FACTORS DETERMINING PERCEIVED JOB PERFORMANCE OF UNIVERSITY LEADERS IN PAKISTAN

ABDUL WAHAB

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ABDUL WAHAB

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Nama Pelajar
(Name of Student) : **Abdul Wahab**

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(Name of Supervisor/Supervisors) : **Prof. Dr. Rosli Mahmood**

Tandatangan

Nama Penyelia/Penyelia-penyelia
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ABSTRACT

Universities within the tertiary education system perform an imperative job in developing the high-level researchers, specialists, scientists and professionals, required by the economy. World-class University is a need of today. The development of a world-class university requires strong leadership as it has widespread effects on the overall performance of the university. This research focused on the improvement of university leadership based on issues and problems related to it. In this regard, the study explored the effects of managerial competency, self-efficacy and learning orientation as predictors of university leaders' job performance to enhance their effectiveness and efficiency. The notion of entrepreneurial leadership has received a somewhat little concentration in the tertiary education leadership studies. So the study proposed and analysed the mediating effect of entrepreneurial leadership through which university leaders can improve their job performance. In addition to that moderating effect of the dynamic environment was also examined on the above-stated relationships. The research used a quantitative method through survey instrument and 242 usable questionnaires were collected from the leaders of public higher education institutions of Punjab, Pakistan. Partial Least Squares (PLS) was employed to analyse the data. Results showed support for the theoretical model that was studied. The results implied that managerial competency, self-efficacy, and learning orientation are linked with performance. The mediating process was also empirically justified, but the moderating effect of the dynamic environment was not found on the proposed model. The study has validation for a theoretical framework to trigger the future research and theory on edifying university leadership and to comprehend how such leadership develop and has significance for effective job performance. By summarising the results of this research and building a link to its useful applications the study is also useful and has importance for policy makers, academicians and practitioners for further improving and developing university leadership.

Keywords: university leaders' job performance, managerial competency, self-efficacy, learning orientation, entrepreneurial leadership

ABSTRAK

Universiti-universiti dalam sistem pendidikan tinggi melaksanakan tugas penting membangun ahli-ahli penyelidik, pakar, saintis dan golongan profesional bertahap tinggi yang diperlukan oleh ekonomi. Universiti bertaraf dunia adalah keperluan hari ini. Pembangunan universiti bertaraf dunia memerlukan kepimpinan yang kuat kerana ia memberi kesan meluas kepada prestasi keseluruhan universiti. Kajian ini memfokuskan kepada penambahbaikan kepimpinan universiti berdasarkan isu dan permasalahan yang berkaitan. Berdasarkan ini kajian ini menerokai kesan-kesan kompetensi pengurusan, efikasi diri dan orientasi pembelajaran sebagai peramal prestasi kerja pemimpin-pemimpin universiti dalam meningkatkan kecekapan dan keberkesanan mereka. Tanggapan kepimpinan universiti didapati kurang mendapat perhatian dalam pengajian-pengajian mengenai kepimpinan pendidikan tinggi. Justeru kajian ini menganalisis dan mencadangkan kesan pengantara kepimpinan keusahawanan dalam meningkatkan prestasi kerja pemimpin-pemimpin universiti. Selain itu kesan penyederhana persekitaran dinamik diteliti dalam hubungan-hubungan tersebut. Kajian ini menggunakan kaedah kuantitatif melalui instrumen tinjauan, dan sebanyak 242 soal selidik bolehguna dipungut daripada pemimpin-pemimpin institusi pengajian tinggi di Punjab, Pakistan. *Partial Least Squares (PLS)* digunakan untuk menganalisis data. Dapatan kajian menunjukkan sokongan kepada model teoretikal yang dikaji. Dapatan juga menunjukkan bahawa kompetensi pengurusan, efikasi diri dan orientasi pembelajaran mempunyai hubungan dengan prestasi. Proses pengantaraan juga telah dibuktikan secara saintifik tetapi tiada kesan penyederhana persekitaran dinamik ditemui dalam model ini. Kajian ini telah mengesahkan rangka kerja teoretikal bagi mencetuskan kajian-kajian masa hadapan dan teori mengenai kepimpinan universiti serta memberi kefahaman tentang bagaimana kepimpinan ini membangun dan menjadi signifikan kepada prestasi kerja yang berkesan. Dengan meringkaskan dapatan kajian ini dan membangunkan hubungan dengan aplikasi yang perlukan, kajian ini juga perlu dan mempunyai kepentingan kepada pembuat-pembuat dasar, ahli akademik dan pengamal-pengamal bagi membangun dan meningkatkan lagi kepimpinan universiti.

Kata kunci: prestasi kerja pemimpin universiti, kompetensi pengurusan, efikasi diri, orientasi pembelajaran, kepimpinan keusahawanan

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CHAPTER ONE

INTRODUCTION

1.1 Background

In a higher education system, tertiary institutions perform a vital job in educating the high-level professionals, specialists, researchers and scientists, required by the country and in creating the latest information and know-how in favour of national innovation systems (World Bank, 2002). The progression in the educational marketplace in many nations is also observed as significant state goal (Rodionov, Rudskaia, & Kushneva, 2014). Within this situation, an ever more vital concern of many governments is to make certain that their universities are actually working at the most advanced stage of scientific and intellectual development (Salmi, 2009). World Development Report 1998/99 suggested a logical framework highlighting the corresponding job for four important strategic aspects to direct nations in the changeover to a knowledge-based nation: a robust human resource support, suitable institutional and economic control, systematic national innovation system and a dynamic knowledge infrastructure (World Bank, 1999).

Higher learning is essential to entire four poles of this framework; however its task is mainly critical in constructing a robust human resource base and in supporting a systematic national innovation system. Higher learning supports nations to form internationally competitive countries by making a flexible, productive and skilled workforce and by generating, scattering and applying new technologies and ideas. A current worldwide study of copyright creation has revealed, for instance, that research institutes and universities, comparatively than firms, lead scientific developments in biotechnology (Cookson, 2007). Higher learning institutions can also perform a critical job in their regional and local financial systems (Yusuf & Nabeshima, 2007).

Innovation and research perform a vital role in supporting a country's social and economic life, and higher learning institutes are at the centre of the innovation and research, and human capital producing procedure (Ivey, Potopsingh, Henry, & Oliver, 2013). Sonhadji (2012) mentioned that education has the main job in the growth of a country, such as the development of the idea of nationalism, an increase in ethics and morality, economic growth, workforce preparation, and development of science and technology. Tertiary education is a strategically significant segment and there is a proof that investment in research-type education assists in areas which are adjacent to the world technological revolution (Aghion, Dewatripont, Hoxby, Mas-Colell, & Sapir, 2010; Acemoglu, 2006).

Currently, tertiary education has already advanced far from the conventional settings where the university was an institution for dispersing the knowledge, but now, higher education institutes are performing the remarkable job in nation's innovation (Yusoff & Khan, 2013). Ramli *et al.* (2013) stated that tertiary education now has turned into a place for spreading the knowledge in addition to commercialising its research output which mainly contributing to the economic growth of the nation. Bokor (2012) observed that present tertiary education sector is facing a basic change, particularly in terms of mode of operation, value to the society, its role in society and economic structure. Hence, there is a strong requirement to investigate directions and ideas for future.

World-class university is a requirement of today, and Salmi (2009) explained three corresponding groups of features mandatory in top higher learning institutions: (a) a prime focus of expertise (students and faculty), (b) ample funds to provide a productive learning atmosphere and to carry out higher level research, and (c) suitable governance factors that motivate strategic vision, flexibility and innovation that allow universities to organise resources and to form decisions without bureaucracy's burden.

Two complementary viewpoints are required to be regarded in investigating on how to set up modern world-class higher education institutions. The primary side, of an outside nature, deals with the part of the government at the provincial, state and national level and the support that could be made accessible to raise the reputation of universities. The next side is inner. It deals with the independent universities themselves and the essential development and actions that they require changing themselves into world-class universities. Universities that seek to superior results involve in an objective evaluation of their potency and areas for development, settle new broader objectives, and plan and execute a revival plan that could direct towards enhanced performance. By difference, several universities are self-satisfied in their position, be deficient in the determined vision of a superior future, and keep on to work as they were doing in the past, ending up with an increasing performance interval in comparison with that of their international or countrywide competitors (Salmi, 2009). Businesses of all extents need leadership that could offer guidance in addition to making an environment where cultural and organisational factors are in accordance with each other, therefore helping the organisation to be successful in its strategic atmosphere (Hussain, Talib, & Shah, 2014).

Championship in tertiary education is on the mount. The development in higher education keeps on gaining the thrust internationally, carrying with it numerous opportunities and challenges (Calderon, 2012). Many scholars have indicated the paucity of adequate leaders, and the need for effective leadership in tertiary education institutions. Effective leaders are needed in tertiary education institutions for success in institutional reforms and changes, future planning, maintaining sustainability, updating curricula, and adaptation to technological changes and global competition (Posthuma & Al-Riyami, 2012). Leadership is a key factor influencing many educational institutes' outputs (Mathur, Negi, Vigg, & Gupta, 2010).

The formation of a world-class higher education institution needs, in particular, sturdy leadership, a clear vision of the university's goals and mission, and a clearly segmented strategic map to interpret the vision into real targets and programmes (Salmi, 2009). Numerous circumstantial changes have happened in the tertiary education sector in current decades, mainly internationalisation of institutions and globalisation of the market, expansion of profit-making private institutions, enhanced cross-border academic mobility and cut down in public funding (Middlehurst, 1999; Gibbons, 1998; Altbach, 2011; Schofer & Meyer, 2005). On January 24, 2004, the daily paper Le Monde published an article, named 'The Great Misery of French Universities'. The higher education institution union leaders and presidents interviewed for that article argued that the scarcity of capital support and the inflexibilities linked with their use were the main justifications for the failure of the French tertiary education system. The outcomes of the current study of European tertiary education institutions verify that governance and funding affect performance collectively. They specify evidently that the higher-leveled institutes of higher learning tend to relish better management independence, which, consecutively, raises the effectiveness of expending and outcomes in higher research output (Salmi, 2009). According to Salem Khalifa (2009), tertiary education is facing new realities as universities in many states and experiencing budget constraints and financial pressures. Similar challenges and barriers are expected to emerge in many HEIs and it is essential for university leaders to deal with them effectively and to involve all the engaged parties in the change procedure (Hamidifar, 2012).

The present higher learning system of Pakistan could be explained as ‘non-market framed’. The Education Policy (1998-2010) claimed that the whole thrust of government policies and regulatory interventions of Pakistan were not gearing the higher education institutions to market principles and market requirements. In view of its beginning in 2002, the Pakistani Higher Education Commission (HEC) was struggling to support higher education institutions to perform a superior role in the country’s economic growth. After employing the Medium Term Development Framework 2005-2010, the Higher Education Commission put forward its upcoming five-year map viz. its subsequent Medium Term Development Framework (MTDF) 2011-2015 to build the technology and knowledge resources required to facilitate Pakistan to meet the level of the industrially highly developed nations in the next twenty years. A few main physical goals of the suggested five-year plan were:

a) Advancing quality in research and learning
b) Advancing management, governance and leadership
c) Higher education institutions building communities and economies
d) Monetary control and sustainability, and
e) Entrepreneurship, innovation and research

The Islamic Republic of Pakistan is moving through a demographic change and this is a reasoning transition in nation's age structure. The post-secondary inhabitants that come among ages 18-23 are going to mount until 2050; whilst, the ratio of pre-secondary will keep on to diminish (Naqvi, 2008). This suggests that there will be an increased requirement for higher learning and by emphasising on forward planning, by growing access and by rising the system, higher education institutions should be in appropriate position to come across the increasing demand (Khan, 2010). The expansion and growth of education of university have not been achieved without numerous challenges. Among them are quality and relevance, financing, equity and access and the improvement in technology. There have been fresh challenges raised by liberalisation and internationalisation of universities and carried with them various requirements, approaches, and dimensions to the leaders of universities. High authorities such as heads of departments and deans have not been playing appropriate roles for their educational staff. Along with other problems, employees also complained of little pay, irregular promotion, scarcity of motivation, decreasing academic freedom, lack of resources for research and teaching and pathetic work environment (Akhtar & Kalsoom, 2012).

Presently, the main problem facing the Pakistani universities is the unavailability of funding which has taken a toll on many universities such as Gomal University and others, where the staffs are yet looking for their salaries. There are also teachers' concerns about internal management and university regulations (The Express Tribune Pakistan, 2013). The efficiency and effectiveness of the higher education institutions in Pakistan have been the long-established problems since the last five decades. Vague practices of coordination, powers of governance and oversight mitigate the ultimate accountability while unnecessary bureaucratic rigidity and centralisation of authority create stagnant consistency. This permanent dilemma has formed a more turbulent and hostile atmosphere, as the organisations continually need to be up to date with the global needs of the 21st century, and it has also raised the demands from boards of tertiary education institutions to be more receptive towards their stakeholders (Nayyar & Mahmood, 2014).

The shrunk resources from the government, increased costs, growing expectations from the students, and the informational and technological advancements are some of the challenges that described the tertiary education institutions' environment in Pakistan (Nayyar & Mahmood, 2014). Funds of universities are diminishing gradually and it is leaving worse consequences on the growth of universities as well as higher education efficiency. Too many admissions, insufficient material and human capital are the major factors of deteriorating quality in universities. The problem of funding has thus become the main issue in the leadership of Pakistani higher education. The fast intakes in universities affect physical and financial resources. The number of students in the institutions prevails over the government's financial support capability (Akhtar & Kalsoom, 2012). The government even now continues to be the key financier of universities and draws most of its influence in university governance from this financial support role. However, the government financial support is insufficient for the growing needs of the universities, and these institutions rely mainly on government funding. The expenses and earnings evaluation of these higher institutions indicated surplus of expenses over earnings and that there was a building up of the deficit between capital expenses and capital earnings (Memon, 2007).

The challenges experiencing the Pakistani higher education at the start of the twenty-first century have straight inferences for the pupils. The reality is that they have to compensate for their learning, and the struggle for employment can no longer be taken for granted. The organisational governance should be more accountable to constituencies both external and internal to the universities, and the sturdy existence of the state in comparison with other stakeholders needs to be evaluated. The government of Pakistan has to re-evaluate and place obvious goals for the education of university, amend the Universities' Acts in conformity with the present changes and focus for proficient use of resources in the universities. This requires the government to drive away from the basics of everyday university administration and gives the universities a little space of autonomy. The Pakistani government has to begin restructuring and stimulating higher education management to provide considerable independence (Akhtar & Kalsoom, 2012).

Recently the higher education's functions are experiencing some noteworthy changes, and they are likely to excel in research and education and also encourage entrepreneurship and innovation. Higher education institutions are facing notable challenges in revealing who they are, what they do, how they do it and why they do it. Ever more, the appearance of the knowledge economy, the economic unsteadiness, the expansion of the information and communication technology and the decline in government funding have brought new demands on tertiary education systems universally (Lamidi & Williams, 2014). In order to realise challenges and sustain a competitive edge, leaders in higher education institutions will need to exploit diverse revenue generating activities to attract new students, stay competitive, and to create positive financial impacts for their colleges or universities (Eckel, 2007).

Higher education institutions that focus on performance objectives should promote the enthusiasm of risk-taking and proactive behaviour in order to attain the desired performance (Nayyar & Mahmood, 2014). Based on the research of Clark (1998, 2000, 2004), leaders in colleges and universities need to gain entrepreneurial skills in order to meet the variations of a competitive and dynamic environment if they want to be successful. Schultz defined entrepreneurial ability as a type of human capital (Klein & Cook, 2006) and stressed that entrepreneurship was there in every facet of life, demonstrated by several different people. Schultz (1979) also explained that entrepreneurship is an element of all individual behaviour rather than only performed by specialist groups. He believed this ability may be improved by education, experience and health and that every person should be able in supplying entrepreneurship when there is a demand for it. Using Schultz's idea of entrepreneurship, people at diverse organisational ranks, such as college provosts, presidents or academic deans could be seen as entrepreneurial agents.

University leaders such as deans and head of academic programmes perform a vital role in the academic departments that constitute universities. They administer daily operations, hire professional staff and faculty, and work closely with higher university administrators (Goodall, McDowell, & Singell, 2014). These leaders are in the main position to involve in entrepreneurial activity when met with limited resources (Krahenbuhl, 2004). An entrepreneurial framework for higher education was laid out in 2000 and has since been employed in numerous research studies in the area of higher education (Clark, 1998, 2000). Clark (2004) proposed that entrepreneurship needs to be consistent and proactive for an organisation to become further entrepreneurial. Based on Clark's framework, entrepreneurialism is a process which higher education institutes can employ when facing change or planning for change. There is also a proposal that higher learning intuitions not only change but revamp themselves by becoming more entrepreneurial in the characteristics, behaviours and attitudes of the administration (Bakar & Mahmood, 2014). The entrepreneurial university is now an idea that captivates a lot of attention from scholars (Salem, 2014). An entrepreneurial university, according to Clark (2004), is one whose leadership takes risks by beginning new plans when the outcome is unknown and consistently putting efforts on actions and in innovating strategies that lead to organisational transformation.

Institutions of tertiary education experience many challenges including training the students to work in an international environment that is rapidly changing, entrepreneurial and dynamic. In this situation, there are opportunities for enhanced entrepreneurship in tertiary education (Salem, 2014). Entrepreneurship in the field of higher education could engage schools, departments, or the whole campus and may require the leadership of all levels of an institution, from the president to academic deans and could even engage the students (Cleverley-Thompson, 2011). The important concern is how entrepreneurship can get benefit from leadership to deal with the diverse challenges of business enterprise formation and enhance the possibility of victory in the world of business. Consecutively, the leadership could also take advantage of entrepreneurial abilities to cope with highly competitive and disturbed firm atmosphere (Cogliser & Brigham, 2004). Therefore, in order to attain greater comprehension of both phenomena and using the synergy in respect of refining the two areas, researchers have incorporated them into a modern paradigm known as 'entrepreneurial leadership' (Yang, 2008; Gupta, MacMillan, & Surie, 2004).

New movements in the society and the appearance of knowledge economy have challenged the conventional ways of running the public tertiary education institutions. Increasing public demands and the technological advancements coupled with the shortage of fixed sources of funding and rise in the operation overheads are putting pressure on higher education institutes to maintain a sustainable growth and stay competitive (Mahmood, 2013). This altering background needs the tertiary institutes to be diverse and adaptable, and meet these challenges by behaving innovatively (Nayyar & Mahmood, 2014). One of the normally accepted tasks of changing higher learning institutes towards higher performance is effective leadership, as leaders are in the seats of power and they persuade and administer human, financial and other resources, in addition, to providing essential aid towards superior success and achievement (Gappa, Austin, & Trice, 2007; Bento, 2011; Yukl, 2010).

Both professionally and academically oriented studies proposed that the leader performs a vital job in the administration of today's universities and colleges (Bowman Jr, 2002; Allen, 2003; Lucas, 2000; Hecht, Higgerson, Gmelch, & Tucker, 1999). In reality, some see university leader as the most significant managerial seat in higher learning institutions (Gmelch & Parkay, 1999). Studies have also found that it's the performance of a leader who actually leads the performance of whole organisation towards success and that entrepreneurial leadership behaviour enables these leaders to promote the procedure of organisational innovation by identifying and taking advantage of new opportunities to enhance the performance of the firm, resolving issues creatively and utilising resources effectively (Gupta *et al.,* 2004; Rae, 2007).

1.2 Problem Statement

In the present competitive situation, most organisations strive to be successful and sustainable. Certainly, one of the significant variables in formulating the failure or success of an organisation is leadership. The word 'Leadership' has attracted growing attention in the theoretical and practical sphere for the past decades. However, leadership in tertiary education has been given less significance and is not investigated widely (Siddique, Aslam, Khan, & Fatima, 2011). The job of university leader is large, complex and often filled with ambiguity (Cardno, 2014). Therefore, leadership and its effectiveness have been the aims of substantial debate and research from which more questions have occurred (Mesterova, Prochazka, Vaculik, & Smutny, 2015). It is widely believed that leadership has a straight influence on how effectively an institution achieves its goals and realises expected results. This is mainly true today in the fast-changing and complex background of the 21st century. After more than a decade of economic, social and political turmoil, demand for open, trustworthy and honest leaders has grown tremendously (Northouse, 2013; Owusu-Bempah, Addison, & Fairweather, 2011), and this has extended into tertiary education. Universities and colleges are now being drawn into the rising dilemma of leaders (Fraser, 2014). Tertiary education is being handled with a rising sense of distrust of individuals in leadership positions. Problems linked to violence on campus, the growing cost to attend college and interpersonal misconduct is causing severe concerns about leadership in university and college campuses (Fraser, 2014). There has been an increasing interest in the jobs of leaders within tertiary education institutions in present years driven by the altering shape of tertiary education leadership in the face of universal challenges within the sector (Black, 2015).

The expectancy of superior job performance and efficiency has resulted in growing demands for tertiary education liability (Nayyar & Mahmood, 2014). Leader performance in universities has become the main issue, both at departmental and institutional levels (Bolton, 2004). Leadership is also one of the key factors affecting university's performance (File & Shibeshi, 2011). While there are several studies associated with the issue of leadership in institutions of tertiary education, up till now researchers have not sufficiently studied specific predictors of leadership effectiveness in such institutions (Al-Shuaiby, 2009). Furthermore, university leaders as a population have not been extensively researched, which shows a gap in the research literature (Thrash, 2012). Similarly, there is a huge body of research associated with leadership and job performance of middle managers in business, but studies of leadership behaviour and academic performance in HEIs are missing

(Almayali & Ahmad, 2012). Little is known about thriving leadership in the thousands of academic departments that constitute universities (Goodall *et al.*, 2014). Thus, there is a need to build a model of effective university leadership as a base for institutional performance (Hamidifar, Vinitwatanakhun, & Roodposhti, 2013).

Scholars are also concerned in finding out the degree to which leadership capabilities of university leaders can be anticipated by a blend of constructs including their leadership styles, and competencies in addition to roles to be an important aspect in leadership efficacy (Daugherty & Finch, 1997; Rosser, Johnsrud, & Heck, 2003; Eagly, Johannesen-Schmidt, & Engen, 2003; Billing & Alvesson, 1994; Thorp, Cummins, & Townsend, 1998; Eagly *et al.*, 1992; Moss & Jensrud, 1995). But, there is a paucity of research linked with leadership styles and professional and personal characteristics of university leaders as predictors of their leadership effectiveness.

The transformation process that occurred in the higher education sector has also changed the role of university leaders. They must perform not only in their scholastic capability but also as managers. However, some researchers (for example, Raines & Alberg, 2003; Filan, 1999) argued that those educationists who have been placed in leadership positions perhaps do not have the needed managerial competence and that many of the institutions offer little or no formal training and coaching. Deficiency of managerial competencies, abilities, skills, experience, inadequately thought out business plans, as well as resource starvation and adverse economic conditions, have been found to be the chief contributors to the failure of organisations (Nieman & Nieuwenhuizen, 2009; Bucur, 2013). Thus, a framework of management competencies for coaching reasons has become crucially significant for the university leaders for it is the most helpful indicator for forecasting their job performance (Bucur, 2013).

Past empirical research has supported that competencies are positively linked to job performance (Spreitzer, McCall Jr, & Mahoney, 1997; Russell, 2001; Goldstein, Yusko, & Nicolopoulos, 2001). However, some researchers have suggested that the debate of competencies in the entrepreneurial research is still in its initial phases (Brinckmann, 2008), very limited, scarce or somewhat underdeveloped in the field of higher education (Martinez, 2008), and therefore presents several opportunities for the scholars (Bhardwaj & Punia, 2013). Laguna, Wiechetek and Talik (2012) argued that competencies have been researched in isolation and with a small attempt to recognise their shared relationships. To this end, the connection between broader groups of competencies and their associations with job performance and organisational success is yet to be statistically tested (Mitchelmore & Rowley, 2010; Markman, 2007). Though rising competition compels organisations to engage competent individuals, the connection between organisational success due to job performance and managerial competencies still remains a significant issue in the organisational literature (Crook, Todd, Combs, Woehr, & Ketchen Jr, 2011).

The expansion and growth of many higher education institutions would not have easily achieved without countering numerous challenges like financing, quality and the improvement in technology. There are also new challenges in the sector as a result of internationalisation, globalisation, and liberalisation of universities. These have brought with them various requirements, approaches and dimensions to the university leaders (Akhtar & Kalsoom, 2012). Consequently, in order to meet all these challenges, a strong sense of self-efficacy is vital among the university leaders for them to thrive and sustain. According to Bandura (2001), the significance of self-efficacy in leadership situation is when they are confronted with setbacks or obstacles, and only those with a strong faith in their abilities will strengthen their efforts to master the challenge. He also stressed that individuals with a high self-efficacy will likely take a wider view of a job in order to establish the finest plan. Hassan, Alasmari, and Ahmed (2015) concurred that difficulties often motivate persons with high self-efficacy to superior efforts.

Many studies have revealed a positive relationship between leader's self-efficacy and job performance, and that leaders' self-efficacy looks to be a promising construct for understanding their behaviour and motivation. However, it has yet been comparatively studied especially in the education sector (Tschannen-Moran & Gareis, 2007). Furthermore mentioned by Leithwood and Jantzi (2008), leaders' self-efficacy research is still very much in its early years (Leithwood & Jantzi, 2008). In addition, the literature of self-efficacy in the university leader's job performance specifically in the tertiary education institutions of Pakistan is sparse and somewhat understudied (Nayyar & Mahmood, 2014).

The present higher learning system of Pakistan could be explained as 'non-market framed'and it was not geared towards market principles and requirements. According to Yang (2003), universities are required to become customer oriented, adopt the marketplace and work as a full business venture in order to move ahead in the international competitive environment. In view of the transformations that have happened in higher education, it would not be wrong to state that learning orientation is the need of today's higher education institutions, because learning orientation is the degree to which an organisation gets and shares information about market changes, customer requirements and competitor actions, as well as advancements in new technologies to produce new services or products that are better to those of competitors (Calantone, Cavusgil, & Zhao, 2002; Farrell, 2000).

Research scholars still believe that the area of learning orientation with respect to job performance has been less studied (Laverie, Madhavaram, & McDonald, 2008; Long, 2013). Learning orientation still needs more research due to the very small number of studies (Darmanto, Runing S, Harsono, & Haryono, 2014). Careful examination related to learning is sparse, particularly in the perspective of performance effects (Jantunen, Nummela, Puumalainen, & Saarenketo, 2008). Even though the importance of learning in the area of global business has been extensively accepted, researches concerning learning orientation across borders (Jantunen *et al.*, 2008) and in the framework of the exporting realm (Souchon, Sy-Changco, & Dewsnap, 2012) are limited. Although the learning orientation has received considerable attention in the scholarly literature, however, the use of learning orientation as a variable especially with job performance is lacking. Thus, this study looks into the learning orientation variable as one of the factors affecting university leader' job performance specifically in Pakistani higher education institutions.

From the above discussion it is concurred that by focusing on their self-efficacy to make them confident in their abilities to take timely and productive actions, managerial competencies to make them managerially strong in addition to their scholastic capabilities, and learning orientation to understand and cadre the prevailing needs of markets, clients, and other stakeholders make a suitable mix of variables to increase the job performance of university leaders.

Extensive studies have been concentrated on the jobs of chancellors, presidents and deans, and leadership catastrophe in managing the higher learning institutions has been discovered (Coats, 2000). The search for solutions to this leadership issue directs many researchers to believe that the university leader development is the least researched and most misunderstood management procedure (Gmelch, 2013). Mohamad, Daud and Harun (2014) emphasised that the university leadership should be flexible and should bring transformation in order to attain academic excellence because they are experiencing multifaceted challenges (Hamidifar, 2012). The enhanced difficulty of the leadership role in the tertiary education setting has gained attention as a topic of study over the past fifteen years (Ramsden, 1998; Knight & Trowler, 2001; Cohen, 2004; Coaldrake & Stedman, 1998, 1999; Mead, Morgan, & Heath, 1999). Cohen (2004) also argued that bosses at every level of the organisation need leadership that is to visualise, to inspire and to initiate change. However, what is needed more is entrepreneurial leadership because it is vital for the future of organisations. By embracing entrepreneurial leadership it is hypothesised that this variable contributes to job performance as what Mohtar and Rahim (2014) suggest it enhances the organisational performance.

According to the Association for the Study of Higher Education (2006), entrepreneurial leadership and how to be successful in implementing entrepreneurial activities are valuable subjects and revolutionary ideas for future research in higher education. Despite the essential effect of entrepreneurial leadership on developing organisational performance and leadership effectiveness, the significant role this leadership behaviour can play in enhancing educational organisations has not been fully studied (Peck, 1991; Eyal & Inbar, 2003; Lebusa, 2009). Moreover, literature on the effect of entrepreneurial leadership on performance improvement of educational institutions is sparse (Pihie & Bagheri, 2013). Furthermore, little is known about the entrepreneurial leadership construct. According to Tarabishy, Solomon, Fernald Jr. and Sashkin (2005) there is much needs to be done to explain the characteristics and role of tomorrow's leaders, new thinking patterns and new organisational designs, and that entrepreneurial leadership may offer one answer. Kuratko (2007) emphasised that entrepreneurial leadership is becoming a worldwide need and that the more understanding will be formed around the elements including this concept, the more the concept itself can be understood. Other researchers have emphasised on leadership types but hardly had they fully discovered the functions and concepts of entrepreneurial leadership in the public sector. Even though there are some subjective facts of the functions of entrepreneurial leadership in the public sector, limited academic work has been carried out to examine the meaning of entrepreneurship in the public sector (Park, 2012; Pihie, Asimiran, & Bagheri, 2014; Roomi & Harrison, 2011; Ruvio, Rosenblatt, & Hertz-Lazarowitz, 2010) or the vital functions of entrepreneurial leadership for nurturing positive behaviours in public sector settings. In addition, some scholars have suggested for additional research into the entrepreneurship role as a mediating variable (Bakar & Mahmood, 2014). Only Hunter (2013) who studied the mediating role of entrepreneurial leadership in an investigation of the competitiveness of SMEs and his results showed a partial mediation. As studies on the indirect effect of entrepreneurial leadership on performance improvement in educational institutions is scarce (Pihie & Bagheri, 2013; Park, 2012), there is a need to study the mediating effect of entrepreneurial leadership behaviour to enhance the leader's job performance of higher education institutions so that they respond all the challenges in the changing environment.

The research has documented the environment of entrepreneurs as a major factor affecting their entrepreneurial behaviour (Ucbasaran, Howorth, & Westhead, 2000). Pertinent literature also discussed that the capability of entrepreneurs to recognise, and capitalise on opportunities is affected by the environment in which they work (Scott, Fadahunsi, & Kodithuwakku, 2000; Ucbasaran, Westhead, & Wright, 2001). Zahra's (1996) view that environment plays a moderator role is well supported by many types of research (Chen, Greene, & Crick, 1998; Rauch & Frese, 2007; Wijbenga & van Witteloostuijn, 2007; Okhomina, 2010). Nandakumar, Ghobadian and O'Regan (2010) also mentioned that the dynamic environment moderates the connection between competitive performance and firm-level strategy. University leaders have faced with significant changes in their internal and external environments that influence their general functioning and leadership roles (Preston, 1994), as well as how they comprehend, interpret and develop their leadership roles. Higher education institutions have to be receptive to the transformations in both outside and inside environments in order to stay relevant, being willing and ready to adapt strategies where need most, and to cater appropriately diverse public (Ellis & Miller, 2014). Universities are strongly intertwined with the wider national environment. Therefore, it is likely to argue that the national environment of university leaders may shape their activities in entrepreneurial endeavours (De Silva, 2012).

