entrepreneurship

Zahra (1993) criticized this model as it did not define what the entrepreneurial orientation was and how it differentiated from the corporate entrepreneurship's constructs. He also argued that corporate entrepreneurship occurred at multiple levels. Consequently the model of Covin and Slevin (1991) presented multi-level framework that was accounted for corporate entrepreneurship and firm performance relationship (Adonisi, 2003).Furthermore, Zahra (1993) criticized this model that it failed to identify the

probability of different entrepreneurial orientation impact on different dimensions of organizational performance.

2.2.3. Model of Zahra (1993):

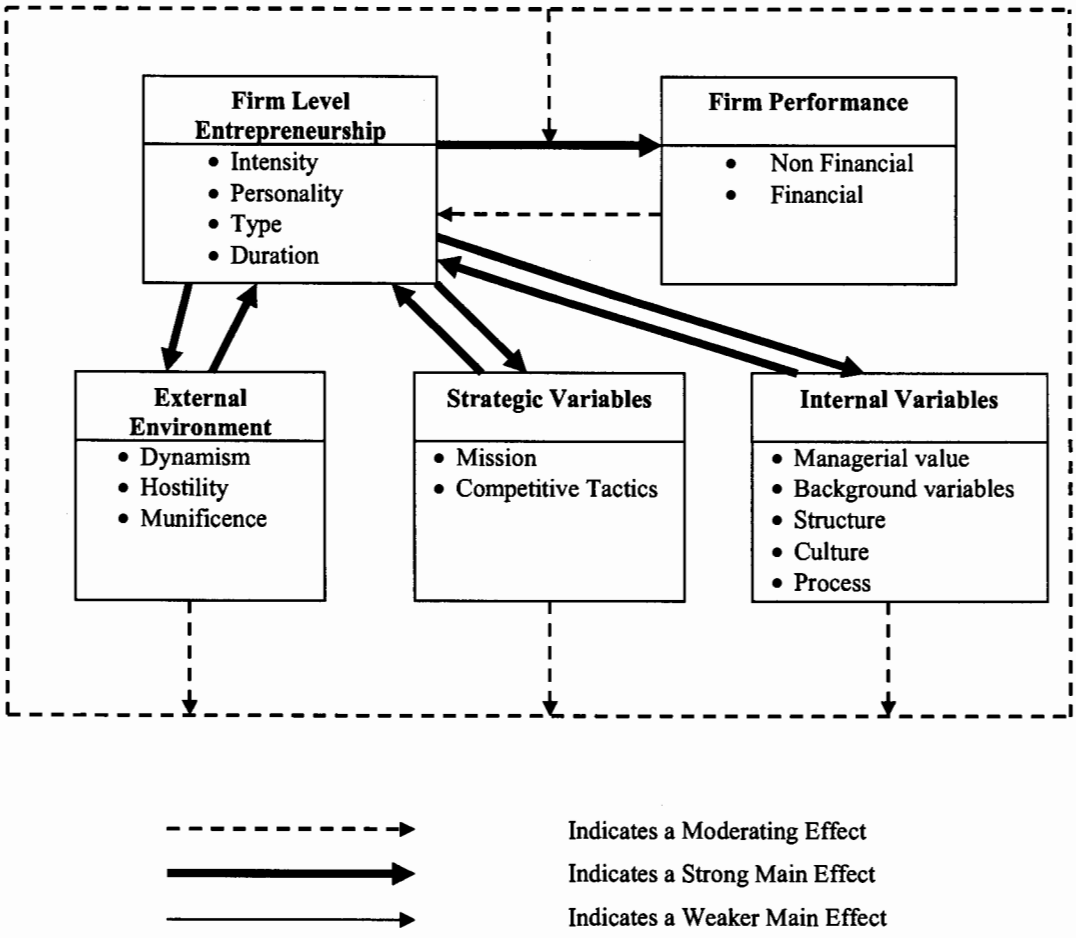


Fig: 2.2.3 The Zahra (1993) model for Corporate Entrepreneurship

Zahra (1993) revised the model of Covin and Slevin (1991) as she clearly categorized the external environmental factors and amalgamated the technological sophistication factor with dynamism factor. He included a new factor 'munificence' which transpired opportunity seeking for making innovations in the industry. Furthermore, he highlighted to deem the entrepreneurial activities both at domestic and international level. The model of Covin and Slevin (1991) incorporated the feedback loop between different links

(Adonisi, 2003). Lastly, Zahra (1993) demonstrated that the managerial process, values and backgrounds along with organizational structure and culture should be regarded in the development of corporate entrepreneurship models.

2.2.4. Model of Lumpkin and Dess (1996):

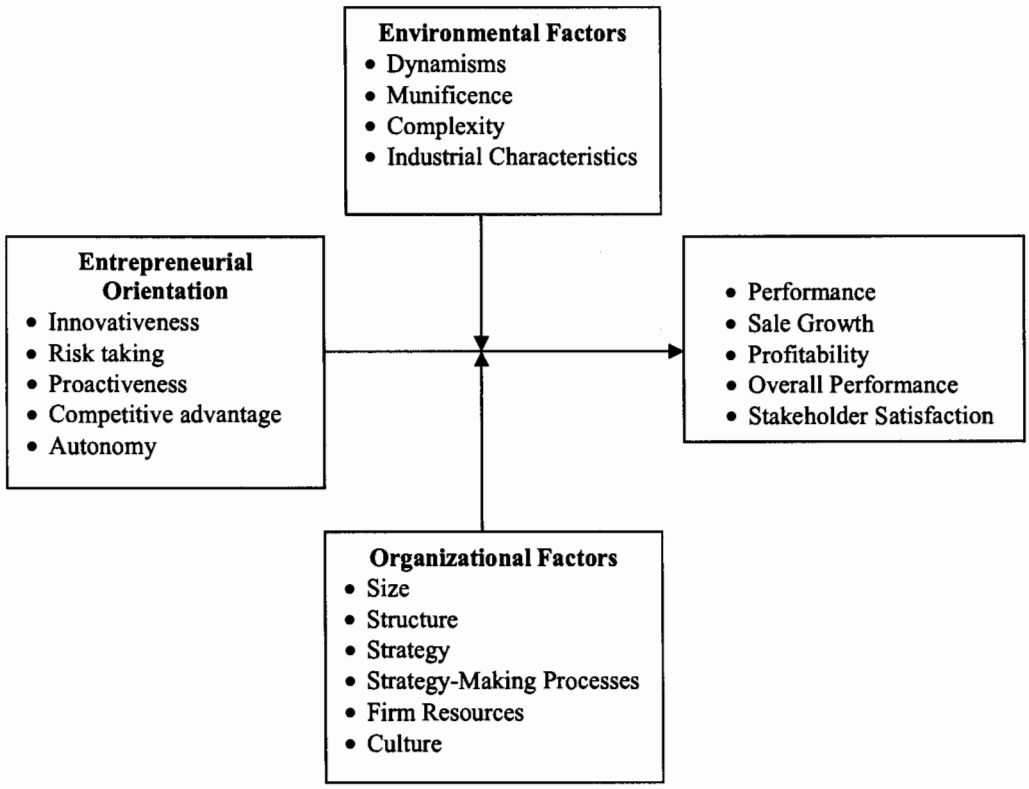


Fig: 2.2.4 The Lumpkin and Dess (1996) model for Corporate Entrepreneurship

Lumpkin and Dess (1996) presented a diverse model of corporate entrepreneurship which defined the entrepreneurial orientation into five dimensions, namely risk taking, innovativeness, proactiveness, competitive aggressiveness and autonomy. They discussed that entrepreneurial orientation concerns the processes, practices and decision-making tasks that escort to entering into new market along with new products and services. According to this model, a new entry conceives a key concept of corporate entrepreneurship (Adonisi, 2003).

The model of Lumpkin and Dess (1996) is quite different from the Covin and Slevin (1991) as it specifies the organizational and environmental factors that affect the link between entrepreneurial orientation and firm performance. Yet there is no evidence that firm performance impacts entrepreneurial orientation, reflecting that model of Lumpkin and Dess does not incorporate any feedback loop between entrepreneurial orientation, organizational factors, environmental factors and organizational performance. (Adonisi, 2003)

2.2.5. Model of Barrett and Weinstein (1998):

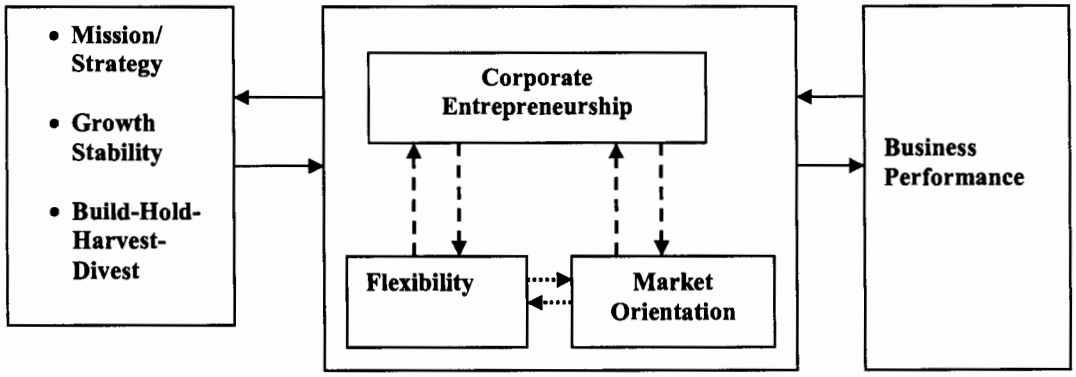


Fig 2.2.5: The CEFMO Model of Barrett and Weinstein (1998)

Barrett and Weinstein (1998) developed relationships between corporate entrepreneurship, market orientation, flexibility and firm performance in their 'corporate entrepreneurship, flexibility and market orientation (CEFMO)' model, endeavoring to elucidate the organizational mission strategy. Adonisi (2003) quoted that Barrett and Weinstein (1998) suggested that the market orientation and flexibility should be incorporated along with corporate entrepreneurship activities whilst surviving in a global competitive situation.

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

Goosen, De Coning and Smit (2002) incorporated three well researched elements of corporate entrepreneurship, namely innovativeness, self renewal and proactiveness. They also considered another concept i.e. 'new business venturing' from the research of Antocic and Hisrich (2001). This model is shown in fig 2.2.6

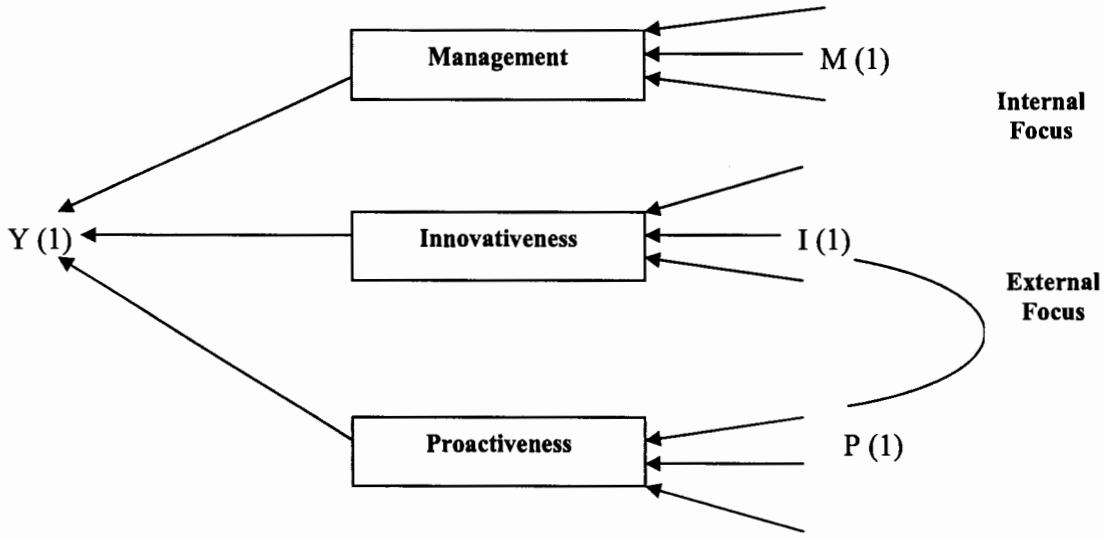


Fig 2.2.6 .The Model of Model of Goosen, De Coning and Smit (2002)

This model presents some additional dimensions of corporate entrepreneurship, namely 'market orientation, managerial styles, organizational structure, strategy and environment, innovativeness, risk taking, proactiveness that enhance the organizational culture (Adonisi, 2003).