Transformational model theoretically identifies the possible moderating effect of the situation on the effectiveness of leader behaviour (Pawar & Eastman, 1997), but few researches have in reality tested for such moderating influences (Podsakoff & Bommer, 1996; Bass, 1996), and as pointed out by Yukl (1999), there is not much statistical proof of important moderator variables. Previous research has also shown uncertainty about the environment and its impact on decision making and entrepreneurial strategy in many ways (West & Drnevich, 2010). The discussion has shown that all three predictors of performance and job performance of university leaders itself are affected by the environment. So there is a great need to observe the influence of dynamic environment on these variables relationship. By studying the moderating effect of a dynamic environment with the combination of these variables, and specifically, in the higher education institution context will increase an understanding to which extent dynamic environment exists and affect the job performance of university leaders.

1.3 Research Questions

Based on the research problem the following research questions have been formulated as a basis for this study.

1. Is there a significant relationship between managerial competency and job performance of university leaders in Pakistan?

2. Is there a significant relationship between self-efficacy and job performance of university leaders in Pakistan?

3. Is there a significant relationship between learning orientation and job performance of university leaders in Pakistan?

4. Does entrepreneurial leadership mediate the relationship between managerial competency and job performance of university leaders in Pakistan?
5. Does entrepreneurial leadership mediate the relationship between self-efficacy and job performance of university leaders in Pakistan?
6. Does entrepreneurial leadership mediate the relationship between learning orientation and job performance of university leaders in Pakistan?
7. Does dynamic environment moderate the relationship between managerial competency and job performance of university leaders in Pakistan?
8. Does dynamic environment moderate the relationship between self-efficacy and job performance of university leaders in Pakistan?
9. Does dynamic environment moderate the relationship between learning orientation and job performance of university leaders in Pakistan?

1.4 Research Objectives

The main objective of this study is to gain a better understanding of the factors influencing job performance of university leaders in the higher education institutions in Pakistan. Specifically, the objectives of the study are:

1. To determine the significant relationship between managerial competency and job performance of university leaders in Pakistan.
2. To determine the significant relationship between self-efficacy and job performance of university leaders in Pakistan.

3. To determine the significant relationship between learning orientation and job performance of university leaders in Pakistan.
4. To examine the mediating effect of entrepreneurial leadership on the relationship between managerial competency and job performance of university leaders in Pakistan.
5. To examine the mediating effect of entrepreneurial leadership on the relationship between self-efficacy and job performance of university leaders in Pakistan.
6. To examine the mediating effect of entrepreneurial leadership on the relationship between learning orientation and job performance of university leaders in Pakistan.
7. To examine the moderating effect of dynamic environment on the relationship between managerial competency and job performance of university leaders in Pakistan.
8. To examine the moderating effect of dynamic environment on the relationship between self-efficacy and job performance of university leaders in Pakistan.
9. To examine the moderating effect of dynamic environment on the relationship between learning orientation and job performance of university leaders in Pakistan.

1.5 Scope of Study

The target population of 1379 university leaders comprises vice chancellors, deputy vice chancellors, deans, deputy deans, directors/chairmen and head of departments of faculty/schools of 25 public sector institutions of higher learning in Punjab, Pakistan. The required sample is 322 on a 5 percent margin error. The data collection process will take around four to five months time. This study is limited to leaders of the universities in only one region, Punjab, Pakistan. As the study is in Pakistan therefore, the results may not be applicable in other countries both within Asia and beyond. This study considers the views of respondents from only one angle (the universities). It does not include other stakeholders in the education sector in Pakistan particularly the government. The model presented in this study is small in scope to examine all related factors that might influence leader's job performance of public sector universities in Punjab, Pakistan.

1.6 Significance of Study

As the 21st-century starts, higher education is experiencing unmatched challenges, occurring from the convergent influences of globalisation, growing significance of knowledge as the main driver of development, and the communication and information revolution (World Bank, 2002). Universities itself, public and private and commissions that direct and govern higher education in diverse parts of the world are developing policies to respond to growing requirements for tertiary education. As liability stakes continue to be raised in tertiary education, it builds stresses on leadership which is more and more observed as a factor that affects educational conditions and consequently the quality of student education (Cardno, 2014). Pakistan is no exception to this trend. According to July 2014, the numbers of private and public sector universities in Pakistan were 69 and 89 respectively, but as per the data updated on October 2015, these numbers has risen to 73 and 100 respectively. This growth has aroused the need of a distinct and an inclusive leadership system to run universities that are growing at a fast pace.

As higher education institutions are multi-product organisations, an examination of how those institutions can get better efficiency is of greater interest not only for policymakers but also for tertiary education managers (Olivares & Wetzel, 2014). One of the normally accepted tasks of changing higher learning institutes towards higher performance is effective leadership, as leaders are in the seats of power and they persuade and administer human, financial and other resources, in addition, to providing essential aid towards superior success and achievement (Gappa, Austin, & Trice, 2007; Bento, 2011; Yukl, 2010). The literature in recognising certain variables that could be related to leadership efficacy of university leaders is very sparse (Al-Shuaiby, 2009). Therefore, this research study by focusing on the improvement of university leadership based on issues and problems related to it addresses the variables that help university leaders' to improve their job performance. Research says it's the performance of leader who actually leads the performance of whole organisation towards success so the idea of conducting this research is to study the mediating effect of entrepreneurial leadership and moderating impact of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of public sector university leaders of Punjab, Pakistan. The researchers, scholars, practitioners, and organisations (leaders and managers) are beneficiaries of this investigation.

Despite the extensive research work that has been carried out in the entrepreneurial and leadership literature in the light of the contingency theory and organisational change, in other words, the results call for further research to resolve this inconsistency. Moreover, in the view of lacking empirical studies investigating the university leader’s job performance, and implications of the interaction between three determinants managerial competency, self-efficacy and learning orientation in the presence of entrepreneurial leadership and dynamic environment in the higher education institutions of Punjab, Pakistan, this study represents an attempt to fill this theoretical gap in the existing literature. In general, the research has many added value and contributions to the boundary of knowledge as discussed below:

The research revealed that there is a little empirical research work conducted to study the relationships between these three determinant factors and the job performance of leaders in the context of higher education industry of Punjab, Pakistan. In addition to that, most of the work related to this has been far from empirical-based research work. Therefore, this study added to the scarce empirical research stream by studying this relationship in the context of one of the developing countries like Pakistan. Second, the said relationship of the three determinant factors managerial competency, self-efficacy, learning orientation and the university leaders’ job performance, with the mediation effect of entrepreneurial leadership and in the moderation influence of dynamic environment in the higher learning institutions in Pakistan, is hence the first attempt to identify the mediation effect in the integration of three determinant factors and the university leaders' job performance.

The managerial significance of this study is of a great value for practitioners since it has many implications as follows: First, there is a significant role of these three determinants, i.e., managerial competencies, self-efficacy and learning orientation for the effective and efficient performance of university leaders which ultimately impact their organisational performance. These are the leaders who establish the quality management practices within their faculties. This implies that all the highly performance-oriented activities conducted by the employees are due to their leaders. Second, the results of the study regarding the significant impact of entrepreneurial leadership on the university leaders' job performance implies that the leaders of schools/faculties in the higher education institutions of Punjab, Pakistan should establish and develop an entrepreneurial cultural that encourage pro-active behaviour, innovation and risk tolerance as learning opportunities and growth drivers. Focusing the effect of mediation of entrepreneurial leadership on the relationship between three determinant factors, and the leader's job performance of the higher education institutions in Punjab, Pakistan provides some insights into how the integration of entrepreneurialism in their leadership behaviour could help in building the competitive advantage to increase the overall performance.

This study, however, could be very informative and of a significant value to policy makers for many reasons. First, it reveals the importance of quality initiatives towards the university leader's performance which has the influence on the overall organisational performance of higher education institutions in Punjab, Pakistan in particular and thus to the overall economy in general. Towards that end, policymakers can help university leaders to achieve a high level of products and services quality and offer them the required training and consultation. Second, this study shows the significance of entrepreneurialism to the organisational performance. Therefore, policy makers can facilitate organisations to be entrepreneurial / more entrepreneurial by providing many incentives and opportunities and by encouraging the training and consultation. Many researchers such as Russell and Russell (1992) state that for entrepreneurialism to be enhanced, all the organisational members should be engaged and involved in knowledge activities. Moreover, there must be a guide for policymakers as how to use entrepreneurial leadership to create and enhance the competitive advantage of an organisation. Having emphasised that, the higher education sector is the heart of economy for countries and one of the effective drivers of the economic prosperity, therefore, the policymakers should give more attention to the higher education institutions when they plan for the long-term development process.

1.7 Definition of Key Terms

The definitions and brief explanation of the key terms used in this study are as follows:

1.7.1 Higher Education Institution (HEI): 'Higher education institution' or 'tertiary education institution' or 'higher learning institution' is a university or higher education college in Pakistan.

1.7.2 University Leaders: University leaders include deputy vice chancellors, deans, deputy deans, directors /chairmen of academic institutes and heads of department.

1.7.3 Job Performance: Campbell (1990) defined performance as those actions or behaviours under the control of the individual, that contribute towards the organisation's goals, and that can be measured according to the individual's level of proficiency.

1.7.4 **Managerial Competency:** Whiddett and Hollyford (2003) defined managerial competencies as a set of behaviours of individual that demonstrate the effective performance of tasks within the organisation.

1.7.5 **Self-Efficacy:** Self-efficacy is the cognitive process by which a person evaluates his or her ability to perform a certain task (Bandura, 1997). McCormick (2001) said self-efficacy is a key factor which performs a significant role in a leader's capability to be successful in a challenging, adversarial, dynamic or complex environment.

1.7.6 **Learning Orientation:** Learning orientation as the person's internal driving power, inducing the person to get new knowledge and skills, to seek challenge, looking ahead to learn from the growth and challenges, which facilitate to improve his/her creativity (VandeWalle, Brown, Cron, & Slocum Jr, 1999; Gong, Huang, & Farh, 2009; Amabile, 1988; Gong, Huang, & Farh, 2009). A learning orientation is an inner mindset that stimulates a person to build his or her competence (VandeWalle *et al.,* 1999; Dweck & Leggett, 1988; Dweck, 1986, 2000; Gong *et al.,* 2009). In this study, and as revealed in the scholastic literature, learning orientation stands for a person's tendency to seek knowledge (Kohli, Shervani, & Challagalla, 1998; Dweck & Leggett, 1988).

1.7.7 **Entrepreneurial Leadership:** Entrepreneurial leadership behaviour enable leaders to promote the procedure of organisational innovation by identifying and taking advantage of new opportunities to enhance the performance of the firm, resolving issues creatively and utilising resources efficiently (Rae, 2007; Gupta *et al.*, 2004).

1.7.8 Dynamic Environment: Environmental dynamism refers to the degree of unpredictable change in a firm's environment. Even though the literature uses a variety of terms such as high-velocity, volatility and uncertainty, they all capture to some extent the underlying theme of unpredictable change. The moderating role played by environmental dynamism is well documented in the literature (Gilley & Rasheed, 2000).

1.8 Organisation of Thesis

This study comprises five chapters: Background of the study, problem statement, research objectives and questions, scope and significance of the study and the key terms used in this study are explained in chapter 1. Chapter 2 presents a review of related past studies involving the dependent, independent, mediating and moderating variables that have been investigated in this study and also propose hypotheses and research framework. Chapter 3 covers the methodology used in this study including research design, population and sampling procedure, data collection method, variables and their measurements, tool for data analysis and pertinent techniques. Chapter 4 presents the descriptive analysis, hypotheses testing, empirical results and key findings. Chapter 5 which is the last chapter offers detailed discussion on findings, research contributions, limitations and suggestions for future research and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter investigates the issues related to the leaders of higher education institutions in general and especially in Pakistan. Moreover, this chapter tries to identify the causes behind the deprived organisational performance of higher education sector of Pakistan. The chapter throws a little light on the poor status of the sector as it stood at the dawn of this century as well as why an innovative strategy is required to bring about changes in the tertiary education sector. The university leaders and policy makers may strengthen the higher education sector in general and institutions of higher education, in particular, to keep pace with the new international advancements and trends towards a knowledge economy. It reviews the literature associated with entrepreneurship, leadership, and entrepreneurial leadership. This chapter reveals the gap in the literature about the need for entrepreneurial leadership behaviour by the university leaders in the higher education institutions.

This chapter discusses the entrepreneurial organisations, entrepreneurial educational organisations and the entrepreneurship in the higher education institutions. The entrepreneurial leadership is also elaborated as a mediator and dynamic environment as a moderator in managerial competency, self-efficacy, learning orientation and job performance of university leader’s relationships. After discussing the relationship between each variable and job performance of university leaders, nine hypotheses are derived that conceptualised the research framework of this study. Finally, the chapter discusses the underpinning theories which support the research framework.

2.2 Higher Education Institutions in General and Challenges

In the higher education system, tertiary institutions perform a vital job in educating the high-level professionals, specialists, researchers and scientists, required by the country and in creating latest information and know-how in favour of national innovation systems (World Bank, 2000). Progression in the educational marketplace in many nations is also observed as significant state goal (Rodionov *et al.*, 2014).Within this situation, an ever more vital concern of many governments is to make certain that their universities are actually working at the most advanced stage of scientific and intellectual development (Salmi, 2009). World Development Report 1998/99 suggested a logical framework highlighting the corresponding job for four important strategic aspects to direct nations in the changeover to a knowledge-based nation: a robust human resource support, suitable institutional and economic control, systematic national innovation system and a dynamic knowledge infrastructure (World Bank, 1999).

Higher learning is essential to entire four poles of this framework; however its task is mainly critical in constructing a robust human resource base and in supporting a systematic national innovation system. Higher learning supports nations to form internationally competitive countries by making a flexible, productive and skilled workforce and by generating, scattering and applying new technologies and ideas. A current worldwide study of copyright creation has revealed, for instance, that research institutes and universities, comparatively than firms, lead scientific developments in biotechnology (Cookson, 2007). Higher learning institutions can also perform a critical job in their regional and local financial systems (Yusuf & Nabeshima, 2007).

Innovation and research perform a vital role in supporting a country's social and economic life, and higher learning institutes are at the centre of the innovation and research, and human capital producing procedure (Ivey *et al.*, 2013). Sonhadji (2012) mentioned that education has the main job in the growth of a country, such as the development of the idea of nationalism, an increase in ethics and morality, economic growth, workforce preparation, and development of science and technology. Tertiary education is a strategically significant segment and there is a proof that investment in research-type education assists in areas which are adjacent to the world technological revolution (Aghion *et al.*, 2010; Acemoglu, 2006).

Currently, tertiary education has already advanced far from the conventional settings where the university was an institution for dispersing the knowledge, but now, higher education institutes are performing the remarkable job in nation's innovation (Yusoff & Khan, 2013). Ramli *et al.* (2013) stated that tertiary education now has turned into a place for spreading the knowledge in addition to commercialising its research output which mainly contributing to the economic growth of the nation. Bokor (2012) observed that present tertiary education sector is facing a basic change, particularly in terms of mode of operation, value to the society, its role in society and economic structure. Hence, there is a strong requirement to investigate future directions and ideas.

The world-class university is a requirement of today. Salmi (2009) explained three corresponding groups of features mandatory in top higher learning institutions: (a) a prime focus of expertise (students and faculty), (b) ample funds to provide a productive learning atmosphere and to carry out higher level research, and (c) suitable governance factors that motivate strategic vision, flexibility and innovation that allow universities to organise resources and to form decisions without bureaucracy's burden. Two complementary viewpoints are required to be regarded in investigating how to set up modern world-class higher education institutions. The primary side, of an outside nature, deals with the part of the government at the provincial, state and national level and the support that could be made accessible to raise the reputation of universities. The next side is inner. It deals with the independent universities themselves and the essential development and actions that they require changing themselves into world-class universities. Universities that seek to superior results will be involved in an objective evaluation of their strength and areas for development, settle new broader objectives, and plan and execute a revival plan that could direct towards enhanced performance. By difference, several universities are self-satisfied in their position, be deficient in the determined vision of a superior future, and keep on to work as they were doing in the past, ending up with an increasing performance interval in comparison with that of their international or countrywide competitors (Salmi, 2009).

2.3 Higher Education Institutions of Pakistan and Challenges

The Islamic Republic of Pakistan is moving through a demographic change and this is a reasoning transition in nation's age structure. The post-secondary inhabitants that come among ages 18-23 are going to mount until 2050; whilst, the ratio of pre-secondary will keep on to diminish (Naqvi, 2008). This suggests that there appears to be an increased requirement for higher learning and, by emphasising on forward planning, by growing access and by rising the system, higher education institutions should be in appropriate position to come across the increasing demand (Khan, 2010).

2.3.1 History

Pakistan inherited a very poor foundation of higher education. There was only a single university, the Punjab University in Lahore (established in 1882) when Pakistan came into existence in 1947. It looked after the whole state excluding Sindh, which was associated with the Bombay University. A university for Sindh was in the phase of development. The size of students was 644 in 1947. It was primarily an examining and affiliating university with restricted teaching functions. With independence, higher education acknowledged superior consideration, but the speed of growth then was slow (Erfan, 1990).

During the initial ten years, the total number of universities remained limited to four. The subsequent decade saw the development of six more universities. The number enhanced to 18 during the time 1967-77, and during the following decade between 1977 to1987, increased to 26. From 1987 to 1997 the total number has enhanced to 43. Due to its rapid population increase, the figure of colleges and universities has almost doubled in every subsequent decade up to 1978. Therefore, the 1970s, 1980s, and 1990s were a phase of rapid physical development (HEC, 2005-2006). In the coming years, the number is likely to grow even more in view of the contribution of the private sector. There is now 100 public sector universities/degree awarding institutes and 73 in the private sector in Pakistan. Thus, enrolment increase has been capable of meeting the growing needs of the population, as only 2.7 % of the entitled age group found admission in higher education (GOP, 1998).

2.3.2 Failure of the University Grants Commission (UGC)

It is worth stating the role of University Grant Commission here. A vital body assigned to look after the universities in Pakistan, the UGC, was set up to deal with all the affairs of higher education in the state. A federal level constitutional organisation, the UGC, over a period of twenty-eight years of its survival could not realise what was anticipated from it. During approximately thirty years of its continuation, it could not put tertiary education on a way to progress, prosperity and credibility. Inadequate and late constitutional provisions together with a number of plans, although recognising the significance of tertiary education, it failed to serve as a means of transformation (MTDF, 2005-2010).

The powerlessness of the University Grant Commission could be measured from the reality that it barely ever carried out academic audits of institutions or, if it did, almost never made it published. Right through its survival there was a feeling of distrust about the issue of university autonomy (Jahangir, 2008). For efficient capability development of universities, it is important that the faculty should be thoroughly developed, research strongly practised, and leaders must be talented, men or women with established administrative and academic background and exposure (The Boston Group, 2001).

Finally, the University Grant Commission could not take solid steps to assist universities to set up endowment funds for the reason of funding research, writing articles and books and upgrading physical and financial facets of universities. Failure to initiate significant industrial associations with degree awarding institutions and universities was another domain where the University Grant Commission could not pitch in. These persistent failures produced by eternal weaknesses in the governing body can reasonably be credited to an absence of reliable execution analyses to conclude what went wrong and why. The condition was explained well by the World Bank's Report (1992), which said the higher education and scientific research sector in Pakistan manifests four institutional deficiencies. Their resolution is a necessary, although insufficient precondition for significant and sustained improvement in the sector's performance. Ambiguous assignment of powers of governance, coordination and oversight diffuse ultimate responsibility. It is unclear who is in charge and who should be held accountable; consequently, effective planning and management are impossible. Excessive centralisation of authority and bureaucratic rigidity, both within and across institutions produces stultifying uniformity; all institutions work at the lowest common denominator of performance.

2.3.3 Higher Education Commission

The literature since 1947 till 2015, noted the massive rise in the number of universities in both public and private sectors. This expansion put the education resources of the country to a severe scarcity. It also influenced on educational and social planning in both making new openings and extending the existing ones. Some questions of general and standard quality had also been put up. Much of this pitiable condition resulted from the collapse of the UGC, a legitimate body Higher Education Commission (HEC) which was built to deal with the issue of tertiary education to the optimal use for the benefit of the nation (Jahangir, 2008). The Higher Education Commission (HEC), erected in 2002, made the Medium Term Development Framework (MTDF) which gave a vision and a set of articulated programmes to be executed. Since its beginning, the Commission has successfully initiated a number of reforms intended to improve the most pressing issues such as quality, access, and relevance for country and market needs. John Wall highly praised Pakistan for moving forward with the improved agenda, but emphasised that improvements need to be more refined and strengthened to have the desired effect.

Government expenses on higher education through HEC had increased from 2001/02 to 2005/06 by more than 340 percent in real terms. But this growth in spending is just the start of the rehabilitation campaign, said by Benoit Millot, World Bank Lead Education Expert and Team Leader for the report. Compared to other states in the region and elsewhere, government spending per student was still low, and obviously, there is space for growth. Currently, Pakistan spends around 0.4 percent of GDP on higher education. In contrast, India's expenditure on higher education stands at 0.7 percent, and Malaysia expenditure at 2.7 percent. The report states that for desirable higher education transformation execution, Pakistan will have to more than double its expenses as a percentage of GDP in the sub-sector over the next decade.

2.4 Major Issues of Higher Education Institutions in Pakistan

Higher Education in Pakistan is an epidemic by many issues. The higher education institutions have not been capable of accomplishing the major milestones and targets set in the past, which are to offer Pakistan with knowledge-led society covered by intellectual and moral excellence. The academic capability that is missing can increase rational thinking and can add successfully towards the economic, industrial, social and technological development of the country. Lack of resources, financial constraints, illiteracy, inefficient management system and huge population are some of the problems for Pakistani tertiary education (Mehmood, Khan, Raziq, & Tahirkheli, 2012). The most critical issue of universities in Pakistan comprises, among others, an imperfect institutional framework, problematic nature of plan and delivery of service, wastage and irrelevance, ineffectiveness and inefficiency, low productivity and under-funding in the research. Higher Education is measured as a source of great potential for the socio-politico-economic growth of the country. It is usually considered the truth that through quality higher education an under-developed nation can be changed into a developed nation by the journey of a single generation.

Fast development of the educational system, scarce financial input and intermittent student turbulence has blocked the learning / teaching procedure, despite the endeavours of the government to improve the condition. The interaction between industries and universities has not taken place. It appears that higher education institutions in their current form are neither working as frontiers of knowledge nor they are knowledge factories, which is the critical hallmark of a contemporary university. This is due to little investment, lack of funds and scarcity of resources to which this sector has been subjected. There is also a wastage and ineffective utilisation of public funds. The research base in higher education institutions is pathetic and, poorly equipped laboratories, libraries and a lack of competent teachers continue to hamper the development of universities towards attaining global benchmarks (Safdar, 1996).

The rise of internationalism, globalisation of economies, cultural and knowledge, and the idea of continuing education and life-long education give a unique character to tertiary education, both in the national and international contexts. Institutions of higher learning and universities of Pakistan have to comply with the challenges of the twenty-first century; the sector of higher education needs to initiate a new start, and the problems which are the barriers to his growth, will have to be resolved (MTDF, 2011-2015).

Other issues which challenge higher education institutions are inadequate student support services, the weak base of research, wastage of resources, low recovery of cost and underfunding and out-of-date curricula (Abdus Salam, 1998). The teachers have no pre-service coaching and very little succeeds to get a chance of coaching during their job. Their pay structure is insufficient to sustain a decent living. Promotions come very slowly, more as a right by seniority in the job and not by one's quality of the job. Strong students' unions in the past often pushed the management and faculty to bow to their demands. This has exhausted a lot of precious time and has depressed the faculty from taking the preferred level of interest in scholastic activities of students' (HEC, 2007-2008).

2.4.1 Financing

Funds play an essential job in the successful provision of any public service. Either it is a community, educational or health services, funds allocation makes a distinction (MTDF, 2005-2010). The increase in population, Asia in general and Pakistan in specific also had its influence on the higher education institutions. The increasing cost of utilities, equipment, books and other consumables have severely squeezed the per-student expenditure incurred by the government (MTDF, 2005-2010).

New movements in the society and the emergence of knowledge economy have challenged the conventional ways of running the public tertiary education institutions. Increasingly public demands and the technological advancements coupled with the shortage of permanent sources of funding and rise in the operation overheads are putting pressure on higher education institutes to maintain a sustainable growth and stay competitive (Mahmood, 2013). Employees are now measured as 'human resource' on the financial statements of corporations and companies, and their empowerment through training and learning has reached to new dimensions. Developing states have now recognised how significant higher education is for industrial, technological and scientific development that is crucial for creating prosperous societies and alleviating poverty. Tertiary education is also the source of modernising societies and for making highly learned leaders in all endeavours of life (HEC, 2005-2006).

The government yet remains the major sponsor of higher education and represents most of its power in universities governance. Government financial support has however proved insufficient to the growing needs of the universities. The institutions rely on government funding. Higher education institutions' expenses and earnings evaluation indicated a surplus of expenses over earnings in all public higher education institutions and there was a building up of the deficit between capital expenses and capital earnings (Memon, 2007). The fast growth in higher education affects physical and financial resources. Funds for higher education are lessening gradually and it is leaving bad effects on the universities' effectiveness as well as the growth of higher education (Akhtar & Kalsoom, 2012). The shrunk resources from the government, increased costs, growing expectations from the students, and the informational and technological advancements are some of the challenges that describe the tertiary education institutions' environment (Nayyar & Mahmood, 2014).

2.4.2 Leadership

As liability stakes continue to be raised in tertiary education, it builds stresses on leadership which is more and more observed as a factor that affects educational conditions and consequently the quality of student education (Cardno, 2014). Pakistan is no exception to this trend. In view of its beginning in 2002, Pakistani Higher Education Commission (HEC) has been struggling to support higher education institutions to perform a superior role in the country's economic growth. After employing the Medium Term Development Framework 2005-2010, Higher Education Commission has put forward its upcoming five-year map viz. its subsequent Medium Term Development Framework 2011-2015 to build the technological and knowledge resources required to facilitate Pakistan to meet the level of the industrially highly developed nations in the next twenty years. A few main physical goals of the suggested five-year plan are:

a) Advancing quality in research and learning
b) Advancing management, governance and leadership
c) Higher education institutions building communities and economies
d) Monetary control and sustainability
e) Entrepreneurship, innovation and research

The expansion and growth of education of university have not been possible without encountering numerous challenges. Among them are quality and relevance, financing, access and equity and the improvement in technology. There are also fresh challenges raised by internationalisation and liberalisation of universities. These have carried with them various requirements, approaches and dimensions to the leaders of universities (Akhtar & Kalsoom, 2012). The present higher learning system of Pakistan could be explained as 'non-market framed'. Education Policy (1998-2010) claimed that the whole thrust of government policies and regulatory interventions of Pakistan were not geared towards market principles and requirements.

High authorities such as heads of departments and deans have not been playing appropriate roles for their educational staff. Along with other problems, employees also complained of little pay, irregular promotion, scarcity of motivation, decreasing academic freedom, lack of resources for research and teaching and pathetic working environment (Akhtar & Kalsoom, 2012). The challenges experiencing by the Pakistani higher education at the starting of the twenty-first century have straight inferences for the pupils. Organisational governance should be accountable to constituencies both external and internal for the universities. The sturdy existence of the state in comparison with other stakeholders needs to be evaluated. The government requires driving away from the basics of the everyday university administration to give the universities a little space of autonomy. The Pakistani government has to begin restructuring and stimulating higher education management to provide considerable independence (Akhtar & Kalsoom, 2012). University leaders are motivated to visit foreign countries and bring novel innovations and ideas in the tertiary education sector with them and took measures for integrating these ideas in the tertiary education (Mehmood, Khan, Raziq, & Tahirkheli, 2012).

Universities and colleges play an important role in nation's tertiary education system. Over the years, there have been lots of challenges for these universities (Mathur, Negi, Vigg, & Gupta, 2010). One of the normally accepted tasks of changing higher learning institutes towards higher performance is effective leadership, as leaders are in the seats of power and they persuade and administer human, financial and other resources, in addition, to providing essential aid towards superior success and achievement (Gappa *et al.*, 2007; Bento, 2011; Yukl, 2010). Today's leaders need to know new knowledge, skills and abilities to efficiently handle the continuous institutional changes. Successful execution of a change process needs leadership skills, perseverance, a good sense of humour, knowledge of departmental culture, and an understanding of the factors linked with resistance (McArthur, 2002). The most important function of higher education institution depends on its leadership efficacy in building a pleasant teaching atmosphere for faculty and, in giving students with the quality education they deserve (Al-Shuaiby, 2009).

2.5 University Leaders

Both professionally and academic-oriented research proposed that the leader plays a vital role in the management of today's universities and colleges (Lucas, 2000; Hecht *et al.*, 1999; Bowman, 2002; Allen, 2003). The call for university leaders to assure provision of quality higher education through effective leadership is highlighted (Garwe, 2014). A university leader is one who broadens the vision of his area and has the power to bring the transformation in his/her area. A university leader also accepts change for the gain of his/her institution beyond his/her like or dislike. He/she knows what the need of the market is and how it may be met (Mehmood, Khan, Raziq, & Tahirkheli, 2012). In reality, some see the university leader as the most significant managerial position in tertiary education (Gmelch & Parkay, 1999). Researchers observe that leaders play an active role in nearly every facet of departmental life and the outcomes of their actions often reach far beyond their personal departments (Hubbell & Homer, 1997). University leaders fairly often talk about critical values in institutions and focus on worthwhile and attractive visions (Pihie, Sadeghi, & Elias, 2011). Tucker (1992), for example, catalogued 54 different duties of university leaders including change agent, budget and curriculum manager, mentor, entrepreneur, mediator, recruiter, planner, rule interpreter and department representative. Tertiary education leaders' response to university affairs influence their campus communities and lay down the standard for how moral and ethical conduct is practised and modelled. It is vital for leaders to identify how extensively their moral and ethical decisions influence the surrounding community, institution itself, and higher education largely. Leaders require being aware that their decisions and choices have a broader impact (Fraser, 2014).

Numerous researches have revealed that the major current barriers and challenges of university leaders at managerial posts in private and public universities are 'boss-centered' culture, hierarchy structure, centralization, instability of management, conservatism, inability to change the institutional culture, lack of effective communication, insufficient professional development, ineffective planning, and inadequate attention to external and internal stakeholders (Mehralizadeh, 2005; Hamidifar, 2012; Bikmoradi, 2009).

Few scholars have taken into discussion the particular challenges faced by university leaders, such as the dynamic and complex economic, social and political situations most colleagues and universities are working in, in addition to the outcomes of ineffective or rather unsuccessful leadership in tertiary education (Smith & Hughey, 2006). University leaders are in many ways, directly responsible for the vitality of their institutions (Petty, 2008). Several scholars have recognised aspects of a university leader as knowledge, abilities, skills and experience to lead others, credibility, enthusiasm to learn new things and to adapt changes, inspirational personality, selflessness, awareness of atmosphere, openness in sharing information and taking input of individuals while taking decisions when necessary, flexibility, fair in giving credits on their accomplishments, be supportive, accepting, recognising and valuing the efforts of subordinates, giving them professional autonomy and providing growth opportunities to subordinates (Siddique, Aslam, Khan, & Fatima, 2011).

Leaders in higher education institutions are liable for making decisions on every day basis (Hecht *et al.*, 1999; Wheeler, Seagren, Becker, Kinley, Mlinek, & Robson, 2008). The university leader's responsibilities include a broad range of issues: office management and department governance, programme curriculum development, student matters, faculty matters, financial, facilities management and communication with the external public (Hecht *et al.*, 1999). Pettit (1999) pointed out seven classes of tasks regularly attended by university leaders: 1) internal administration; 2) curriculum and instruction; 3) human relations and personnel administration; 4) professional development; 5) student relations; 6) external administration; and 7) budget planning, development, and control. Ho, Dey, and Higson (2006) proposed that higher education has usually experienced four main higher decision issues, namely performance measurement, resource allocation, scheduling and budgeting. According to (Bethel, 1990), the results of poorly prepared leaders and inconclusive leadership may forfeit everyone's future, weaken trust, waste money, talent, time and opportunity.

Table 2.1 shows the most presiding challenges experienced by university leaders. These challenges need leaders to balance teaching and research funds, financial management, assist staff with increased workloads, generate income, mentor young staff, help and assist staff with change, develop new skills, achieve high quality research with reduced public funding, reward performance, set new goals and maintain morale and enthusiasm at the time of deteriorating public respect for the academic profession (Ramsden, 1998).

Table 2.1
Main Leadership Challenges that 100 University Leaders Expected in Britain, Hong Kong, Singapore, New Zealand and Australia for 1997-2005

Leadership Challenge	**Frequency of Mention**
Managing and extending funds; doing extra with less; sustaining quality with fewer resources	76
Leading and managing academic individuals at a time of fast change	60
Alteration and turbulence in the universities environment	35
Student numbers and acknowledge to new class of students	33
Balancing personal academic job with the demands of being a university leader	15

Source: Adapted from Ramsden,1998

Consequently, the 21st century university leaders will have to increase and manage change, lead academic transformation, re-assert academic leadership, balance the university's varied and various constituencies, find extra financial resources, raise increasing amount of funds and respond to rising demands for strict responsibility by promoting and defending higher education (Penney, 1996).

2.5.1 General Role and Primary Tasks of University Leaders

The difficulty for university leaders is not only limited to a lack of management and leadership development. An added problem is a lack of conformity within institutes of higher learning on just what the academic leadership role includes (Pounder, 2001). In spite of a number of studies, the roles of university leader are still unclear and vague. The higher education system is a difficult and a distinctive administrative field, and the tertiary education system is burdened with excessive complexity (Jones & Holdaway, 1995). It is thus hard to pinpoint and identify job-related duties and tasks to categorise the position as either an administrative or academic.

In the perspective of understanding the leadership role of university leaders it is essential to evaluate the accessible literature in order to understand how their roles are built. This is not an easy job, as Hubbell and Homer (1997) proposed that university leaders have to deal with various roles and that their particular roles count from ten to forty. University leaders have to accomplish a variety of roles. The following table 2.2 draws attention to outline behaviours in certain categories (as per the definition of Jones & Holdaway, 1996) and it summarises the viewpoints of a number of scholars on university leader's role.

Table 2.2
Roles University Leaders have to Fulfil

Roles	**Authors**
Academic leader	Hare and Hare, 2002; Jones and Holdaway, 1995; Ullyatt, 2001
Academic Controller	Ullyatt, 2001
Administrator	Moses and Roe, 1990; Seagren *et al.*, 1993; Ullyatt, 2001
Agent of Change	Hubbell and Homer, 1997
Anticipator	Tucker, 1984
Advocator/ politician	Moses and Roe, 1989; Tucker, 1984
Advisor-counselor	Tucker, 1984
Budget and resources manager	Green and McDade, 1991; Middlehurst, 1993; Moses and Roe, 1989; Seagren *et al.*, 1993; Tucker, 1984; Ullyatt, 2001; Hubbell and Homer, 1997
Building and maintaining morale	Moses and Roe, 1989
Communicator (internal and external)	Green and Mcdade, 1991; Seagren *et al.*, 1993; Tucker, 1984; Ullyatt, 2001
Committee membership roles	Moses and Roe, 1989; Ullyat, 2001
Conduit of information and policy	Carroll and Gmelch, 1995
Coordinator	Moses and Roe, 1990; Tucker, 1984
Curriculum manager	Seagren *et al.*, 1993; Tucker, 1984
Custodian of academic standards	Seagren *et al.*, 1993

Table 2.2 (Continued)

Roles	**Authors**
Decision Maker	Moses and Roe, 1989; Seagren *et al.*, 1993; Tucker, 1984
Delegator	Moses and Roe, 1989; Tucker, 1984
Departmental governance official	Tucker, 1984
Departmental representative	Hubbell and Homer, 1997
Entrepreneur	Hubbell and Homer, 1997; Tucker, 1984
Evaluator	Seagren *et al.*, 1993; Tucker, 1984
Facilitator	Tucker, 1984
Faculty affairs manager	Tucker, 1984
Faculty developer	Green and McDade, 1991; Gmelch and Miskin, 1993
Faculty evaluation and development	Seagren *et al.*, 1993
Financial role	Ullyatt, 2001
Governing the department	Green and McDade, 1991; Middlehurst, 1993
Image builder	Seagren *et al.*, 1993
Implementer	Tucker, 1984
Innovator	Tucker, 1984
Intellectual leader	Moses and Roe, 1990
Institutional manager	Hare and Hare, 2002
Instruction giver	Green and Mcdade, 1991; Tucker, 1984
Link to external groups	Middlehurst, 1993
Leader	Hubbell and Homer, 1997; Gmelch and Miskin, 1993; Tucker 1984; Ullyatt, 2001
Manager	Gmelch and Miskin, 1993; Hare and Hare, 2002; Tucker, 1984; Jones and Holdaway, 1995
Marketer	Ullyatt, 2001
Mediator	Hubbell and Homer, 1997
Mediator-negotiator	Tucker, 1984
Mentor	Hubbell and Homer, 1997; Tucker, 1984
Motivator	Tucker, 1984
Negotiator	Seagren *et al.*, 1993
Office manager	Tucker, 1984
Organizer	Tucker, 1984
Peacemaker	Tucker, 1984
Peer-colleague	Tucker, 1984

Table 2.2 (Continued)

Roles	Authors
Performance monitor	Moses and Roe, 1989
Personnel Administrator/ Manager	Green and McDade, 1991; Middlehurst, 1993; Moses and Roe, 1989; Seagren *et al.*, 1993; Moses and Roe, 1990
Planner (medium & long term)	Hare and Hare, 2002; Moses and Roe, 1989; Tucker, 1984
Politician/ advocate	Jones and Holdaway, 1995
Problem solver	Tucker, 1984
Professional activities encourager	Moses and Roe, 1989
Professional developer	Tucker, 1984; Ullyatt, 2001
Programme developer	Seagren *et al.*, 1993
Promoting departmental development and creativity	Middlehurst, 1993
Promoting and encouraging excellence	Moses and Roe, 1989
Recommender	Tucker, 1984
Recruiter and selector	Seagren *et al.*, 1993; Hubbell and Homer, 1997; Moses and Roe, 1989; Tucker, 1984
Representative	Green and McDade, 1991; Middlehurst, 1993; Tucker, 1984; Moses and Roe, 1990
Researcher	Moses and Roe, 1989; Tucker, 1984
Resource mobiliser	Moses and Roe, 1990
Rule interpreter	Hubbell and Homer, 1997
Scholar	Gmelch and Miskin, 1993
Staff supervisor/ manager	Green and McDade, 1991; Moses and Roe, 1989; Tucker, 1984; Ullyatt, 2001
Students affairs administrator	Green and McDade, 1991; Middlehurst, 1993; Tucker, 1984
Teacher/ managing teaching	Middlehurst, 1993; Moses and Roe, 1989; Tucker, 1984; Ullyatt, 2001
Time manager	Moses and Roe, 1989

Source: Lyons, 2008

The list in Table 2.2 looks never-ending and Moses and Roe (1990) hence categorised university leaders' key roles into six categories: academic leader, administrator, a source and distributor of resources, personnel manager, advocate and politician within the university and negotiator, representative and lobbyist outside the university. Carroll and Gmelch (1995) furthermore grouped their roles into four broadly accepted categories of leader, manager, scholar, and faculty developer. Wolverton, Gmelch, Wolverton, and Sarros (1999a) narrowed down these to leadership roles and administrative roles. Ngang, Prachak, and Saowanee (2013) carried out a study named 'Leadership Soft Skill of Deans in Three Malaysian Public Universities' from the observations of their support staff. The eight elements of leadership soft skills comprise initiative, teamwork/collaboration, leadership capability, communication skills, personal mastery/personal effectiveness, presentation skills, organising and planning, and people coaching/development.

Goodall (2006, 2009a) investigated the functions of leaders in universities and, especially, that of proficient leaders. She found facts that the selection of sturdy academics at the top of the organisation is linked with superior research performance at the university level. Tucker (1984) followed a diverse approach by not categorising the actions of university leaders engages in the key outcome, but to categorise them according to the role they have to accomplish. The roles known are department governance, office management, budget and resources, instruction, faculty affairs, professional development, student affairs and external communications.

Various researchers have commented on the series of roles that university leaders need to carry out. Based on a thorough literature review, Visser (2009) documented four core roles that a university leader seems to perform in the higher learning environment which has been explained as:

i. Academic

ii. Leadership

iii. Management

iv. Administration

The university leader's job is complex, difficult and open to explanation. Tucker (1984) put this difficulty in view by reminding the readers that, a brilliant college or university management with incompetent chairpersons cannot survive; an incompetent management with the help of a bunch of brilliant chairpersons usually can. In brief, there has been a huge quantity of research on university leaders: describing the roles that they play, challenges they experience, their duties and tasks. The consideration that university leaders are vital to the overall success and growth of institutions in the past, present, and future, is hardly controversial. Thus, and due to the constant challenges experienced by university leaders, an assessment of the job performance and competencies of university leaders is long overdue.

2.5.2 Effective University Leaders

In the current competitive atmosphere, leaders require the courage to take action when the future remains vague (Barnett, 2004; Hanna, 2003). It is well-known, educational institution's success depends on effective leadership (Aslam, Suleman, Zulfiqar, Shafaat, & Sadiq, 2014). The ability to grow and support leaders, so that they are able to control difficult problems and involve people efficiently and lead through transformation, is a strategic requirement for today's higher education institutions (Fulmer, Gibbs, & Goldsmith, 2000). Higher education institutions were found to have enhanced their performance if they were directed, a number of years prior, by leaders (rectors, vice-chancellors) with sturdy research history (Goodall, 2006, 2009a, b). The same conclusion prevails at the academic department level (Goodall *et al.*, 2014). Research on management and leadership in tertiary education has increased in range and volume in the last 3 decades. However, it is still a rather new and expert field that has a stand both in management sciences and education (Middlehurst, 2012). In this globe of information expressway, increased calls for liability, student consumerism and increasing costs of education, university leadership has become even more multidimensional and complex (Wisniewski, 2002). Extensive studies are in existence on leadership in widespread, and university leadership in tertiary education may be the least researched and most misinterpreted (Gmelch, 2000). An assessment of leadership problems in tertiary education has led scholars to understand that the university leader is the least researched and most misinterpreted management seat (Gmelch, 2004). The university leader plays a noteworthy job in the managerial process of higher learning institutions, but, limited research has been carried out in the area of university leaders, and even less has been done in the domain of their leadership (Brown & Moshavi, 2002; Brown, 2002). According to Vroom (1984), there is a paucity of studies on leadership in tertiary education. Specifically, there have been not enough published articles about leaders in tertiary education (Leaming, 1998; Gmelch, 2004).

Leaders in universities are experiencing higher stresses than ever before (Stewart, 1997). Those in university leadership experience problems involving managerial characteristics of institutions, and new challenges experiencing these universities. The analysis of the available literature on tertiary education makes questions concerning the growing demands and expectations of leaders in higher education. Before a comprehension of university leaders and their constraints and demands took place, it is useful to study perspectives and issues particular to higher education institutions. Other relevant literature also proposed that university leaders are experiencing increasing demands and stresses on their jobs as leaders (Thompson, 1999; Brown & Moshavi, 2002; Brown, 2002). Leader productiveness in universities has become a key issue, both at departmental and institutional levels (Bolton, 2004). Leaders in universities often come to their seats without leadership coaching, without any previous managerial or leadership exposure, and without an obvious understanding of the complexity and uncertainty of their posts (Lindholm, 1999; Gmelch, 2000, 2002; Bolton, 2004).

Conceivably the most important challenge experiencing university leaders today is to be proficient in understanding and identify the constraints and demands facing them within their universities and respond accordingly with resilient leader behaviour (Yukl & Lepsinger, 2004; Murphy, 2003). Another area in the literature on university leaders is a criticism: little attention paid to this role as a leadership job in the organisation (Bennett & Figuli, 1990; Eisen, 1996; Leaming, 2007). Even though the area of leadership is well studied, there is no theory of leadership that deals with particularly to university leaders in higher education (Thompson, 1999). The leader is a most important character in defining the educational success of the tertiary learning institutions. Practitioners have always strived to discover influential variables of university leaders' performance (Mahdinezhad, Suandi, Silong, & Omar, 2013). There are several researches linked to leadership effectiveness of tertiary learning institutions' leaders. The literature still is very sparse in recognising certain aspects that could be related to leadership efficacy of university leaders (Al-Shuaiby, 2009). Therefore, this research addresses the variables that help university leaders' to improve their job performance.

2.6 Entrepreneurship

Entrepreneurship is more than just establishing a business (Kuratko, 2009). It is a combined view that pervades an individual's business in an innovative way (Kuratko, 2009). The procedure needs an application of passion and energy towards formation and execution of new ideas, and innovative solutions. This entails imposing of certain elements comprising the readiness to take calculated risks; the innovative ability to organise required resources; the basic expertise of constructing a strong business plan, and the vision to identify opportunity where others see confusion, anarchy and contradictions (Ronstadt, 1984).

Although the term entrepreneurship has been exercised for over two hundred years, now until there is significant disagreement on its accurate meaning. The main discussion between theorists is the conceptualisation of an individual entrepreneur in contrast to an entrepreneurial organisation. Normally, both organisational activities and individual behaviours are central features of entrepreneurship notion. Each feature of entrepreneurship utilises its own ideas and works within its own standpoint.

2.6.1 Entrepreneurship in Higher Education Institutions

The role of educational institutions is shifting towards the entrepreneurship system which is a need of today (Neck, Meyer, Cohen, & Corbett, 2004). Kanter in 'The Change Masters' (1983) and 'When Giants Learn to Dance' (1989), put forward the concept of entrepreneurship inside an organisation. Entrepreneurial organisations are attributed with a set of organisational behaviour and attitudes in the entrepreneurial literature (Stevenson & Jarillo, 1990; Kuratko, Naffziger, & Montagno, 1993; Lumpkin & Dess, 2001; Lumpkin & Dess, 1996; Stevenson & Gumpert, 1985; Morris & Jones, 1999; Lee, Lee, & Pennings, 2001; Miller, 1983; Covin & Slevin, 1989). Entrepreneurial firms exhibit competencies such as opportunity identification (Stevenson & Jarillo-Mossi, 1986; Miller, 1983), ability to encourage, measure, and reward innovative actions (Zahra, 1993) and organisational flexibility (Stevenson & Gumpert, 1985; Naman & Slevin, 1993; Murray, 1984). Whether the entrepreneur is in the present organisation or a person starting a new business, the entrepreneurship is grounded on the same doctrines (Drucker, 1985). The occurrence of entrepreneurial management is pertinent to all types of organisations, regardless of whether the organisation is a public-service group, a for-profit company, a non-profit organisation or a governmental institution.

The research has been extended to incorporate the expansion of frameworks for the appearance of entrepreneurship within the non-profit and public sectors organisations (Morris & Kuratko, 2002; Boyett, 1996; Borins, 1998; Foster, Graham, & Wanna, 1996; Dees, Emerson, & Economy, 2002; Graham & Harker, 1996). Interest in organisational entrepreneurship is also being studied in higher education institutions and non-profit groups. There is a range of both public and for-profit organisations and similarly in the case with not-for-profit organisations. Usually, these non-profit groups vary from conventional businesses because they are managed by a board of directors; they have several goals not only services and products, and also they are driven by various constituencies rather than merely in the economic marketplace (Cornwall & Perlman, 1990).

The entrepreneurial university is an idea that captivates a lot of attention from scholars (Salem, 2014). In the current years, the idea of entrepreneurial university captivates the policy makers and academic researchers who are struggling to describe and/or explain the phenomenon. There is an increasing literature on academic and university entrepreneurship presenting a widespread meta-analysis of existing literature (Rothaermel, Agung, & Jiang, 2007) in addition to individual models of the entrepreneurial university (Nelles & Vorley, 2010; Kim, 2013; Guerrero & Urbano, 2012). Research about the effects of entrepreneurial characteristics amongst business groups and business leaders are easily accessible, however, studies about the effect of these same characteristics in public organisations are just beginning to come out (Bergland & Holmgren, 2006; Morris, Schindehutte, & Allen, 2007). The appearance of these researches is consistent with increased competition for economic resources, a limited sufficient sponsorship, and a lack of talent pool among not-for-profit public sector organisations like universities and colleges (Morris *et al.,* 2007). Augmented budgetary stresses are pressing the public universities finances and sparse school financial support is also challenging institutions of higher education to do more with less. Rapid paced economic market variations are pushing HEI's to evaluate their relevance to a changing and dynamic workplace. Scarce resources, market changes and funding pressures are forcing these higher education institutes to perhaps evaluate past/new models that have met and prevail over similar challenges and pressures.

A variety of constraints and barriers to adopting entrepreneurial actions prevail in the public sector higher learning institutions (Nayyar & Mahmood, 2014). Theorists and researchers (eg. Bergland & Holmgren, 2006; Carter, 2001; Eyal & Inbar, 2003; Fullan, 2005; Ouchi, 2003; Stokes, 2002) are calling for a paradigm shift that creates a requirement for entrepreneurial institutions to be regarded as essential in the public sector, comprising educational organisations. Entrepreneurship is determined by the leadership and governance of higher education institutions (O'Connor, 2012). This standpoint change not only entrenched in the concept of entrepreneurship as a business formation but also as an approach to how things are done (Bergland & Holmgren, 2006). A paper from the European Commission (2002) illustrated an entrepreneurial approach as one where people represents the strength of initiative, personal creativity to each job activity and independence, whether the activity is an expansion of a new service or product or the learning of new matter.

The higher education institutions across the globe are in evolution. The conventional design of the university as a semi-autonomous organisation charged with passing on knowledge from one generation to other and producing knowledge for prospective generations does not deal with the contemporary challenges of globalisation, and with societal and political stress. Increasingly higher education institutions are being needed to work more entrepreneurially, commercialise the outcomes of their scholarly work and amplify new knowledge-based projects and must perform a dynamic role in knowledge wealth (Lamidi & Williams, 2014).

2.7 Leadership

Leadership as an idea is ill-defined and difficult to explain. It has been a topic of debate and thought since the time of Plato and Aristotle (McCaffery, 2004). Effective leadership is vital to an organisation's success. Effective leadership builds thriving environment of any institution. The importance of leadership is a worldwide concern nowadays. In all areas, there is a requirement of effective leadership. Without effective leadership, there is no way to achieve the targeted goal (Aslam, Suleman, Zulfiqar, Shafaat, & Sadiq, 2014). Numerous researches have shown organisational variables such as commitment, followers' satisfaction and performance (Popper, Landau, & Gluskinos, 1992; Dvir, Eden, Avolio, & Shamir, 2002; Barling, Weber, & Kelloway, 1996). Likewise, Al-Omari, Qablan, Khasawneh, and Khasawneh (2008) stated that leaders are one of the critical factors, who are liable for failure or success of business. Leaders come in all shapes, colours and sizes; they are multifaceted and, when authorised, they challenge and stretch themselves to involve in uncertainty as well as certainty (Fraser, 2014). Heuer (2003) stated that there is often a paucity of information on what made a capable leader and what made him/her victorious. Even though many types of persons are compulsory to run a business, not everyone had the ability to move into administrative seats.

2.7.1 Leadership Competencies: Theories and Approaches

This segment presents a general outline of the theories and approaches of leadership. In other words, theories and approaches to leadership have emphasised on the behaviours showed by leaders, the individual traits of leaders, how leaders should adjust to contingencies or situations, and the environments that challenge or facilitate leadership.

An extent of leadership theories available in the literature shows some are well-known with a widespread historical context while others are rising (Northouse, 2013). These theories implement in many forms of situations and settings. Their approaches to qualities, roles, and expectations of followers and leaders are all distinctive. Leadership impacts the institutional success and is seen as an extremely esteemed asset (Northouse, 2013; Bennis, 2009). An evaluation of leadership theories and approaches help in comprehending the unique abilities or knowledge that could help university leaders in promoting further research and do their roles. This review is not comprehensive, but still has some of the main theories and approaches related to leadership behaviours.

2.7.2 Behaviour-Based Theories and Approaches

The transactional-transformational leadership model is associated with leadership behaviour. In transactional leadership, leaders follow economic exchange and a cost-benefit with followers. Transactional leadership comprises two factors: management by exception and contingent reward. Particularly, transactional leaders make certain that employees complete the work without needing more than is required (i.e., management by exception) and offer material remunerations for the efforts of their workers (i.e. contingent rewards). According to Sarros and Santora (2001), transformational leadership is related to behaviour that increases the awareness among followers by appealing to superior ideas. Transformational leaders particularly use individualised thought, idealised influence to motivate others and intellectual and inspirational motivation. The aim of transformational leadership is to identify individual talents and enhance enthusiasm through appeals to values, emotions and belief systems (Bryant, 2003). Authorities consider that transformational leadership is good for producing and sharing knowledge while transactional leadership is better for utilising knowledge (Bryant, 2003; Sarros & Santora, 2001). Hence, the requirements of the organisation should decide whether a transformational or transactional leader is suitable.

Charismatic leaders, on the other side, are those who, by the strength of their own capabilities are able of having extraordinary and profound effects on followers (House & Baetz, 1979). Charismatic leaders are capable of changing the status quo by transforming the approach of his/her followers to acknowledge the advised vision of the leader (Conger & Kanungo, 1987). Jung and Sosik (2006) stated that managers who were ranked higher in charismatic leadership had: (a) placed greater value on their self-improvement (b) a higher level of self-monitoring, arousal of high-level needs, (c) a higher level of need for social power, (d) a higher level of self-actualization or enhanced consciousness, (e) had higher levels of organisational citizenship behaviour (OCB) than managers ranking low in charismatic leadership, and (f) had followers that reported higher levels of additional effort.

Authentic leadership has come out as a new form of leadership that is valued by assistants. Authentic leaders are self-aware of their values, emotions, thoughts and beliefs, and align their behaviours and actions to their inner beliefs and values. Authentic leaders know the ethical implications of their activities (May, Chan, Hodges, & Avolio, 2003). Some scholars have also explained amalgamation of behaviours that have been associated with excellent leadership, whereas others have built around many of the known behavioural leadership approaches. For instance, a blend of the behaviours linked with transformational, charismatic, and authentic leadership devised the five practices of excellent leadership as portrayed by Kouzes and Posner (2003). In their book 'Academic Administrator's Guide to Exemplary Leadership', Kouzes and Posner (2003) mentioned five perfect behaviours and practices of leaders grounded on research. They proposed that university leaders: (1) inspire a shared vision, (2) model the way, (3) enable others to act, (4) encourage the heart, and (5) challenge the process.

Lastly, a construct that basically unite the significance of authenticity, networking, power and impression management is described as 'political skill' by Ferris and Judge (1991). Political skill needs comprehending others at the job, and utilising what is known about others to affect their activities to increase one's individual or organisational goals (Ferris & Judge, 1991). Political skill has been shown to clarify a major percentage of difference in group performance (Ahearn, Ferris, Hochwarter, Douglas, & Ammeter, 2004) and has been associated with the effectiveness of leaders in institutions (Ammeter, Douglas, Gardner, Hochwarter, & Ferris, 2002). These examples showed different approaches and theories of leadership behaviour are not limited.

2.7.3 Leadership in Higher Education Institutions

Effective leadership has an essential position in the better growth and performance of the organisation (Mahdinezhad, Suandi, Silong, & Omar, 2013). Arsenault (2007) suggested that higher education institutions are certainly not immune to this requirement of effective leadership as they face similar challenges as any other institutions. According to Koen and Bitzer (2010), an effective university leadership can be seen as being the main advantage a university can have in a resource starving competitive higher education atmosphere. The persistent success of a higher education institution relies on vital positions at all levels that are being employed with competent and effective leaders (Gaither, 2004). Stiles (2004) concurred that most successful leaders in university leadership are those who revoke limits to involve in innovative solutions.

The current research on issues and themes recognised by academic leaders verified that relationship-building behaviours are most effective in leadership roles (Scott *et al.*, 2008). Gaither (2004) proposed that a new outlook of academic leadership could be outlined to the varying organisational structure of multi-campus organisations, the diverse expectation of more different employees, and a drive towards quality. He gave other aspects that have influenced this transformation, involving a flatter organisational construction, reduced institutional adherence, and the concept that quality leadership can be found and is essential at all levels of an institution. Performance anticipations have increased as tasks and liabilities have increased. In addition to a decentralised and complex inner environment, higher education leadership has been challenged to be accountable for an ever growing number of outer elements.

Leadership in university is complex by the social, dynamic, economic, and policy contexts in which most universities and colleges work (Goldring & Greenfield, 2002). A central point is that to lead effectively in tertiary education needs a lavishly blended nature of basic relationship skills, strategic intent, sense of purpose, and atmosphere of trust, in addition to understanding the traditional, historical, and social viewpoints on education and how it impacts education (Opatokun, Hasim, & Hassan, 2013). To thrive in higher education, leaders must be intuitively aware of the distinctive factors that typify most campus atmosphere. Investment in development and growth of leaders and choosing leaders among experts for leadership in higher education institutes can be a primary factor for increasing the performance and the attainment of university standards (Afani, Mohammadkhani, Zahir, & Davoudi, 2015). Internationally, leaders in academic institutions require handling growing diverse and complex issues. Facts from an empirical study conducted in Canada and the US highlighted the causes of internationalisation in higher education: private-sector interaction, external competition, globalisation, restructuring, real-time communications, efficiency, productivity, additional workload, business partnerships, state intervention, commoditization and workforce training (Jansen, Habib, Gibbon, & Parekh, 2001).

As administrators in the higher education institutions, university leaders must act not only as managers and leaders but also as agents of transformation (Santiago, Carvalho, Amaral, & Meek, 2006), because in the educational community, transformation is one of the most discouraging challenges for the 21st century (Garrison & Vaughan, 2008). It is emphasised that leadership styles can support in the development of leadership abilities of leaders and in increasing their commitment and performance (Mahdinezhad, Suandi, Silong, & Omar, 2013). Thus, if the university leaders recognise themselves and their leadership approaches, they can be more flexible in their leadership styles in the ever-changing academic environment (Goleman, Boyatzis, & McKee, 2004; Green, 2005; Martínez, 2007). Moreover, attempting to find out the influence of leadership approaches of university leaders may be of considerable value in the area of leadership development (Zigarmi, Blanchard, Edeburn, & O'Connor, 2004).

The challenges faced by tertiary education in current decades have directed towards developing diverse leadership approaches in the sector and can be observed in many higher education institutions across all areas, whether teaching-led, research-led, small or large, multi-faculty or specialised (Black, 2015). There is a scarcity of knowledge on the leadership approaches of leaders in the university. According to Vroom (1984), there is a lack of studies on leadership in tertiary education, and that there are not enough researches about university leaders in higher education (Gmelch, 2002). Furthermore, improving the effectiveness of institutional leadership, governance, and management system is recognised as one of the strategic problems of the university under consideration (Jimma University, 2007). While literature and studies on leadership in higher education have increased significantly (Amaral, Meek, & Larsen, 2003), Moore (2008) argued that educational institutes are experiencing much pressure nowadays, as quality assurance, continuous growth and performance management, are not allowing personnel to enjoy academic autonomy and therefore it calls for a sturdy leadership.

Higher education institutions are different from many other kinds of organisations, entailing leadership to be a more shared phenomenon as compared to most other for-profit organisations (Seagren, Creswell, & Wheeler, 1993; McDaniel, 2003). University leaders have additional challenges than the leaders of business firms. One significant cause is the stakeholders, where there are numerous stakeholders in the university such as faculty members, students, etc. so university leaders must have to view everyone independently and utilise diverse policies to tackle with them (Sathye, 2004). It is extensively recognised that leadership responsibilities and tasks in the tertiary education institutions are demanding and some scholars are telling that these institutions are the most complicated organisations on the earth to lead (Bennis & Movius, 2006). A great number of researchers have also concentrated on the requirement of research in tertiary education leadership (McGoey, 2005; Smart, 2003; Bensimon & Neumann, 1993; Astin & Leland, 1991; Tierney, 1997; Jackson, 2004; Kezar, 2000b; Astin & Scherrei, 1980; Roaden, 1970; Rosener, 1990). However, only a few researches have concentrated on the role of leadership approach as well as certain professional and personal aspects of leadership effectiveness in higher education institutions (Madden, 2005; Al-Omari, 2005; Pritchett, 2006; Anderson, 2002). Moreover, as some scholars have concentrated on the effect of certain professional and personal aspects influencing leadership effectiveness in higher education, there are only a few researches that have jointly concentrated on the combined effect of such aspects (Madden, 2005; Pritchett, 2006; Nies & Walverton, 2000).

2.7.4 Leadership Challenges Facing Universities Globally

At present, institutions of higher education are experiencing various challenges. University leaders around the globe are being faced by rising demand for higher education, leadership inadequacies, status loss of universities, international mobility and policy, differentiation and finance, strategic alliances, equal opportunities and social unity, governance and political structure, and traditionalism (World Bank, 2002; Ritzen, 2006). The university leader's need to implement proactive and creative leadership has increased significantly (Lucas, 1994). But leaders in tertiary institutions are usually not aware of how powerful they can be, or explicitly consider their leadership style in accomplishing enhanced performances and most significantly to enhance the performances of their institutions (Lo, Ramayah, & De Run, 2010). Moreover, growing change and complexity have needed that, at every position in higher education, there must be leaders proficient in making a vision; disseminate that vision to others; inspiring people to think in diverse ways; finding answers to problems in the knowledgeable and sophisticated way (Lucas, 1994). Today's educational environment calls for leaders who are not only able to lead their departments, but also perform as drivers of change (Lick & Kaufman, 2000).

Blair (2000) mentioned that higher education institutions are more and more expecting a leader getting outside funding to be regarded as an effective leader, while in a current research it is pointed out that, only a small number of studies have inquired senior university leaders about what they do, what they required knowing, and what attitudes or characteristics they need to own (Townsend & Bassoppo-Moyo, 1997; Mapp, 2008). But, leadership development in higher education is still an understudied area of application and research (Castle & Schutz, 2002; Bryman, 2007).

University leaders also need leadership skills and capabilities to lead (Nordin, 2013). Up to now, faculties are selected to a senior position based on their experience, extensive subject knowledge and scientific achievement (e.g., number of published material in international journals), not based on leadership abilities. Consequently, faculty members who are senior, hold leadership seats without enough training. Furthermore, to make stronger institutional effectiveness the expectations positioned on senior faculty are often markedly high (Beck-Frazier, White, & McFadden, 2007). Despite the huge significance of effective leadership in tertiary education, concrete propositions for particular growth programmes are also sparse (Arsenault, 2007).

The increased difficulty of the leadership function in the tertiary education setting has got consideration as a topic of research over the past decades (Ramsden, 1998; Mead, Morgan, & Heath, 1999; Cohen, 2004; Knight & Trowler, 2001; Coaldrake & Stedman, 1998, 1999). The list of challenges rises bigger as university main business increases in difficulty (Drew, 2006; Marshall, 2007; Hanna, 2003; Snyder, Marginson, & Lewis, 2007; Middlehurst, 2007; Marshall, Adams, Cameron, & Sullivan, 2000; Scott, Coates, & Anderson, 2008; Barnett, 2004). Scott *et al.* (2008), who related their research of leadership issues and challenges in higher education, wrote about the requirement to help university leaders in making sense of the continuously and rapidly changing context in which they work, and that, overall, what emerges is how important it is for university leaders to be able to deal with change. In the coming years, because of the varying environment, it appears that university leaders will face a new level of leadership challenges that will be growingly intense and complex (Pence, 2003; Harvey & Newton, 2004). The type and style of leadership used by university leaders play a key role in the successful completion of their jobs and the overall victory of their academic departments (Del Favero, 2006).

Administrators and researchers talked about a big leadership crisis in higher education. Kellogg foundation (Beinecke & Sublett, 1999) to the Global Consortium of Higher Education (Acker, 1999), executive reports and blue ribbon commissions from the American Council on Education (Eckel, Hill, & Green, 1998), called for daring and better university and college leadership. Seeking out for solutions to this leadership dilemma requires people to understand that university leader growth is the most misunderstood and least researched administrative procedure in America (Gmelch, 2013). One of the most evident limitations in the leadership development field is the paucity of sound research on when and how to coach and develop leaders (Conger & Benjamin, 1999; Gmelch, 2013).