In this model Y(1) is the level of corporate entrepreneurship and I(1) is innovativeness component , M(1) is management component and P(1) is proactiveness component

2.2.7. Public Sector Corporate Entrepreneurship Model (2007):

This model is developed by Kearney, Hisrich & Roche (2007) that can be applied to public sector organizations. In this model, they incorporated corporate entrepreneurship and its two antecedents's, namely public sector organization and external environment. It also depicts the direct and indirect influence of corporate entrepreneurship on organizational performance. This model is shown in fig 2.2.7

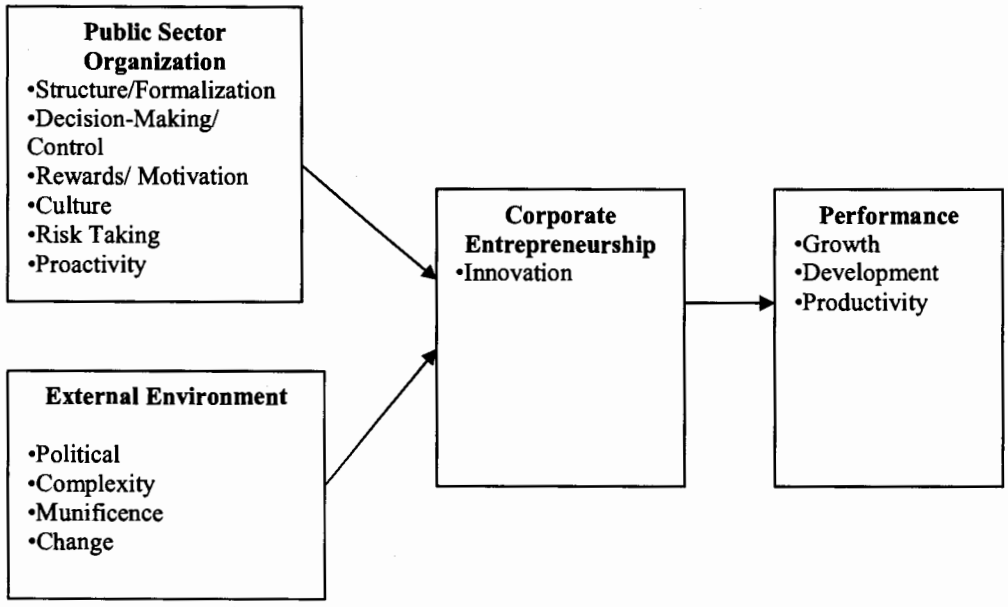


Fig. 2.2.7 Model of Public Sector Corporate Entrepreneurship (2007)

This model presents the dimensions of public sector organization (Structure/formalization, decision-making/control, rewards/motivation, culture, risk taking and proactiveness) and external environment (political, complexity, munificence and change) that can influence the organization to employ the corporate entrepreneurial task.

2.3. Corporate Entrepreneurship and Firm Performance:

Research reveals that the concept of corporate performance is multidimensional in nature (Venkatraman & Ramanujam 1986; Aktan & Bulut, 2008). Corporate Entrepreneurship can enhance the company's growth and profitability (Zahra, 1991). He also confirmed that environmental dynamism, hostility, heterogeneity, growth-oriented strategies, formal communication and organizational structure clearly defined organizational values strengthen the Corporate Entrepreneurship which directly leads to firm's financial performance. Prior literature demonstrates that corporate entrepreneurship facilitates new venture to exploit innovative market prospects (Wiklund & Shepherd, 2003); to enhance their firm performance (Zahra & Garvis, 2000; Ireland, Hitt, & Sirmon, 2003); and to prosper in a competitive environment (Lumpkin & Dess, 2001; Shane & Venkataraman, 2000). Briefly, corporate entrepreneurship is the fundamental element of victorious organization. (Pinchot, 1985; Kanter, 1984)

Many entrepreneurial scholars spelled out the term 'performance' by examining the relationship between corporate entrepreneurship and firm performance (Lumpkin & Dess, 2001; Zahra & Covin, 1995).Within corporate performance, the focal point has always been on the financial side; hence it is conventionally defined in financial terms. The financial performance measures can be divided into two major types: (1) measures based on accounting/financial data (i.e. the effect of actions on one year's profits, ROI, ROE, etc.) which reflect a firm's past performance and (2) market-based measures derived from stock market values which are based on valuation principles. Several financial measures e.g. revenue, cash flows, return on equity and return on assets should be adopted to compute firm financial performance(Haber & Reichel, 2005). Although these indicators

are essential but not enough to evaluate the overall firm performance (Aggarwal & Gupta, 2006). Therefore, several studies have considered financial and non financial measures for the comprehensive assessment of overall firm performance (Clark, 1999; Haber & Reichel, 2005). These above mentioned studies identified the non-financial scales i.e. perceived market growth, perceived market share, brand equity, brand loyalty and customer satisfaction. Furthermore, Aggarwal & Gupta, (2006) highlighted another approach i.e. internal indicators, external indicators, input indicators and output indicators for the evaluation of firm performance. They recognized the internal indicators that relate to the interest of shareholders within an enterprise; the external indicators that concern with the customers, suppliers, competitors and other market factors; input indicators that refer to the tasks and activities involved in the accomplishment of goals and output indicators that focus on firm's goals, performance and outcomes. In entrepreneurial research, firm performance can be assessed in terms of efficiency, growth and profit (Murphy et al., 1996). He categorized efficiency that refers to financial measures like return on equity and return on assets; growth that reflects market share and profit concerns the return on sales and net profit margin.

Zahra & Covin (1995) and Aktan & Bulut (2008) authenticated the significant positive relationship between Corporate Entrepreneurship and Firm Performance. Corporate entrepreneurship is positively related to performance of large organizations (Zahra & Covin, 1995). Antoncic & Hisrich, (2001) confirmed a positive relationship of corporate entrepreneurship and performance of small, medium and large organizations in Slovenia but not in US. They 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" (pp. 523). 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 & Selvarajah (2008) examined the positive relationship between corporate entrepreneurship and performance of auto parts manufacturing firms in Thailand.

Some research scholars proved that dimensions of corporate entrepreneurship escort the firm performance (Wiklund & Shepherd, 2005; Zahra & 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 & Dess, 1996; Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003). Innovative companies can exploit novel opportunities that lead to the development of new and innovative products in market and enhance their organizational performance (Lumpkin and Dess, 1996; Zahra & Garvis, 2000).Risk taking firms may confiscate the market opportunities by making worthwhile deals in order to acquire higher returns. Therefore, risk taking activities may lead to firm performance(Frese, Brantjes, & Hoorn, 2002).A proactive firm as first mover identifies the market opportunities and introduces new products and services beforehand than its competitors and attains the high market share. So proactiveness is positively related to firm performance (Hunt & Arnett, 2006; Wiklund & Shepherd, 2005). Firms having competitive aggressiveness can modify the rules of competitors, revise industrial boundaries and outperform the competitors that lead to high market share. Thus competitiveness is also positively related to firm performance (Lumpkin & Dess, 2001)

Most studies scrutinized the positive relationship between Corporate Entrepreneurship and firm performance in western economies, like Canada (Knight, 1997), United States, New Zealand, The Netherlands, Argentina, Republic of Croatia, and Russia (McDougall & Oviatt, 2000), like United States, United Kingdom (Gartner & Birley, 2002)as well as in emerging economies like China (Luo et al., 2005; Yang, Li-Hua, Zhang & Wang, 2007); like Slovenia(Antoncic & Hisrich,2001); like Thailand (Lekmat & Selvarajah, 2008). Mostly, corporate entrepreneurial activities have been conducted in developed nations (Zahra & Covin 1995; Gartner & Birley, 2002; Knight, 1997; McDougall & 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 need for generalization of entrepreneurial research outcomes in developing countries (Lekmat & Selvarajah, 2008). To eradicate the shortfall in entrepreneurial research, this study has conducted in one of the developing country i.e. Pakistan.

2.4. Agency Cost:

Recently, agency problems are rapidly growing in the modern organizations (Henry, n.d) and are cited as special case in the current theory of firm (Jensen & 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 & Meckling, 1976). It also proposed that ownership and managerial interest may not be linked, that leads to agency costs (Jensen, 1986; Jensen & Meckling, 1976). The model of agency costs, first documented by Jensen & Meckling (1976), defined "Agency costs as the sum of three variables: (1) the monitoring

expenditures of the principle, (2) the bonding expenditures by the agent, and (3) the residual loss." The monitoring cost involves the charges for observing and controlling the behavior of agents. Some scholars classified it as external and internal monitoring cost. External monitoring refers to appoint an accountant who audits the books of firm to detect the misallocation of resources by mangers, while the internal monitoring cost refers to analyze the listings of related companies by buying magazine or newspaper. The bonding cost is an additional expenditure that principal will pay to the agent for utilizing resources and for providing guarantee that he will not take any decision that is harmful for principal. Bonding cost acts as a substitute for monitoring cost. The residual loss refers to the remaining welfare of principal after the divergence of his interest by the agent (Peterson, 2007)

Prior literature revealed that agency cost is of three type: managerial agency cost as cost between firm managers and stock holders (Jensen & Meckling, 1976), equity agency cost as cost between firm managers and equity shareholders (Fleming, Heaney & McCosker, 2005; Florackis, 2008) and agency cost of debt as cost between firm managers or shareholders and debt holders (Jensen & Meckling, 1976; Anderson, Mansi & Reeb, 2002; Adams, 2005). According to Jensen & Meckling (1976) managerial agency costs happen with the 'separation of ownership and control' and it can be measured through administrative expense ratio (Li, Wang & Deng, 2008). Equity shareholders are different from the other shareholders because they monitor/supervise the management as well as other shareholders according to their equity stake (Grossman & Hart, 1988). The proxies for equity agency cost are discretionary expense to sales ratio and asset utilization ratio (Ang et al., 2000; Florackis, 2008). Discretionary expenses are all other operating

expenses. The proxies for agency cost of debt are spread yield for fixed income debt securities; discount rate for corporate securities (Anderson, Mansi & Reeb, 2002; Adams, 2005).

Currently research studies treated agency cost as a determinant of capital structure/ ownership structure, dividend policy, accounting policy choice and executive compensation (Fleming, Heaney & McCosker,2005).The proxies for investigating the impact of agency cost on the financial policies(leverage, managerial stock ownership and dividend yield) are bank size, earnings volatility, managers' portfolio diversification losses and standard deviation of bank equity returns (Mendez & Willey, 1995). Other proxies for agency costs are investment of free cash flows and frequency of board meeting (Doukas, Kim & Pantzalis, 2000; Yi, Chen & Chotigeat, 2007)

Agency cost can be apparent in various kinds containing self interest behaviors of managers usually concerned on rank, excessive profit consumption, wrong decision making regarding investment and firm, misallocation of resources and accounting practices; agency cost affects the shareholder's wealth as well as other stakeholders' wealth like debt financers, employee society (Henry,n.d). The consequences of agency cost highlight the importance of monitoring system, such as corporate control mechanism, institutional shareholders and codes of corporate goverence should be introduced that reduce the agency cost (Henry,n.d)

Agency cost is significantly negative related to firm performance (Xiao, 2008; Classens et al., 2002; Lemmon & Lins, 2003).Ang, Cole & Lin (2000) proved the negative relationship between agency cost and manager's ownership as well as the degree of external bank monitoring. They confirmed a positive relationship between agency cost

and the number of shareholders as well as existence of outside managers. Jensen and Meckling (1976) examined that managerial ownership is positively related to corporate performance. Jensen (1993) investigated a negative relationship between level of managerial ownership and the degree of agency cost. Yi, Chen & Chotigeat (2007) depicted that large ratio of outsider directors and high outside director ownership reduces agency costs, reflecting better monitoring of firms operations and enhancing firm performance. Henry (n.d) identified the significant relationship between the agency cost levels and the extent and nature of directors' remunerations, the board independence, corporate dividend policy, institutional share ownership and the existence of CEO-chairperson duality. He also proved that higher internal governance structure would diminish the level of agency costs.

There are some techniques for reducing the agency cost. One technique is to engage family relatives and business associates in the business (Fama & Jensen, 1983a) particularly small firms; other stakeholders like concentrated equity shareholders, banks, debt financers and venture capital providers (Ertugrul & Hegde, 2008)

Jensen & Meckling (1976) depicted the 'zero-cost base' case for defining the concept of agency cost. By definition a firm that is owned by single owner- manger exhibits zero agency cost, it can be possible in small and private organizations but due to financial constraints, rules for minimum number of shareholders and other related issues in large public limited companies cannot be owned by sole manager. Therefore, agency cost heightens with low managerial ownership in public limited companies. (Ang, Cole & Lin, 2000). Both, managerial agency cost and equity agency cost increase with separation of ownership and control as well as reduction in managerial ownership (Ang, Cole & Lin,

2000; Fleming, Heaney & McCosker, 2005). Thus, managerial agency cost and equity agency cost tend to be similar in public limited companies.

2.5. Relationship between Corporate Entrepreneurship and Agency Cost:

A better understanding of the linkages between Corporate Entrepreneurship and agency cost is important for a number of reasons. Firstly, Corporate Entrepreneurship is significantly positive related to firm performance (Zahra & Covin, 1995; Covin & Slevin, 1991; Aktan & Bulut, 2008). On the contrary agency cost is significantly negative related to firm performance (Xiao, 2008; Classens et al., 2002; Lemmon & Lins, 2003). They both inversely affect firm performance. Secondly, Corporate Entrepreneurship is a strategic orientation in accomplishing the competitive advantage in a global milieu (Drucker, 1985; Zahra & Covin, 1995). On one extreme, qualified inside directors can more consistently evaluate the worth of Corporate Entrepreneurship projects (Baysinger & Hoskisson, 1990). Raheja (2005) depicted that highly competitive industries are better aligned on the incentives of insiders with its shareholders. He further elucidated that firms that have a high degree of inside ownership require smaller board sizes. He also proved that small boards have the aptitude to save on coordination cost related to outsiders. Therefore, board size is positively related to agency costs (Yi, Chen & Chotigeat, 2007). On the other extreme, the more outsiders on a board increase the operational cost which leads to negative impact on performance (Lipton & Lorsch, 1992; Jensen, 1993). Bathala & Rao (1995) also confirmed the negative relationship between outside directors and growth opportunities. Jensen (1986) depicted that firms having low growth opportunities are intended to high agency cost. Thus, there is a positive

relationship between agency cost and existence of outside managers (Ang, Cole & Lin, 2000) .Within the agency cost perspective, the argument portrays that outside directors will increase the clash of interests between management and outside shareholders. Moreover, the outsiders who are not generally as directly involved in the strategy formulation process as insiders, may rely profoundly on financial controls, which may lower corporate entrepreneurship (Baysinger & Hoskisson, 1990). Hence, it can be inferred that insiders reduces the agency cost and enhance the entrepreneurial activities than outsiders. Thirdly, Agency theory also accompanies to hypothesize that in the competitive environment usually firms with high levels of agency cost are apt to face threats from other firms (Jensen & Ruback, 1983).But through efficient competition the agency cost can be reduced and managerial efficiency can be increased that would lead to market performance benefits, in the form of increased valuation (Krishnamurti et al, 2008).From that it can be presumed that high agency cost deters the competitive advantage which leads to lower corporate entrepreneurship . It inferred that competitive advantage reduces the agency cost that leads to high corporate entrepreneurship. This seems that relationship between corporate entrepreneurship and agency cost may be bi-directional in nature. For further justification the relationship between agency costs and the dimensions of Corporate Entrepreneurship were explored.

2.5.1. Risk Taking and Agency Cost:

Risk-taking activities reflect the firm's tendency to allocate significant resources to projects that involve a high probability of risk along with chances for high return (Lumpkin & Dess, 1996).According to agency theory the principals are risk neutral because they want to maximize their wealth and agents are risk averse due 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 & Mejia, 1998). Owing to risk aversive nature of managers, they ignore the risky decisions regarding firm (Williamson, 1963) and do not invest in high risky projects (Jegers, 1991; Piron & Smith, 1995; Wiseman & Bromiley, 1996) that lower the corporate entrepreneurship.

2.5.2. Innovativeness and Agency Cost:

Innovativeness reflects the propensity of a firm to engage in new ideas and creative processes that may result in new products, services or technological processes (Miller, 1983) .According to agency theory, principals have risk neutral behavior and managers have risk aversive behavior (Donaldson, 1961; Williamson, 1963). Due to this 'risk differential' between the principal and manager, agency cost arise (Wiseman & Mejia, 1998). Moreover, the agency costs escort costly innovation in the economy (Martimort & Verdier, 2004) .The risk aversive behavior of managers can act as an obstacle to transform the knowledge and learning for making innovation. Therefore, Managers are not interested in innovative projects that lead to decrease in market share and loss of competitive position (Amour, 2004). Hence corporate entrepreneurship decreases.

2.5.3. Proactiveness and Agency Cost:

In some studies, competitive aggressiveness and proactiveness have been treated as synonyms (Antoncic, 2007). Lumpkin & Dess (1996) defined proactiveness as "a response to opportunities" and "a firm intends to seek out an attractive niche". A proactive firm takes initiative, aggressive and bold steps for executing in the competitive environment, to incline for taking risks through experimentation. (Miller, 1983; Morris &

Kuratko, 2002). According to agency theory, risk aversive behavior of managers (Donaldson, 1961; Williamson, 1963) prevents to invest in risky projects (Jegers, 1991; Piron & Smith, 1995; Wiseman & Bromiley, 1996) reflecting to low proactiveness. Therefore, corporate entrepreneurship reduces.

2.5.4. Competitive Aggressiveness and Agency Cost:

Lumpkin and Dess (1996) defined competitive aggressiveness as "a response to threats" and "seeks to protect the position of niche once firm has established". Competitive advantage is apprehended through innovation and proactiveness (Tidd et al, 1999). Owing to risk aversive behavior of mangers (Donaldson, 1961; Williamson, 1963) managers will not bring innovations (Amour, 2004) that lead to low competitive aggressiveness. Thus, corporate entrepreneurship diminishes.

The above literature refers that competitive advantage is vital component in ascertaining the relationship between corporate entrepreneurship and agency cost. At one extreme, high agency cost reduces the corporate entrepreneurship through deterring the competitive advantage and at other extreme, corporate entrepreneurship reduces the agency cost through enhancing the competitive advantage .The above literature helps in stating the respective proposition.

P1: There is a significant relationship between Corporate Entrepreneurship and Agency Cost.

2.6. Agency Cost as a Moderator on the Relationship Between Corporate Entrepreneurship and Firm Performance:

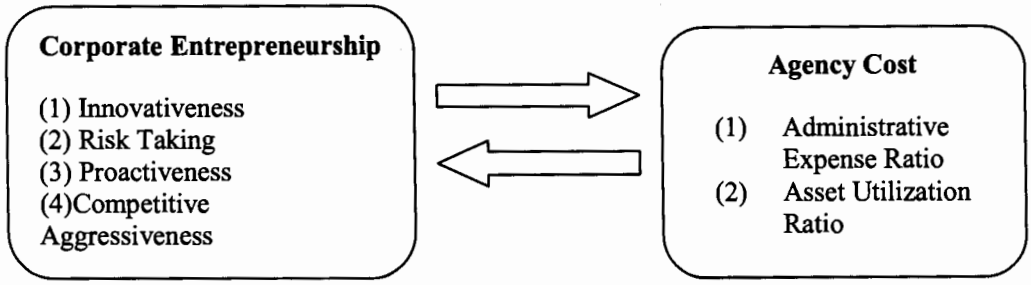
Agency cost can act as moderator on the link between Corporate Entrepreneurship and Firm Performance because it directly affects the risk taking strategies (Jegers, 1991; Piron & Smith, 1995; Wiseman & Bromiley, 1996) and risk taking is one of the dimensions of corporate entrepreneurship. Corporate entrepreneurship is significantly positive related to firm performance (Covin & Zahra, 1995; Covin & Slevin, 1991; Zahra, 1993; Aktan & Bulut, 2008).On the contrary agency cost is significantly negative related to firm performance (Xiao, 2008). Therefore hypotheses can be inferred from the above literature as under:-

H1 (a): Agency cost moderates the relationship between corporate entrepreneurship and firm performance.

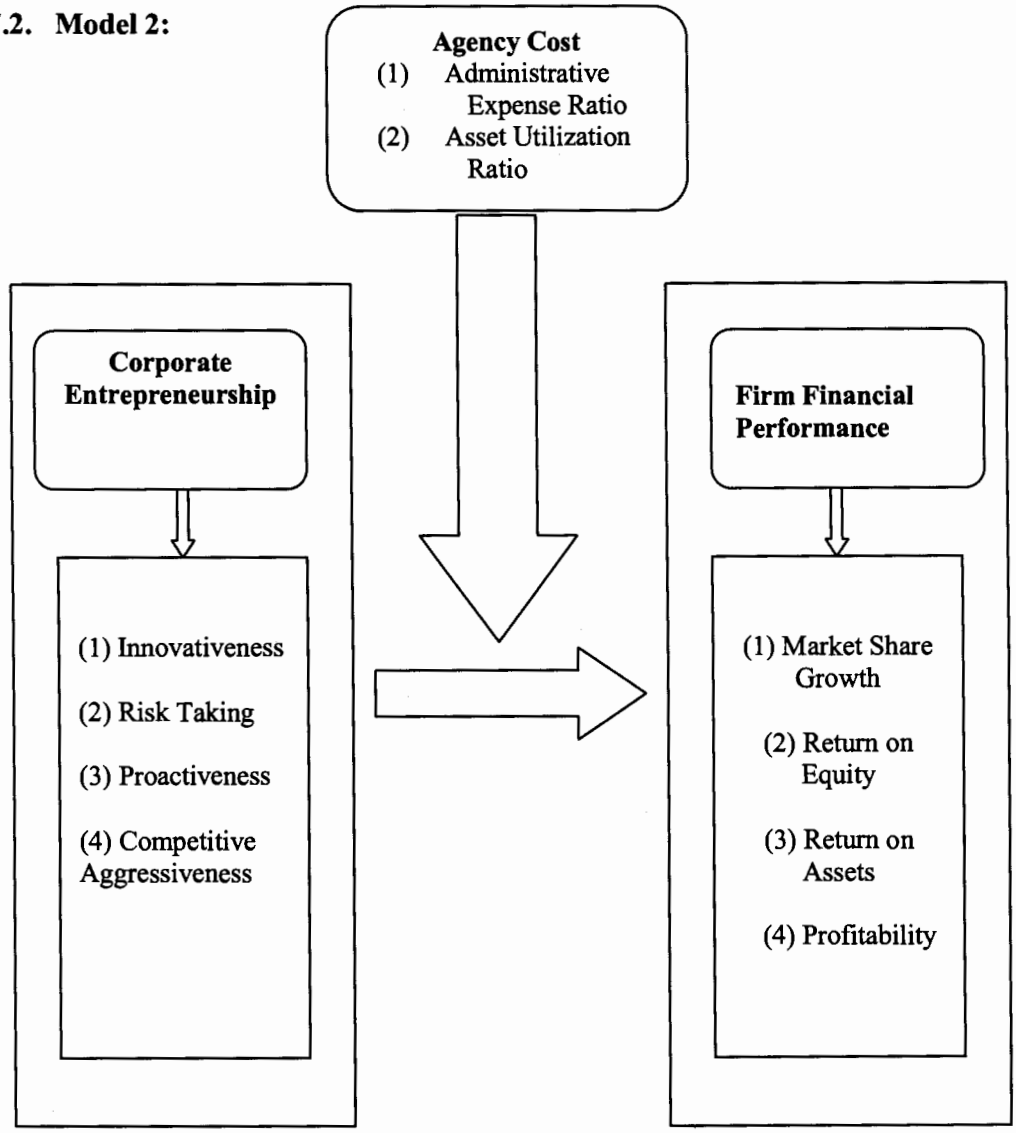
H1 (b): Firms that pursue corporate entrepreneurship with high agency cost generate lower profits i.e. lower performance.

2.7. Proposed Models:

2.7.1. Model 1:



2.7.2. Model 2:



CHAPTER 3

RESEARCH METHODOLOGY

3.1. Variables:

3.1.1. Corporate Entrepreneurship(CE): Corporate Entrepreneurship was measured through four dimensions, namely innovativeness, risk taking, proativeness and competitive aggressiveness.

3.1.2. Firm Performance (FP): Firm performance was measured through four proxies i.e. market share growth, return on assets, return on equity and profitability ratios.

3.1.3. Agency Cost(AGC): Agency cost was measured through two proxies mainly administrative expense ratio and asset utilization ratio.

3.1.4. Company Size(CS): Company size was selected as control variable.

3.1.5. Company Sector(CST): Company sector was selected as control variable.

3.2. Models' Specifications:

3.2.1. Model 1:

Corporate Entrepreneurship (CE) was taken as independent variable and Agency Cost (AGC) as dependent variable and then Agency Cost (AGC) was taken as independent variable and Corporate Entrepreneurship (CE) as dependent variable in Model 1

3.2.2. Equations:

1. $AER_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$
2. $AUR_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(C.S.T_i) + \varepsilon_i$

3. $IN_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \beta_1(C.S.T_i) + \varepsilon_i$

4. $RT_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \varepsilon_i$

5. $PN_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \beta_1(C.S.T_i) + \varepsilon_i$

6. $CA_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \varepsilon_i$

7. $AER_i = \alpha_i + \beta_1(CE_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

8. $AUR_i = \alpha_i + \beta_1(CE_i) + \beta_1(C.S.T_i) + \varepsilon_i$

9. $IN_i = \alpha_i + \beta_1(AGC_i) + \beta_1(C.S.T_i) + \varepsilon_i$

10. $RT_i = \alpha_i + \beta_1(AGC_i) + \varepsilon_i$

11. $PN_i = \alpha_i + \beta_1(AGC_i) + \beta_1(C.S.T_i) + \varepsilon_i$

12. $CA_i = \alpha_i + \beta_1(AGC_i) + \varepsilon_i$

13. $AGC_i = \alpha_i + \beta_1(CE_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

14. $CE_i = \alpha_i + \beta_1(AGC_i) + \varepsilon_i$

3.2.3. Model 2 :

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

3.2.4. Equations:

1. $MSG_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(A.U.R_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

2. $ROA_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(A.U.R_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

3. $ROE_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(A.U.R_i) + \beta_1(C.S_i) + \varepsilon_i$

4. $PF_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(A.U.R_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

5. $MSG_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

6. $ROA_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

7. $ROE_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \varepsilon_i$

8. $PF_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$

}

Where

α = Overall intercept term

β = Sensitivity of risk regarding to specific factor

MSG =Market Share Growth

ROA= Return on Assets

ROE = Return on Equity

PF =Profitability

IN=Innovativeness

RT =Risk taking

PN= Proactiveness

CA = Competitive Aggressiveness

AER= Administrative Expense Ratio

A.U.R= Asset Utilization Ratio

C.S = Company Size

CST= Company Sector

ε = Error term or Residual

3.3. Sample and Data Collection:

The data for Corporate Entrepreneurship was collected through survey method from managers and top executives of Pakistani non-financial sector organizations listed at Karachi Stock Exchange. The sample was selected on the basis of convenience because of non-availability of data. Several companies maintain their accounts at year end (Dec 31), so data for the year 2009 could not be accessed for all companies. Therefore, data for firm financial performance and agency cost was extracted from Balance Sheet Analysis (SBP Report), Companies Annual Reports and Karachi Stock Exchange website on three yearly average bases (FY 2006, FY 2007, FY 2008) in consideration of FY 2009.

3.3.1. Design of the Study:

This study was cross-sectional in nature and took sample of 436 companies. To call for the research, invitation letters were sent to these firms. Only 141 firms accepted the research participation. From 141 firms, 775 participants responded to research. Most data was collected through personally administered interview to avoid the self reporting error and a small data was collected through mail survey. The demographics of respondents were mostly top male executives.

3.4. Data Collection Instrument & Measures:

3.4.1. Corporate Entrepreneurship (CE):

A 20-Item scale (Aktan & Bulut, 2008) was used to measure Corporate Entrepreneurship (CE). This scale consisted of four dimensions i.e. Innovativeness (6-items), Riskiness (7-Items), Proactiveness (4-Items) and Competitive Aggressiveness (3-Items). Past research demonstrated adequate levels of reliability and construct validity i.e. Alpha= 0.86.All scale employed for Corporate Entrepreneurship

dimensions were close ended and measured on Five -point Likert scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The relationship between Corporate Entrepreneurship and agency cost was expected to be negatively related

3.4.2. Firm Performance(FP) :

The scale of firm performance was chosen from most frequently used financial criteria and the existing literature (Aktan & Bulut, 2008), which were:

- Market Share Growth(MSG) = Company Sales/Total Industry Sales
- Return on Assets(ROA) = Net Income /Total Asset
- Return on Equity(ROE) = Net Income/ Total Equity
- Profitability(PF) = Net Income /Sales

From the previous literature, it has been found that corporate entrepreneurship has significant positive impact on firm performance. On the basis of available literature it was expected that this relation would be significant positive in Pakistan.