The requirement for studies in leadership effectiveness of university leaders has been extensively documented. Nelms (2005), for example, has inquired about the validity and reliability of the tools being used to evaluate the job performance of university/ college leaders. She has come up with her own survey instruments which she said have a considerable degree of reliability and higher levels of validity to be utilised for assessment of tertiary education leadership efficacy. Rosser, Johnsrud, and Heck (2003) also mentioned the need of assessing university leader’s leadership effectiveness from both personal and organisational aspects. They have examined the personal roles of university leaders as linked to their organisational effectiveness. In the review of the past studies associated with leadership effectiveness in higher learning, Kezar (2000a) mentioned the scarcity of adequate hierarchical models of leadership for fulfilling the challenges experiencing higher learning institutions. She also suggested on establishing new models to assist and develop leadership in tertiary education.

2.8 Entrepreneurial Leadership

Entrepreneurial leadership is the outcome of merging parts of two theoretical schools of thoughts: entrepreneurship and leadership. The following section discusses it.

2.8.1 Entrepreneurship and Leadership: Common Threads and Linkages

In the past two decades, scholars have tried to find commonalities between the entrepreneurship and leadership areas and combined them into an integrated one in an endeavour to describe this new phenomenon called 'entrepreneurial leadership' (Gupta & MacMillan, 2002; Kuratko & Hornsby, 1998; Schulz, 1993; Lippitt, 1987). The important concern is that how entrepreneurship can benefit from leadership to deal with the diverse challenges of business enterprise formation and enhance the possibility of victory in the world of business. Consecutively, how leadership could take advantage from entrepreneurial abilities to cope with the highly competitive and disturbed firm environment (Cogliser & Brigham, 2004). Therefore, in order to attain greater comprehension of both phenomena and using the synergy in respect of refining the two areas, researchers incorporated them into a modern paradigm known as 'entrepreneurial leadership' (Gupta *et al.,* 2004; Yang, 2008).

Entrepreneurial leader fundamentally is a person with both leadership and entrepreneurial abilities. As an entrepreneur is deeply associated as the leader of the firm, he is responsible for the firm performance as well. Earlier studies had connected the entrepreneurial leadership with firm performance (Covin & Slevin, 1991), and thus, it is projected that entrepreneurial leadership has a positive association with performance (Mohtar & Rahim, 2014). Entrepreneurial leaders deal with the crucial challenge of entrepreneurs and leaders of entrepreneurial actions in organisations in assigning the tasks, involving their followers with their responsibilities and building their capabilities to continuously form new business ideas (Mumford, Bedell-Avers, & Hunter, 2008; Sambasivan, Abdul, & Yusop, 2009; Chen, 2007; Gupta *et al.,* 2004).

Definitely, both academic strings have abstained the preoccupation with recognising inherent personality traits that differentiate entrepreneurs or leaders from those who are not. Instead, leadership studies have concentrated on what leaders do relatively who they are, accepting a systemic outlook of leadership as a procedure of social influence in a particular situation (Emrich, 1999; Yukl, 1998). As mentioned by Perren and Burgoyne (2002), entrepreneurship and leadership share the capabilities; risk acceptance, and personal drive. However, Vecchio (2003) sought to incorporate entrepreneurship research and theory into a more developed tradition of management and leadership. According to Vecchio (2003), entrepreneurship can be seen as a form of leadership that takes place in a particular setting. A similar explanation was given by Cogliser and Brigham (2004), who described entrepreneurial leadership to those who have considerable features of a leader, and particularly so one who leads in an unusual circumstance. Finally, leadership can also be explained as the process of influencing others to comprehend and agree with what needs to be done and how it can be done successfully, and the process of helping individuals and share efforts to achieve a common objective (Yukl, 2002; Ensley, Pearce, & Hmieleski, 2006).

2.8.2 Entrepreneurship and Leadership Synthesis

Hunt-Oxendine (2010) mentioned that the term entrepreneurial leadership is the outcome of merging parts of two theoretical schools of thoughts: entrepreneurship and leadership. According to Hunt-Oxendine (2010), as scholars noted the requirement for entrepreneurs to be leaders, a new term entrepreneurial leadership appeared to be in the forefront of debate. According to Huynh (2007), the research of entrepreneurial leadership is in need of additional improvement before an in-depth fusion of the domain can be developed. Given the situation around the entrepreneurial leadership construct, there are efforts by scholars to investigate the idea through empirical researches. Cogliser and Brigham (2004) hypothesised that there are many commonalities, both in the theoretical grounds, as well as the nature of research on which these two fields of entrepreneurship and leadership are grounded, and introduced numerous areas of thematic overlap across the two domains as indicated in Table 2.3 below.

Table 2.3
Areas of Thematic Overlap between Leadership and Entrepreneurship

Construct	**Leadership Application**	**Entrepreneurship Application**
Vision	Vision is the major element in motivating followers towards excellent performance or other goal-directed actions in addition to firm's performance.	Vision attributes (ability to inspire, future orientation, clarity, stability, challenge, abstractness and brevity) and content (growth imagery) are linked to new business development: followers require being inspired through a professionally meaningful mission, participation and involvement.
Influence	The capability to affect others towards an objective is a commonality across many of the numerous descriptions of leadership.	Entrepreneurs not only see opportunities but are capable of assembling resources to achieve their vision. Use of rational influence and motivational appeals is likely to be useful when the request is valid and in line with the values of the entrepreneur and the requirements of the constituencies.
Leading in context of innovation/ creativity	Leading creative individual needs technical skills and creativity using a number of indirect and direct influence strategies.	Entrepreneurial Leadership must engage idea creation, idea building and idea promotion (where concept creation is vital in the initial phases of a business, and concept building and promotion are more important in later on stages).
Planning	Planning symbolises an important effect on performance in dynamic, complex environments where individuals must coordinate their actions.	Entrepreneurs have an evident need for the mental simulation of future activities to forecast possible biases in strategic choices.

Source: Adapted from Cogliser and Brigham, 2004

In addition, a study by Fernald Jr., Solomon, and Tarabishy (2005) showed a set of eight general characteristics shared by both entrepreneurs and leaders as demonstrated in Table 2.4. These researchers explained the characteristics held by both entrepreneurs and leaders from different sources such as theses, dissertations, journal articles, magazines and book articles. The number of times each characteristic was seen in the literature review was utilised in the assessment and no scale was fixed to these characteristics. Table 2.4 shows the characteristics common to entrepreneurs and leaders: achievement orientated, able to motivate, visionary, patient, flexible, risk-taking, creative and persistent. Fernald Jr. *et al.* (2005) also proposed that Table 2.4 induces a critical research question such as whether having the common characteristics would have expected a person whose performance would demonstrate entrepreneurial leadership.

Table 2.4
Common Characteristics of Entrepreneurs and Leaders

Characteristics common to the entrepreneur and leader	**Number of times the characteristics was linked to an entrepreneur**	**Number of times the characteristics was linked to a leader**
Visionary	6	29
Persistent	3	2
Patient	1	3
Risk-taker	24	6
Achievement-orientation	15	7
Creative	10	5
Able to motivate	3	15
Flexible	2	6

Source: Fernald Jr. *et al.,* 2005

2.8.3 Importance of Entrepreneurial Leadership

Little is known about the entrepreneurial leadership construct. However Tarabishy *et al.* (2005) mentioned that a lot of things need to be done to make clear the characteristics or role of tomorrow's leaders, new thinking patterns, new information systems, and new organisational designs that must involve new leadership styles. They also proposed 'entrepreneurial leadership' as an answer.

Meanwhile, Gupta *et al.* (2004) argued that the business atmosphere is getting more and more competitive and turbulent, and thus a type of entrepreneurial leader is needed who is different from the conventional behavioural forms of leaders. This entrepreneurial leader may be more effective in change-orientated, competitive circumstances. Scheepers and Hough (2008) agreed that within the fast shifting economy, an entrepreneurial leadership has become a significant base of competitive advantage. Kuratko (2007) concurred that entrepreneurial leadership is becoming a worldwide need and that the more recognition should be established around the ingredients consisting of this idea so that the idea itself can be comprehended.

Ling and Jaw (2011) studied the associations between top executive teams' entrepreneurial leadership, global competitiveness and international human capital management (IHCM). The main outcomes were (i) entrepreneurial leaders are good at taking benefit of managing human capital and global opportunities for aiding the organisation's overall objectives in the international context, and (ii) the occurrence of entrepreneurial leadership in the top executive team is significant to a multinational company's international competitiveness in dynamic environments. Wang, Tee, and Ahmed (2012) acknowledged the two key research gaps in entrepreneurial leadership literature. First, there is a sparse investigation on the theoretical expansion of entrepreneurial leadership (Jensen & Luthans, 2006), and secondly, there have been scarce trends and themes between leadership and entrepreneurship (Vecchio, 2003). Cohen (2004) also mentioned that bosses at every level of the organisation need leadership that is to visualise, to inspire and to initiate change. However, what is needed more than ever before in organisations is entrepreneurial leadership because it is vital for the future of organisations. Swiercz and Lydon (2002) claimed that the entrepreneurial leader plays a vital role in the success of a new start-up venture and proposes that an improved comprehension of the construct may ultimately help to cut back the higher failure rate of business ventures and more significantly, keep the capable entrepreneurs involved in the enterprise for a long time. Organisational structures and strategies that might have worked in comparatively stable markets in the history will limit the endurance of organisations attempting to compete in dynamic markets. Therefore, entrepreneurial leadership is essential to help a conventional organisation to transform and adapt for success and sustainability. The growing incompetence of conventional strategy calls for an entrepreneurial way to increase an organisation's chances for long-term endurance, its capability for transformation, and its performance (Tarabishy *et al.*, 2005).

Even though the outcomes of these researches offer helpful insight, studying the consequences of entrepreneurial leadership is still rising in the educational research field. Comprehending entrepreneurial leadership and its impacts have achieved significance because public firms realise that entrepreneurial quests minimise goal uncertainty and improve performance.

2.8.4 Entrepreneurial Leadership in Higher Education Institutions

One of the first excerpts of entrepreneurial leadership in higher education was by Peck (1983) who formed a theory proposing that success can initiate through the entrepreneurial leadership inside a university or college. Peck's theory is still used to explain entrepreneurial leadership in higher education (Fisher & Koch, 2004). Entrepreneurial leadership in higher education is explained as, an emphasis on cultivating leaders all over the organisation as a mean to increase opportunities for growth and innovation (ASHE, 2006). Entrepreneurial leadership and how to be successful in executing entrepreneurial activities are also valuable topics and innovative concepts for future investigations in higher education. Entrepreneurial leaders are persons, who make a key difference; are innovative and creative; spot and utilise opportunities; discover the competencies and resources necessary to convert opportunity into actions; are good networkers and team builders; are determined in the face of competition and difficulty; engage in risk and change; have power in organisation; create capital; and put stakeholders first (ASHE, 2009).

Meanwhile, Middlehurst (2013) revealed that higher education institutes require revising their systems and structures so as to meet up with the transformation in the segment. It is emphasised that re-modernising the power structure and taking action efficiently to the demands of the knowledge society is vital to leadership function in tertiary education institutions and hence there is a need for new and novel leadership style. Academic scholars strongly consider that entrepreneurial leaders can increase the effectiveness of educational leadership and particularly school leadership in numerous ways. First, entrepreneurial leaders' individual capability in developing new ideas, identifying new opportunities and taking actions to utilise the opportunity can assist principals to open new horizons for school performance enhancement and meet the various requirements of students (Berglund & Holmgren, 2006; Eyal & Kark, 2004; Kempster & Cope, 2010) also they are supportive of building an encouraging environment for innovation and change at schools (Park, 2012). Entrepreneurial leadership has been more and more employed to increase educational leadership (Yusof, 2009) and particularly school leadership and performance (Xaba & Malindi, 2010; Lebusa, 2009).

2.9 Job Performance

Job performance is questionably one of the most significant dependent variables of interest to businesses, educators, the society and government. Businesses and researchers are just now reaching agreement on widespread conceptualization and definitions of individual level job performance.

Rotundo (2000) described that although scholars present their own conceptualisation of job performance, a classic definition focuses on actions or behaviours of individuals, not outcomes or results of these behaviours and actions. Smith (1976) argued some of the issues with numerous definitions of job performance and emphasised that an exact measure of job performance comprises the direct examination of behaviour. Murphy (1989) claimed that job performance should be described in terms of behaviours rather than outcomes. He insisted that outcome-based measures are not all the time useful to the organisation, as workers may attempt to maximise outcomes at the cost of other things, while Campbell (1990) described performance as those behaviours or actions under the control of the person, that contribute to the institutional objectives, and that can be evaluated according to the individual's level of ability, a definition that is consistent with the others. According to Jex and Britt (2008), job performance can be described as all of the behaviours workers are involved in while at the job. It symbolises behaviours where staff are involved in while at a job that contributes to institutional objectives (Campbell, 1990). In other words, job performance symbolises behaviours that are properly assessed by the organisation as part of the workers' duties and responsibilities (Jex & Britt, 2008).

Performance can also be described as the capability of an entity, such as an organisation, group or individual, to make outcomes in relation to determined or specific goals (Lebas & Euske, 2004; Laitinen, 2002). It is a real job or productivity produced by a particular entity or unit. To put it in a different way, the performance notion relates to the quantifiable accomplishments produced (Phillips, Davies, & Moutinho, 1999; Harbour, 1997), and the quantity specifies the processes and ability used to measure and control specific events and activities (Morgan, 2004).

Meanwhile, Millmore, Lewis, Saunders, Thornhill, and Morrow (2007), described performance measurement as a process of evaluating the performance against set measures of performance. This is grounded on Key Success Factors (KSF) which may consist of measures of deviation from the standards, track previous accomplishments and measures of input and output. To control performance, one first has to gauge it, and that measurement is appealing to stakeholders because it presents a sense of guidance and for making decision, a rationalising and a defense mechanism in opposition to challenges to workmates above and below and thus helps them to vindicate the status quo (Thorpe & Holloway, 2008).

Based on the above argument, it is apparent that performance measurement monitors and informs 'how well someone or something is doing'. In theory, it is a broad phrase pertinent to activities, things, people, organisations and situations while performance management is a procedure that assists organisations to devise, execute and modify their strategy with the intention to satisfy their shareholders' requirements (Verweire & Van der Burghe, 2004). Performance measurement is an objective-oriented procedure (Mondy, 2008) and the phrase is frequently used interchangeably with performance appraisal, performance measurement or performance evaluation (Mello, 2006).

2.9.1 Impact of Individual Performance on Organisational Performance

The presence of a seamless relation between broader organisational goals and individual performance is a vital supposition that underlies a system approach to performance management (Wholey & Hatry, 1992; Behn, 1995; Pollitt & Bouckaert, 2000; Hood, 1991, 1995; Osborne & Gaebler, 1993). In high-performing businesses, every person is assessed according to his or her performance. If assessed correctly both the organisation and the persons within it will be affected positively (Alam, Hoque, & Oloruntegbe, 2010). Performance measures should be outlined to push people towards the overall vision of the business and to concentrate on the future and not just in the past (Millmore *et al.*, 2007). The last twenty years of studies have seen developments in describing job performance and in comprehending the performance measurement procedure (Campbell, 1990; Arvey & Murphy, 1998).

Research in respect of performance measurement and management proposes a near agreement of view that there is a positive association between performance measurement; competencies; work-load; leadership and goal setting in the framework of performance management (Areolla, 2000; Becker, Huselid & Ulrich, 2001; Bryman, Haslam, & Webb, 1994; Carl & Kapp, 2004; Franzen, 2003; Green, 1999; Hecht *et al.,* 1999; House, Hanges, Javidan, Dorfman, & Gupta, 2004; Lundy & Cowling, 1996; Meyer & Botha, 2004; Mondy, 2008; Okafor, 2005; Phillips & Schmidt, 2004; Simmons, 2002; Spencer & Spencer, 1993; Stephen & Roithmayr, 1998; Wilkinson, Fourie, Strydom, Van der Westhuyzen, & Van Tonder, 2004; Williams, 2002; Alam *et al.,* 2010).

2.9.2 Models of Job Performance

Campbell (1990, 1994) came up with an all-inclusive model of job performance after examining a varied set of jobs performed by soldiers in the United States military. The model elaborates that performance on all jobs can be divided into eight dimensions. Table 2.5 illustrates Campbell's (1990, 1994) model of job performance according to the in-role and extra-role division. Campbell's in-role was also recognised as task-performance. From the eight dimensions given in the model, it is well realised that not all of these dimensions would be pertinent to all jobs. In reality, only three (Job-Specific-Task Proficiency (core task proficiency), demonstrating effort, and maintenance of personal discipline) were acknowledged as key performance elements for all jobs (Campbell, 1990).

Table 2.5
Campbell's (1990, 1994) Model of Job Performance According to the In-Role and Extra-Role Distinction

Performance Dimensions	**Description**
In Role	
1 Job-Specific-Task Proficiency	Technical aspects of job performance
2 Non-Job-Specific-Task Proficiency	Common tasks performed by different employees
Extra Role	
3 Written and Oral Communication	Ability to write and communicate effectively
4 Demonstrating Effort	Going the 'extra mile' at work
5 Maintaining Personal Discipline	Refraining from negative behaviours, following through on tasks
6 Facilitating Peer and Team Performance	Being a good team member, working well with other members
7 Supervision/Leadership	Effectively supervising and leading others
8 Management/Administration	Effectively organising and keeping track of critical information

Source: Jex and Britt, 2008

Another researcher, Murphy (1994) suggested the second model of job performance. Although the model was particularly built to make easier the comprehension of job performance in the United States Navy, the performance dimensions are also pertinent to any standard jobs. In contrast to the first model, this model splits performance down into four dimensions. The characteristics of the model are summed up in Table 2.6.

Table 2.6
Murphy's (1994) Model of Job Performance According to the In-Role Extra-Role Distinction Performance Dimensions

Performance Dimensions	Description
In Role	
1 Task-Oriented Behaviours	Performing major tasks associated with the job
Extra Role	
2 Interpersonally Oriented Behaviours	All interpersonal transactions that occur on job
3 Down-time Behaviours	Behaviours outside of work that affects job performance (drug, use of alcohol, extra jobs)
4 Destructive / Hazardous Behaviours	Safety violations, sabotage, accidents

Source: Jex and Britt, 2008

According to Jex and Britt (2008), the Murphy's (1994) four-dimension model was regarded as less helpful in contrast to Campbell's (1990, 1994) eight-dimension model, because the model was built to describe job performance for the United States Navy staff, while Campbell's goal was to explain performance in a wider term of jobs. Aside from that, Murphy's model was so extensive that it was complex to establish factors that led to differences between personnel on the performance dimensions.

2.9.3 Job Performance and University Leaders

The acceptance of individual performance management in higher learning institutions was focused on the positions of the vice chancellor, deputy vice chancellor, dean, deputy dean, academic director / chairman and the heads of department who have a chief liability for managing the performance of their unit of institutions, and therefore the performance of individual teachers and department associates. One of the most significant groups of university leaders is those charged with the management of the core academic units: departments and faculties (Meek, Huisman, & Goedegebuure, 2000). McCormack, Propper, and Smith (2013) interviewed 248 department chairpersons in the disciplines of Computer Science, Business, English, and Psychology and found that the quality of management practices can be directly connected to improved performance.

Growing rivalry for public funds and burden of greater liability were said to be the basis for the use of performance indicators in higher education (see e.g. Lewis, Ikeda, & Dundar, 2001; Sorlin, 2007; Sukboonyasatit, Thanapaisarn, & Manmar, 2011). These stresses of enhanced efficiency, effectiveness and accountability keep increasing the demand on the implementation of performance management in higher education (Lapsley & Mitchel, 1996). However, performance management in higher education has not received adequate consideration from policymakers and government in the past (Alam, 2009). Although there is a huge body of research related to job performance and leadership of middle managers in business organisations, similar researches of academic performance and leadership behaviour in HEIs are scarce (Almayali & Ahmad, 2012). Al-Shuaiby (2009) mentioned that various researches have also been carried out by a number of scholars on a variety of issues linked to leadership effectiveness in HEIs. In the procedure of assessing any individual performances, the most significant issue is to make out a set of suitable criteria.

After considerable examination of the literature, the scholars were concerned in finding out that the degree to which leadership effectiveness of university leaders can be anticipated by a combination of variables involving their leadership styles, competencies as well as roles to be an important factor in leadership effectiveness (Thorp *et al.*, 1998; Eagly & Johannesen-Schmidt, 2003; Eagly, Makhijani, & Klonsky, 1992; Daugherty & Finch, 1997; Rosser *et al.*, 2003; Moss & Jensrud, 1995; Billing & Alvesson, 1994). Gibson, Ivancevich, Donnelly, and Konopaske (2009) highlighted that performance in a firm is affected by the leader's behaviour. Leadership is one of the main aspects influencing university's performance (File & Shibeshi, 2011). Although there are various researches linked to the issue of leadership in higher education institutions, up till now research literature have not sufficiently investigated certain predictors of leadership effectiveness in higher education institutions (Al-Shuaiby, 2009).

Jing and Avery (2011), in their research of missing connections in comprehending the association between leadership and firm performance, realised that even though a hypothesised leadership-performance connection recommended by some scholars, present findings are difficult to understand and uncertain. To estimate leaders' effects on firm performance in a precise way within a real-world context is known to be challenging (Blettner, Chaddad, & Bettis, 2012; Antonakis, Bendahan, Jacquart, & Lalive, 2010). A number of researches have either evaluated and/or analysed leadership effectiveness of higher learning institutions in common (Mercer, 1997; Cox, 1994), and few researches have focused on the association between leadership styles and leadership effectiveness of university leaders in higher learning institutions (Greiner, 1972; Fiedler, 1997). Numerous researches have investigated the effects of certain professional characteristics of university leaders on their leadership effectiveness (Covey, 1991; Arter, 1981; Hahs-Vaughn, 2004), while other researchers have focused on the roles that certain personal characteristics of university leaders might play in their leadership effectiveness (Moss & Jensrud, 1995; Kempner, 2003; Stanford, Oates, & Flores, 1994). Leadership's effective styles can contribute to the improvement of performance when fresh challenges begin (McGrath & MacMillan, 2000), and identify the leadership's effects on performance is vital as some scholars observe leadership as a key inspiring force for increasing job performance. However, there is a scarcity of studies linked to leadership styles and personal and professional characteristics of university leaders as predictors of their leadership effectiveness. This study particularly focuses on certain predictors of leadership effectiveness of the university leaders serving in public sector universities of Punjab, Pakistan.

2.10 Managerial Competency

What is competency? Relying on the viewpoint and context in studies, several meanings were found for the phrase 'competency' (Garavan & McGuire, 2001; Viitala, 2005; Wickramasinghe & De Zoyza, 2008). The phrase competency usually entails knowledge, skills, abilities, trait, potentiality, value, preference, aptitude and opinion. Managerial competencies are knowledge, activities, attitudes or skills and conceivably also individual characteristics needed to enhance performance (Martina *et al.,* 2012). Klemp Jr's (1980) description of 'competence' refers to an essential characteristic of a person which is causally linked to superior or effective performance in a job while important basic managerial competency models found in the literature for leadership skills as intra-personal skills; business skills and interpersonal skills which are important for successful managerial performance (Asumeng, 2014).

In order to carry out a job effectively, specific skills, knowledge and behaviours are essential (Gomez-Mejia, Balkin, & Cardy, 2004). Competencies can, therefore, be simply described as certain characteristics of an individual, including skills, knowledge and behaviours, that enables performance (Dessler, 2005), or as the blend of behaviour, knowledge and know-how structured according to the objective or a goal in a certain form of working environment (Segrestin, 2004). Boyatzis (1982) highlighted and categorised managerial competencies into two groups; (i) Consummate competencies – which comprise productivity, conceptualisation, efficiency orientation, self-confidence, concern with impact, managing group process, diagnostic use of concepts, use of oral presentations, perceptual objectivity and use of socialised power, and (ii) threshold competencies – which comprise self-control, logical thought, stamina and adaptability, accurate self-assessment, spontaneity, developing others, use of unilateral power, specialised knowledge and positive regard.

Meanwhile, Whiddett and Hollyford (2003) described managerial competencies as a set of actions that persons show in successful performance of tasks inside the organisation, Mitchelmore and Rowley (2010) presented competencies as someone's skills, knowledge, and characteristics, and Bartlett and Ghoshal (1997) identified the three competencies groups knowledge/experience, skills/abilities, and traits/attitudes. Nevertheless, competency has no established definition (Strebler, Robinson, & Heron, 1997; Jubb & Rowbotham, 1997) and a number of stakeholders used the phrase, each with their own outline (Burgoyne, 1993). Relying on whether one was an educationalist, management theorist, psychologist, politician or HR manager, it took on diverse emphases. The extent of competence and of competence-based management is also not obvious (Colin & Grasser, 2007; Defe´lix, Klarsfeld, & Oiry, 2006; Zarifian, 2001). In reality, there is no theoretical framework for competence, and finding an agreement on that subject is very hard as many descriptions are accessible (Finch-Lees, Mabey, & Liefooghe, 2005; Stoof, Martens, Van Merriënboer, & Bastiaens, 2002). This consequently explains the complexity creating an agreement on that concept.

2.10.1 Managerial Competencies and Leaders

It is perhaps safe to say that most would agree that there are (at least) two important roles that are significant to the success of any business, leading and managing. The two roles are, realistically speaking, indivisible. Conceptually and theoretically, they can be distinguished. They can be researched, to some level, individually. But in actuality, they exist within and are experienced by the single person. Institutions require both functions in order to succeed (Kent, 2005). Brown (2001) suggested that successful leaders have to develop both leadership and managerial traits and behaviour. Also in leadership and contemporary management literature, it is more and more acknowledged that isolating management from leadership is unhelpful; both should harmonise each other (Mintzberg 2009a, 2009b; Bennis, 2009).

It is claimed then that the two procedures, although different, cannot efficiently work without each other. From the viewpoint of the purposes of the two procedures, how useful is it for a leader to develop a vision for the organisation and to gather motivation and support to practice it if the manager in him/her does not acquire and proficiently distribute the resources to achieve the vision? Or, the manager can effectively and efficiently choose and distribute resources, but if he/she has no sense of direction or vision what is that distribution based on and where is it leading the organisation? (Kent, 2005).

There must be a continuous changing of hats or hands off, within a single manager/leader to be effective. The leader part of the manager/leader creates the sense of direction and vision and the manager works out how to get there in terms of the accurate substitute path, obtaining and distributing the resources that are required. Wearing his/her leader hat he/she sorts the people concerns and make promises, and inspirations while proceeding the organisation's values and ethics. Handing off the manager in him/her assures that objectives are set and helps to find out the most useful way of achieving those objectives. The task is carried out through this continuous handing off (within the same individual) from manager to leader and back to the manager (Kent, 2005).

Competency theory is grounded on studying effective leaders, breaking down their skills, attitudes and behaviours into quantifiable aspects, and seeking ways of bringing them together in order to produce humans who show greater performance (Mitchelmore & Rowley, 2010). Competencies and roles, present a helpful tool for leadership success. For successful leadership, competency models are not a direction but symbolise effort to detain the lessons learned, experience and knowledge of qualified leaders to give a guiding framework for the advantage of the organisation and others (Spendlove, 2007). The contingency theories such as those suggested by Fiedler (1967), House (1996), House and Mitchell (1974), Vroom and Yetton (1973), and so on, state that management style and leadership patterns required to be adapted to each particular organisational situation (Schmid, 2006).

2.10.2 Managerial Competencies in Organisational Context

In recent years, increasing attention and interests have focused on managerial competency and competency modelling (Qiao & Wang, 2009). The associations between individual attributes and managerial success, in addition to the examination of the connections between specific competencies and managerial performance have also gained recognition (Robertson, Gibbons, Baron, MacIver, & Nyfield, 1999; Young & Dulewicz, 2009). Scholars have put efforts to investigate the role of competencies with varied organisational results (Boyatzis, 1982; Cripe & Mansfield, 2002; Goleman *et al.*, 2002), and some are also attempting to build competency models for organisations (Wickramasinghe & De Zoyza, 2009; Fortier, 2009; Sanchez & Levine, 2009; Qiao & Wang, 2009; Tahir & Abu Bakar, 2010; Chong, 2013).

The concentration of the competency concept is chiefly to help organisations to deal with the varying environment and the requirement to incorporate an organisation's corporate strategy and its human resource strategy (Barber & Tietye, 2004). As the university environment is facing many challenges these days, the university leaders should be competent and knowledgeable enough to administer their subordinates productively (Siddique, Aslam, Khan, & Fatima, 2011). Entrepreneurial and managerial competencies vary by level of organisational growth (Gasse, d'Amboise, Simard, & Lasker, 1997), and by context (Capaldo, Iandoli, & Ponsiglione, 2004).

As the possession of a set of managerial competencies is promoted as a requirement for endurance of the business and the economic development (Tahmasb, Niknafs, & Mirvaziri, 2014; Königová, Urbancovsá, & Fejfar 2012), there is a growing confluence of literature on the complicatedness of the association between possession of managerial competencies and organisational performance (Krajcovicova, Caganova, & Cambal, 2012; Xiang, 2009; Tahmasb *et al.*, 2014).

However, there is a huge agreement that managerial competencies are connected in a multifaceted way to performance, and being the main necessity for steady performance over time (Bucur, 2013). Studies have suggested that entrepreneurs need both managerial and entrepreneurial competencies and that the managerial competencies are most vital for the business growth and to support effective business growth (Mitchelmore & Rowley, 2010). The argument of competencies in entrepreneurial research is still in its early phases (Brinckmann, 2008), and prior researches have not yet offered a clear view of the connection between specific or separate managerial competencies and organisational or managerial effectiveness (Semeijn, Van Der Heijden, & Van Der Lee, 2014).These general and specific competencies may need to be tested to realise their associations in addition to explaining their impact on performance (Rambe & Makhalemele, 2015).

2.10.3 Managerial Competencies in Higher Education Institutions Context

The changing environment has also seen key changes in the tertiary education field, where university heads are needed to act as leaders of transformation and change (Smith & Hughey, 2006). The transformations in the higher education atmosphere are particularly noticeable in the move from collegialism to managerialism (Deem, 1998). University leaders have to perform not only in their scholastic capacity but also as managers. According to Yang (2003), institutions of higher education are required to embrace the marketplace, become customer focused, and work as a full business venture in order to endure in the worldwide competitive surroundings. In view of the transformations that have taken place in higher education, Yang (2003) considered that it is compulsory to equal the new demands on the role of university leaders with an extent of managerial skills.

Scholars such as Raines and Alberg (2003) and Filan (1999) argued that for the preceding few years very few academic associates of staff in the tertiary education setting have been obligatory to work as managers, and thus those academics who have been positioned in leadership positions perhaps do not have the required skills. For these scholars, it is an issue of concern that a lot of universities offer too little or no formal coaching. It has become obvious that most university leaders with no past exposure to management supported their role without the advantage or benefit of any managerial or leadership coaching (Raines & Alberg 2003; Hare & Hare 2002; Gmelch, 2004). According to Yielder and Codling (2004), management and leadership are very much incorporated into the academic framework. They are of the view that both the university management role and the leadership role need attributes of leadership, which in this sense cannot be inscribed into a job description as a role. The university leadership role is hence considered as a quality that a person brings to the position.

In order to facilitate leaders to deal with the modern, complex and multifaceted needs, modification at several levels have to be made and they must be prepared with the new competencies and essential skills in sequence with modern developments (Trivellas & Reklitis, 2014). Proficiency in management competencies will eventually guide to efficient and successful task achievement (Aziz *et al.*, 2005). As a consequence of the general, standardised and limited management development and training programmes in universities, an outline of management competencies for coaching reasons has become crucially significant. The right skills, knowledge and abilities (connected to the required management competence) can contribute to the success of the majority of university leader's important responsibilities and tasks.

Bennett (1983) viewed that persons should be vigilantly chosen for the job of university leadership seat on the basis of managerial aptitude and experience. Many researchers appear to have the same opinion that if managers have a firm set of competencies, then they will be victorious in improving firm performance (Mohd-Shamsudin & Chuttipattana, 2012). Regardless of the increasing literature on managerial competencies, most of the competencies have been investigated separately and with a slight effort to distinguish their common associations with particular features of performance (Mitchelmore & Rowley, 2010; Markman, 2007). Botha and Camphor (2008) considered the growth of management competencies and skills in universities as vital while competency literature in higher education is scarce and somewhat underdeveloped (Martinez, 2008).

2.11 Self-Efficacy

Self-efficacy is a person's cognitive estimation of his or her abilities to mobilise the cognitive resources, motivation, and courses of action required to exercise control over events in their lives (Wood & Bandura, 1989). Bandura (1994) described self-efficacy as persons' beliefs about their abilities to create designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs find out how people think, feel, behave and motivate themselves. On the contrary, individuals with low self-efficacy may think that things are harder than they actually are; a belief that fosters strain, a narrow vision and depression of how best to resolve a problem. Consequent of these influences, self-efficacy beliefs are sturdy predictors and determinants of the level of achievement that person finally achieve (Iroegbu, 2015). Mostly due to the effort of Albert Bandura, self-efficacy has a broadly praised theoretical foundation (Bandura, 1986), a wide knowledge base (Bandura, 1997; Maddux, 1995, 2002), and an established evidence of application in the place of work (Bandura, 1997, 2004; Stajkovic & Luthans, 1998).

Self-efficacy is the cognitive procedure by which an individual assesses his or her capability to do a certain job (Bandura, 1997). It is also called anticipated capability, which refers to the confidence individuals have in their capabilities for achievement in a given job. If they have the capability to effectively do, then that job will be attempted (Tenaw, 2013; Bandura, 1997). Studies grounded on self-efficacy theory have found that personal efficacy affects the objectives people opt, their ambitions, how much energy they will put on a set task, and how long they will persevere in the face of obstacles, difficulties and disappointments (Maurer, 2001). Somebody with little self-efficacy will be inclined towards giving up and discouragement. In addition, an individual with increased self-efficacy will attribute failure to outer factors whereas an individual with little self-efficacy will blame low capability (Hassan *et al.*, 2015).

With increased self-efficacy, persons believe that they do have the suitable skills to productively perform a job or execute well with little to no outer assistance or reliance (Hsieh, Sullivan, Sass, & Guerra, 2012; Pajares, 2005). Efficacy beliefs are acquired from experience, and Bandura (1986) has claimed four main groups of experiences that affect the efficacy estimation. The first and most prominent are individual performance achievements. Studies have revealed that succeeding in challenging events gives the strongest information for altering efficacy beliefs. The second group affecting the efficacy estimation is vicarious experiences, that is, interaction with models. By viewing new strategies and skills in others, people develop their task abilities, and also observing others effectively executing a task tend to elevate the efficacy beliefs of the observer. Efficacy is also influenced by the third group, constructive feedback or the encouragement of a believable person such as a teacher, a coach, a parent or a mentor. It is simple to develop and sustain a sense of confidence if those we respect and like show confidence on us too. The fourth group is mood state and physiological conditions, therefore, the better, ones feel emotionally and physically, the more efficacious he/she will feel (McCormick, Tanguma, & López-Forment, 2002).

2.11.1 Self-Efficacy and Leadership

Bandura dedicated significant consideration to the workplace in his revolutionary book, ‘Self-Efficacy: The Exercise of Control’. He gave a broad review of the emergent body of research coping with the direct and indirect affect of self-efficacy on job-related organisational and personal success (Bandura, 2004). This research review of the effect of self-efficacy comprises an extensive range of themes such as change and innovation, teaming (i.e., collective efficacy), training and development, stress and leadership. From this substantial body of research and theory on self-efficacy, organisational and managerial implications were presented (Ivancevich, Konopaske, & Matteson, 2011; Luthans, Yuussef, & Avolio, 2007). Self- efficacy has a considerable effect on effort, adaptability, goal-setting, persistence and level of aspiration (Bandura, 1986; Gist & Mitchell, 1992). These beliefs influence the growth of useful leadership strategies, and the skilful implementation of those strategies (McCormick, 2001). Bandura (2000) supported the significance of self-efficacy in leadership setting by saying, when confronted with setbacks or obstacles, and that those with a strong faith in their abilities will strengthen their efforts to master the challenge.

Studies of successful leaders have characterised them as goal-focused, resourceful, resilient, highly committed, determined and effective problem solvers (Locke, 1991), and that they are individuals with a high self-efficacy. Liu, Siu, and Shi (2010) also studied the relationship between self- efficacy, leadership and workers satisfaction. The outcomes pointed out that self-efficacy of the leader mediates the connection between employee satisfaction and leadership and performance. McCullers and

Bozeman's (2010) in their research found that increased self-efficacy levels were linked to the school leaders' belief in the achievement of objectives set by district authorities or the school, in addition to being positively linked with the principals' strategies and actions for achieving educational objectives.

McCormick (2001) proposed that one of the most often documented findings in leadership research is the association between a leader self-confidence and effective leadership in any organisational situation. His study also found that leadership self-efficacy is a vital aspect which plays a significant role in a leader's capability to be successful in a challenging, adverse, complex or dynamic environment. Self-efficacy is a vital construct in Bandura's social learning theory (1977a, 1982; Wood & Bandura, 1989), and there have been debates about self-efficacy and its implications for entrepreneurship and management (Wood & Bandura, 1989; Boyd & Vozikis, 1994; Gist, 1987). There is also a growing importance on the role of self-efficacy in the research of entrepreneurship comprising performance (Scherer, Adams, Carley, & Wiebe, 1989; Krueger Jr., & Brazeal, 1994; Gartner, 1989; Chandler & Jansen, 1992; Boyd & Vozikis, 1994).

Efficacious educational leaders have traits that let them be more determined in chasing goals. But efficacious leaders are also realistic in the sense that they adapt their strategies to the current situation so that they do not misuse time attempting ineffective strategies (Osterman & Sullivan, 1996). When tackling problems, efficacious leaders infer failure as a lack of effort or use of an inaccurate strategy rather than a lack of ability. Leaders with higher levels of self-efficacy believe that by changing their strategy or doubling their efforts, they will achieve goals and realise victory (Versland, 2009). Even though leader's self-efficacy looks to be a promising construct for the comprehension of their behaviour and motivation, it has been comparatively unstudied (Tschannen-Moran & Gareis, 2007).

2.12 Learning Orientation

Learning orientation as the person's internal driving power, induces the person to get new knowledge and skills, to seek challenge, looking ahead to learn from the growth and challenges, which facilitate to improve their creativity (VandeWalle, Brown, Cron, & Slocum Jr, 1999; Gong, Huang, & Farh, 2009; Amabile, 1988). A learning orientation is inner mindset that stimulates a person to build his or her competence (VandeWalle *et al.*, 1999; Dweck & Leggett, 1988; Dweck, 1986, 2000; Gong *et al.*, 2009), and also a tendency for a person to seek knowledge (Kohli, Shervani, & Challagalla, 1998; Dweck & Leggett, 1988).

Organisational learning is, at its most fundamental level has the potential to affect behaviour (Slater & Narver, 1995) and it normally takes place at two levels; individual and organisational. At individual level learning orientation is a person's tendency to seek knowledge (Kohli *et al.*, 1998; Dweck & Leggett, 1988), and it is also endeavoured to raise the organisational values that affect the tendency of the organisation to generate and use knowledge (Sinkula, Baker, & Noordewier, 1997).

Learning orientations have drawn the interest of researchers over the decades (Hakala, 2011; Brettel & Rottenberger, 2013). It is also perceived as a fundamental approach towards learning, i.e., the managerial and organisational characteristics that assist the organisational learning procedure (Real, Roldán, & Leal, 2014). In this situation, learning orientation is observed as an organisation's value that impact the organisation's propensity to produce and utilise knowledge (Zhao, Li, Lee, & Chen, 2011; Wang, 2008), and management dedication to sustain a culture that encourages learning orientation as one of its key values (Real *et al.,* 2014; Baker & Sinkula, 1999). Martinette and Obenchain-Leeson (2012) mentioned that learning orientation field is still very much relevant as academic examination field due to some reasons. First, the firm needs learning the process to make a change of behaviour that directs to superior performance (Slater & Naver, 1995). Second, the firm is demanded to generate competitive revenue, and third, firm is also demanded to be accountable in building an organisational culture and achieving profitability (Pramono, Nimran, & Utami, 2015).

Learning orientation symbolises the inclination of firms to generate and use knowledge (Sinkula *et al.*, 1997) in order to achieve competitive advantage (Calantone *et al.*, 2002). The latest knowledge is producing all around the globe and affecting the entire globe equally. This occurrence has brought many modifications in almost all spheres of life and it becomes vital for the tertiary education institutions to acknowledge these changes for working in this era of globalisation. In the present scenario, tertiary education is accountable for many tasks; research in tertiary education is carrying new changes which are facilitating human beings as well as making new challenges to humankind (Mehmood, Khan, Raziq, & Tahirkheli, 2012). Learning may be understood along the lines suggested by Huber (1991) as the expansion or gaining of new knowledge that has the capacity to affect behaviour. Researchers' thorough observation supposes that learning, in fact, results in new behaviours or value creation (Argyris & Schön, 1978). Sinkula *et al.* (1997) conceptualised learning orientation in the dimensions of shared vision, open-mindedness and commitment to learning, whereas some scholars have also integrated intra-organisational knowledge sharing (Calantone *et al.,* 2002). Shared vision suggests that there should be a firm-wide concentration on learning. Calantone *et al.* (2002) emphasised that without a shared vision; learning by associates of an organisation is less likely to be significant. Open-mindedness requires the readiness to seriously assess the organisation's operational routine and to get new ideas, as the rate of knowledge out-dating is high these days (Sinkula *et al.,* 1997). In this view, openness to the outer world relating to non-stop research concerning stakeholders – particularly beneficiaries or service users and donors – and making use of competitors' performance as yardsticks for assessing performance is an important aspect of learning organisations. As highlighted by Slater and Narver (1995), undertaking research helps the organisation to become close to its key stakeholders, therefore, making easy alterations when the unforeseen happens. Lastly, intra-organisational knowledge sharing entails behavioural routines or shared beliefs linked to the spread of learning between diverse units inside an organisation (Calantone *et al.,* 2002). This facilitates to remain alive the information and knowledge collected from different sources for future action.

Learning orientation assists organisations to broaden their ability to survive and compete in the market (Rhee, Park, & Lee, 2010). Learning is observed as the instrument behind relationship governance in inter-organisational dealings (Liu, 2012). Learning orientation is also positively linked to performance, such as organisational innovativeness, new product success and profitability and superior growth (Westerlund & Rajala, 2010; Hanvanich, Sivakumar, & Hult, 2006; Brachos, Kostopoulos, Soderquist, & Prastacos, 2007). Through learning orientation, firms can comprehend the worth of inter-organisational collaboration and the procedure by which this can be attained (Vera & Crossan, 2004; Baker & Sinkula, 1999). In summary, firms can enhance absorptive capability by designing inter-organisational routines that help knowledge sharing (Dyer & Singh, 1998). They can constantly gather their knowledge bases and absorb complex knowledge by learning orientation to develop knowledge effectiveness (Huang & Chu, 2010).

Early researchers have established that learning orientation has a noteworthy impact on small and medium enterprise's performance (Wang, 2008; Real *et al.*, 2014). For instance, Maes and Sels (2014) believed that learning is a key element of any effort to advance organisational performance and competitive advantage. Additionally, Rhee *et al.* (2010) performed a study on small and medium enterprises' performance and found that managers with market orientation and entrepreneurial orientation should put more focus on learning orientation in order to increase innovativeness, and, eventually, attain superior performance. In this regard, small and medium enterprises with increased levels of learning orientation are linked with better innovation and usually outperformed their competitors with greater performance (Baron, Hmieleski, & Henry, 2012; Avlonitis & Salavou, 2007; Nasution, Mavondo, Matanda, & Ndubisi, 2011; Brettel & Rottenberger, 2013; Hung, Lien, Yang, Wu, & Kuo, 2011; Grinstein, 2008; Lin, Peng, & Kao, 2008; Pesämaa, Shoham, Wincent, & Ruvio, 2013; Wincent, Thorgren, & Anokhin, 2014; Real *et al.*, 2014).

In an atmosphere in which a learning orientation is promoted, people will be encouraged and motivated to learn, where they will build and share new perspectives and skills (Nonaka, 1991). The notion of learning orientation has received significant consideration in the research literature as higher learning processes have been indicated as a basis of competitive advantage. The main ideas recognised in the different reports of the learning orientation are: gaining and transfer of knowledge (Lewis, 2002); transformation (Pedler, Burgoyne, & Boydell, 1997); improvement (Rowden, 2001); creation, individual, team and organisational learning fixed in real visions, values and goals (Moilanen, 2005); in addition to change (Nevis, Dibella, & Gould, 1995) and continuous learning (Senge, 1990).

The learning orientation and market driving research have found that organisations with an added learning orientation perform better (Narver, Slater, & MacLachlan, 2001; Li, Lin, & Chu, 2008). This is because when organisations use organisational learning as their capability to take out lessons from both failures and successes to create new innovativeness and knowledge; this will lead to organisational success. Farrell (1999) proposed that one method of becoming more innovative, and making more profitable, is to support the higher levels of learning orientation within the firm.

It has also been suggested that firms seeking change and performance improvement must focus on learning (Senge, 1990), whilst being excellent at learning is one aspect that extremely thriving organisations have in common (De Geus, 1988). The outcomes of numerous studies have exposed that firms with the variables of learning, market and innovation orientation, can successfully advance performance (Nazdrol, Breen & Josiassen, 2011; Ozmen & Deniz Eris, 2012; Julian, 2010). Learning is thus the gaining and development of new knowledge which has the potential to impact behaviour, and more notably it may have consequence with value creation or new behaviours (Hakala, 2011). Learning helps behavioural transformation, which would ultimately direct to enhanced performance (Slater & Narver, 1995). According to Lusch and Laczniak's (1987) duplication characteristics increase a firm's fit in its atmosphere which can become a part of its future development. Duplication is often attained through organisational learning, which could offer a contribution to the firm's innovation procedure (Keskin, 2006; Lee & Tsai, 2005). Therefore, it is recommended that the organisations that really shine in the future will be the organisations that find out how to tap the workers' devotion towards learning (Lee & Tsai, 2005). Indeed, Bennett (1998) revealed that firms that showed superior learning abilities were found to practice higher fundraising performance, while Hurley and Hult's (1998) research in the US confirmed that when the personnel of an organisation is motivated to learn and develop to be capable of affecting their firm, innovative performance of the firm is enhanced. Learning and knowledge which are gained inside the organisational situation must give workers an obvious understanding of how to implement programmes or respond appropriately to the requirements of beneficiaries or users (Renshaw & Krishnaswamy, 2009; Barrett, 2000).

Past studies have revealed statistically noteworthy relationships between learning orientation and job complexity and entrepreneurial style (Sadler-Smith, Spicer, & Chaston, 2001). Leadership is another aspect that is conceivably linked to learning orientation (Farrell, 2000), as effective university leadership facilitates institutions to build a continuous learning environment, to offer the best answers to problems in teaching and research and to be innovative to convert challenges into opportunities (Hamidifar, Vinitwatanakhun, & Roodposhti, 2013). Scholars believe that the domain of performance orientation and learning orientation has been less studied (Laverie *et al.*, 2008) and that vigilant research concerning learning is sparse, particularly in the domain of performance outcomes (Jantunen *et al.*, 2008).

2.13 Entrepreneurial Leadership

Gupta and MacMillian (2002) tried to explain the notion of entrepreneurial leadership by describing it as leadership that makes visionary scenarios, motivating and committing a cast of characters for the finding and utilisation of strategic value formation in an organisational setting. Entrepreneurial leaders are also able to make easy proactive changes, must prove success in deploying efforts to forward the organisation, to look for new opportunities and to foster development (Venkataraman & Van de Ven, 1998). By definition, entrepreneurial leadership is the procedure of making an entrepreneurial vision and motivating a group to act out the vision in uncertain and high-velocity environments (Kuratko, 2007; Gupta *et al.*, 2004; Chen, 2007; Surie & Ashely, 2008).

McGrath and MacMillan (2000) suggested that a new type of business leader must emerge, one who is prepared to lead in the face of enhanced uncertainty and competitiveness in these dynamic marketplaces. They described this new sort of business leader as ‘entrepreneurial leader’. The entrepreneurial leader manages unexpected change. He/she comprehends that the circumstances of a dynamic market need them to move further than incremental developments to entrepreneurial transformation. Entrepreneurial leadership can also be considered as leading through direct participation, a procedure that generates worth for firm's stakeholders by bringing together a distinct innovation and package of resources to respond to an identified opportunity (Darling, Keeffe, & Ross, 2007). Chen (2007) described entrepreneurial leadership as the involvement in an effective integration of innovativeness, risk-taking and pro-activeness.

Past descriptions of entrepreneurial leadership paid more attention on individual characteristics and attributes of entrepreneurial leaders (Swiercz & Lydon, 2002; Vecchio, 2003), while the latest definitions focus on the influential and interpersonal procedures through which entrepreneurial leaders marshal a group of individuals to attain the entrepreneurial vision (Kempster & Cope, 2010). In this sense, entrepreneurial leadership is a procedure of transformation, empowering and social influence in quickly varying and vague situation (Kempster & Cope, 2010; Gupta *et al.*, 2004). An entrepreneurial leadership style is distinguished by giving autonomy to the personnel. When giving autonomy to the personnel they get the opportunity to carry out tasks efficiently because they work self-directed, creatively and independently (Arshad, Rasli, Arshad, & Zain, 2014).

According to Darling and Beebe (2007), entrepreneurial leadership needs observation to make an innovative vision of the future, and the leaders concentrate on new solutions and opportunities. Studies have extended the capacity of entrepreneurial leadership further than concentrating merely on an individual initiating a business to encompass the wider characteristics of a particular type of leader, tagged as entrepreneurial (Cohen, 2004). Entrepreneurial leaders dissolve and predict underlying conflict and obtain vital stakeholders' help inside and outside the enterprise. Entrepreneurial leaders are different and come from diverse settings. Several studies have suggested that organisational factors impact the procedure of devising leadership (Wang *et al.,* 2012; Bagheri, Lope Pihie, & Krauss, 2013). A diverse type of leadership style emerges in a dynamic and complex process of individual interaction with the atmosphere in which the leader's attitudes, perceptions and capabilities are established and built. Entrepreneurial leadership is formed through interactions among contextual and individual factors in a dynamic process (Kempster & Cope 2010; Hitt, Beamish, Jackson, & Mathieu, 2007).

2.13.1 Entrepreneurial Leader

Entrepreneurial leaders are the persons who have the capability to make dynamic, competitive firms where change and innovation are as general as clientele; workforce and stakeholder support (McGrath & MacMillan, 2000). These leaders have the advanced capability to create new ideas, tendency to discover new opportunities, propensity to execute the innovative ideas to enhance the performance of the firm, the capability to confront the challenges and the ability to influence personnel to be innovative (Chen, 2007; Cogliser & Brigham, 2004; Fernald Jr *et al.,* 2005; Gupta *et al.,* 2004; Thornberry, 2006). Locke (1993) in Fynn (2005), pointed out the characteristics of entrepreneurial leaders to be competent, visionary, determined and persistent, zealous about work, independent and active-minded, extremely focused on action and reality, and fair in the giving of rewards and having a high regard for capability.

Entrepreneurial leaders have to experience two interconnected challenges to effectively lead entrepreneurial events comprising of ‘cast enactment’ and ‘scenario enactment’. In cast enactment, entrepreneurial leaders are required to influence and inspire a group of committed and competent persons to attain the goals of the entrepreneurial situation. In scenario enactment, entrepreneurial leaders have to develop a thriving future for their entrepreneurial business enterprise through the continuous formation of innovative entrepreneurial ideas, recognition of entrepreneurial opportunities, and adaptation to the extremely competitive business world. To handle these challenges, entrepreneurial leaders should have a blend of interpersonal and personal competencies. Based on the challenges of leading entrepreneurial events in organisational scenarios and the competencies that entrepreneurial leaders need to confront the challenges, Gupta *et al.* (2004) built a theoretical base for entrepreneurial leadership.

Scholars for the first time are talking about the requirement of a possibly new type of leadership to appear and prepared to direct organisations in facing these new challenges (McGrath & MacMillan, 2000; Teece, Pisano, & Shuen, 1997). Some scholars have initiated naming this new kind of leadership as ‘entrepreneurial leadership’. They clarified that it demonstrates both entrepreneurial and leadership behaviours and characteristics (Ireland & Hitt, 1999; McGrath & MacMillan 2000; Meyer & Heppard, 2000). Several researchers agreed with the concept of entrepreneurial leadership where Kempster and Cope (2010), Gupta *et al.* (2004) and Tarabishy *et al.* (2005) suggested that a new kind of entrepreneurial leader is needed in the competitive and turbulent environment that firms confronting today.

Conceptualisations about entrepreneurial leadership are still developing, but it is attractive to view that Gupta *et al.* (2004) tried to describe the attribute of entrepreneurial leaders. These attributes include creativity, a decisive and positive mindset, intuition, intellectual inspiration, unconventional thinking and determined foresight. Entrepreneurial leaders are also motivated by the desire for firm excellence which is grounded on four principles, namely committed people, constant innovation, care for customers and management's leadership (Darling *et al.*, 2007).

2.13.2 Entrepreneurial Leader Characteristics

Churchill and Lewis (1983) pointed out that more empirical researches have been carried out concerning an entrepreneur's characteristics and behaviours than any other kind of entrepreneurship research. Additionally, scholars have over the years documented many characteristics of entrepreneurs. Characteristics of entrepreneurial leadership are self-confidence, need for achievement, risk-taking, creative tendencies, need for autonomy, internal locus of control, tolerance for ambiguity and propensity (Timmons, 1999). Eggers, Leahy, and Churchill (1994) have also carried out numerous studies looking at the characteristics of entrepreneurial leaders. From these researches, they observed that there are nine characteristics that are noticeable which comprise courage, motivation, screening for the opportunity, having a need to achieve, the locus of control, goal orientation, optimism, strong internal tolerance for ambiguity, and self-esteem. Entrepreneurial leaders have a higher level of innate inspiration and they are persistence even when they do not get support from outer sources such as family members, friends, and employees (Johannsen, 2008).

2.13.3 Entrepreneurial Leadership in Organisational Context

Basically, entrepreneurial leadership is initiated from organisational entrepreneurship (Gupta *et al.*, 2004; Swiercz & Lydon, 2002; Kuratko, Hornsby, & Goldsby, 2007; Vecchio, 2003). Entrepreneurial leadership expands through the connections among individual characteristics of the leader, firms and task performance demands and contextual aspects (Leitch, McMullan, & Harrison, 2013; Kempster & Cope, 2010). The notion of entrepreneurial leadership involves combining the ideas of 'entrepreneurship' (Schumpeter, 1934), 'entrepreneurial management' (Stevenson, 1985), and 'entrepreneurial orientation' (Covin & Slevin, 1989; Miller, 1983), with leadership (Gupta *et al.*, 2004) (Prieto, 2010).

Entrepreneurial leadership has become more and more significant because organisations have to be more entrepreneurial to improve their performance, and their capability for long-term survival and adaptation (Prieto, 2010). The positive link between entrepreneurial leadership and organisational performance as measured by profitability, growth and survival (Baum, Frese, & Baron, 2007) is accepted by both scholarly literature and the popular press (Lumpkin & Dess 1996). Hence, entrepreneurial leadership is established in the society, in individuals and in most firms due to its innovative behaviour.

Entrepreneurial leadership is also breaking new ground and facilitating to make the future. What creates a truly thriving entrepreneurial leader is not narrowly concentrated on only lifestyle, education intelligence or background. A major factor that seems to verify success is the entrepreneur's capability to cope with opportunities through the dynamics of firm's surroundings, thus motivating and enabling the employees to be devotedly and actively involved and thriving (Darling *et al.*, 2007). Entrepreneurial leadership is a procedure where leaders disclose their creative potential to facilitate their firms in recognising its potential. Firms that are guided by entrepreneurial leaders build and manage their own environments, are more productive, and become more creative in the procedures as they build and recognise their vision. Entrepreneurial leaders then empower workers to act on their vision to drive the organisation onward (Kotelnikov, 2005). Entrepreneurial leaders are regarded as transformation agents. Through motivation, these leaders instigate thriving change within their firms in an age where knowledge-based ventures are growing and rapidly shifting. Entrepreneurial leaders build networks through supportive relations. These relations and networks, in turn, facilitate entrepreneurial leaders in improving themselves (Kotelnikov, 2005).

Some scholars such as Crute (2010), Fynn (2005), Jones and Crompton (2009), Hunt-Oxendine (2010) and Huynh (2007) have suggested that too little research has been dedicated to the theme of entrepreneurial leadership. Covin, Sleevin, and Heely (2000) in Kuratko (2009), also mentioned that the early 21^{st} century has been a time when entrepreneurial actions have been recognised extensively as the path to competitive advantage and victory in firms of all sizes and types.

2.13.4 Research on Entrepreneurial Leadership

Numerous authors have done a series of studies concerning diverse aspects of entrepreneurial leadership, and several contributions are summed up in Table 2.7.

Table 2.7
Research in the Field of Entrepreneurial Leadership

Nicholson (1998)	Identified character differences between entrepreneurial leaders and ordinary managers. A distinct profile of the entrepreneurial leader is presented.
Santora, Seaton and Sarros (1999)	The study found that an entrepreneurial leader must articulate the vision and inculcate it through the entire organisation. Several characteristics of entrepreneurial leaders were highlighted.
Swiercz and Lydon (2002)	Confirmed the legitimacy of a two-phase life cycle model associated with entrepreneurial leadership.
Vecchio (2003)	Present a model of entrepreneurial leadership that integrates process and level influences.
Gupta *et al.* (2004)	Entrepreneurial leadership has to do with two interconnected enactment challenges achieved through linked roles being (i) scenario enactment and (ii) cast enactment. The entrepreneurial leader may be more successful in competitive change-oriented circumstances.
Cohen (2004)	Found that an entrepreneurial leader can refer to two groups of people with two distinct roles in the organisation: (a) the people at the top of the organisation, and (b) people at any level of the organisation.
Fernald *et al.* (2005)	Identified general characteristics shared by both leaders and entrepreneurs.
Tarabishy *et al.* (2005)	Entrepreneurial leaders exhibit both transformational and transactional leadership characteristics. Transactional and transformational leadership measures are defined through Visionary Leadership Theory.
De Jong and Den Hartog (2007)	Explored specific leader behaviours that are likely to increase employees' innovative behaviour.
Chen (2007)	Identified various qualities that the entrepreneurial group requires having, counting pertinent exposure and abilities, creativity, interpersonal skills and opportunity obsession.

Table 2.7 (Continued)

Kuratko (2007)	The study highlights the fact that entrepreneurial leadership is becoming a global necessity and that the more understanding is created around the elements that comprise this concept, the more the concept itself can be advanced.
Van Zyl and Mathur-Helm (2007)	Developed a theoretical model of entrepreneurial leadership consisting of proactiveness, risk-taking propensity, innovativeness, psycho-emotive, technical and ethical dimensions.
Huynh (2007)	This research assignment discovered the variable of entrepreneurial leadership as a modern way of comprehending the entrepreneur. A framework for discovering the phenomenon and its theoretical gaps was built by joining the areas of leadership and entrepreneurship. Three evolving themes in the research were recognised, theses are: contextual boundaries, carrying out a vision and individual influence. These themes shaped the basis of the research.
Yang (2008)	This research validates the concept of entrepreneurial leadership which is observed to be more transformational than transactional in nature, but with some basic distinctions.
Surie and Ashley (2008)	Build a conceptual model incorporating pragmatism with ethics to propose that the two are not contrary and that sustaining entrepreneurial leadership for value formation necessities ethical action to establish authenticity.
Jones and Crompton (2009)	Proposed a framework of entrepreneurial leadership in small organisations that illustrates the way in which certain factors combine to influence organisational innovation which relates to improvements in existing products and services, as well as more radical changes in terms of new products and services.

Table 2.7 (Continued)

Kempster and Cope (2010)	The scholars implemented a learning view to the theme of entrepreneurial leadership by discovering the nature of leadership learning in the entrepreneurial perspective. Leadership learning reflects contextual and informal procedures of apprenticeship and situated learning.
Crute (2010)	Entrepreneurial leadership is still an unfamiliar or loosely defined phenomenon. The effectiveness of entrepreneurial leadership behaviour and significance of value were not clearly exposed through this research. Internal and external factors affect the degree or level of entrepreneurship practised by leaders. The adopted culture of 'out-of-the-box' creative thoughts can be accredited to the entrepreneurial state of mind of the top level leadership. A number of advantages to the leadership and entrepreneurial practices executed by leadership: tangible outcomes were increases in funding and in-kind donations as well as the creation of innovative technology. Intangible advantages were symbolised by the amount of commitment and job satisfaction of the top level leadership.
Ling and Jaw (2011)	The results of this research mentioned that entrepreneurial leadership of top management teams not only had direct positive effects on an organisation's international human capital management but also had indirect positive effects on an organisation's global competitiveness through the mediating effects of international human capital management.

Source: Davids, 2012

2.14 Dynamic Environment

Environmental dynamism symbolises the rate of transformation in an environment. Wijbenga and van Witteloostuijn (2007) described environmental dynamism as the rate at which the services of firms and the choice of consumers vary over time. Environmental dynamism describes the level of factor's uncertainty and the rate of change within an environment (Li & Simerly, 1998). It could, therefore, be described with regard to technological transformation and unpredictability or uncertainty of the environment (Tegarden, Sarason, Childers, & Hatfield, 2005). Intense circumstances of environmental dynamism are in the form of ‘hyper competition’, where the advantages resulting from almost all type of competitive advantages are short-termed (Bierly & Daly, 2007). Dynamism also relates to ambiguities where it is seen as the speed or rate of transformation in an industry or the proceedings of industry customers or competitors as well as changes in overall demand and developments in technology (Chi, Kilduff, & Gargeya, 2009; Nandakumar *et al.*, 2010).

The environment is a multifaceted construct (Sharfman & Dean Jr, 1991). Previous researches have discussed on a number of theoretical aspects of environment which were mainly concentrated on numerous key aspects such as munificence (the availability of resources to firms in the environment to support growth), uncertainty (Child, 1972; Galbraith, 1973), complexity (Dess & Beard, 1984), and dynamism. These aspects reflect an affluent history of research and theory on environmental features that provides a basis for subsequent research (Sharfman & Dean Jr, 1991). Ellis and Shpielberg (2003) argued that firms came to know their environments only through their leaders’ viewpoints. Moreover, prior studies have recommended that the subjective measures which leaders used to identify their environments are more pertinent than actual measures of the environment (Boyd, Dess, & Rasheed, 1993; Miller & Friesen, 1983). Among the above-mentioned dimensions of environment, environmental dynamism is an important feature when examining dynamic capabilities, and therefore this study used environmental dynamism to measure the impact of environmental perspective. Environmental dynamism is also a broadly-explored variable in strategic management literature and firms' theory. The phrases 'volatility' and 'turbulence' relate to environmental characteristics alike to the environmental dynamism and they all are referred to the speed and degree of changes (Ansoff, 1979).

Malik and Kotabe (2009) have suggested that organisations require abilities dealing with quickly changing environments to take benefit of new opportunities and recompose resources. Working in dynamic environments usually gives the organisations to recognise the requirement for adaptation and change, and thereby endeavours these organisations to create more dynamic capabilities that can better acknowledge to a dynamic environment (Zahra, Sapienza, & Davidsson, 2006). In addition, the laws concerning resources and their values are more flexible, as marketplaces can reconfigure in unanticipated ways (Senyard, Davidsson, & Steffens, 2015). Thus, a firm's capability to adapt to varying environmental situations is a key to endurance, and that environmental dynamism has to be a necessary aspect for the source of productivity and strategy development (Idris & Momani, 2013).