3.4.3. Agency Cost(AGC):

The scale for measuring agency cost was taken from previous literature by Li, Wang & 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 is expected to be significantly negatively related to corporate entrepreneurship. Previous literature depicts that agency is significantly positively related to firm performance while some researchers opposed the above findings

3.4.4. Company Size (CS):

The scale for company size was

- Company size (CS) = LN of Total Asset

3.4.5. Company Sector(CST):

- It was assigned value from 1 to 10, to each sector

3.5. Procedure:

3.5.1. Sampling Technique:

Convenient probability sampling technique was adopted because of time and resource constraints.

3.5.2. Data Analysis Tools:

Data analysis was done by using SPSS 17 software to validate the results. Following tests were applied on the data.

1. Descriptives to highlight the outliers and missing data.
2. Correlation Analysis to find out inter-correlation among variables
3. Linear Regression Analysis to test the proposition.
4. Moderation Regression Analysis to test the hypotheses

The next chapter reveals the results of this study.

CHAPTER 4

RESULTS

4.1. Proposition & Hypotheses:

This study fills gap in literature by establishing the relationship between corporate entrepreneurship and agency cost. Although extensive literature exists in both domains, yet up to the understanding of researcher the link between corporate entrepreneurship remain unexplored so the proposition is,

P1: There is a significant relationship between Corporate Entrepreneurship and Agency Cost

It also examines the moderating role of agency cost on the relationship between corporate entrepreneurship and firm performance to validate whether corporate entrepreneurship yields high profits in the presence of agency cost or otherwise. So the hypotheses are:

H1 (a): Agency cost moderates the relationship between corporate entrepreneurship and firm performance.

H1 (b): Firms that pursue corporate entrepreneurship with high agency cost generate lower profits i.e. lower performance

For making analysis some test were applied on data in order to validate the results. The following tables present results of applied tests

Table: 4.1 **List of Variables**

Variables	Abbre.	Variables	Abbre.
Corporate Entrepreneurship	CE	Agency Cost	AGC
Innovativeness	IN	Administrative Expense Ratio	AER
Risk Taking	RT	Asset Utilization Ratio	AUR
Proactiveness	PN	Firm Performance	FP
Competitive Aggressiveness	CA	Market Share Growth	MSG
Company Size	CS	Return on Assets	ROA
Company Sector	CST	Return on Equity	ROE
		Profitability	PF

4.2.Descriptive Statistics

The descriptive statistics show that CE has highest mean value i.e. 3.79 while AGC and FP have mean value of 1.091 and 0.069 respectively. In case of volatility CE has highest standard deviation i.e. 49%; AGC and FP have variance of 47% and 30% respectively. The overall reliability of the constructs is 86%. The response rate for research invitation is 33%.

Table: 4.2.1

Descriptive Statistics

	CE	AGC	FP
Mean	3.791	1.091	0.069
Standard Deviation	0.490	0.471	0.301
Maximum	2.05	0.48	-4.51
Minimum	4.75	3.00	0.56
N Statistics	775	775	775

Table: 4.2.2

Cronbach's Alpha	
Corporate Entrepreneurship	0.855
• Risk Taking	0.846
• Innovativeness	0.772
• Proactiveness	0.865
• Competitive Aggressiveness	0.94

4.3. Correlations:

4.3.1. Individual Analysis:

Correlation test has used to find out the interrelationship between the variables. When correlation was applied between individual variables, it has been found that RT is significantly positively related to IN, PN CA, while RT has significant negative relationship with AER. RT is insignificantly positively related to MSG, ROA, PF and CST, while it is insignificantly negatively related to ROE, AUR and CS. IN is significantly positively related to PN CA, MSG and CST, while IN has significant negative relationship with AER. IN is insignificantly positive related to ROA, ROE, PF and CS, while it is insignificantly negatively related to AUR. PN is significantly positively related to CA, MSG and CST, while PN has significant negative relationship with AER. PN is insignificantly positive related to ROA, PF and CS, while it is insignificantly negatively related to AUR and ROE. CA has significant negative relationship with AER. CA is insignificantly positively related to MSG, ROA, ROE, PF and CST, while it is insignificantly negatively related to AUR and CS. AER is significantly positively related to AUR, while AER has significant negative relationship with MSG, ROA, PF, CST and CS, while it is insignificantly negatively related to ROE. AUR is significantly positively related to MSG, ROA, ROE and CST, while AUR has insignificant negative relationship with PF and CS. MSG is significantly positively related to ROA, ROE, PF, CS and CST.ROA is significantly positively related to ROE, PF, CS and CST. ROE is significantly positively related to PF and CS but insignificant positive relation to CST. PF has significant positive relationship with CS and CST. CST is significantly positively related to CS.

Table: 4.3.1

Correlations

		RT	IN	PN	CA	AER	AUR	MSG	ROA	ROE	PF	CST	CS
RT	Pearson Correlation	1											
	Sig. (2-tailed)												
	N	775											
IN	Pearson Correlation	.656**	1										
	Sig. (2-tailed)	.000											
	N	775	775										
PN	Pearson Correlation	.599**	.527**	1									
	Sig. (2-tailed)	.000	.000										
	N	775	775	775									
CA	Pearson Correlation	.599**	.441**	.523**	1								
	Sig. (2-tailed)	.000	.000	.000									
	N	775	775	775	775								
AER	Pearson Correlation	-.131**	-.114**	-.134**	-.092*	1							
	Sig. (2-tailed)	.000	.002	.000	.011								
	N	775	775	775	775	775							
AUR	Pearson Correlation	-.046	-.042	-.057	-.051	.212**	1						
	Sig. (2-tailed)	.196	.244	.114	.155	.000							
	N	775	775	775	775	775	775						
MSG	Pearson Correlation	.028	.080*	.120**	.025	-.183**	.141**	1					
	Sig. (2-tailed)	.442	.026	.001	.494	.000	.000						
	N	775	775	775	775	775	775	775					
ROA	Pearson Correlation	.056	.066	.054	.027	-.209**	.154**	.239**	1				
	Sig. (2-tailed)	.120	.068	.136	.447	.000	.000	.000					
	N	775	775	775	775	775	775	775	775				
ROE	Pearson Correlation	-.014	.016	-.007	.002	-.062	.077*	.106**	.466**	1			
	Sig. (2-tailed)	.703	.647	.855	.964	.084	.032	.003	.000				
	N	775	775	775	775	775	775	775	775	775			
PF	Pearson Correlation	.063	.055	.053	.043	-.224**	-.066	.183**	.930**	.386**	1		
	Sig. (2-tailed)	.078	.124	.142	.237	.000	.065	.000	.000	.000			
	N	775	775	775	775	775	775	775	775	775	775		
CST	Pearson Correlation	.017	.089*	.118**	.023	-.086*	.359**	.452**	.321**	.034	.254**	1	
	Sig. (2-tailed)	.632	.013	.001	.527	.017	.000	.000	.000	.351	.000		
	N	775	775	775	775	775	775	775	775	775	775	775	
CS	Pearson Correlation	-.013	.005	.058	-.038	-.381**	-.055	.587**	.116**	.192**	.121**	.124**	1
	Sig. (2-tailed)	.713	.892	.109	.286	.000	.123	.000	.001	.000	.001	.001	
	N	775	775	775	775	775	775	775	775	775	775	775	775

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

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

4.3.2 Composite Analysis:

From the composite correlation analysis, it has been found that CE has negative coefficient of 0.073 with AGC at 0.043 which means a unit change in CE will bring negative change in AGC by 0.073 and CE is significantly negatively related to AGC. CE has positive coefficient of 0.031 with FP at 0.395 reveals that CE will bring positive change in FP by 0.031; and CE has insignificant positive relation to FP. CE has 0 coefficients with CS at 0.992 which depicts that a unit change of CE will brings no change in CS; CE has insignificant relation with CS. CE has coefficient of 0.069 with CST at 0.055 which reflects that a unit change of CE will brings positive change in CST; CE has insignificant positive relation with CST. AGC has coefficient of 0.077 with FP at 0.031 which shows that AGC will bring positive change in FP by 0.077; AGC is significantly positively related to FP. AGC has coefficient of -0.093 with CS at 0.010 which demonstrates that AGC will bring negative change in CS by 0.093; AGC is significantly negatively related to CS. AGC has coefficient of 0.340 with CST at 0.000 which transpires that AGC will bring positive change in CST by 0.340; AGC is significantly positively related to CST. FP has positive coefficient of 0.298 and 0.194 with CS and CST at 0.00 and 0.000 respectively, which depicts that FP has positive significant relations to CS and CST. CS has positive coefficient of 0.124 with CST at 0.001 that shows that CS is significantly positively related to CST. All variables show weak correlation with other variables except moderate correlation between CST and AGC

Table: 4.3.2

Correlations

		CE	AGC	FP	CS	CST
CE	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	775				
AGC	Pearson Correlation	-.073*	1			
	Sig. (2-tailed)	.043				
	N	775	775			
FP	Pearson Correlation	.031	.077*	1		
	Sig. (2-tailed)	.395	.031			
	N	775	775	775		
CS	Pearson Correlation	.000	-.093**	.298**	1	
	Sig. (2-tailed)	.992	.010	.000		
	N	775	775	775	775	
CST	Pearson Correlation	.069	.340**	.194**	.124**	1
	Sig. (2-tailed)	.055	.000	.000	.001	
	N	775	775	775	775	775

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

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

From correlation analysis, it has been seen that CE is significantly negatively related to AGC but this justification is not enough, so linear regression was applied to test the relationship between CE and AGC.

4.4. Regression Analysis:

4.4.1. Impact of Corporate Entrepreneurship on Agency Cost:

Individual Variable Analysis:

4.4.1.1. Impact of Corporate Entrepreneurship on Administrative Expense Ratio:

$$AER_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When AER was regressed with individual factors of CE, it has been noted that RT has coefficient of -0.083 with AER which depicts that a unit change in RT will bring negative change in AER by 0.083; RT has t-value of -1.619 against a p-value of 0.106 which reflects that RT has insignificant negative impact on AER. Similarly, IN has coefficient of -0.027 with AER which reveals that a unit change in IN will bring negative change in AER by 0.027; IN has t-value of -0.591 against a p-value of 0.555, which transpires that IN has insignificant negative impact on AER . PN has coefficient of -0.030 with AER which means that a unit change in PN will bring negative change in AER by 0.030; PN has t-value of -0.676 against a p-value of 0.499 which reflects that PN has insignificant negative impact on AER. Similarly, CA has coefficient of -0.029 with AER which shows that a unit change in CA will bring negative change in AER by 0.029; CA has t-value of -0.670 against p-value of 0.503, which reveals that CA has insignificant negative influence on AER. CST has coefficient of -0.031 with AER which depicts that a unit change in CST will bring negative change in AER by 0.031; CST has t-value of -0.918 against a p-value of 0.359 which transpires that CST has insignificant negative relation to AER, while CS has coefficient of -0.378 with AER which means that a unit change in CS will bring positive change in AER by 0.378; CS has t-value of -11.329 against a p-value of 0.000 which depicts that CS has significant negative relation to AER

Table 4.4.1.1

Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.105	0.017		63.574	0.000
	CST	-0.001	0.001	-0.039	-1.161	0.246
	CS	-0.023	0.002	-0.376	-11.229	0.000
2	(Constant)	1.213	0.035		34.629	0.000
	CST	0.000	0.001	-0.031	-0.918	0.359
	CS	-0.024	0.002	-0.378	-11.329	0.000
	RT	-0.015	0.009	-0.083	-1.619	0.106
	IN	-0.006	0.010	-0.027	-0.591	0.555
	PN	-0.004	0.006	-0.030	-0.676	0.499
	CA	-0.003	0.004	-0.029	-0.670	0.503

a. Dependent Variable: Administrative Expense Ratio(AER)

The value of R-square is 16% which shows that this model explains only 16% of independent factors that affect AER while 84% are other factors that influence AER. These findings demonstrate insignificant negative impact of IN, RT, PN, CA and CST on AER.

Regression Statistics(A)	
Multiple R	0.409
R Square	0.167
Adj R Square	0.160
Standard Error	0.08830
R Square Change	0.020
F Value Significance	0.000

4.4.1.2. Impact of Corporate Entrepreneurship on Asset Utilization Ratio:

$$AUR_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When AUR was regressed with individual factors of CE, it was seen that RT has coefficient of 0.044 with AUR which depicts that a unit change in RT will bring positive

change in AUR by 0.044; RT has t-value of 0.850 against a p-value of 0.396, which reflects that RT has insignificant positive impact on AUR, whereas IN has coefficient of -0.047 with AUR which reveals that a unit change in IN will bring negative change in AUR by 0.047. IN has t-value of -1.039 against a p-value of 0.299 which transpires that IN has insignificant negative impact on AUR. PN has coefficient of -0.094 with AUR which means that a unit change in PN will bring negative change in AUR by 0.094; PN has t-value of -2.114 against a p-value of 0.035 which depicts that PN has significant negative influence on AUR. CA has coefficient of -0.016 with AUR which shows that a unit change in CA will bring negative change in AUR by 0.016; CA has t-value of -0.369 against a p-value of 0.712 which reveals that CA has insignificant negative impact on AUR .CST has coefficient of 0.374 with AUR which depicts that a unit change in CST will bring positive change in AUR by 0.374; CST has t-value of 11.037 against a p-value of 0.000 which transpires that CST has significant positive relation to AUR

Table: 4.4.1.2

Regression Statistics(B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.883	0.048		18.505	0.000
	CST	0.099	0.009	0.359	10.686	0.000
2	(Constant)	1.501	0.299		5.027	0.000
	CST	0.103	0.009	0.374	11.037	0.000
	RT	0.078	0.091	0.044	0.850	0.396
	IN	-0.101	0.097	-0.047	-1.039	0.299
	PN	-0.128	0.061	-0.094	-2.114	0.035
	CA	-0.015	0.039	-0.016	-0.369	0.712

a. Dependent Variable: Asset Utilization Ratio(AUR)

The value of R-square is 13.5% which shows that this model explains only 13.5% of independent factors that affect AUR, while 86.5% are other factors that influence AUR. These outcomes demonstrate significant negative impact of PN on AUR.