2.14.1 Dynamic Environment and Performance

The contingency theory argues that a firm's performance initiates from a fit between environmental factors and firm structure and proposes that mechanistic structures are successful in steady environments whereas organic organisational structures are more effective in dynamic environments (Donaldson, 2001). Environmental aspects allow scholars to resolve how the environment can influence the diverse structural and strategic characteristics of firm performance (Molina-Azorín, Claver-Cortés, Pereira-Moliner, & Tarí, 2009; Boyd *et al.*, 1993; Claver, López, Molina, & Tari, 2007; Hill & Wilkinson, 1995; Miller & Frisen, 1983, Keats & Hit, 1988; Papadakis, Lioukas, & Chambers, 1998).

Firm environments that experienced fast changes have negative and positive consequences on the business enterprises in relation to their competitiveness, adaptation, responsiveness and abilities. Through these circumstances, firms require strategic management approach grounded on non-traditional strategies and managerial philosophies to deal with environmental dynamism seeking to realise higher performance through more attention in outer environment constructs to bring additional value for clients, high distinctiveness, in another perspective concentrate more on environmental dynamism (Idris & Momani, 2013).

2.14.2 Dynamic Environment, Entrepreneurship and Higher Education Institutions

Aldrich and Wiedenmayer (1993) argued that the socio-political atmosphere could be so influential at the level of destroying or creating entrepreneurship in the state. The environmental powers have affected business firms in many ways comprising the design of the culture and structure. The effect of firm environment on the strategic orientation of a business has acknowledged extensive interest in the entrepreneurship research (Dickson & Weaver, 1997; Zahra, 1996; Zahra & Garvis, 2000; Luthans *et al.,* 2000). Lewin, in Shaver and Scott (1991) hypothesised that behaviour is a role of both environment and person. This is in line with the shared causation model recognised by Bandura's (1989) Social Cognitive Theory (SCT) where cognitive process, behaviour, and environment are related with one another. Under SCT, individual's environment and behaviour affect each other.

The environment of entrepreneurs has been recognised as the main element affecting their entrepreneurial actions (Ucbasaran *et al.*, 2000). Current facts revealed that entrepreneurs working in resource-restrained atmospheres tend to get involved in several income creation activities (Kodithuwakku & Rosa, 2002). Pertinent literature also suggested that the capability of entrepreneurs to recognise, and exploit opportunities is affected by the environment in which they work (Scott *et al.*, 2000, Ucbasaran *et al.*, 2001). Furthermore, the achievement of entrepreneurs is reliant upon to what degree they can adapt to the transformations in the environment (Kirzner, 1973, Bryant, 1989) and modify the circumstances in the environment (Schumpeter, 1934). Hence, it can be assumed that the entrepreneurial procedure cannot be detached from the environmental perspective of entrepreneurs (Beckford, 1995).

The appearance of new movements and knowledge economy in the society and culture has also challenged the conventional thoughts about public tertiary education institutions. These institutions are dealing with a trouble to stay competitive and maintain a sustainable development in the existing environment of transformation with reduced fixed sources, bigger operation costs, funding, and changing pupil populations. Those tertiary education institutions that revamp themselves by becoming further entrepreneurial in the behaviours, attitudes, and individuality of their management are more probable to sustain and survive in this fast changing environment (Nayyar & Mahmood, 2014). Subrahmanyam and Shekhar (2014) who examined the influence of globalisation on higher education in India found that in such circumstances, building a sturdy pool of skilled individuals is unavoidable to meet the requirements of the challenges of the international environment. Thus, entrepreneurial leaders would do good to adjust their leadership actions as per the environmental situations in which their organisations function (Ensley *et al.*, 2006). Some studies have identified the possible moderating effect of the circumstances on the success of leader's behaviour (Pawar & Eastman, 1997) but not many researchers have really tested for such moderating effects (Podsakoff & Bommer, 1996; Bass, 1996), and according to Yukl (1999), there is still not much statistical evidence of noteworthy moderator variables.

To maintain a competitive advantage in an unstable market environment, firms not only have to create, gather and keep resources, but also need to evaluate regularly the functionality of their market knowledge and assets (Fang, Chang, Ou, & Chou, 2014). An environment of academic entrepreneurs generally comprise the university, which consists of the internal environment and actors in the wider social and economic environment, particularly the government and industry (O'Shea, Allen, O'Gorman, & Roche, 2004, Etzkowitz & Leydesdorff, 2000, Siegel, Waldman, Atwater, & Link, 2004, Eun, Lee, & Wu, 2006). These universities are strongly intertwined with the wider national environment, and therefore, it is likely that the university leaders may shape their activities in entrepreneurial endeavours (De Silva, 2012).

Past researches have also shown uncertainty about the environment and its impact on decision making and entrepreneurial strategy in many ways (West & Drnevich, 2010). The setting in which the higher education, and for that subject, all education works is facing fast variation. Transformation results from different forces, particularly those which have developed and advanced quickly in a comparatively little span of time (Gunawardena, 2008). Hanna (2003) and Barnett (2004) have identified the challenges of leading within ambiguity in the higher education setting, which includes the determination to make a start when the future is unclear. Not amazingly, it has been suggested that a capability to build and support leaders' ability to manage complexity, partnering successfully, involving people in the vision, and leading through transformation is 'not a luxury but a strategic need' for present day universities (Fulmer *et al.,* 2000). Of varied leadership, Kotter (2007) observed the capability to lead change as the crucial test of a leader while Maringe and Gibbs (2008) viewed dynamic environment of tertiary education as the requirement of creating some new opportunities in the future, such as complex social role of learning institutions, better complexity of the educational products, and significance of their monetary performances and competition.

A higher education institution's vital challenge is the capability to be adaptable, flexible and possesses know how to solve the problem so as to meet the demands of an increasingly complex and dynamic environment (Hanna, 2003). Additionally, university leaders are experiencing with crucial changes in their external and internal environments that influence their general functioning and leadership jobs (Preston, 1994), covering how they comprehend, infer and build their leadership roles.

Dealing with increased difficulty while sustaining the strength of an academic environment requires university leaders to do what they have been doing for centuries, which is organising their external and internal environments while growing and shielding the academic field. It appears that the challenges might be diverse in the 21st century, but the call for leadership at higher education institutions remains genuine (Lyons, 2008). The local and universal movements in universities, as well as the varying internal and external atmosphere, provide many challenges to the leaders in universities. As higher education institutions find themselves working in a more market-oriented and competitive environment, they are required to be flexible and capable of responding rapidly to market stresses and signals. Thus, many university leaders have begun searching for ways to make their universities more autonomous and entrepreneurial (Nordin, 2008).

2.15 Hypotheses Development

This section relates to the reviewed literature of research framework and based on that related hypotheses are proposed.

2.15.1 Managerial Competency and Job Performance of University Leaders

McClelland (1971) mentioned that there are behavioural variables that predict job performance successfully and he named these variables ‘competencies’. Mitchelmore and Rowley (2010) found that a major module in the study of competencies is exploring the life-long characteristics of individuals which result in performance or success in a work. Many researchers appear to have the same opinion that if managers have a specific set of competencies, then they will be victorious in improving firm performance (Mohd-Shamsudin & Chuttipattana, 2012). Important basic managerial competency models cited in the literature includes leadership skills such as intra-personal skills; business skills and interpersonal skills which are important for successful managerial performance (Asumeng, 2014). The term 'managerial competencies' is often used by successful managers and they are identified to have competence in their pertinent working field, mainly in relation to improving and developing their performance tasks and decisions (Gilmore, 1998).

Managerial competencies are being used as performance predictors as well as measures for performance. Managerial competencies are significant mostly for the viewpoint of enhancing performance and also for predicting performance (Bucur, 2013). Bucur (2013) also believed that intervention and prediction for enhancing managerial performance can gain an immense advantage from managerial competencies. For Iversen (2000), there are some managerial competencies that are causally connected to superior and/or effective performance in a job, but yet there is still a lack of empirical support that competencies are positively linked to individual performance (Spreitzer *et al.*, 1997; Goldstein *et al.*, 2001; Russell, 2001).

Managerial competencies have been recognised significant tools of human resources management and targeted at attaining the strategic goals of the firm. Managerial competencies are aspects of behaviour which are essential to accomplishing the necessary level of manager's performance, in grouping with efficient firm management, and becoming an important factor of achievement and also for a competitive advantage. Managerial competencies include knowledge, activities, attitudes or skills and also individual characteristics essential to develop management performance (Martina *et al.,* 2012). Visser (2009) developed a management competency framework for the development and coaching of university leaders. This management competency framework is grounded on a wide literature review carried out in the South African tertiary education setting and shows that competencies are necessary for excellent or effective performance at work. However, formal coaching of university leaders is still necessary for the understanding of competencies required by them to maximise both personal and organisational performance (Aziz *et al.,* 2005). It is also noted that the capitalisation of personal competencies and human resources has been shown to a competitive advantage of institutions that can improve performance (Lado, Boyd, & Wright, 1992), and that an increasing body of literature has confirmed a positive connection between managerial competencies and performance (Mahembe, 2011; Mitchelmore & Rowley, 2010). Based on this argument, the first hypothesis is formulated:

H1: There is a significant relationship between managerial competency and job performance of university leaders in Pakistan.

2.15.2 Self-Efficacy and Job Performance of University Leaders

Bandura (1997) reviewed almost two thousand published researches investigating the function of self-efficacy in an array of performance areas. For example, thoughts about individual abilities were found to influence academic success, decision making, entrepreneurship, career choice, teaching performance, athletic performance, drug and alcohol abstinence, stress tolerance, voter participation and organisational functioning. Self-efficacy has been generally linked to performance, and in an area of entrepreneurship, numerous empirical researches have found a positive link between performance and a general measure of self-efficacy (Torres & Watson, 2013).

Leadership has been described as a method through which managers elevated their performance expectancy and increased self-efficacy which, in turn, enhanced performance (Eden, 1992). Numerous researches have confirmed the significance of self-efficacy for enhancing performance in the organisational framework (Gist & Mitchell, 1992). Bandura and Locke (2003) concluded that self-efficacy is a dominant predictor of job performance. The literature on self-efficacy and leadership validated a general argument that leader's higher self-efficacy beliefs play a role towards leadership performance (McCormick *et al.*, 2002). Those persons with higher levels of self-efficacy about a given job certainly perform better than those with lower beliefs. Those individuals who are deficient in self-efficacy about particular tasks often do not even try those tasks (Versland, 2009). It should be observed that research has constantly revealed that even though there is a positive relationship between self-efficacy and performance achievement, self-efficacy is a better determinant than past experience / performance for future performance (Bandura, 1982, 1986).

Studies on the effects of self-efficacy (Wood & Bandura, 1989; Bandura & Schunk, 1981; Bandura, 1977b, 1982, 1986) established that self-efficacy is the most effective determinant of performance. Individuals with higher self-efficacy have a more built-in interest in the jobs, more eager to use their effort, and demonstrate more determination in the face of setbacks and hurdles. Consequently, they perform more effectively. It has been revealed that greater levels of self-efficacy leads to improved performance in some educational assignments (Javanmard, Hoshmandja,

& Ahmadzade, 2012; Bandura, 1997). The positive association between performance and self-efficacy has also been backed in many researches. Two meta-analyses that were conducted on the association between self-efficacy and work performance (Stajkovic & Luthans, 1998; Judge & Bono, 2001) revealed corrected correlations of 0.38 and 0.23, respectively, between job performance and self-efficacy (Tims, Bakker, & Derks, 2014). Cherian and Jacob (2013) also carried out a meta-analysis which examined the individual research outcomes related to the connection between employee motivation, self-efficacy, and job-related performance of the personnel. From the outcomes of the research, it was noticed that self-efficacy theory can be implemented to job-related performance.

Organisational scholars have extensively investigated efficacy constructs such as general efficacy (Chen, Gully, & Eden, 2001), self-efficacy (Stajkovic & Luthans, 1998; Multon, Brown, & Lent, 1991; Holden, 1992), forms of team or collective efficacy (Tasa, Taggar, & Seijts, 2007; Prussia & Kinicki, 1996; Gully, Incalcaterra, Joshi, & Beaubien, 2002), and means efficacy (Eden & Sulimani, 2002; Eden, 2001). This body of research has evidently shown how each of these forms of efficacy is associated with desired performance effects. The magnitude of self-efficacy individuals perceived linked positively with their prior performances and compels them to show the confidence that persuades the making of another excellent performance (Valiante & Morris, 2013; Holzberger, Philipp, & Kunter, 2013). Olusola (2011) investigation’s outcomes highlighted two things. The first recognised that job satisfaction, intrinsic motivation and self-efficacy predict the work performance of industrial employees, and the second offered the idea that each of these constructs predicts the work performance of employees.

Self-efficacy is always associated with performance because it affects both the actions that individuals seek and how much effort they assign to those actions (Yeo & Neal, 2006; Bandura, 1997). Self-efficacy can influence performance by affecting the objectives people set for themselves. Persons with higher self-efficacy set higher performance objectives, and then develop and more competently perform effective job strategies than those low in self-efficacy (Bandura, 1986). Based on the above discussion, the second hypothesis is derived as follows:

H2: There is a significant relationship between self-efficacy and job performance of university leaders in Pakistan.

2.15.3 Learning Orientation and Job Performance of University Leaders

The higher-order and active learning are always recognised as a leading higher performance (Sadler-Smith *et al.*, 2001; Spicer, 2002). It is this learning that permits organisations to respond to transformation and act effectively in a complex and turbulent business environment (Klimecki & Lassleben, 1998). Prior researches revealed that learning orientation indirectly affects both gains through innovation and firm performance (Pramono *et al.*, 2015). Organisation which has the capability to learn rapidly than their competitors will be on high performing and sustain in the market (Slater & Narver, 1995). For the small and medium enterprises, learning orientation demonstrated an important positive affiliation with financial performance and was also positively and considerably associated with non-financial performance (Spicer, 2004). Small and medium enterprises' with increased levels of learning orientation are linked with better innovation and usually outperform their competitors with greater performance (Baron *et al.*, 2012; Avlonitis & Salavou, 2007; Nasution *et al.,* 2011; Brettel & Rottenberger, 2013; Hung *et al.,* 2011; Grinstein, 2008; Lin *et al.,* 2008; Pesämaa *et al.,* 2013; Wincent *et al.,* 2014; Real *et al.,* 2014).

Significant works in the field of learning orientation have so far been descriptive and concentrated mainly on the theoretical implications (Watkins & Marsick, 1996, 1997). However, empirical researches have begun to review the learning orientation's affiliation to different measures of performance (Ellinger, Ellinger, Yang, & Howton, 2002), and these researches have validated some positive relations between learning orientation and performance. Empirical results also confirmed that learning orientation has a considerable positive effect on extensive innovation and performance (Lee & Tsai, 2005; Hughes, Morgan, & Kouropalatis, 2008). Relating learning orientation to performance usually shows that firms with higher levels of learning orientation demonstrate higher performance than firms having lower level of learning orientation (Atuahene-Gima, Slater, & Olson, 2005; Farrell & Oczkowski, 2002; Nazdrol *et al.,* 2011; Ozmen & Deniz Eris, 2012; Julian, 2010). This is especially true mainly in strong and unstable competitive environments (Mavondo, Chimhanzi, & Stewart, 2005; Liu, Luo, & Shi, 2002; Limpibunterng & Johri, 2009). Past studies also revealed that learning orientation is linked with as well as enhances the innovation and performance of the organisation (Alegre & Chiva, 2008; Glenn Richey Jr & Autry, 2009; Akgün, Keskin, & Byrne, 2008; Nguyen & Barrett, 2006; Calantone *et al.,* 2002; Nguyen & Nguyen, 2008; Mavondo *et al.,* 2005). From the above-discussed literature, the third hypothesis is proposed.

H3: There is a significant relationship between learning orientation and job performance of university leaders in Pakistan.

2.15.4 Entrepreneurial Leadership as a Mediator

According to the theories of mediating effects in management research, the objective of a mediating variable is to comprehend the ‘drivers’ of specific outcomes by hypothesising and checking what affects the outcomes rather than admitting that actions and outcomes were associated (Shaver, 2005). Research on mediating effects usually specifies whether the affiliation between two constructs is direct or indirect through some third variable (i.e. mediating variable).

Entrepreneurial leaders are capable in using their innovativeness, inspiring individuals to be innovative, providing a supporting and encouraging atmosphere for them to execute their new ideas and engaging all the employees in the procedure of organisational performance development (Kempster & Cope, 2010; Gupta *et al.*, 2004; Leitch *et al.*, 2013; Chen, 2007). Hence, there has been a belief of implementing entrepreneurial leadership to enhance institutional performance. It is also expected that entrepreneurial leadership has a positive connection with firm performance (Mohtar & Rahim, 2014). One aspect of firms with increased growth potential could be its entrepreneurial leadership style (Pihie *et al.,* 2014; Leitch *et al.*, 2013; Kuratko, 2007). The entrepreneurial leader’s capability to induce such performance is originated in perspective of the organisation’s requirement to adapt to rising environmental instability (Gupta *et al.*, 2004). Therefore, the fundamental challenge is to produce motivation in followers to dump existing conservative but career-secure actions for entrepreneurial and creative activities (Gupta *et al.*, 2004).

Even though the effect of entrepreneurial leadership in developing organisational performance and leadership effectiveness has been well-researched, the significant function that this leadership behaviour can perform in advancing educational institutions has not been fully studied (Peck, 1991; Lebusa, 2009; Eyal & Inbar, 2003). Moreover, research on the effect of entrepreneurial leadership on performance betterment of educational institutions is still sparse (Pihie & Bagheri, 2013), and that research on entrepreneurial leadership basically focused on its significance of performance such as innovativeness and creativity (Yýlmaz, 2010; Pihie *et al.* 2014), ventures' growth and performance (Ruvio *et al.*, 2010), leadership succession (White, D'Souza, & McIlwraith, 2007). Nevertheless, the mediating role of entrepreneurial leadership was investigated by Hunter (2013) studied the mediating on the competitiveness of SMEs in the UK and the findings showed a partial mediation where the causal relationship between social capital and entrepreneurship process was confirmed. Therefore, entrepreneurial leadership has become more and more significant because institutions must be more entrepreneurial to increase their performance as well as their ability for long-term survival and adaptation (Gupta *et al.*, 2004). In addition, entrepreneurship leadership has also proven to act as a mediator in any variables relationship to performance. Based on these premises the following hypotheses are put forward:

H4a: Entrepreneurial leadership mediates the relationship between managerial competency and job performance of university leaders in Pakistan.

H4b: Entrepreneurial leadership mediates the relationship between self-efficacy and job performance of university leaders in Pakistan.

H4c: Entrepreneurial leadership mediates the relationship between learning orientation and job performance of university leaders in Pakistan.

2.15.5 Dynamic Environment as a Moderator

Environmental dynamism refers to the degree of unpredictable change in an institution's environment. Even though the literature utilises a range of phrases such as volatility, uncertainty and high-velocity, they all retain to some level the underlying idea of unpredictable change. The moderating role played by environmental dynamism is well supported in the literature especially on a range of correlations or relationships between organisational performance and firm variables (Gilley & Rasheed, 2000). Environmental dynamism also shows ambiguity that undermines the capability of managers to anticipate future actions as well as their effect on the organisation (Khandwalla, 1977). As a heuristic for strategy execution, managers create a sense of environmental opportunities and threats, adjust them with inner weaknesses and strengths of the organisation, and then involve in a decision procedure that engages additional resource investments or divestments whereby they change the resource base of their business to calibrate with the seeming demands of the new environment (Teece, 2007; Sirmon, Hitt, & Ireland, 2007).

Gül (2011) and Akgün *et al.* (2008) linked environmental dynamism directly with performance. Verdu-Jover, Llorens-Montes, and Garcia-Morales (2006) suggested that under resource and capability based theories, the competitiveness and opportunities in the outer business environment affect firm's strategy which in turn affects firm performance. Homburg, Krohmer, and Workman Jr (1999) documented that higher management in firms tends to have a smaller effect on performance in dynamic rather than constant environments. In fact, many scholars have documented the empirical support that unpredictable and turbulent environments affect organisation's performance (Nadkarni & Narayanan, 2007). Akgün *et al.* (2008) and Gül (2011) testified that transformations in the outer environment may also enhance organisational performance. Similarly, Ward and Duray (2000) noted that the effect of the business atmosphere on business performance has been long documented as a key contingency factor. Nonetheless, the dynamic environment role as a moderator is well documented in many studies (Zahra, 1996; Chen *et al.*, 1998; Rauch & Frese, 2007; Wijbenga & van Witteloostuijn, 2007; Okhomina, 2010; Nandakumar *et al.*, 2010). In order to examine further the moderating effect of dynamic environment, the following hypotheses are put forward:

H5a: Dynamic environment moderates the relationship between managerial competency and job performance of university leaders in Pakistan.

H5b: Dynamic environment moderates the relationship between self-efficacy and job performance of university leaders in Pakistan.

H5c: Dynamic environment moderates the relationship between learning orientation and job performance of university leaders in Pakistan.

2.16 Underpinning Theories

The research framework proposed for this study is based on three theories which are explained in the following section.

2.16.1 Resource-Based Theory

Researchers and authors have recognised that entrepreneurial thinking is essential to organisational achievement in the business sector (Covin & Covin, 1990; Zahra, Covin, & Slevin, 1995) as well as the public sector (Ramamurti, 1986; Sandford, 2000). Since then, entrepreneurship has become one of the significant thoughts in the theoretical domain of resource-based theory and in the area of strategic management (Todorovic, 2004; Barney, 2001; Bruton & Rubanik, 2002; Alvarez & Busenitz, 2001). The resource-based theory (also acknowledged as resource-based view) was first promoted by Penrose (1959). According to Alvarez and Busenitz (2001), resource-based theory and the entrepreneurship have the identical level of examination, the resource and as entrepreneurship is an opportunity-seeking behaviour, it is also known as a resource (Todorovic, 2004). Resources are divided into organisational resources, human resources and physical resources which are worth creating resources (Wernerfelt, 194; 1995). As in public sector universities, the human resources regarded for this study are the university leaders. Therefore, the relevance of resource-based theory for this study considers individual instead of the organisation.

Resources are the intangible and tangible units accessible to the organisation that allow it to make effectively and/or efficiently a market offering (Hunt, 1997) and simultaneously assist leaders in executing strategies to get better their organisation's effectiveness and efficiency (Pringle & Kroll, 1997). With the scarce existing resources, leaders struggle to achieve competitiveness in the marketplace. To be a world-class university on the basis of performance is a long and ongoing process and consists of the struggle of their leaders to achieve a competitive advantage and thus achieve superior performance and financial stability and independence for their institutions. Innovative human resource (entrepreneurial university leaders) contributes to the organisations' achievement and superior performance through their effective performance. So it can be concluded that measuring university leader's job performance and factors influencing their performance are of great importance for research.

2.16.2 Social Cognitive Learning Theory

The central thought on the back of social cognitive viewpoint is that persons can self-regulate motivation, thoughts and behaviours. Rather than just responding to the situation as the behaviourist perspective contends, the social cognitive approach observes the individual as being practically involved in shaping the task environment and goal directed. Social cognitive learning theory clarifies psychological functioning (Bandura, 1986). In this model, cognitive, behaviour and other environmental events and individual aspects function as interrelating determinants. Social cognitive learning theory proposes a comprehensive causal structure that deals with the growth of competencies, learning and self-efficacy in individuals and their affect on the regulation of their behaviour (performance).

Knowledge (competency) structures symbolise the strategies, rules and models of successful action serve as a cognitive guide for the building of difficult patterns of behaviour (performance). These knowledge structures are produced from the behaviours and styles of thinking that are modelled from the results of verbal instruction, innovative cognitive syntheses of gained knowledge and exploratory actions. Individuals have developed a complex ability for observational learning that allows them to expand their skills (competencies) and knowledge from information transmits by modelling effects (Bandura, 1986; Rosenthal & Zimmerman, 1978).

Modelling is not simply a procedure of behavioural imitation. Modelling affects convey rules for innovative and generative behaviour. This very much applies to the leaders in universities because through their competencies they are able to perform better in the face of extreme challenges in the highly dynamic environment.

Over the years, psychological theories have concentrated almost wholly on learning through the influences of one's behaviours or through the organisations in which they work or through social networks. This basic form of learning influences directly person's actions and their performances. Much individual learning takes place either intentionally or unintentionally by watching the real behaviour of others and the effects of them. In observational learning, a single model can convey novel ways of thinking and behave at the same time to huge numbers of humans in extensively dispersed surroundings. This very much applies to the leaders in universities because through learning they are capable of performing better in the face of extreme chaos in the highly changing environment.

Thinking about leadership as a specific type of individual functioning, Bandura's social cognitive model entails that to completely comprehend the leadership procedure three groups of leadership variables must be judged. They are leader behaviours, leader cognitions and the leadership environment. And the most significant leader cognition is the person's self-efficacy for the leadership job. Perceived self-efficacy inhibits a key role in social cognitive theory because it not only influences action straightly but also through its impact on other classes of determinants. Self-efficacy beliefs influence performance through two mediating mechanisms: task strategy development and individual motivation. The ability to practice self-influence by own challenge through evaluative reaction and goal setting to one's own performance gives a key cognitive mechanism of self-directedness and motivation (Bandura, 1991; Locke & Latham, 1990). This very much applies to the leaders in universities because through their self-efficacy believes they are able to perform better in the face of extreme turmoil in the highly unstable environment. It can be concluded that leaders in higher education institutions through their competencies, learning and perceived efficacy, certainly perform better in the highly changing environment and those who have not such qualities surely set back.

2.16.3 Contingency Theory

Contingency approaches and theories to leadership comprise many factors, facets or dimensions. Fiedler (1972) in his contingency-based model proposed that leaders must have an authoritative leadership style. He additionally clarified that leaders must also own the exceptional leadership skills and/or style essential for meeting the requirements of a specific situation, adaptive to environment, and in some cases must also know which approach best fulfils the requirement of the environmental situation that prevails. To sum up, there are many behaviours in leadership that may be of worth to university leaders. Examining the job performance and unique behaviour of leadership that are applicable to university leaders might allow them to perform their jobs more efficiently in the dynamic environment.

It may be concluded from the above discussion that Resource Based Theory supports the view of individual university leader's performance and its impact on overall institutional performance. Social Cognitive Theory supports the competencies, learning and perceived self-efficacy of university leaders and impact of these on their actions and performances. Contingency Theory supports the unique leadership behaviour (entrepreneurial leadership) to respond to obstacles, challenges and turmoil university leaders facing currently due to highly changing or dynamic environment.

2.17 Research Framework

The research framework proposed for this study is shown in Figure 2.1. As a result of a thorough literature review, the subsequent theoretical gaps and with the identified underpinning theories, the research framework is drawn which shows the relationship between the independent variables (managerial competency, self-efficacy and learning orientation), the dependent variable (job performance), mediated and moderated by entrepreneurial leadership and dynamic environment respectively. Variables are analysed at the individual level.

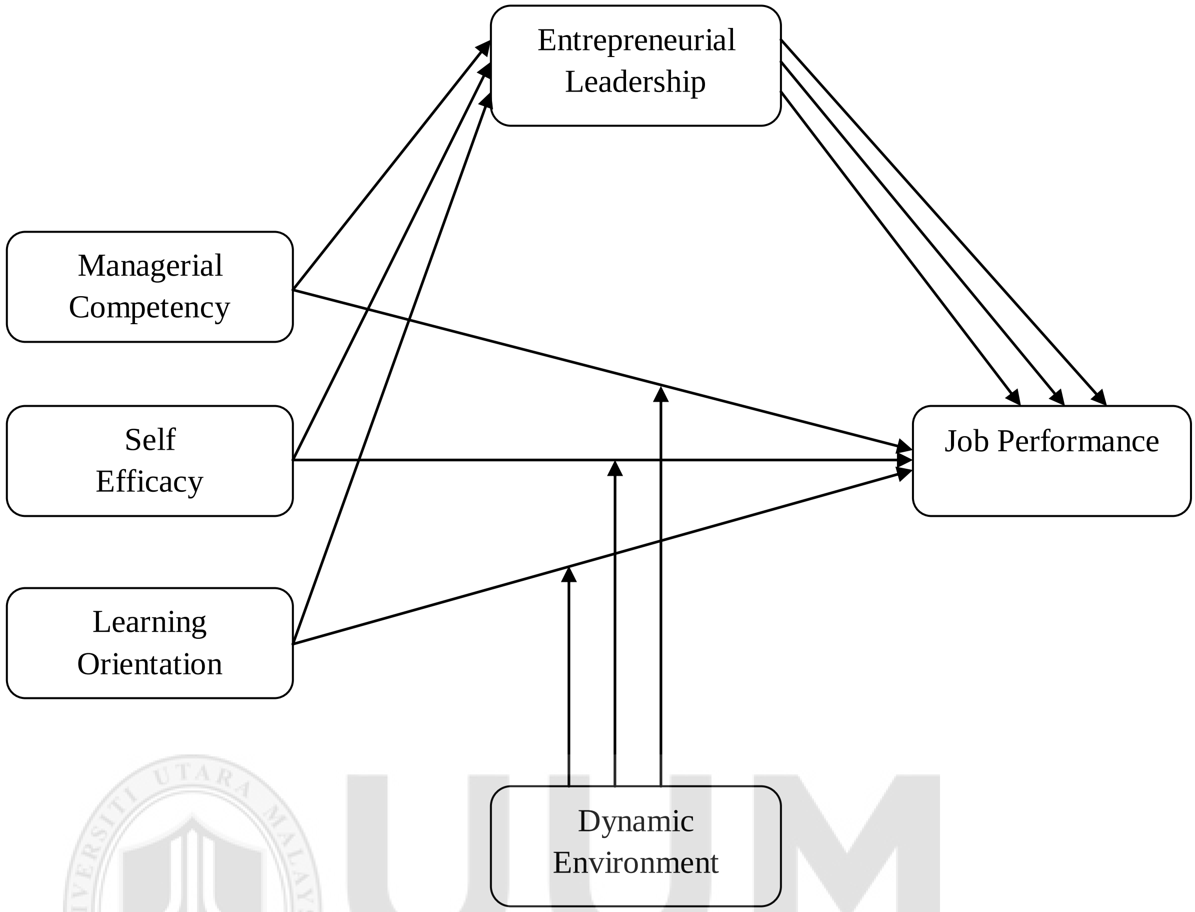

Figure 2.1

Research Framework

2.18 Summary

In Chapter 2, the review of the literature focused on the limited past and existing studies related to the leaders of higher education institutions. It reviewed the literature related to the historical perspective of entrepreneurship, leadership and entrepreneurial leadership. It also revealed the gap in the literature about the need for entrepreneurial leadership behaviour by the university leaders in the educational institutions.

Entrepreneurial leadership is elaborated as a mediator and dynamic environment as a moderator in the relationships of managerial competency, self-efficacy, learning orientation and job performance of university leaders. The relationship between each variable and job performance of university leaders was discussed and on this basis hypotheses were derived that conceptualised the research framework of this study. Various underpinning theories were also discussed which supported the research framework.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methodology used to explore the mediating effect of entrepreneurial leadership and moderating impact of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of university leaders in public sector universities of Punjab, Pakistan. This chapter also elaborates the different aspects of methodologies employed by the researcher to achieve the objectives of this study. A detail of the research design, measurements of variables, reliability and validity of variables, data collection procedure, sampling frame and data analysis techniques are also presented.

3.2 Research Design

This study is designed to investigate the relationships between independent variables (managerial competency, self-efficacy and learning orientation) to a dependent variable (job performance), the mediating variable, entrepreneurial leadership and the moderating variable, dynamic environment. The unit of analysis for this study is individual (university leaders) in 25 public sector universities of Punjab, Pakistan. The respondents' attitude towards his/her job performance will be measured as well as their perceptions towards the influence of their managerial competency, self-efficacy, learning orientation, entrepreneurial leadership and dynamic environment on their job performance.

It has been indicated in the literature that research design is the master map that is structured by the researcher to lead his/her steps in the undertaking of the research assignment through the data gathering and data evaluation stages (Zikmund, 2003). From the research methodology viewpoint, there are various research designs that can be utilised in conducting research. As mentioned by Zikmund (2003), there are four research methods for causal and descriptive research. These methods are experiments, observation, survey and secondary data study. Selecting a suitable research design is essential to the success of a research (Bordens & Abbot, 2011). However, there are no definitive means to determine and choose the best design (Davis, 1996). The decision to choose the correct research design determines the quality of the outcomes and recommendations drawn from the research results (Bordens & Abbot, 2011).

As there is no absolute rule in choosing the excellent research design in determining which research design to be followed in conducting research, is entirely reliant on the research context and the research purpose (Zikmund, 2003). As qualitative data gathering technique utilises the words as the description of situations, circumstances and people, quantitative data collection technique is the statistical description that is accurately recorded (Zikmund, 2003; Cooper & Schindler, 2006). In other terms, quantitative research is a method of accurately assessing variables through operational definitions (Cooper & Schindler, 2006).

Business research is classified based on the functions and techniques such as surveys, experiments and observational studies (Zikmund, 2003). For business research, the most widely used method is the survey design which is appropriate and in fact, the best approach for studying and describing large populations quickly and at a comparatively low cost (Davis, 1996). In fact, surveys are very versatile and can be adapted to almost any research area. According to Sonquist and Dunkelberg (1977), most surveys have as a central objective, a search for relationships between variables. As such, surveys have been used successfully to test hypotheses, describe populations, evaluate programmes, build models of human behaviour, develop useful measurement scales, and make other methodological improvements in business research (Davis, 1996). Thus, a quantitative survey method was employed for this research.

According to Hair, Money, Page, and Samouel (2007), survey questionnaire design is excellent and most commonly used to collect the primary data pertaining to the hypothesised relationships and therefore can be categorised as a field study with a correlation research design or quantitative orientation (Kerlinger & lee, 2000). Through the survey method, not only different types of data can be gathered from a large sample size, but it can give benefit in terms of time and cost reduction (Leedy & Ormrod, 2005). In contrast to the interview method, the survey method does not affect much with the respondent's time on the job. Apart from that, survey method also assures confidentiality on the respondents' background. The characteristics of the survey method allow researchers to collect data, perform statistical analysis, reliability and validity test effectively on the instrument (Alreck & Settle, 2004). According to Babbie (2008) survey methods have the benefits of 1) being feasible to large samples, 2) have the flexibility of responding to many questions on a topic, 3) and reliable. So to accomplish the objectives of this study; a quantitative survey questionnaire research method was used through a self-administered questionnaire to measure the variables under examination.

3.3 Population and Sample

This research studied the mediating affect of entrepreneurial leadership and the moderating impact of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of university leaders in public sector universities of Punjab, Pakistan. The target population was deputy vice chancellors, deans, deputy deans, directors/chairmen and head of departments of faculty/schools of 25 public sector institutions of higher learning in Punjab, Pakistan.

The total population of this study was based on the statistics which were drawn by browsing individual websites for each public university for the most current data. The statistics of target population comprised 25 public sector universities in Punjab is shown in Table 3.1

Table: 3.1

Public Sector Universities/Degree Awarding Institutions in Punjab, Pakistan

S. No.	University/DAI Name	Main Campus Location	No. of University Leaders
	Universities/DAIs chartered by the Government of Pakistan in Punjab		
1	National College of Arts, Lahore (NCA)	Lahore	29
2	National Textile University, Faisalabad	Faisalabad	29
3	NFC Institute of Engineering & Technology, Multan	Multan	20
4	Pakistan Institute of Fashion and Design, Lahore	Lahore	25
5	Virtual University of Pakistan, Lahore	Lahore	90
	Universities/DAIs chartered by Government of the Punjab in Punjab		
1	Bahauddin Zakariya University, Multan	Multan	59
2	Fatima Jinnah Women University, Rawalpindi	Rawalpindi	48
3	Government College University, Faisalabad	Faisalabad	53
4	Government College University, Lahore	Lahore	54
5	Government College for Women University, Faisalabad	Faisalabad	46
6	Islamia University, Bahawalpur	Bahawalpur	88
7	King Edward Medical University, Lahore	Lahore	50
8	Kinnaird College for Women, Lahore	Lahore	47
9	Lahore College for Women University, Lahore	Lahore	55
10	Pir Mehr Ali Shah Arid Agriculture, University Rawalpindi	Rawalpindi	38
11	University of Agriculture, Faisalabad	Faisalabad	51
12	University of Education, Lahore	Lahore	180
13	University of Engineering & Technology, Lahore	Lahore	93
14	University of Engineering & Technology, Taxila	Taxila	23
15	University of Gujrat, Gujrat	Gujrat	50
16	University of Health Sciences, Lahore	Lahore	12
17	University of Sargodha, Sargodha	Sargodha	50
18	University of the Punjab, Lahore	Lahore	118
19	University of Veterinary & Animal Sciences, Lahore	Lahore	41
20	The Women University, Multan	Multan	30
			1379

The sampling method is vital for assuring the validity of the collected data as well as an illustration of the population in order to represent generalised results on the whole population (Pedhazur & Schmelkin, 1991).

The resource limitation is the major obstacle in doing good research but information obtained can be maximised relative to cost, to obtain sample efficiency (Zikmund, 2003). According to Chua (2006), using too large sample may contribute to a larger type II error since larger the number of respondents, higher will be the error. Cohen, Manion, and Marrison (2001) proposed that in determining the sample size one has to ponder the significant levels and the sampling error. The researcher determined the sample size by taking into consideration the significance level at $p < 0.05$ (at 95% confidence level) and this statement was supported by Sekaran and Bougie (2010). Table 3.2 shows the sample size, significance level and the sampling error.

Table 3.2
Sampling Size

Population Size	**Sampling Error 5% 95% Level of Certainty (Significance Level = 0.05)**	**Sampling Error 1% 99% Level of Certainty (Significance Level = 0.01)**
	Sample Size	**Sample Size**
50	44	50
100	79	99
200	132	196
500	217	476
1000	278	907
2000	322	1661
5000	357	3311
10000	370	4950
20000	377	6578
30000	379	7000
50000	381	8195
100000	383	8926
1000000	384	9706

Source: Sekaran and Bougie, 2010

The proportionate random sampling design was used for its simplicity, less expensive, and easy to manage (Sekaran & Bougie, 2010). According to Sekaran and Bougie (2010), for a population of 1000, the appropriate sample is 278. Hence, for a population of 1379 university leaders, 322 respondents were needed on a 5 percent margin error.

3.4 Instruments and Measurements

The objective of this study was to investigate the mediating affect of entrepreneurial leadership and the moderating impact of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of university leaders in public sector universities of Punjab, Pakistan.

There is no such thing as a definitive mean to develop a flawless data collection instrument (Davis, 1996). New advancements in the field and general guidelines could be employed in the design of any instrument. To ensure that the instrument shows the desired data, the design of the questionnaire has to be pertinent to the research objectives (Davis, 1996), the instruments must be validated by pre-testing, and also the methods by which the questionnaires are administered (Hair *et al.*, 2007). The instruments used in this study were adapted from existing research models and a pilot study was carried out to find out their validity and reliability. These instruments were fit to measure at the individual level of unit of analysis.

For this study self-administered questionnaire was used, a closed-ended question format gives a uniform frame of reference for respondent's views, and the semanticdifferential approach was used along a seven-point scale. Psychological research indicates that respondents can perceive seven distinct reliability (Weisberg & Bowen, 1977), so a seven-point likert scale is not too complex for capturing the agreement or disagreement. Ahire, Golhar, and Waller (1996) found that a seven-point scale captures more variations than a five-point scale. Likert scale was utilised because it is easy to construct, has intuitive appeal, adaptability and usually have better reliability (Nunnally, 1978; Babbie, 1990). In a Likert scale, respondents have to choose amongst the given options. Thus, the researcher is capable of seeking answers about the given statement through a set of response keys.

The options given in the questionnaire for this research were, strongly disagree, disagree, slightly disagree, neutral, slightly agree, agree and strongly agree. Cooper and Schindler (2006) mentioned that the reliability of the measure enhances when the number of scale increases. In addition, the number of scale chosen must approximate the degree of complexity of the construct (Cooper & Schindler, 2006). There is also a chance that choosing of the midpoint is also a consequence of satisfying (Krosnick, 1999). Furthermore, Similarly, Matell, and Jocoby (1971) also found that there is no particular specification for validity and reliability using a different number of alternatives. Therefore, the use of 7 point scale is suitable. Surveys mostly employ a well-constructed or standardised questionnaire to collect data from the pertinent unit of analysis under study (Davis, 1996), usually an individual. For this research, self-administered questionnaires were used for data gathering from respondents (university leaders).

3.5 Questionnaire Design

According to Folz (1996), the characteristics of questionnaire design is clarity, attractiveness and simplicity. Logical and clear questions with appropriate response choices foster correct, consistent response (Kim, 2007). The sequence of questions should be logical so that the respondents should be able to observe immediately the connection between the questions asked and the mentioned objective of the survey (Casley & Kumar, 1988). Self-administered questionnaires need more concentration on preparation and monitoring for having a rational response rate (Fink & Kosecoff, 1985). In addition, a self-administered questionnaire is better than interviewer-administered survey because respondents may don't know about an interviewer's initiative (Fowler Jr, 1993).

3.5.1 Dependent Variable: Perceived Job Performance

Campbell (1990) defined performance as those behaviours or actions under the control of the person, that contribute to the institutional objectives, and that can be evaluated according to the individual's level of ability, a definition that is constant with the others. The acceptance of individual performance management in higher education institutions is studied at the position of the deans, deputy deans, heads of department, academic directors/ chairpersons who have the main responsibility for managing the performance of their academic units, and consequently the performance of department members and faculty. One of the most significant groups of academic managers is those charged with the stewardship of the basic academic units: departments and faculties (Meek *et al.*, 2000). Leadership is one of the major factors affecting university's performance (File & Shibeshi, 2011).

Perceived Job Performance scale with thirty items has been adopted from Fox, Burns, and Adams (2005) with Cronbach alpha coefficient of reliability 0.95. The scale is also used by Bakar and Mahmood (2014) in their study as a measure of university leaders' job performance.The measurement items for perceived job performance are shown in Table 3.3:

Table 3.3
Measurement Items of Perceived Job Performance

No.	Items
1	I am capable of adapting leadership style to fit varying situations
2	I am capable of recognising when a decision is required
3	I can act with proper swiftness when making decisions
4	I am able to assist departmental goal setting
5	I encourage faculty to achieve departmental objectives and goals
6	I am monetary responsible
7	I put an effort to get suitable alternatives involved in problem resolving
8	I am able to recognise when a group requires further guidance
9	I effectively interact with a group to guide them to fulfil a job
10	I understand needs, concerns and personal issues of others
11	I am capable of resolving conflict
12	I show sensitivity in dealing with individuals from different backgrounds
13	I effectively deal with individuals concerning emotional problems
14	I recognise what information necessary to be communicated to others
15	I can perform effectively under pressure
16	I can perform effectively during opposition
17	I can handle negative and positive feedback properly
18	I can make clear oral presentations of ideas or facts
19	I am able to express ideas clearly in writing
20	I interact nicely with students
21	I communicate effectively with other academic departments within the university

Table 3.3 (Continued)

No.	Items
22	I do my job effectively with department professionals
23	I communicate effectively with alumni
24	I demonstrate a clear view of the professional and academic norms of the department
25	I make easier, faculty scholarly activities
26	I facilitate faculty quality in teaching
27	I encourage achievement and development among students
28	I have an effective working relationship with other leaders in the university
29	I represent my department interests in communication within the university
30	I effectively communicate college and university decisions and orders to department

3.5.2 Independent Variables

3.5.2.1 Managerial Competency

In order to perform a job successfully, specific knowledge, skills, and behaviours are essential (Gomez-Mejia *et al.,* 2004). Competencies can thus be simply defined as certain characteristics of an individual, including skills, knowledge and behaviours, that enable performance (Dessler, 2005), or as the combination of knowledge, know-how, and behaviour structured according to the goal, the objective in a certain type of working environment (Segrestin, 2004). Competency theory is grounded on studying effective leaders, breaking down their skills, attitudes and behaviours into quantifiable aspects, and seeking ways of bringing them together in order to produce humans who show greater performance (Mitchelmore & Rowley, 2010).

Managerial competency with eleven items has been adapted from Noor and Dola, (2009) with Cronbach alpha coefficient of reliability 0.91. The measurement items for managerial competency are shown in Table 3.4:

Table 3.4
Measurement Items of Managerial Competency

No.	Items
1	I have the capability to plan, prioritise and execute according to schedule
2	I know the best use of skills and resources within the group or department
3	I have the capability to plan and prioritise work
4	I am capable of performing both short and long term planning and distributing resources effectively
5	I have the ability to behave firmly, honestly and backup my words with action
6	I have the capability to ensure work performance through effective discipline
7	I am capable of creating and capitalising on opportunities for competitive advantage
8	I possess very good computer expertise to carry out job function
9	I have the capability to anticipate and fulfil customer needs and trends
10	I have the capability to evaluate and use information for justification and solve problems
11	I have the capability to evaluate and interpret data into beneficial information by applying statistical tools

3.5.2.2 Self-Efficacy

Self-efficacy is a person's cognitive estimation of his or her abilities to mobilise the cognitive resources, motivation, and courses of action required to exercise control over events in their lives (Wood & Bandura, 1989). Bandura (1994) described self-efficacy as, persons' beliefs about their abilities to create designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs find out how people think, feel, behave and motivate themselves. Self-efficacy is the cognitive process by which a person evaluates his or her ability to perform a certain task (Bandura, 1997). The efficacious person should be normally motivated to allocate higher effort if he or she believes their efforts will result in greater performance (Srivastava, Pelton, & Strutton, 2001).

Self-efficacy with eight items has been adapted from Chen, Gully, and Eden (2001) with Cronbach alpha coefficient of reliability 0.92. The measurement items for self-efficacy are shown in Table 3.5:

Table 3.5
Measurement Items of Self-Efficacy

No.	Items
1	I am capable of accomplishing majority of the goals that I have assigned to myself
2	When facing complicated tasks, I am sure that I will succeed in them
3	Generally, I believe that I can achieve outcomes that are significant to me
4	I believe I can accomplish at most any aim to which I prepare my mind
5	I am capable to successfully overcome many challenges
6	I am certain that I can work effectively on many different tasks
7	As compared to other persons, I can perform majority tasks very nicely
8	Even when things are hard, I can work quite well

3.5.2.3 Learning Orientation

The research proposes that learning orientation is an inner state of mind that encourages a person to build his/her personal competence. Learning orientation as the person's internal driving force inducing the person to seek challenge, looking further to learn from the challenges and growth, to get new skills and knowledge which support to improve his/her creativity (VandeWalle *et al.,* 1999; Gong *et al.,* 2009; Amabile, 1988). In the same context, learning orientation is conceptualised as the effort to enhance organisational values that affect the tendency of the firm to create and use knowledge (Sinkula *et al.,* 1997). In terms of the relationship with performance, it is the active, higher-order learning that is recognised as a driver of better performance (Sadler-Smith *et al.,* 2001; Spicer, 2002). It is this learning that allows organisations to respond to change and perform effectively in turbulent and complex business environments (Klimecki & Lassleben, 1998).

Learning orientation with fifteen items has been adapted from Calantone *et al.*, (2002) with Cronbach alpha coefficient of reliability 0.90. The measurement items for learning orientation are shown in Table 3.6:

Table 3.6
Measurement Items of Learning Orientation

No.	Items
1	I basically accept that our university's capability to learn is the key to our competitive advantage
2	The basic values of our university include learning as a key to improvement
3	The perception throughout our university is that employee learning is an investment, not an expense
4	Learning in my university is perceived as a key commodity essential to assure organisational survival
5	There is a commonality of goal in my university
6	There is a total consensus on our organisational vision across all levels, functions and departments
7	All employees are devoted to the objectives of this organisation
8	Employees view themselves as partners in charting the direction of the organisation
9	We are not afraid to reflect critically on the shared assumptions we have made about our customers
10	Employees in this institution understand that the very way they see the marketplace must be constantly questioned
11	We constantly judge the quality of our activities and decisions over time
12	There is a good deal of organisational conversation that keeps alive the lessons learned from history
13	We always evaluate ineffective organisational activities and communicate the lessons learned widely
14	We have specific systems for sharing lessons learned in organisational activities from department to department (division to division, group to group)
15	We put little effort in sharing lessons and experiences

3.5.3 Mediating Variable: Entrepreneurial Leadership

Entrepreneurial leadership is the process of forming an entrepreneurial vision and inspiring a group to act out on the vision in high velocity and uncertain environments (Gupta *et al.,* 2004; Kuratko, 2007; Chen, 2007; Surie & Ashely, 2008)

Entrepreneurial leaders are the individuals who have the capability to form dynamic, competitive organisations where change and innovation are as common as employee, clients and stakeholder support (McGrath & MacMillan, 2000). They are not only proficient in bringing about dramatic innovations and changes to the organisation by creating a shared vision but also in directing the procedure of organisational innovation by exploring new opportunities and providing an atmosphere that supports and encourages creating and implementing new ideas to realise the vision (Burns, 2005; Gupta *et al.,* 2004). Entrepreneurial leaders are proficient in applying their innovativeness, influencing people to be innovative, providing a supportive and encouraging atmosphere for them to implement their new ideas and including all of the staff in the process of organisational performance development (Chen, 2007; Gupta *et al.,* 2004; Leitch *et al.,* 2013; Kempster & Cope, 2010).

Entrepreneurial leadership with sixteen items has been adapted from Renko, El Tarabishy, Carsrud, and Brännback (2015) with Cronbach alpha coefficient of reliability 0.89. The measurement items for entrepreneurial leadership are shown in Table 3.7:

Table 3.7
Measurement Items of Entrepreneurial Leadership

No.	Items
1	I often come up with profoundly advanced ideas related to the services my university is offering
2	I often come up with ideas of totally new services that our university could offer
3	I would like my subordinates to challenge the current approach within which we carry out business activities
4	I challenge and push my subordinates to behave in a more innovative way
5	I am creative

Table 3.7 (Continued)

No.	Items
6	I create processes that enable subordinates to ignore the unnecessary rules, regulations and bureaucratic senselessness of the organisation
7	I build a culture in which staff is rewarded for attempting different and new things even if they don't work out in the end
8	I am passionate about my work
9	I am versatile
10	I show patience in complex situations
11	I like to do more with less to prove my skills
12	I usually look for less expensive ways to run the department/university while creating superior value for the beneficiaries
13	I would preferably like to hire key players because of personality, not only due to outstanding qualifications or resumes
14	I understand the importance of acquiring funds and other resources outside the normal channels
15	I am visionary
16	I am a risk taker

3.5.4 Moderating Variable: Dynamic Environment

Environmental dynamism refers to the extent of unpredictable change in firm's environment. Although the literature uses a variety of terms such as uncertainty, volatility, and high-velocity, they all capture to some extent the underlying theme of unpredictable change. The moderating role played by environmental dynamism is well documented in the literature by cases studying a variety of associations between organisational variables and performance (e.g. Gilley & Rasheed, 2000). According to Kaufman (1991), the rapidly varying environments not only call for managers' understanding and adaptation but also such environments require flexible personnel who strive to be compatible with the environment through teamwork. The literature has identified the environment of entrepreneurs as a key factor affecting their entrepreneurial behaviour (Ucbasaran *et al.*, 2000).

Dynamic environment with five items has been adapted from Zahra, Neubaum, and Larraneta (2007) with Cronbach alpha coefficient of reliability 0.72. The measurement items for dynamic environment are shown in Table 3.8:

Table 3.8
Measurement Items of Dynamic Environment

No.	**Items**
1	Competitor universities continually revise their strategies according to the market needs / trends
2	As compared to my university, other higher education institutions are spending more on R&D to a source of additional revenue as to be self-sufficient
3	In contrast to my university, other competitor universities are spending more on advertisement
4	Variations in university's customer preferences in the market are frequent
5	Variations in laws and regulations from higher education commission / bodies like accreditations, quality assurance, funding, infrastructure etc. are frequent

The questionnaire was comprised of seven sections that supposed to depict the variables associated with the respondents' perceptions of job performance, independent variables (managerial competency, self-efficacy and learning orientation), mediating variable (entrepreneurial leadership) and moderating variable (dynamic environment). Table 3.9 shows the review of the survey items, section and source.

Table 3.9
Variables, Sections and Source

No.	Variable	Section	Source
1	Job Performance	Section A: 30 items	(Fox, Burns, & Adams, 2005)
2	Managerial Competency	Section B: 11 items	(Noor & Dola, 2009)
3	Self-Efficacy	Section C: 08 items	(Chen, Gully, & Eden, 2001)
4	Learning Orientation	Section D: 15 items	(Calantone, Cavusgil, & Zhao, 2002)
5	Entrepreneurial Leadership	Section E: 16 items	(Renko, El Tarabishy, Carsrud, & Brännback, 2015)
6	Dynamic Environment	Section F: 05 items	(Zahra, Neubaum, & Larraneta, 2007)
7	General Information	Section G: 08 items	

3.6 Validity and Reliability

This section explains and discusses the validity and reliability in general and particularly of the measures used in this research study.

3.6.1 Validity

The validity of a measure is the level to which it measures what it intends to measure (Bordens & Abbot, 2011). It is also expressed as the extent to which the measure or set of measures exactly illustrate the concept of study – that is the degree to which it’s free from any systematic or non-random error. Validity is concerned with how properly the concept is defined by the measure(s), whereas reliability relates to the consistency of the measure(s) (Hair, Black, Babin, & Anderson, 2010). For this research, validity test was conducted to ensure that the instrument measure, what it is intended to measure (Bordens & Abbot, 2011). Validity tests could be in internal or external forms (Campbell & Stanley, 1966; Zikmund, 2003). Internal validity shows whether the independent variable was the sole reason for the change in the dependent variable. External validity, on the other hand, shows the extent to which the outcomes of the experiment applicable in the real world (Zikmund, 2003), in other words, external validity is the quality of being able to generalise beyond the data of the experiment to other subjects or other groups in the population under investigation. Two most commonly accepted and used validity tests in business research are face or content validity, and construct validity (Bordens & Abbot, 2011).

Content validity or face validity deals with the subjective agreement among professionals that a scale logically reflects exactly what it is contended to measure and the content of the scale appears to be adequate (Zikmund, 2003). It explains how well an instrument appears to measure what it was intended to measure (Bordens & Abbot, 2011). According to Hair *et al.* (2007) content or face validity subjectively evaluates the association between the individual items and the concept through ratings by expert judges, pre-tested with multiple subpopulations or other means (Churchill, 1979; Robinson, Shaver, & Wrightsman, 1991b).

Face validity is a weak form of validity in a sense that an instrument may lack face validity and yet, by other criteria, measure what it proposed to measure (Bordens & Abbot, 2011). Nevertheless, having good face validity might be important in a way that it gives certain assurance to the researchers and the study as a whole. If the respondents did not see the instruments as valid, they might build a negative attitude about its effectiveness (Cohen & Swerdlik, 2010). Another validity test is the construct validity. Construct validity has to do with how sufficiently the content of a test, samples the behaviours, skills or knowledge, that test is intended to measure (Bordens & Abbot, 2011). Construct validity established during the statistical analysis of the data. Construct validity involved two aspects of assessments, namely theoretical and statistical (Raemah, 2010).

3.6.2 Reliability

The reliability of a measure concerns its capacity to create similar results when repeated measurements were made under identical conditions (Bordens & Abbot, 2011). Reliability is also considered as the scale to which the observed variable measures the 'true' value and is 'error free' (Hair *et al.*, 2010). To determine the reliability of the measurements used, internal consistency check was conducted which applied to the consistency amongst the variables in a summated scale (Hair *et al.*, 2010). The reason for applying internal consistency is that the individual terms or indicators of the scale should all be measuring the same construct and hence be extremely intercorrelated (Churchill, 1979; Nunnally, 1978).

The two most common diagnostic measures of reliability were to look at the item-to-total correlation (the correlation of the item to the summated scale score) and the inter-item correlation (the correlation among items) (Hair *et al.*, 2010). According to Robinson, Shaver, and Wrightsman (1991a), rules of thumb recommended that the item-to-total correlations must exceed 0.50 and that the inter-item correlations must exceed 0.30.

This research adopted the second type of diagnostics measure, which is the reliability coefficient that evaluates the consistency of the entire scale, with the most commonly used Cronbach's alpha (Peter, 1979; Nunnally, 1978; Cronbach, 1951). It is suitable for instruments that use a likert scale and dichotomous scales. An alpha value of 0.6 is regarded as reliable. The closer the value to 1 means, that the instrument is more reliable and shares a high internal consistency. The cronbach alpha of the constructs used in this research ranged from 0.7 to 0.9 that indicates good reliability.

3.7 Pre and Pilot Tests

The pre-test was conducted to verify if respondents have any complexity in understanding the questionnaire, or whether there exists any uncertainty or bias in the questions. Therefore, numerous parties were contacted for a discussion session in order to make clear the contents of the questionnaire; they were professors of the academic departments and institutes. These experts were asked to critique and give suggestions in order to improve the questionnaire. During the session, they were encouraged to give their input on the design of the questions, wording of the questionnaire, and any improvement that they might think is appropriate. The objective was to improve the content and the face validity of the questionnaire.

As a developed questionnaire is subject to validity and reliability test, a pilot test was carried out. According to Neuman (1997), a pilot study is significant because it improves the questionnaire. It is used to identify weaknesses in instrumentation and design, and to give proxy data for the selection of a probability sample (Cooper & Schindler, 2001). According to Emory and Cooper (1991), respondents of 25 to 100 are appropriate for a pilot study. The outcomes of the pilot study identify misunderstandings, useless items and ambiguities (Wiersma, 1993). So, 43 sets of questionnaires were distributed randomly to a few respondents, however only 30 responded. As the number was small and the sample limited, no further attempt or any follow-up action was done on the non-responded questionnaires. Table 3.10 shows the reliability of the constructs.

Table: 3.10
Reliability of the Constructs

No.	Construct	Cron. Alpha	Mean	Sd. Dev.
1	Job Performance	0.954	177.035	16.402
2	Managerial Competency	0.910	63.633	6.376
3	Self-Efficacy	0.920	45.733	5.644
4	Learning Orientation	0.907	81.414	11.150
5	Entrepreneurial Leadership	0.896	90.107	10.159
6	Dynamic Environment	0.729	27.667	3.736

3.8 Data Collection

The respondents from 25 public sector universities of Punjab, Pakistan were randomly selected from the lists obtained from the respective universities' websites. A total of 590 questionnaires were distributed. The questionnaire package consisted of a one-page cover letter and the questionnaire itself. The cover letter showed the purpose of the research study, anonymity and confidentiality of the questionnaire's respondent, and consent by the Review Board of Universiti Utara Malaysia for the safety of human subjects to enhance response rate (O'Sullivan & Rassel, 1995).

3.9 Data Analysis

Upon completion of data collection, combinations of both inferential and descriptive statistics were used as techniques of data analysis. The PLS-SEM approach was employed in the analysis of the collected data for this research. Particularly, two major PLS-SEM software applications including PLS-Graph (Chin, 2010) and Smart PLS (Ringle, Wende, & Will, 2005) were employed in the analysis and presentation of outcomes.

3.9.1 Descriptive Analysis

Descriptive analysis was used to demonstrate the characteristics of the samples such as the demographic profile of the respondents (gender, age, education level, etc.). Descriptive analysis is often used to explain phenomena of interest (Sekaran & Bougie, 2010). In those investigations, descriptive information is analysed statistically in terms of how frequent certain phenomenon of interest arises (i.e., frequency), the average score or central tendency (i.e., mean) and the extent of variability (i.e., standard deviation). In this research, descriptive analysis was employed primarily to identify the characteristics of the sample and all the constructs used in this research. Results from the analyses performed were utilised to rationalise and explain the research questions of the study.

3.9.2 Partial Least Squares (PLS) Technique

PLS-SEM method is called a second generation structural equation modelling (Wold, 1982). The comparatively new technique works well with structural equation models that include a series of cause-and-effect relationships and latent variables (Gustafsson & Johnson, 2004). The PLS-SEM approach is a flexible and good tool for statistical model building in addition to forecasting (Ringle *et al.*, 2005). Particularly, the PLS method was used for this research due to the following reasons. Firstly, structural equation models have been illustrated to be advanced models that perform estimations better than regressions for measuring mediation (Preacher & Hayes, 2004; Mattanah, Hancock, & Brand, 2004; Iacobucci, Saldanha, & Deng, 2007; Brown, 1997). It has been documented that PLS-SEM accounts for measurement error and gives a more precise estimation of mediating affects (Chin, 1998).

Secondly, PLS path modelling becomes more suitable for actual world applications and more beneficial to employ when models are difficult (Hulland, 1999; Fornell & Bookstein, 1982). The soft modelling assumptions of PLS technique (i.e., ability to flexibly develop and validate complex models) gives it the benefit of estimating big complex models (Akter, D'Ambra, & Ray, 2011). That is the main reason this study used PLS-SEM method for better prediction. Thirdly, in most social science researches, data tend to have normality issue (Osborne, 2010) and PLS path modelling does not necessarily need data to be normal (Chin, 1998). In other words, PLS treats non-normal data comparatively well. PLS path modelling technique was selected to avoid data normality problem for this study. Fourthly, PLS-SEM proposes more valid and meaningful results, while other techniques of analysis such as software package used for statistical analysis (SPSS) often results in less clear outcomes and involve several separate analysis (Bollen, 1989). Additionally, Tabachnick and Fidel (2007) stated that SEM is one of the most powerful statistical tools in behavioural and social sciences that have the capability of testing various relationships simultaneously.

Regarding this research, Smart PLS path modelling was used to create measurement and structural models. Measurement model was used to clarifying or evaluating constructs' validity and reliability of the present study. The structural model was also used to conduct bivariate correlation analyses and simultaneous regression analyses to build relationship effects and correlations among constructs under investigation. Additionally, by using the PLS mechanism of the algorithm and bootstrapping, mediating and moderating affects were also analysed.

3.10 Summary

This chapter has discussed the research methodology for this study. It has outlined the sampling design, which is concerned with methods and strategy of data collection and the rationale for the research design. Specifically, this chapter has described the population of the study, sample size and sampling technique, instruments used for this study, questionnaire design, validity and reliability, pre and the pilot study conducted and their results, data collection and data analysis techniques.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter describes analysis undertaken and presents the empirical findings and results to test the research hypotheses in accordance with the proposed method of data analysis in Chapter 3. Data analysis and path modelling was done by using one of the structural equation modellings (SEM) methods – partial least squares (PLS-SEM), SmartPLS 2.0 (M3) software. The organisation of this chapter is listed on several core sections, the profile of the respondents presented is based on their demographic information, descriptive analyses, preliminary analyses, and this is followed by the goodness of measure part, in which the measurement model validity is established. Subsequently, this is followed by validation of the structural model in which the direct, mediation and moderation hypotheses were tested to confirm the final outcome of this research. At the end of the chapter, a table summary of the results of hypotheses findings is presented. Finally, a short summary of the chapter is provided.

4.2 Response Rate

A total of 271 respondents filled and returned the distributed questionnaires. However, as depicted in Table 4.1, a total of 242 questionnaires were finally retained for analysis from a total 271 that were collected back from the respondents. Specifically, after the data collection, a total of 29 responses were excluded from the analysis because some questionnaires were incomplete and several missing data per case was experienced.