Regression Statistics(B)	
Multiple R	0.374
R Square	0.140
Adj R Square	0.135
Standard Error	0.85330
R Square Change	0.011
F Value Significance	0.000

4.4.2. Impact of Agency Cost on Corporate Entrepreneurship

4.4.2.1.Impact of Agency Cost on Innovativeness:

$$IN_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When IN was regressed with individual factors of AGC, it has been noted that AER has coefficient of -0.092 with IN which depicts that a unit change in AER will bring negative change in IN by 0.092; AER has t-value of -2.497 against a p-value of 0.013 which reflects that AER has significant negative impact on IN while AUR has coefficient of -0.059 with IN which reveals that a unit change in AUR will bring negative change in IN by 0.059; AUR has t-value of -1.486 against a p-value of 0.138 which transpires that AUR has insignificant negative impact on IN .CST has coefficient of 0.102 with IN which depicts that a unit change in CST will bring positive change in CST by 0.102; CST has t-value of 2.628 against a p-value of 0.009 which confirms that CST has significant positive impact on IN.

Table: 4.4.2.1:

Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.974	0.024		166.589	0.000
	CST	0.011	0.005	0.089	2.477	0.013
2	(Constant)	4.377	0.150		29.158	0.000
	CST	0.013	0.005	0.102	2.628	0.009
	AER	-0.412	.165	-0.092	-2.497	0.013
	AUR	-0.028	0.019	-0.059	-1.486	0.138

a. Dependent Variable: Innovativeness(IN)

The value of R-square is 1.8% which shows that this model explains only 1.8% of independent factors that affect IN while 98.2% are other factors that influence IN. These outcomes depict significant negative impact of AER on IN.

Regression Statistics(A)	
Multiple R	0.148
R Square	0.022
Adj R Square	0.018
Standard Error	0.42582
R Square Change	0.014
F Value Significance	0.001

4.4.2.2. Impact of Agency Cost on Risk Taking:

$$RT_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \varepsilon_i$$

When RT was regressed with individual factors of AGC, it has been noted that AER has coefficient of -0.127 with RT which depicts that a unit change in AER will bring negative change in RT by 0.127; AER has t-value of -3.465 against a p-value of 0.001which reflects that AER has significant negative impact on RT while AUR has coefficient of -0.020 with RT which reveals that a unit change in AUR will bring negative change in

RT by 0.020; AUR has t-value of -0.536 against a p-value of 0.592 which transpires that AUR has insignificant negative impact on RT .

Table: 4.4.2.2:

Regression Statistics(B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.463	0.176		25.294	0.000
	AER	-0.683	0.197	-0.127	-3.465	0.001
	AUR	-0.011	0.021	-0.020	-0.536	0.592

a. Dependent Variable: Risk Taking(RT)

The value of R-square is 1.5% which shows that this model explains only 1.5% of independent factors that affect RT, while 98.5% are other factors that influence RT. These outcomes reflect significant negative impact of AER on RT.

Regression Statistics(B)	
Multiple R	0.132
R Square	0.017
Adj R Square	0.015
Standard Error	0.51668
R Square Change	0.017
F Value Significance	0.001

4.4.2.3. Impact of Agency Cost on Proactiveness:

$$PN_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When PN was regressed with individual factors of AGC, it was seen that AER has coefficient of -0.104 with PN which depicts that a unit change in AER will bring negative change in PN by 0.104; AER has t-value of -2.818 against a p-value of 0.005 which reflects that AER has significant negative impact on PN. Similarly, AUR has coefficient of -0.085 with PN which reveals that a unit change in AUR will bring negative change in

RT by 0.020; AUR has t-value of -0.536 against a p-value of 0.592 which transpires that AUR has insignificant negative impact on RT .

Table: 4.4.2.2:

Regression Statistics(B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.463	0.176		25.294	0.000
	AER	-0.683	0.197	-0.127	-3.465	0.001
	AUR	-0.011	0.021	-0.020	-0.536	0.592

a. Dependent Variable: Risk Taking(RT)

The value of R-square is 1.5% which shows that this model explains only 1.5% of independent factors that affect RT, while 98.5% are other factors that influence RT. These outcomes reflect significant negative impact of AER on RT.

Regression Statistics(B)	
Multiple R	0.132
R Square	0.017
Adj R Square	0.015
Standard Error	0.51668
R Square Change	0.017
F Value Significance	0.001

4.4.2.3. Impact of Agency Cost on Proactiveness:

$$PN_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When PN was regressed with individual factors of AGC, it was seen that AER has coefficient of -0.104 with PN which depicts that a unit change in AER will bring negative change in PN by 0.104; AER has t-value of -2.818 against a p-value of 0.005 which reflects that AER has significant negative impact on PN. Similarly, AUR has coefficient of -0.085 with PN which reveals that a unit change in AUR will bring negative change in

PN by 0.085; AUR has t-value of -2.162 against a p-value of 0.031 which transpires that AUR is significantly negatively related to PN .CST has coefficient of 0.140 with PN which depicts that a unit change in CST will bring positive change in CST by 0.140; CST has t-value of 3.623 against a p-value of 0.000, which proves that CST has significant positive impact on PN.

Table: 4.4.2.3:

Regression Statistics(C)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.620	0.037		97.353	0.000
	CST	0.024	0.007	0.118	3.302	0.001
2	(Constant)	4.339	0.233		18.611	0.000
	CST	0.028	0.008	0.140	3.623	0.000
	AER	-0.723	0.257	-0.104	-2.818	0.005
	AUR	-0.062	0.029	-0.085	-2.162	0.031

a. Dependent Variable: Proactiveness(PN)

The value of R-square is 3.1% which shows that this model explains only 3.1% of independent factors that affect PN, while 96.9% are other factors that influence PN. These outcomes reveal significant negative impact of AER and AUR on PN.

Regression Statistics(C)	
Multiple R	0.187
R Square	0.035
Adj R Square	0.031
Standard Error	0.66134
R Square Change	0.021
F Value Significance	0.000

4.4.2.4. Impact of Agency Cost on Competitive Aggressiveness:

$$CA_i = \alpha_i + \beta_1(AER_i) + \beta_2(AUR_i) + \varepsilon_i$$

When CA was regressed with individual factors of AGC, it was observed that AER has coefficient of -0.085 with CA which depicts that a unit change in AER will bring negative change in PN by 0.085; AER has t-value of -2.307 against a p-value of 0.021 which reflects that AER has significant negative impact on CA. AUR has coefficient of -0.033 with CA which reveals that a unit change in AUR will bring negative change in CA by 0.033; AUR has t-value of -0.904 against a p-value of 0.366 which transpires that AUR has insignificant negative impact on PN .

Table: 4.4.2.4:

Regression Statistics(D)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.201	0.342		12.276	0.000
AER	-0.882	0.382	-0.085	-2.307	0.021
AUR	-0.036	0.040	-0.033	-0.904	0.366

a. Dependent Variable: Competitive Aggressiveness(CA)

The value of R-square is 0.7% which shows that this model explains only 0.7% of independent factors that affect CA, while 99.3% are other factors that influence CA. These upshots demonstrate significant negative impact of AER on CA.

Regression Statistics(D)	
Multiple R	0.097
R Square	0.009
Adj R Square	0.007
Standard Error	1.00200
R Square Change	0.009
F Value Significance	0.026

4.4.3. Impact of Corporate Entrepreneurship on Agency Cost

Composite Analysis:

4.4.3.1.Impact of Corporate Entrepreneurship on Administrative Expense Ratio

$$AER_i = \alpha_i + \beta_1(CE_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When AER regressed with CE, it has been seen that CE has coefficient of -0.141 with AER which depicts that a unit change in CE will bring negative change in AER by 0.141; CE has t-value of -4.283 against a p-value of 0.000 which reflects that CE has significant negative impact on AER. CST has coefficient of -0.029 with AER which reveals that a unit change in CST will bring negative change in AER by 0.029; CST has t-value of -0.874 against p-value of 0.383 which transpires that CST has insignificant negative impact on AER. Similarly, CS has coefficient of -0.377 with AER which reflects that a unit change in CS will bring negative change in AER by 0.377; CS has t-value of -11.390 against a p-value of 0.000, which reflects that CS has significant negative impact on AER.

Table: 4.4.3.1:

Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.105	0.017		63.574	0.000
	CST	-0.001	0.001	-0.039	-1.161	0.246
	CS	-0.023	0.002	-0.376	-11.229	0.000
2	(Constant)	1.210	0.030		40.492	0.000
	CST	0.000	0.001	-0.029	-0.874	0.383
	CS	-0.024	0.002	-0.377	-11.390	0.000
	CE	-0.028	0.006	-0.141	-4.283	0.000

a. Dependent Variable: Administrative Expense Ratio(AER)

The value of R-square is 16.3% which depicts that this model explains only 16.3% of independent factors that affect AER while 83.7% are other factors that influence AER. These outcomes transpire significant negative impact of CE on AER

Regression Statistics(A)	
Multiple R	0.409
R Square	0.167
Adj R Square	0.163
Standard Error	0.08815
R Square Change	0.020
F Value Significance	0.000

4.4.3.2. Impact of Corporate Entrepreneurship on Asset Utilization Ratio

$$AUR_i = \alpha_i + \beta_1(CE_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When AUR regressed with CE, it has been seen that CE has coefficient of -0.085 with AUR which depicts that a unit change in CE will bring negative change in AER by 0.085; CE has t-value of -2.528 against p-value of 0.012 which reflects that CE has significant negative impact on AUR .Similarly, CST has coefficient of 0.365 with AUR which reflects that a unit change in CST will bring positive change in AUR by 0.365; CST has t-value of 10.872 against p-value of 0.000 that reflects CST has significant positive impact on AUR.

Table: 4.4.3.2:

Regression Statistics(B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.883	0.048		18.505	0.000
	CST	0.099	0.009	0.359	10.686	0.000
2	(Constant)	1.478	0.240		6.155	0.000
	CST	0.100	0.009	0.365	10.872	0.000
	CE	-0.159	0.063	-0.085	-2.528	0.012

a. Dependent Variable: Asset Utilization Ratio(AUR)

The value of R-square is 13.4% which demonstrates that this model explains only 13.4% of independent factors that affect AUR, while 86.6% are other factors that influence AUR. These findings demonstrate significant negative impact of CE on AUR.

Regression Statistics(B)	
Multiple R	0.369
R Square	0.136
Adj R Square	0.134
Standard Error	0.85376
R Square Change	0.007
F Value Significance	0.000

4.4.4. Impact of Agency Cost on Corporate Entrepreneurship

4.4.4.1.Impact of Agency Cost on Innovativeness:

$$IN_i = \alpha_i + \beta_1(AGC_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When IN regressed with AGC, it has been noted that AGC has coefficient of -0.093 with IN which depicts that a unit change in AGC will bring negative change in IN by 0.093; AGC has t-value of -2.459 against p-value of 0.014 which reflects that AGC has significant negative impact on IN. CST has coefficient of 0.121 with AUR which reflects that a unit change in CST will bring positive change in AUR by 0.121; CST has t-value of 3.173 against p-value of 0.002 which depicts that CST has significant positive impact on IN.

The value of R-square is 1.3% which depicts that this model explains only 1.3% of independent factors that affect IN, while 98.7% are other factors that influence IN. These outcomes reveal significant negative impact of AGC on IN

Table: 4.4.4.1:

Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.974	0.024		166.589	0.000
	CST	0.011	0.005	0.089	2.477	0.013
2	(Constant)	4.050	0.039		103.275	0.000
	CST	0.016	0.005	0.121	3.173	0.002
	AGC	-0.085	0.035	-0.093	-2.459	0.014

a. Dependent Variable: Innovativeness(IN)

Regression Statistics(A)	
Multiple R	0.125
R Square	0.016
Adj R Square	0.013
Standard Error	0.42694
R Square Change	0.008
F Value Significance	0.002

4.4.4.2.Impact of Agency Cost on Risk Taking:

$$RT_i = \alpha_i + \beta_1(AGC_i) + \varepsilon_i$$

When RT was regressed with AGC, it was noted that AGC has coefficient of -0.059 with RT which depicts that a unit change in AGC will bring negative change in RT by 0.059; AGC has t-value of -1.631 against p-value of 0.103 which reflects that AGC has insignificant negative impact on RT

Table: 4.4.4.2:

Regression Statistics(B)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.899	0.047		82.743	0.000
AGC	-0.065	0.040	-0.059	-1.631	0.103

a. Dependent Variable: Risk Taking(RT)

The value of R-square is 0.2% that shows this model explains only 0.2% of independent factors that affect RT, while 99.8 % are other factors that influence RT. These outcomes reveal insignificant negative impact of AGC on RT

Regression Statistics(B)	
Multiple R	0.059
R Square	0.003
Adj R Square	0.002
Standard Error	0.52001
R Square Change	0.003
F Value Significance	0.103

4.4.4.3. Impact of Agency Cost on Proactiveness:

$$PN_i = \alpha_i + \beta_1(AGC_i) + \beta_1(C.S.T_i) + \varepsilon_i$$

When PN was regressed with AGC, it was seen that AGC has coefficient of -0.123 with PN which reveals that a unit change in AGC will bring negative change in PN by 0.123; AGC has t-value of -3.271 against p-value of 0.001 which reflects that AGC has significant negative impact on PN while CST has coefficient of 0.160 with PN which means that a unit change in CST will bring positive change in PN by 0.160; CST has t-value of 4.238 against p-value of 0.000 which transpires that CST has significant positive impact on PN.

Table: 4.4.4.3:

Regression Statistics(C)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.620	0.037		97.353	0.000
	CST	0.024	0.007	0.118	3.302	0.001
2	(Constant)	3.779	0.061		61.988	0.000
	CST	0.032	0.008	0.160	4.238	0.000
	AGC	-0.176	0.054	-0.123	-3.271	0.001

a. Dependent Variable: Proactiveness (PN)

The value of R-square is 2.5% which depicts that this model explains only 2.5% of independent factors that affect PN while 97.5 % are other factors that influence PN.These outcomes reveal significant negative impact of AGC on PN

Regression Statistics(C)	
Multiple R	0.165
R Square	0.027
Adj R Square	0.025
Standard Error	0.66356
R Square Change	0.013
F Value Significance	0.000

4.4.4.4. Impact of Agency Cost on Competitive Aggressiveness:

$$CA_i = \alpha_i + \beta_1 (AGC_i) + \varepsilon_i$$

When CA was regressed with AGC, it was observed that AGC has coefficient of -0.059 with CA which shows that a unit change in AGC will bring negative change in CA by 0.059; AGC has t-value of -1.647 against p-value of 0.100 which reflects that AGC has insignificant negative impact on CA

Table: 4.4.4.4:

Regression Statistics(D)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.490	0.091		38.354	0.000
AGC	-0.126	0.077	-0.059	-1.647	0.100

a. Dependent Variable: Competitive Aggressiveness(CA)

The value of R-square is 0.2% which demonstrates that this model explains only 0.2% of independent factors that affect CA, while 99.8 % are other factors that influence CA. These findings depict insignificant negative impact of AGC on CA

Regression Statistics(D)	
Multiple R	0.059
R Square	0.003
Adj R Square	0.002
Standard Error	1.00436
R Square Change	0.003
F Value Significance	0.10

4.5.1. Impact of Corporate Entrepreneurship on Agency Cost

$$AGC_i = \alpha_i + \beta_1(CE_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When CE was regressed with AGC, it was seen that CE has coefficient of -0.098 with AGC which depicts that a unit change in CE will bring negative change in AGC by 0.098; CE has t-value of -2.927 against p-value of 0.004 which reflects that CE has significant negative impact on AGC. Similarly CS has coefficient of -0.138 with AGC which means that a unit change in CS will bring negative change in AGC by 0.138; CS has t-value of -4.115 against p-value of 0.000 which depicts that CS has significant negative impact on AGC. CST has coefficient of 0.364 with AGC which means that a unit change in CST will bring positive change in AGC by 0.364; CST has t-value of 10.823 against p-value of 0.000 which transpires that CST has significant positive impact on AGC

The value of R-square is 14.1% that shows this model explains only 14.1% of independent factors that affect AGC, while 85.69% are other factors that influence AGC. These findings depict that CE has significant negative impact on AG

Table: 4.5.1:

Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.235	0.086		14.419	0.000
	CS	-0.042	0.010	-0.137	-4.071	0.000
	CST	0.051	0.005	0.357	10.593	0.000
2	(Constant)	1.589	0.148		10.731	0.000
	CS	-0.042	0.010	-0.138	-4.115	0.000
	CST	0.051	0.005	0.364	10.823	0.000
	CE	-0.094	0.032	-0.098	-2.927	0.004

a. Dependent Variable: Agency Cost(AGC)

Regression Statistics(A)	
Multiple R	0.379
R Square	0.144
Adj R Square	0.141
Standard Error	0.43683
R Square Change	0.010
F Value Significance	0.000

4.5.2. Impact of Agency Cost on Corporate Entrepreneurship:

$$CE_i = \alpha_i + \beta_1(AGC_i) + \varepsilon_i$$

When AGC was regressed with CE, it was seen that AGC has coefficient of -0.073 with CE which means that a unit change in AGC would bring negative change in CE by 0.073; CE has t-value of -2.025 against p-value of 0.043 which reflects that AGC has significant negative impact on CE.

The value of R-square is 0.4% which shows that this model explains only 0.4% of independent factors that affect CE while 99.6% are other factors that influence CE. These outcomes demonstrate that AGC has significant negative impact on CE.

Table: 4.5.2:

Regression Statistics(B)

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.874	0.044		87.383	0.000
	AGC	-0.076	0.037	-0.073	-2.025	0.043

a. Dependent Variable: Corporate Entrepreneurship(CE)

Regression Statistics (B)	
Multiple R	0.073
R Square	0.005
Adj R Square	0.004
Standard Error	0.48924
R Square Change	0.005
F Value Significance	0.043

The above outcomes confirm proposition that there is a significant negative relationship between CE and AGC. Thus, the first model has been proved.

4.6. Moderation Regression Analysis:

4.6.1. Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship & Firm Performance

Individual Variable Analysis

4.6.1.1. Agency cost as moderator on relationship between Corporate Entrepreneurship and Market Share Growth

$$MSG_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(AU.R_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

To test second model, moderation regression was applied to validate whether AGC would moderate the link between corporate entrepreneurship and firm performance. Before putting moderator (AGC) on nexus between CE and FP, direct impact of CE, AGC, CS and CST on individual factors of FP was examined. When regression test was applied between individual factors of CE, AGC and MSG, it was found that AER, CS and CST have significant positive impact on MSG, while IN, PN, CA, AUR have positive insignificant impact on MSG, but RT is insignificantly negatively related to MSG. The value of R-square is 49.4% which transpires that this model explains only 49.4% of independent variable that influence MSG, while 50.6% are the other factors that impact MSG.

Regression Statistics(A)	1	2	3
Multiple R	0.700	0.706	0.712
R Square	0.491	0.499	0.507
Adj R Square	0.489	0.494	0.501
Standard Error	0.16161	0.16095	0.15972
R Square Change	0.491	0.008	0.008
F Value Significance	0.000	0.000	0.000

From the moderation regression analysis it has been noted that CS and CST have significant positive impact on MSG but AUR and RT have significant negative impact on

MSG. IN, PN, CA and AER are insignificantly negatively related to MSG .The interaction term has coefficient of 0.716 with CE-FP relationship; it has t-value of 3.577 against p-value of 0.000 that proves significant moderating impact of AGC on relationship between CE and FP. The value of R-square is 50.1% which shows that this model explains only 50.1 % of AGC that affects on the link between CE and FP, while 49.9% are other factors that influence above relationship.

Table: 4.6.1.1:

Moderation Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.605	0.032		-19.198	0.000
	CS	0.079	0.004	0.539	20.828	0.000
	CST	0.026	0.002	0.385	14.876	0.000
2	(Constant)	-0.893	0.102		-8.735	0.000
	CS	0.083	0.004	0.567	20.265	0.000
	CST	0.025	0.002	0.369	13.005	0.000
	RT	-0.009	0.017	-0.021	-0.522	0.602
	IN	0.021	0.018	0.039	1.117	0.264
	PN	0.011	0.012	0.034	0.987	0.324
	CA	0.005	0.007	0.023	0.700	0.484
	AER	0.157	0.068	0.067	2.320	0.021
	AUR	0.007	0.007	0.030	1.048	0.295
3	(Constant)	-0.509	0.148		-3.446	0.001
	CS	0.084	0.004	0.573	20.603	0.000
	CST	0.025	0.002	0.362	12.809	0.000
	RT	-0.046	0.020	-0.107	-2.310	0.021
	IN	-0.010	0.020	-0.019	-0.491	0.623
	PN	-0.006	0.012	-0.018	-0.490	0.624
	CA	-0.009	0.008	-0.040	-1.073	0.283
	AER	-0.035	0.086	-0.015	-0.404	0.686
	AUR	-0.157	0.047	-0.638	-3.379	0.001
	AGC*CE	0.090	0.025	0.716	3.577	0.000

a. Dependent Variable: Market Share Growth(MSG)

4.6.1.2. Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship and Return on Assets

$$ROA_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(AU.R_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When regression test was applied between individual factors of CE, AGC and ROA, it was observed that AUR and CST have significant positive impact on ROA, while AER has significant negative impact on ROA. IN, RT and CS have positive insignificant impact on ROA but PN and CA are insignificantly negatively related to ROA. The value of R-square is 13.7% which depicts that this model explains only 13.7% of independent variables that influence ROA while 86.3% are the other factors that impact ROA.

Regression Statistics(B)	1	2	3
Multiple R	0.330	0.382	0.383
R Square	0.109	0.146	0.146
Adj R Square	0.107	0.137	0.136
Standard Error	0.14012	0.13769	0.13777
R Square Change	0.109	0.037	0.000
F Value Significance	0.000	0.000	0.000

From the moderation regression analysis it has been noted that CST has significant positive impact on ROA, while AER has significant negative impact on ROA. AUR, CS, IN and RT have insignificant positive impact on ROA whereas PN, CA are insignificantly negatively related to ROA .The interaction term has coefficient of -0.062 with CE-FP nexus; it has t-value of -0.237 against p-value of 0.812 that proves insignificant moderating impact of AGC on relationship between CE and FP. The value of R-square is 13.6% which depicts that this model explains only 13.6 % of AGC that affects on the nexus between CE and FP, while 86.4 % are other factors that affect above relationship.

Table: 4.6.1.2:

Moderation Regression Statistics(B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.062	0.027		-2.272	0.023
	CS	0.007	0.003	0.077	2.250	0.025
	CST	0.014	0.002	0.311	9.097	0.000
2	(Constant)	0.214	0.088		2.448	0.015
	CS	0.001	0.004	0.014	0.384	0.701
	CST	0.012	0.002	0.267	7.216	0.000
	RT	0.012	0.015	0.043	0.825	0.410
	IN	0.005	0.016	0.014	0.305	0.761
	PN	-0.006	0.010	-0.028	-0.633	0.527
	CA	-0.001	0.006	-0.008	-0.191	0.848
	AER	-0.307	0.058	-0.199	-5.304	0.000
	AUR	0.016	0.006	0.102	2.735	0.006
3	(Constant)	0.192	0.127		1.508	0.132
	CS	0.001	0.004	0.013	0.368	0.713
	CST	0.012	0.002	0.268	7.210	0.000
	RT	0.014	0.017	0.050	0.828	0.408
	IN	0.007	0.017	0.019	0.376	0.707
	PN	-0.005	0.011	-0.024	-0.488	0.626
	CA	0.000	0.007	-0.003	-0.056	0.955
	AER	-0.296	0.074	-0.192	-3.996	0.000
	AUR	0.026	0.040	0.160	0.644	0.519
	AGC*CE	-0.005	0.022	-0.062	-0.237	0.812

a. Dependent Variable: Return on Asset (ROA)

4.6.1.3. Agency Cost as Moderator on Relationship between Corporate Entrepreneurship and Return on Equity

$$ROE_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(A.R_i) + \beta_2(AU.R_i) + \beta_1(C.S_i) + \varepsilon_i$$

When regression test was applied between individual factors of CE, AGC and ROE, it transpired that AUR and CS have significant positive impact on ROE, while IN and CA have positive insignificant impact on ROE but AER, RT and PN are insignificantly

negatively related to ROE. The value of R-square is 3.8% which depicts that this model explains only 3.8% of independent variables that influence ROE, while 96.2% are the other factors that impact ROE.

Regression Statistics(C)	1	2	3
Multiple R	0.192	0.216	0.217
R Square	0.037	0.047	0.047
Adj R Square	0.036	0.038	0.037
Standard Error	0.93987	0.93876	0.93909
R Square Change	0.037	0.010	0.001
F Value Significance	0.000	0.000	0.000

Table: 4.6.1.3:

Moderation Regression Statistics(C)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.950	0.182		-5.209	0.000
	CS	0.119	0.022	0.192	5.441	0.000
2	(Constant)	-1.103	0.596		-1.850	0.065
	CS	0.122	0.024	0.197	5.121	0.000
	AER	-0.072	0.391	-0.007	-0.185	0.853
	AUR	0.093	0.038	0.089	2.472	0.014
	RT	-0.071	0.100	-0.039	-0.707	0.480
	IN	0.103	0.107	0.046	0.966	0.334
	PN	-0.046	0.067	-0.032	-0.686	0.493
	CA	0.031	0.043	0.033	0.714	0.476
3	(Constant)	-0.682	0.866		-0.788	0.431
	CS	0.123	0.024	0.198	5.149	0.000
	AER	-0.280	0.500	-0.028	-0.561	0.575
	AUR	-0.088	0.274	-0.085	-0.323	0.747
	RT	-0.112	0.117	-0.061	-0.951	0.342
	IN	0.069	0.118	0.031	0.587	0.557
	PN	-0.065	0.073	-0.046	-0.897	0.370
	CA	0.015	0.049	0.016	0.313	0.755
	AGC*CE	0.099	0.148	0.186	0.670	0.503

a. Dependent Variable: Return on Equity(ROE)

From the moderation regression analysis it has been noted that CS has significant positive impact on ROE. IN and CA have insignificant positive impact on ROE whereas RT, PN, AER and AUR are insignificantly negatively related to ROE .The interaction term has coefficient of 0.186 with CE-FP link; it has t-value of 0.670 against p-value of 0.503, which depicts insignificant moderating impact of AGC on relationship between CE and FP. The value of R-square is 3.7% which depicts that this model explains only 3.7% of AGC that influences on the link between CE and FP, while 96.3 % are other factors that affect above relationship.

4.6.1.4.Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship and Profitability:

$$PF_i = \alpha_i + \beta_1(IN_i) + \beta_2(RT_i) + \beta_3(PN_i) + \beta_4(CA_i) + \beta_1(AR_i) + \beta_2(AUR_i) + \beta_1(CS_i) + \beta_2(CST_i) + \varepsilon_i$$

When regression test was applied between individual factors of CE, AGC and PF, it was noted that CST has significant positive impact on PF, while AER and AUR have significant negative impact on PF. CS, RT and CA have positive insignificant impact on PF but IN and PN are insignificantly negatively related to PF. The value of R-square is 11.4% which portrays that this model explains only 11.4% of independent variable that influence PF, while 88.6% are the other factors that impact PF.

Regression Statistics(D)	1	2	3
Multiple R	0.269	0.350	0.352
R Square	0.073	0.123	0.124
Adj R Square	0.070	0.114	0.114
Standard Error	0.19935	0.19463	0.19463
R Square Change	0.073	0.050	0.001
F Value Significance	0.000	0.000	0.000

From the moderation regression analysis it has been noted that CST has significant positive impact on PF, while AER has significant negative impact on PF. IN, CS, RT,

AUR and CA have insignificant positive impact on PF whereas PN is insignificantly negatively related to PF .The interaction term has coefficient of -0.268 with CE-FP relationship; it has t-value of -1.004 against p-value of 0.316 which reveals that insignificant moderating impact of AGC on relationship between CE and FP. The value of R-square is 11.4% which shows that this model explains only 11.4% of AGC that affects on the link between CE and FP, while 88.6 % are other factors that affect above relationship.

Table: 4.6.1.4:

Moderation Regression Statistics(D)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.107	0.039		-2.758	0.006
	CS	0.012	0.005	0.091	2.596	0.010
	CST	0.015	0.002	0.243	6.947	0.000
2	(Constant)	0.294	0.124		2.374	0.018
	CS	0.003	0.005	0.019	0.521	0.603
	CST	0.018	0.002	0.292	7.776	0.000
	AER	-0.347	0.082	-0.162	-4.248	0.000
	AUR	-0.031	0.009	-0.135	-3.592	0.000
	RT	0.026	0.021	0.066	1.243	0.214
	IN	-0.008	0.022	-0.016	-0.354	0.723
	PN	-0.014	0.014	-0.047	-1.028	0.304
	CA	0.001	0.009	0.007	0.164	0.869
3	(Constant)	0.162	0.180		0.901	0.368
	CS	0.002	0.005	0.017	0.458	0.647
	CST	0.018	0.002	0.295	7.828	0.000
	AER	-0.282	0.105	-0.131	-2.695	0.007
	AUR	0.026	0.057	0.114	0.454	0.650
	RT	0.039	0.024	0.098	1.584	0.114
	IN	0.003	0.025	0.005	0.103	0.918
	PN	-0.008	0.015	-0.027	-0.551	0.582
	CA	0.006	0.010	0.031	0.620	0.535
	AGC*CE	-0.031	0.031	-0.268	-1.004	0.316

a. Dependent Variable: Profitability(PF)

4.6.2. Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship and Firm Performance

Composite Analysis

4.6.2.1.Agency cost as moderator on relationship between Corporate Entrepreneurship and Market Share Growth:

$$MSG_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When regression test was applied between CE, AGC and MSG, it was found that CST and CS have significant positive impact on MSG, while AGC and CE have positive insignificant impact on MSG .The value of R-square is 49.2 % which shows that this model explains only 49.2% of independent variable that influence MSG while 50.8% are the other factors that impact MSG.

Regression Statistics(A)	1	2	3
Multiple R	0.700	0.703	0.710
R Square	0.491	0.495	0.504
Adj R Square	0.489	0.492	0.500
Standard Error	0.16161	0.16117	0.15983
R Square Change	0.491	0.004	0.009
F Value Significance	0.000	0.000	0.000

From the moderation regression analysis it has been noted that CST and CS have significant positive impact on MSG while AGC and CE have significant negative impact on MSG. The interaction term has coefficient of 0.740 with CE-FP nexus; it has t-value of 3.727 against p-value of 0.000 that transpires significant moderating impact of AGC on relationship between CE and FP. The value of R-square is 50% which represents that this model explains only 50% of AGC which impacts on the nexus between CE and FP, while 50 % are other factors that affect above relationship.

Table: 4.6.2.1:

Moderation Regression Statistics(A)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.605	0.032		-19.198	0.000
	CST	0.026	0.002	0.385	14.876	0.000
	CS	0.079	0.004	0.539	20.828	0.000
2	(Constant)	-0.721	0.059		-12.315	0.000
	CST	0.025	0.002	0.364	13.104	0.000
	CS	0.080	0.004	0.546	20.935	0.000
	CE	0.023	0.012	0.050	1.934	0.054
	AGC	0.024	0.013	0.049	1.782	0.075
3	(Constant)	-0.359	0.113		-3.177	0.002
	CST	0.024	0.002	0.359	13.009	0.000
	CS	0.082	0.004	0.557	21.390	0.000
	CE	-0.078	0.030	-0.170	-2.642	0.008
	AGC	-0.319	0.093	-0.664	-3.434	0.001
	AGC *CE	0.093	0.025	0.740	3.727	0.000

a. Dependent Variable: Market Share Growth(MSG)

4.6.2.2.Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship and Return on Assets:

$$ROA_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When regression test applied between CE, AGC and ROA, it has been found that CST and CS have significant positive impact on ROA, while AGC and CE have positive insignificant impact on ROA .The value of R-square is 10.7 %, which demonstrates that this model explains only 10.7% of independent variable that influences ROA, while 89.3% are the other factors that impact ROA.

From the moderation regression analysis it has been noted that CST and CS have significant positive impact on ROA, while AGC and CE have insignificant positive

impact on ROA. The interaction term has coefficient of -0.194 with CE-FP nexus; it has t-value of -0.732 against p-value of 0.465 that transpires insignificant moderating impact of AGC which impacts on relationship between CE and FP. The value of R-square is 10.7% which depicts that this model explains only 10.7% of AGC that affects on the link between CE and FP, while 89.3 % are other factors that affect above relationship.

Table: 4.6.2.2:

Moderation Regression Statistics(B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.062	0.027		-2.272	0.023
	CST	0.014	0.002	0.311	9.097	0.000
	CS	0.007	0.003	0.077	2.250	0.025
2	(Constant)	-0.127	0.051		-2.496	0.013
	CST	0.013	0.002	0.294	7.995	0.000
	CS	0.008	0.003	0.083	2.392	0.017
	CE	0.013	0.010	0.044	1.275	0.203
	AGC	0.012	0.012	0.039	1.067	0.286
3	(Constant)	-0.189	0.099		-1.909	0.057
	CST	0.013	0.002	0.296	8.019	0.000
	CS	0.008	0.003	0.080	2.298	0.022
	CE	0.031	0.026	0.101	1.179	0.239
	AGC	0.071	0.081	0.226	0.876	0.382
	AGC*CE	-0.016	0.022	-0.194	-0.732	0.465

a. Dependent Variable: Return on Assets(ROA)

Regression Statistics(B)	1	2	3
Multiple R	0.330	0.334	0.335
R Square	0.109	0.112	0.112
Adj R Square	0.107	0.107	0.107
Standard Error	0.14012	0.14007	0.14012
R Square Change	0.109	0.003	0.001
F Value Significance	0.000	0.000	0.000

4.6.2.3. Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship and Return on Equity:

$$ROE_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \varepsilon_i$$

When regression test was applied between CE, AGC and ROE, it transpired that CS and AGC have significant positive impact on ROE, while CE has positive insignificant impact on ROE. The value of R-square is 4.5 % which shows that this model explains only 4.5% of independent variable that influences ROE while 95.5% are the other factors that impact ROE.

Regression Statistics(C)	1	2	3
Multiple R	0.192	0.211	0.212
R Square	0.037	0.044	0.045
Adj R Square	0.036	0.045	0.040
Standard Error	0.93987	0.93740	0.93776
R Square Change	0.037	0.008	0.001
F Value Significance	0.000	0.000	0.000

From the moderation regression analysis it has been noted that CS has significant positive impact on ROE, while AGC and CE have insignificant negative impact on ROE. The interaction term has coefficient of 0.176 with CE-FP nexus; it has t-value of 0.640 against p-value of 0.522 that reveals insignificant moderating impact of AGC on relationship between CE and FP. The value of R-square is 4% which depicts that this model explains only 4% of AGC that impacts on the link between CE and FP, while 96 % are other factors that affect above relationship.

Table: 4.6.2.3:

Moderation Regression Statistics(C)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.950	0.182		-5.209	0.000
	CS	0.119	0.022	0.192	5.441	0.000
2	(Constant)	-1.216	0.338		-3.602	0.000
	CS	0.124	0.022	0.200	5.661	0.000
	CE	0.008	0.069	0.004	0.119	0.905
	AGC	0.177	0.072	0.087	2.464	0.014
3	(Constant)	-0.851	0.664		-1.282	0.200
	CS	0.125	0.022	0.203	5.695	0.000
	CE	-0.094	0.174	-0.048	-0.541	0.589
	AGC	-0.168	0.544	-0.083	-0.309	0.758
	AGC*CE	0.094	0.147	0.176	0.640	0.522

a. Dependent Variable: Return on Equity(ROE)

4.6.2.4.Agency Cost as Moderator on Relationship Between Corporate Entrepreneurship and Profitability:

$$PF_i = \alpha_i + \beta_1(CE_i) + \beta_1(AGC_i) + \beta_1(C.S_i) + \beta_2(C.S.T_i) + \varepsilon_i$$

When regression test was between CE, AGC and PF, it has been seen that CST has significant positive impact on PF, while AGC has significant negative impact on PF. CE and CS have insignificant positive impacts on PF .The value of R-square is 9.9 % which shows that this model explains only 9.9% of independent variable that influences PF, while 90.1% are the other factors that impact PF.

Regression Statistics(D)	1	2	3
Multiple R	0.269	0.322	0.325
R Square	0.073	0.104	0.106
Adj R Square	0.070	0.099	0.100
Standard Error	0.19935	0.19623	0.19614
R Square Change	0.073	0.031	0.002
F Value Significance	0.000	0.000	0.000

From the moderation regression analysis it has been noted that CST has significant positive impact on PF, while CS, AGC and CE have insignificant positive impact on PF. The interaction term has coefficient of -0.348 with CE-FP nexus; it has t-value of -1.307 against p-value of 0.192 that depicts insignificant moderating impact of AGC on relationship between CE and FP. The value of R-square is 10% which depicts that this model explains only 10% of AGC that impacts on the link between CE and FP, while 90 % are other factors that affect above relationship.

Table: 4.6.2.4:

Moderation Regression Statistics(D)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.107	0.039		-2.758	0.006
	CS	0.012	0.005	0.091	2.596	0.010
	CST	0.015	0.002	0.243	6.947	0.000
2	(Constant)	-0.058	0.071		-0.808	0.419
	CS	0.009	0.005	0.066	1.892	0.059
	CST	0.019	0.002	0.306	8.271	0.000
	CE	0.013	0.015	0.031	0.908	0.364
	AGC	-0.080	0.016	-0.183	-4.968	0.000
3	(Constant)	-0.213	0.139		-1.537	0.125
	CS	0.008	0.005	0.061	1.739	0.082
	CST	0.019	0.002	0.308	8.330	0.000
	CE	0.057	0.036	0.135	1.561	0.119
	AGC	0.067	0.114	0.153	0.588	0.557
	AGC*CE	-0.040	0.031	-0.348	-1.307	0.192

a. Dependent Variable: Profitability (PF)

These outcomes do not provide support for model 2, so it is concluded that AGC does not moderate the nexus between CE and FP. This confirms that model 2 has been rejected.

CHAPTER 5

DISCUSSION & CONCLUSION

5.1. Summary of Major Findings:

5.1.1. Individual Variable Analysis:

- Proactiveness has significant negative impact on asset utilization ratio.
- Administrative expense ratio has significant negative impact on innovativeness, risk taking, proactiveness and competitive aggressiveness.
- Asset utilization ratio has significant negative impact on proactiveness.
- Agency cost has significant moderating impact only on market share growth.
- Risk taking has significant relationship with innovativeness (positive), proactiveness (positive), competitive aggressiveness(positive) and administrative expense ratio (negative), but it has insignificant relationship with market share growth(positive), return on assets(positive), profitability ratio(positive), company sector(positive), asset utilization ratio (negative), return on equity (negative) and company size (negative).
- Innovativeness has significant relationship with proactiveness (positive), competitive aggressiveness (positive), market share growth (positive), company sector (positive) and administrative expense ratio (negative). However, it is insignificant to return on assets(positive), return on equity (positive), profitability ratio (positive) , company size (positive) and asset utilization ratio (negative).
- Proactiveness has significant relationship with competitive aggressiveness (positive), market share growth (positive), company sector (positive) and administrative expense ratio (negative). However, it is insignificant to return on assets (positive), profitability

ratio (positive), company size (positive), asset utilization ratio (negative) and return on equity (negative).

- Significant relationship (negative) between competitive aggressiveness and administrative expense ratio but it is insignificant to market share growth(positive), return on assets(positive), return on equity(positive), profitability ratio(positive), company sector(positive), asset utilization ratio(negative) & company size (negative).
- Administrative expense ratio has significant relationship with asset utilization ratio (positive), market share growth (negative), return on assets (negative), profitability ratio (negative), company size (negative) and company sector (negative). However, it is insignificant to return on equity (negative).
- Asset utilization ratio has significant relationship with market share growth (positive), return on assets (positive), return on equity (positive) and company sector (positive), but it is insignificant to profitability ratio (negative) and company size (negative).
- Market share growth has significant relationship with return on assets (positive), return on equity (positive), profitability ratio (positive), company sector (positive) and company size (positive).
- Return on assets has significant relationship with return on equity (positive), profitability ratio (positive), company sector (positive) and company size (positive).
- Return on equity has significant relationship with profitability ratio (positive) and company size (positive), however, it is insignificant to company sector (positive).
- Profitability ratio has significant relationship (positive) with company sector and company size.
- Company sector has significant relationship (positive) with company size.

5.1.2. Combined Analysis:

- Corporate entrepreneurship has significant negative impact on administrative expense ratio and asset utilization ratio.
- Corporate entrepreneurship has significant negative impact on agency cost.
- Agency cost has significant negative impact on innovativeness and proactiveness, however, it has insignificant negative impact on risk taking and competitive aggressiveness.
- Agency cost has significant negative impact on corporate entrepreneurship.
- The impact of CE on agency cost is more significant.
- Agency cost cannot act as a moderator on the nexus between corporate entrepreneurship and firm performance; only it has moderating impact on market share growth.
- Insignificant positive relationship between corporate entrepreneurship and firm performance.
- Insignificant positive relationship between corporate entrepreneurship and control variables (Company size and Company sector).
- Significant positive relationship between agency cost and firm performance.
- Significant negative relationship between agency cost and company size.
- Significant positive relationship between agency cost and company sector.
- Significant positive relationship between firm performance and control variables (Company size and Company sector).
- Significant positive relationship between company size and company sector.

5.2. Discussion of Results:

When individual variables of corporate entrepreneurship were regressed with individual variables of agency cost, it was observed Proactiveness having significant negative impact on asset utilization ratio. When individual variables of agency cost were regressed with individual variables of corporate entrepreneurship, it was noted that asset utilization ratio has significant negative impact on proactiveness.The significant negative impact between asset utilization ratio and proactiveness is attributable to cash generating units. They deplete their capability with passage of time, which leads to low net output and low revenue. In order to avoid the breakdown of operating assets, companies should be proactive for their maintenance that leads to increase in revenues. If the company does not play a proactive role in maintainace of cash generating units, its impact becomes insignificant, while risk taking, innovativeness and competitive advantage are independent of cash generating units because these would not be able to create effective value from them, hence their impacts are insignificantly negative.

Administrative expense ratio has significant negative impact on innovativeness, risk taking, proactiveness and competitive advantage. Main logic is that high operating cost (administrative expenses) leads to financial distress and lack of availability of funds for entrepreneurial activities. When corporate entrepreneurship was regressed with agency cost, it was noted that corporate entrepreneurship and agency cost were significantly negatively related to each other; however the impact of corporate entrepreneurship is more significant. Thus, corporate entrepreneurship can be efficient technique for reducing the agency cost within organizations. Agency cost can be reduced by efficient competition (Krishnamurti et al, 2008) and competitive aggressiveness is one dimension

of corporate entrepreneurship. So the first model has received enough support, hence the proposition has proved that corporate entrepreneurship has significant negative impact on agency cost.

However, Model 2 does not find any significant support. From the individual moderation regression, it has been seen that agency cost significantly moderates only market share growth. But from composite moderation regression analysis it is noted that agency cost cannot be as moderator on the relationship between corporate entrepreneurship and firm performance. The reason is that a company lies below market share line of major players. Once AUR increases, the company achieves the highest market position and non-performing of other players come to its place. One possibility for this finding is that the corporate entrepreneurship removes the impact of agency cost as it strengthens, as proved in the Model-1. In Model 2 corporate entrepreneurship nullifies the impact of agency cost, so the corporate entrepreneurship can act as an efficient technique for reducing the agency cost within organization that leads to firm performance.

From correlation analysis, following results have been noted:-.

1. Administrative expense ratio has significant negative impact on innovativeness, risk taking, proactiveness and competitive aggressiveness. The logic is that company spending more on operating expenses does not have enough funds for the implementation of entrepreneurial activities.
2. Risk taking and proactiveness have insignificant positive relation with ROA, but have negative relation with ROE. The reason is that when company exhibits CAPEX by increasing its asset base, derives zero or negative return in initial years, but with the passage of time it steadily increases and become positive.

However, ROE increases and profit remains same over the years, leading to negative return. The innovativeness and competitive advantage have positive insignificant relation with ROA and ROE, because innovativeness and competitive aggressiveness are time saving and cost saving techniques, which exhibit measurable return leading to positive ROA and ROE. Insignificant relation reflects the inefficiency of human capital that does not guarantee the returns.

3. Proactiveness and innovativeness have positive significant relation with market share growth, while risk taking and competitive aggressiveness have positive insignificant relation with market share growth. The logic is that a proactive company introduces latest technology reflecting significant impact on market share growth but its usage and competitive aggressiveness depend upon the behavioral aspect of end-users, whether they are able to take risk, leading insignificant impact on market share growth.
4. Risk taking & competitive aggressiveness have negative insignificant relation with company size; however, innovativeness and proactiveness have positive insignificant relation with company size. It is constrained specific subjective to any country. The possible interpretation for this relationship is that larger companies can be more proactive and innovative by offering effective technology and large human capital that leads to increase in revenue and assets. On the other hand if a company considers risk taking by reducing its debt, it would downsize its human capital due to nonpayment of employees which leads to reduce in tangible assets and consequently the company size reduces. However,

Competitive aggressiveness is independent of company size. The overall insignificant relationship is attributable to inefficiency of human capital.

5. AER shows significant positive relation to AUR.Capex is directly related to operating expenses. The costs in long run become variable. Capex is part of operating expenses as depreciation against operating assets directly contributes to operating expenses.
6. AER has significant negative relation with market share growth, ROA, PF and company size, but insignificant negative to ROE. The reason is that in initial years the revenue streams are low and profit is insignificantly negative, but in the long run smoothing out profit by financial modeling and its impact become significant. The insignificant negative impact on ROE is attributable to losses that still exist in equity.
7. AUR has significant positive relation with market share growth, ROA, ROE, but insignificant negative to PF and company size. It is attributable to depreciation of cash generating units. In initial years due to depreciation, the revenues are low that lead to negative or zero ROA and ROE, but with the passage of time it becomes positive that leads to positive market share growth. As previous losses still persist in equity, so ROA must be higher than ROE. The difference between these returns dampens the profitability which leads to decreases in company size as profit is the part of cash & equivalent.
8. Market share growth has significant positive relation to ROA, ROE, PF & company size. High market growth increases revenue that leads positive effect on ROA, ROE .PF and company size.

9. Corporate entrepreneurship has significant negative impact on administrative expense ratio and asset utilization ratio. However, agency cost has significant negative impact on innovativeness and proactiveness, but it has insignificant negative impact on risk taking and competitive aggressiveness. It is attributable to high operating costs & depleting capacity of cash generating units. It is also due to dependence upon available sources
10. Insignificant positive relationship between corporate entrepreneurship and firm performance has been found. However, prior studies proved significant positive CE-FP relationship in developed countries (Knight, 1997; McDougall & Oviatt, 2000; Gartner & Birley, 2002) and developing countries (Luo et al., 2005; Yang, Li-Hua, Zhang & Wang, 2007; Antoncic & Hisrich, 2001; Lekmat & Selvarajah, 2008). In Pakistan it is insignificant because many organizations do not implement the entrepreneurial activities in right and effective way. It also depends upon certain conditions like inefficiency of human capital, inefficient network, and transfers of loss, withdrawal of cash for their own benefits, that impact performance insignificantly.
11. Insignificant positive relationship between corporate entrepreneurship and company size has been noted which depicts that large organizations consider corporate entrepreneurship as a vital element in their strategic policies.
12. Significant positive relationship between agency cost and firm performance is attributable to high operating costs for maintaining employee retention ratio that enhances the performance capacity. The other reason is that firms might be financed through more leverage than equity, that reduces the managerial equity.

Outsiders being as watchdogs, are more involved in firm's operations that leads to high performance. (Uchida, 2006).

13. Significant negative relationship between agency cost and company size has been found that portrays the large organizations have low agency costs, which is also surprising. In Pakistani context most organizations are labor-intensive.
14. Significant positive relationship between company size and firm performance has been seen that refers that large organizations usually have high profits.

5.3. Implications for Research:

Being a prelude endeavor to gain the attention of academicians and practitioners towards this omission in literature by collaborating the corporate entrepreneurship and agency cost, this study provides a milestone for future studies. It also demonstrates that corporate entrepreneurship acts as efficient technique for removing the agency cost within organizations. By incorporating corporate entrepreneurship, entrepreneurs bring innovative ideas into organizations. Entrepreneurs can transform goals at their interest and acclimatize them to changing conditions (Stevenson & Gumpert, 1985). Entrepreneurs actively participate in strategic orientation process. They do not rely on manager's actions for value creation that minimizes managerial self interest. Secondly, if entrepreneurs are financed through leverage, they create watchdogs for examining manager's behavior that serves as best way for reducing managerial agency cost (Crutehley & Hansen, 1989). Ultimately, corporate entrepreneurship reduces agency cost in organizations that escorts firm performance. So the practical implication of this study is that the organizations would focus on entrepreneurial activities whilst reducing agency problems within themselves.

As this research contributes dual functions (reduces agency cost & enhances firm performance) of corporate entrepreneurship, the policy makers can use it to create the effective policies that are advantageous to corporate entrepreneurship. Policy makers should consider the following issues while making policies:

- They should be unbiased because they are pre-determined about certain issues which depend on different sources.
- Should promote principle of equity. Policies should present the element of sincerity, never shot to loss of nation.

5.4. Future Directions/Limitations:

Corporate entrepreneurship serves as a fundamental element in achieving the competitive advantage among the global milieu, escorting to high firm performance. Pakistan needs corporate entrepreneurship in real terms for achieving competitive advantage. So it is highly appreciable that in future the relationship between corporate entrepreneurship and agency cost would be investigated in other countries to incorporate the generalized studies.

5.5. Conclusion:

This study bridges the gap in literature by establishing the relationship between corporate entrepreneurship and agency cost. It scrutinizes the moderating role of agency cost on the nexus between corporate entrepreneurship and firm performance, whether it yields high profits or otherwise. So the novel feature of this study is to fill a gap between corporate entrepreneurship and agency cost.

From the analysis of Model 1, significant support has been received Corporate entrepreneurship has significant negative impact on agency cost, so the first proposition

has been accepted. From the analysis of Model 2, no support has met. Hence hypotheses of this study have been rejected.

From the above analysis, it has been noted that corporate entrepreneurship has more significant impact on agency cost, transpiring that corporate entrepreneurship can act as efficient technique for reducing agency cost within the organization. Through corporate entrepreneurship not only tangible outcomes, but also intangible outcomes can be achieved (Davis, 2006). Corporate entrepreneurship can be useful if it is implemented in a right effective manner .For implementation of corporate entrepreneurship in an effective manner, individualistic support and organizational support should be needed. Executives and managers play a vital role in this regard. By incorporating corporate entrepreneurship, entrepreneurs bring novel ideas in organization and they actively participate in value creation process. Entrepreneurs do not rely on managers' actions for fulfilling organizational goals. Due to this reason, managers do not demand excessive return and do not take any action that harms the executive's reputation. Meanwhile, both entrepreneurs and managers cooperate in strategic orientation. If they cooperate for effective implementation of corporate entrepreneurship within the organization then this endeavor becomes worthwhile, otherwise lack of cooperation may lead to agency problems which could deteriorate entrepreneurial activities.

5.6. Recommendations:

Corporate entrepreneurship should be introduced and implemented in organizations with both individualistic support and organizational support for eliminating the agency problems within the organizations. Secondly, top management should contour and trigger corporate entrepreneurship in strategic policies and operations.

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APPENDIX- 1(Questionnaire)

International Islamic University, Islamabad.

Faculty of Management Sciences

Department of Business Administration

Dear Participant, ***Q. No.*****_____**

Thank you for agreeing to fill out this questionnaire.

I am a student of MS Leading to PHD in FMS at International Islamic University, Islamabad.

I am conducting a study for my thesis on ***"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 "tricky" questions, so it is important that all questions be answered.

I once again thank you for your cooperation.

Sincerely,
Nousheen Tariq Bhutta.

Please tick the appropriate checkbox below.

1. Name: _____
2. Gender ☐ Male ☐ Female
3. Age :_____
4. Income: _____
5. Name of the organization you work for _____
6. Name of the Department _____
7. Current designation / grade _____
8. Education *(highest degree or certificate attained)* _____
9. Area of specialization _____
10. Total working experience *Years* _____ *Months* _____
11. City:_____

12. Sector:_____

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

	Riskiness					
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**
	Innovativeness					
1.	Our company frequently tries out new ideas	**1**	**2**	**3**	**4**	**5**
2.	Our company is creative in its methods of operation	**1**	**2**	**3**	**4**	**5**
3.	Our company seeks out new ways to do things	**1**	**2**	**3**	**4**	**5**
4.	Company's emphasis on developing new products	**1**	**2**	**3**	**4**	**5**
5.	Company's spending on new product development activities	**1**	**2**	**3**	**4**	**5**
6.	Investment in developing proprietary Technologies	**1**	**2**	**3**	**4**	**5**
	Proactiveness					
1	Typically initiates actions to which competitors then respond	**1**	**2**	**3**	**4**	**5**
2	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**
3	Is very often the first firm to introduce new products/ services operating technologies, etc	**1**	**2**	**3**	**4**	**5**
4	Our firm shapes the environment by introducing new products, technologies, administrative techniques than merely react	**1**	**2**	**3**	**4**	**5**
	Competitive Aggressiveness					
1	Owing to the nature of the environment, bold, wide ranging acts are necessary to achieve the firm's objectives	**1**	**2**	**3**	**4**	**5**
2	Typically adopts a very competitive, 'undo-the-competitor' posture	**1**	**2**	**3**	**4**	**5**
3	My firm has a strong tendency to increase the market share by reducing the competitors'.	**1**	**2**	**3**	**4**	**5**