Table 4.1
Questionnaire Distribution and Decision

Item	Frequency	Percentage
Distributed Questionnaires	590	100
Returned Questionnaires	271	46
Rejected Questionnaires	29	5
Retained Questionnaires	242	41

Source: Researcher

The data collection took around four and a half months (i.e. from September 2014 to Mid January 2015). In the last month of data collection, after Bomber's attack on Peshawar School, all the academic institutions of Pakistan including universities were closed due to further threats. This was the major reason for a low response. A total of 242 respondents constitutes the sample for this study which gave an effective response rate of 41 percent. This rate is considered sufficient considering the Sekaran's (2003) argument that response rate of 30 percent is acceptable for surveys. Similarly, the current response rate is considered adequate going by the suggestion that a sample size should between 5 and 10 times the number of study variables (Bartlett, Kotrlik, & Higgins, 2001; Hair *et al.*, 2010). Given the number of variables in this study is 6; a sample of 60 is adequate for analysis. More importantly, the tool of analysis for the current study, which is PLS, requires a minimum of only 30 responses (Chin, 1998), thus a total of 242 response rate for this study was greatly adequate for analysis.

The collected data was keyed into Microsoft excel 2007 and SPSS version 19 for analysis and later imported into SmartPLS 2.0 M3 (Ringle *et al.*, 2005) for further analysis. SPSS was used for the test of non-response bias, preliminary data screening, correlation analysis and multicollinearity tests. Validity and reliability, measurement model and structural model analysis and test of mediation and moderation were undertaken in SmartPLS 2.0 M3 (Ringle *et al.*, 2005).

4.3 Test for Non-Response Bias

Non-response bias has been defined as the mistake a researcher expects to make while estimating a sample characteristic because some types of survey respondents are under-represented due to non-response (Berg, 2002). It is well explained in the literature that there is no minimum response rate below which a survey estimate is necessarily biassed and conversely, no response rate above which it is never biassed (Singer, 2006). However, no matter small the non-response, there is a possible bias which must be investigated (Pearl & Fairley, 1985; Sheikh, 1981), thus there was a need for conducting the non-response bias analysis for this study. As indicated in Table 4.2, respondents were divided into two independent samples based on their response to survey questionnaires regarding six main survey variables (managerial competency, self-efficacy, learning orientation, entrepreneurial leadership, dynamic environment and job performance). One of the standard ways to test non-response bias which is also used for this study is to compare the responses of those who responded to the questionnaires early before December 2014 and those who responded to the questionnaires in January 2015. Therefore, those who responded to questionnaires in January 2015 are, in fact, a sample of non-respondents to the first distributed questionnaires and are assumed that they are representative of the non-respondents group. Research has demonstrated that late responders are often similar to non-respondents (Oppenheim, 1966; Miller & Smith, 1983). However, it was experienced that most of the questionnaires that were retrieved late were those from the professors and senior lecturers who were always working on tight schedules and some additional administrative responsibilities. The confirmation of the explanation above could be deduced from Table 4.2.

Table 4.2
Results of Independent-Samples T-test for Non-Response Bias

Variables	**Group**	**N**	**Mean**	**SD**	**Levene's Test for Equality of Variances**	
					F	**Sig.**
Managerial Competency	Early Response	176	5.509	0.712	0.368	0.545
	Late Response	66	5.708	0.680		
Job Performance	Early Response	176	5.487	0.689	0.031	0.861
	Late Response	66	5.682	0.652		
Self-Efficacy	Early Response	176	5.472	0.836	0.072	0.789
	Late Response	66	5.587	0.860		
Learning Orientation	Early Response	176	5.268	0.784	0.020	0.889
	Late Response	66	5.495	0.792		
Entrepreneurial Leadership	Early Response	176	5.304	0.717	0.266	0.606
	Late Response	66	5.489	0.708		
Dynamic Environment	Early Response	176	5.194	0.877	0.066	0.798
	Late Response	66	5.349	0.877		

Source: Researcher

As presented in Table 4.2, the results of independent-samples t-test revealed that the equal variance significance values for each of the six study variables were greater than the 0.05 significance level of Levene's test for equality of variances as suggested by Pallant (2010) and Field (2009). Hence, this suggests that the assumption of equal the variances between early and late respondents has not been violated. As such, it can be concluded that non-response bias was not a major concern in the present study. Therefore, all the two hundred and forty-two (242) responses were utilised in the data analysis.

4.4 Data Coding

After it was confirmed that there is no problem of non-response bias, the researcher embarked on data coding. From the opinion of Churchill (1999), categorisation of data coding is mainly two. The first category assumes that the items should emerge to conform the constructs in the study i.e. every construct should have its own different section that asks questions about it and secondly, the code number should be assigned to each construct for easy identification and hitch free analysis. This study followed the argument provided by Churchill (1999) above and arranged the questions in conformity with the constructs. The variables used in this study were coded as shown in Table 4.3.

Table 4.3
Variable Coding

Variable		**Code**
Job Performance	DV	PF
Managerial Competency	IV	MC
Self-Efficacy	IV	SE
Learning Orientation	IV	LO
Entrepreneurial Leadership	Mediator	EL
Dynamic Environment	Moderator	DE

Note: All the six variables used in this research were coded as shown in this table

4.5 Preliminary Analysis

This section provides a detail discussion on the preliminary tests using SPSS before the evaluation of measurement and structural models. The preliminary analyses include data screening, missing data and outlier detection and treatment that followed the further fundamental statistical assumptions i.e. linearity and normality.

4.5.1 Data Screening

The importance of data screening in any form of data analysis especially quantitative research cannot be underpinned because it provides a very solid ground for the attainment of a significant result. The quality of the output and analysis in spite of its enormous burden as pointed out by Hair *et al.* (2010) are dependent upon the quality of preliminary data screening. Unnecessary to say here, that ignoring the potentiality of data screening would always result to the poor quality of output and analysis. Although Tabachnick and Fidell (2007) argued that data quality could be ensured by mere proofreading, this approach may be very tasking when dealing with a large set of data. This study began with the detection of missing data.

4.5.2 Missing Values Analysis

In this study, 13 values were found missing. Specifically, job performance and managerial competency had 5 and 2 missing values each respectively. Likewise, learning orientation and entrepreneurial leadership had 3 missing values each. On the other hand, no missing value was found in the self-efficacy and dynamic environment. Although there is no acceptable percentage of missing values in a dataset for making a valid statistical inference, researchers have generally agreed that a missing rate of 5 percent or less is non-significant (Schafer, 1999; Tabachnick & Fidell, 2007). Furthermore, researchers have suggested that mean substitution is the easiest way of replacing missing values if the total percentage of missing data is 5 percent or less (Little & Rubin, 1987; Raymond, 1986; Tabachnick & Fidell, 2007). Hence, in this study, randomly missing values were replaced by using mean substitution (Tabachnick & Fidell, 2007). Table 4.4 shows the total and percentage of randomly missing values in the present study (see Appendix III for SPSS output).

Table 4.4
Missing Values

Variable	**Number of Missing Values**
Job Performance	5
Managerial Competency	2
Self-Efficacy	0
Learning Orientation	3
Entrepreneurial Leadership	3
Dynamic Environment	0
Total	**13**

4.5.3 Outlier Detection and Treatment

After replacing the missing values, detecting and treating of outliers were also undertaken in this study. As discussed in a series of statistical literature, outliers symbolise observations that depict an unusual permutation of values of two or more variables. This is because outliers have values that have extreme similarity to one another and in a similar condition (Bryne, 2010; Hampel, Ronchetti, Rousseeuw, & Stahel, 1986; Hu, Smeryers-Verbeke, Massart, 1990).

Outliers are defined by Barnett and Lewis (1994) as observations or subsets of observations which come out to be inconsistent with the rest of the data. In a regression-based analysis, the presence of outliers in the data set can seriously distort the estimates of regression coefficients and lead to unreliable results (Verardi & Croux, 2009). It is indeed very normal that in statistical analysis data at times behave abnormal and present unusual values due to entry errors. Several outlier detection techniques adopt a measure of Mahalanobis' distance to calculate how isolated an observation is from the centre of the data. In many studies it has been established that there are many ways of using measure of distance in detecting outliers, some use a modification of the Akaike's information criterion (Ueda, 2009), others prefer robust scale and location estimators (Vendhan & Suresh, 2011) and some uses order statistics such as the quartile or median (Liu *et al.,* 2004). The reason for using Mahalanobis' distance as Gerrit, Martin, Gary, and Bernd (2010) and Chambers (1986) pointed out, is because it has the capability of detecting observations that are positioned away from the centre of the data, giving less influence to variables that have highly interrelated variables. But as far as this research is concerned outliers were not deleted. The outliers cannot distort the data because SmartPLS 2.0 M3 (Ringle *et al.,* 2005) is capable of producing sensible results even with outliers having erratic values (Hair, Christian, & Marko, 2011). The following section provides a discussion of fundamental statistical assumptions.

4.6 Fundamental Statistical Assumptions

As supported by Hair *et al.* (2010), and Hair, Black, Babin, Andersen, and Tatham, (2006), it is very vital to refer to some basic assumptions i.e. multicollinearity and normality regarding the variables to be able to confirm the results and in order to effectively deal with the incidence of errors such as Type I or Type II. For easy comprehension, these fundamental assumptions are highlighted in the following paragraphs.

4.6.1 Multicollinearity Test

For a research to be able to check and deal with the occurrence of Type I and Type II errors, the kind of association between dependent and independent variables in a research should be linear. Experts such as Nunnally and Bernstein (1994) suggested that to be able to reduce non-linearity, researchers may use items that have already been used in an established theory or in a previous study where both reliability and validity have been confirmed. As far as this study is concerned, however, the fear of non-linearity has been relieved because all the items used for dependent and independent variables were adapted from previous studies as discussed in detail in chapter three. Nonetheless, an attempt was made to determine if there is multicollinearity as shown in Table 4.5.

Table 4.5
Results of Multicollinearity Test

Latent Constructs	**Collinearity Statistics**		**Condition Index**
	Tolerance	**VIF**	
Managerial Competency	0.398	2.515	18.515
Self-Efficacy	0.537	1.863	19.272
Learning Orientation	0.545	1.834	29.239

Source: Researcher

The Table 4.5 above indicated that managerial competency (MC) has 0.398 as its value of tolerance and 2.515 as VIF value; self-efficacy (SE) has 0.537 value of tolerance and 1.863 value of VIF and learning orientation (LO) display 0.545 tolerance and 1.834 VIF. Going by what was obtained as shown in the Table 4.5 above, it could be said that all the variables have their values of tolerance greater than 0.2, VIF value less than 5 and condition indices were below 30, as suggested by Hair *et al.* (2011), with that it could be said that there is no multicollinearity.

4.6.2 Data Normality Test

The collected data was analysed and data normality was tested. The results from the descriptive statistic (Appendix V) and normality test showed that the data for this study is not normal (Appendix IV). Normality means that the distribution of the data is normally distributed with the mean of 0, standard deviation of 1 and a symmetric bell-shaped curve. The non-normal distribution could be due to the small number of samples. The central limit theorem states that if a large enough sample is taken, the mean will follow an approximately normal distribution. Normality is an issue because it is one of the basic assumptions required in order to carry out structural equation modelling (SEM) analysis (Byrne, 2010). However, this problem is much less severe when using PLS-SEM (Hair, Hult, Ringle, & Sarstedt, 2013). PLS-SEM employs the bootstrapping method in determining the significant relationship within a model for non-normal data. This is one of the major advantages of using PLS-SEM. Unlike other SEM techniques, PLS-SEM does not require any normality assumption and handles non-normal data rather well (Chin, 1998; Bontis, Booker, & Serenko, 2007). Despite such allowance, Hair *et al.* (2013) suggested a close examination of the data to make sure substantial deviation could be recognised and removed before running PLS-SEM to ensure that the quality of the data does not compromise the outcome of the study. Absolute skewness value of more than 1 means that the data is extremely non-normal and must be removed before PLS-SEM is applied (Hair *et al.*, 2013). Fortunately, upon scrutiny of this data set (Appendix IV), no indication of highly non-normal data was found, thus prompting the researcher to proceed with the subsequent analysis using PLS-SEM without removing any data.

4.7 Demographic Profile of the Respondents

This section describes the demographic profile of the respondents in the sample. The demographic characteristics examined in this study include gender, age, qualification, academic position, designation, academic experience, experience as a university leader and number of employees they are leading (see Table 4.6).

Table 4.6
Demographic Characteristics of the Respondents

	Frequency	Percentage
Gender		
Male	122	50.4
Female	120	49.6
Age (in years)		
25 - 29	33	13.6
30 - 35	76	31.4
36 - 40	65	26.9
41 - 45	47	19.4
46 - 50	14	5.8
Above 50	7	2.9
Qualification		
Professional	0	0
Masters	23	9.5
MS / M. Phil	62	25.6
PhD	139	57.4
Postdoc	18	7.4

Table 4.6 (Continued)

	Frequency	Percentage
Academic Position		
Professor	43	17.8
Associate Professor	83	34.3
Assistant Professor	95	39.3
Lecturer	21	8.7
Designation		
Deputy Vice Chancellor	1	0.4
Dean	14	5.8
Deputy Dean	24	9.9
Director / Chairman	30	12.4
Head of Department	173	71.5
Academic Experience (in years)		
2 – less than 5	53	21.9
5 – less than 10	76	31.4
10 – less than 15	65	26.9
15 – less than 20	33	13.6
20 and more	15	6.2
Experience as a university leader (in years)		
2 – less than 5	119	49.2
5 – less than 10	79	32.6
10 – less than 15	31	12.8
15 – less than 20	7	2.9
20 and more	6	2.5
No. of employees you are leading		
Less than 10	102	42.1
10 – less than 20	58	24
20 – less than 30	27	11.2
30 – less than 40	40	16.5
40 – less than 50	8	3.3
50 and more	7	2.9

Source: Researcher

As shown in Table 4.6, there is equality in the respondents with regards to gender in the sample that is 122 (50.4%) were males, while the remaining 120 representing 49.6 percent were females. Regarding the age group, 31.4 percent of the participants were in the age group of 30-35 years. This is followed by those in the age group of

36-40 years with 65 respondents, which accounted for 26.9 percent of the sample. In the age group of 41-45 years, there were 47 respondents, representing 19.4 percent of the sample. Next is the age group of 25-29 with 33 respondents, representing 13.6 percent followed by the age group of 46-50 with only 14 respondents demonstrating 5.8 percent of the sample. The smallest age group was above 50, which accounted for 2.9 percent or 7 respondents.

In terms of qualification, Table 4.6 shows that 57.4 percent of the respondents are Ph.D. holders, followed by 25.6 percent of the respondents having MS/M.Phil., 9.5 percent of the respondents having Masters Degree and remaining 7.4 percent of the respondents having Post-doctorate. No respondent was with only professional qualification. Additionally, in terms of academic position, Table 4.6 shows that 39.3 percent of the participants were in the position of Assistant Professor, followed by Associate Professors (34.3%); Professors (17.8%); and Lecturers (8.7%). In terms of Designation, the majority of the participants were working as head of the department representing 71.5 percent, then Directors/Chairmen representing 12.4 percent followed by Deputy Deans (9.9%); Deans (5.8%) and Deputy Vice-Chancellor (0.4%).

In terms of Academic Experience, 31.4 percent of the participants having experience from 5 to less than 10 years, 26.9 percent having 10 to less than 15 years experience, followed by 21.9 percent having 2 to less than 5 years experience; 13.6 percent having 15 to less than 20 years experience and 6.2 percent having 20 and more years experience. Table 4.6 also shows the experience of the participants as a university leader. 49.2 percent of respondents experienced as a university leader from 2 to less than 5 years. 32.6 percent having experience of 5 to less than 10 years, followed by 12.8 percent having 10 to less than 20 years experience. Respondents having 15 to less than 20 and 20 and more years experience represents 2.9 percent and 2.5 percent respectively. Regarding number of employees they are leading, majority of them (42.1%) are having less than 10 employees, 24 percent of respondents are having 10 to less than 20 employees, 16.5 percent of respondents are having 30 to less than 40 employees, followed by 11.2 percent participants who are leading 20 to less than 40 employees. Only 3.3 percent and 2.9 percent respondents were having 40 to less than 50 and 50 and more employees, respectively.

4.8 Descriptive Statistics of the Study Variables

The general statistical description of the constructs used in this study is examined by using the descriptive analysis. Statistical values of means, standard deviation, minimum, and maximum were calculated for the dependent, independent, mediating and moderating constructs. The results of these statistical values are displayed in Table 4.7. All the constructs have been measured on a seven-point scale.

Table 4.7
Descriptive Statistics for Study Variables

Construct	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Dev**
Job Performance	242	1	7	5.540	0.684
Managerial Competency	242	1	7	5.563	0.707
Self-Efficacy	242	1	7	5.504	0.842
Learning Orientation	242	1	7	5.330	0.791
Entrepreneurial Leadership	242	1	7	5.354	0.718
Dynamic Environment	242	1	7	5.236	0.878

Source: Researcher

Table 4.7 shows that the overall mean for the study variables ranged between 5.236 and 5.563. The descriptive statistics revealed that the mean value for managerial competency is 5.563 which is the highest mean in all the variables. The descriptive analysis also revealed that dynamic environment has the lowest mean value of 5.236. The mean score of job performance 5.540 and self-efficacy 5.504 were the second and third highest respectively. Learning orientation mean of 5.330 is relatively lower to the mean score of entrepreneurial leadership which is 5.354. Having presented the descriptive analysis of the respondents and the respective constructs, next section presents results of PLS confirmatory factor analysis.

4.9 Results of Confirmatory Factor Analysis (CFA)

This section presents results of confirmatory factor analysis of this study using the PLS principal component analysis (PCA). All the constructs' measurements for the current study were adopted from previous authors; hence, there is no need for exploratory data analysis (Hair *et al.,* 2010). PLS CFA using the PLS-inbuilt principal component analysis is used to determine the structure of the constructs. After the confirmatory factor analysis by using PLS principal component analysis, out of total 85 items from the 6 constructs of this study, a total of 37 items were retained for further analysis as indicated in Table 4.8. Items were deleted for low cross loading. Removing items with low loading increased the total variance explained. The composition of the retained items of constructs has been explained individually in the following section for better understanding.

The main variable of this study was job performance. This construct was originally measured by 30 items. After the PLS PCA 8 items PF1, PF2, PF14, PF17, PF18, PF19, PF20 and PF22 were retained. Firstly, managerial competency, previously it was represented by 11 items but after PLS PCA 6 items including MC1, MC2, MC3, MC4, MC5 and MC10 were retained for this study.

Table 4.8
Constructs Indicators

Indicator No.	Indicator	Construct
PF1	I am capable of adapting leadership style to fit varying situations	Job Performance (PF)
PF2	I am capable of recognising when a decision is required	
PF14	I recognise what information necessary to be communicated to others	
PF17	I can handle negative and positive feedback properly	
PF18	I can make clear oral presentations of ideas or facts	
PF19	I am able to express ideas clearly in writing	
PF20	I interact nicely with students	
PF22	I do my job effectively with department professionals	
MC1	I have the capability to plan, prioritise and execute according to schedule	Managerial Competency (MC)
MC2	I know the best use of skills and resources within the group or department	
MC3	I have the capability to plan and prioritise work	
MC4	I am capable of performing both short and long term planning and distributing resources effectively	
MC5	I have the ability to behave firmly, honestly and backup my words with action	
MC10	I have the capability to evaluate and use information for justification and solve problems	
SE1	I am capable of accomplishing majority of the goals that I have assigned to myself	Self-Efficacy (SE)
SE2	When facing complicated tasks, I am sure that I will succeed in them	
SE3	Generally, I believe that I can achieve outcomes that are significant to me	
SE4	I believe I can accomplish at most any aim to which I prepare my mind	
SE5	I am capable to successfully overcome many challenges	
SE7	As compared to other persons, I can perform majority tasks very nicely	

Table 4.8 (Continued)

Indicator No.	Indicator	Construct
LO1	I basically accept that our university's capability to learn is the key to our competitive advantage	Learning Orientation (LO)
LO2	The basic values of our university include learning as a key to improvement	
LO3	The perception throughout our university is that employee learning is an investment, not an expense	
LO4	Learning in my university is perceived as a key commodity essential to assure organisational survival	
LO6	There is a total consensus on our organisational vision across all levels, functions and departments	
LO7	All employees are devoted to the objectives of this organisation	
LO8	Employees view themselves as partners in charting the direction of the organisation	
LO11	We constantly judge the quality of our activities and decisions over time	
EL1	I often come up with profoundly advanced ideas related to the services my university is offering	Entrepreneurial Leadership (EL)
EL2	I often come up with ideas of totally new services that our university could offer	
EL3	I would like my subordinates to challenge the current approach within which we carry out business activities	
EL4	I challenge and push my subordinates to behave in a more innovative way	
EL8	I am passionate about my work	
DE1	Competitor universities continually revise their strategies according to the market needs / trends	Dynamic Environment (DE)
DE3	In contrast to my university, other competitor universities are spending more on advertisement	
DE4	Variations in university's customer preferences in the market are frequent	
DE5	Variations in laws and regulations from higher education commission / bodies like accreditations, quality assurance, funding, infrastructure etc. are frequent	

Source: Researcher

Secondly, self-efficacy originally had 8 items but after deleting 2 items this construct now dominated by 6 items including SE1, SE2, SE3, SE4, SE5 and SE7. Thirdly, learning orientation construct was actually measured by 15 items but after deleting 7 items now this construct reflecting following items LO1, LO2, LO3, LO4, LO6, LO7, LO8 and LO11. Next are mediator and moderator, for a mediator, entrepreneurial leadership was represented by 16 items but after deleting 11 items, 5 items including EL1, EL2, EL3, EL4 and EL8 were retained for this study. For a moderator, the dynamic environment was represented by 5 items and after deleting 1 item, 4 items including DE1, DE3, DE4 and DE5 were retained for this study.

4.10 Models Evaluations

This segment treats both the measurement model and the structural model. In the following section, an evaluation of the measurement model is discussed in detail.

4.10.1 Measurement Model

In this section, content validity, convergent validity and discriminant validity will be discussed under the head of Construct's validity.

4.10.1.1 Construct Validity

Construct validity assesses the extent results obtained from the use of a measure fit the theories around which the test is designed (Sekaran & Bougie, 2010). In other words, it is concerned with answering the question: does the instrument tap the actual concept as theorised? To achieve the validity test, the measurement scales were subjected to three types of validity tests that are: content validity, convergent validity and discriminant validity (Tore, 2005).

Content validity assesses the level to which the indicators or scale items symbolises the area of the concepts under investigation. Three specialists from Universiti Utara Malaysia (UUM) including a Professor, an Associate Professor and a senior lecturer evaluated the instrument for this research and have found it to be representative of the variables under investigation. Usually, the picking of the measurement items relies on commonly accepted recommendations and procedures designed to achieve content validity (Straub, 1989; Cronbach, 1951). It is thus correct to say that the measurement scales representing the key constructs of this research have fulfilled the content validity criteria.

Convergent and discriminant validity are sub-categories of construct validity. It seeks agreement between a specific measuring instrument and a theoretical concept, and it particularly scans whether the measurement scales symbolise and work like the attributes (Tore, 2005). In line with Hair *et al.*'s (2010) suggestion, the factor loadings, composite reliability and average variance extracted are used to assess convergent validity. Convergent validity is confirmed if all the measures that declare to reflect a particular variable are indeed related.

As a convention, respective loadings and cross-loadings are first to be assessed for detection of problems with any particular items as criteria for establishing convergent validity. Table 4.9 presents the loadings and cross-loadings of indicators in the respective constructs of this study. The validity of a particular measurement scale is said to be convergent when indicators/items load highly (i.e., > 0.50) on their associated constructs (Hair *et al.*, 2010) and that no item loads more highly on another construct than the one it intends to measure (Barclay, Higgins, & Thompson, 1995). As indicated in Table 4.9, all the indicators were loaded on their respective constructs from a lower bound of 0.590 to an upper bound of 0.852. Additionally, all the indicators loaded more highly on their respective constructs than on any other constructs.

Table 4.9
Factor Loadings and Cross Loadings

Indicators	DE	EL	LO	MC	PF	SE
DE1	**0.822**	0.517	0.483	0.497	0.470	0.459
DE3	**0.758**	0.334	0.364	0.302	0.316	0.254
DE4	**0.590**	0.263	0.279	0.253	0.237	0.164
DE5	**0.703**	0.340	0.316	0.295	0.320	0.232
EL1	0.533	**0.784**	0.546	0.510	0.501	0.519
EL2	0.393	**0.780**	0.437	0.499	0.463	0.474
EL3	0.346	**0.746**	0.431	0.480	0.467	0.447
EL4	0.358	**0.774**	0.495	0.503	0.519	0.533
EL8	0.343	**0.689**	0.413	0.458	0.558	0.545
LO1	0.511	0.569	**0.782**	0.576	0.599	0.540
LO11	0.386	0.415	**0.660**	0.399	0.427	0.405
LO2	0.387	0.488	**0.731**	0.548	0.505	0.427
LO3	0.369	0.433	**0.733**	0.397	0.372	0.357
LO4	0.306	0.350	**0.700**	0.434	0.325	0.288
LO6	0.421	0.522	**0.810**	0.532	0.519	0.457
LO7	0.197	0.319	**0.638**	0.352	0.299	0.260
LO8	0.252	0.333	**0.640**	0.363	0.301	0.280
MC1	0.491	0.497	0.527	**0.789**	0.545	0.537
MC10	0.423	0.499	0.523	**0.661**	0.485	0.519
MC2	0.267	0.443	0.439	**0.699**	0.442	0.357
MC3	0.319	0.475	0.441	**0.773**	0.484	0.440
MC4	0.264	0.376	0.380	**0.630**	0.409	0.338
MC5	0.299	0.479	0.433	**0.726**	0.532	0.444
PF1	0.469	0.547	0.581	0.557	**0.780**	0.548
PF17	0.351	0.468	0.428	0.426	**0.695**	0.554
PF18	0.288	0.462	0.396	0.426	**0.702**	0.516
PF19	0.282	0.434	0.409	0.483	**0.713**	0.505
PF2	0.435	0.502	0.525	0.553	**0.769**	0.469
PF20	0.298	0.490	0.359	0.512	**0.698**	0.518

Table 4.9 (Continued)

Indicators	DE	EL	LO	MC	PF	SE
PF22	0.247	0.398	0.348	0.520	**0.666**	0.445
PF4	0.355	0.499	0.392	0.415	**0.701**	0.522
SE1	0.403	0.599	0.504	0.557	0.659	**0.852**
SE2	0.323	0.546	0.430	0.479	0.592	**0.818**
SE3	0.281	0.395	0.354	0.428	0.470	**0.740**
SE4	0.183	0.413	0.290	0.415	0.431	**0.674**
SE5	0.308	0.523	0.407	0.459	0.532	**0.733**
SE7	0.334	0.512	0.449	0.458	0.496	**0.697**

Note: the items bolded belong to a construct on the same column and they possess a high loading of > 0.50

Convergent validity of this research study was measured by means of average variance extracted technique (see Table 4.10). AVE is the average variance shared between a variable and its measures and that AVE for a variable should be bigger than the variance shared between the variable and other variables in a particular model (Couchman & Fulop, 2006). Average variance extracted was calculated using the following formula: (Σλyi2) / ((Σλyi2) + ΣVar (€i)). The rule of thumb is that an AVE value of 0.50 or greater is considered satisfactory (Barclay *et al.*, 1995).

Table 4.10

Loadings, Composite Reliability and Average Variance Extracted

Construct	Item	Loadings	AVE	CR
Dynamic Environment	**DE1**	0.822	0.523	0.812
	DE3	0.758		
	DE4	0.590		
	DE5	0.703		
Entrepreneurial Leadership	**EL1**	0.784	0.571	0.869
	EL2	0.780		
	EL3	0.746		
	EL4	0.774		
	EL8	0.689		
Learning Orientation	**LO1**	0.782	0.510	0.892
	LO11	0.660		
	LO2	0.731		
	LO3	0.733		
	LO4	0.700		
	LO6	0.810		

Table 4.10 (Continued)

Construct	Item	Loadings	AVE	CR
	LO7	0.638		
	LO8	0.640		
Managerial Competency	**MC1**	0.789	0.512	0.862
	MC10	0.661		
	MC2	0.699		
	MC3	0.773		
	MC4	0.630		
	MC5	0.726		
Job Performance	**PF1**	0.780	0.513	0.894
	PF17	0.695		
	PF18	0.702		
	PF19	0.713		
	PF2	0.769		
	PF20	0.698		
	PF22	0.666		
	PF4	0.701		
Self-Efficacy	**SE1**	0.852	0.570	0.888
	SE2	0.818		
	SE3	0.740		
	SE4	0.674		
	SE5	0.733		
	SE7	0.697		

Source: Researcher

Table 4.10 provided results of the AVE calculations with resultant coefficients that ranged from 0.510 to 0.571, indicating that convergent validity has been established for all the constructs. With the results of the convergent validity that demonstrated satisfactory item loadings, satisfactory AVE coefficients and composite reliability for the individual items, it was evidently enough to confirm that the items represent distinct latent constructs, and hence establishing their convergent validity.

Discriminant validity, in contrast, relates to whether measures that should not be related are in reality not related. In measuring the discriminant validity, the square root of the AVE for each variable is utilised (Fornell & Larcker, 1981). The square roots of AVE coefficients are then demonstrated in the correlation matrix along the diagonal. The squared AVE should be greater than the squared correlation estimates to provide good evidence of discriminant validity (Hair *et al.*, 2006). More specifically, in order to create satisfactory discriminant validity, the diagonal elements or coefficients must be bigger than the off-diagonal elements or coefficients in the corresponding columns and rows.

Table 4.11 shows the outcomes of the discriminant validity evaluation of the variables used in this study. Along the diagonal, the table presents square roots of AVE for all the constructs indicating higher square roots of AVE for EL and SE (0.755), and lower for LO (0.714). However, all the square roots of AVE for the constructs are bigger than the off-diagonal elements or coefficients in the corresponding columns and rows, hence, establishing an evidence of discriminant validity.

Table 4.11
Discriminant Validity

Construct	DE	EL	LO	MC	PF	SE
Dynamic Environment (DE)	**0.723**					
Entrepreneurial Leadership (EL)	0.524	**0.755**				
Learning Orientation (LO)	0.514	0.617	**0.714**			
Managerial Competency (MC)	0.488	0.649	0.644	**0.715**		
Job Performance (PF)	0.484	0.667	0.608	0.679	**0.716**	
Self-Efficacy (SE)	0.413	0.670	0.546	0.622	0.712	**0.755**

Source: Researcher
Note: All the values that are bolded in diagonals represent the square root of the AVE while those off the diagonals represent latent variable correlations

Generally, the results depicted in Tables 4.9, 4.10 and 4.11 demonstrate that measures for all the six constructs are valid measures of their respective constructs based on their statistical significance and parameter estimates (Chow & Chan, 2008).

Having presented the results of the measurement model for this study which indicated that the measures for all the constructs are reliable and valid, the next step is to present results of the structural model. But before that an important PLS indicator called goodness-of-fit (GoF) is to be checked first.

4.10.1.2 Goodness-of-Fit (GoF)

Before presenting the results of the structural model, where main, mediating and moderating effects are presented, preliminary analysis regarding goodness-of-fit (GoF) is presented. Results from this analysis help the current analyses by providing validating conclusions about the PLS structural model and providing a positive signal for global application of the model.

Goodness-of-fit (GoF) measure for the PLS path modelling is defined as the geometric mean of the average communality (outer measurement model) and the average R-squared (R^2) for the endogenous constructs (Tenenhaus, Amato, & Vinzi, 2004). Hence, GoF becomes an index for validating the PLS model globally using the performance of both measurement and structural models. More precisely, it is used to assess the overall fit of the model (Tenenhaus, Vinzi, Chatelin, & Lauro, 2005), thus, the closer the GoF index to 1, the better the fit of the model under consideration. To support the validity of the current PLS model, GoF value has been estimated according to the guidelines suggested by Wetzels, Odekerken-Schröder, and Van Oppen (2009). Specifically, GoF for the model was calculated using the following formula:

$$GoF = \sqrt{R^2 \times Average\ of\ Communality\ (AVE)}$$

$$GoF = \sqrt{0.5203065 \times 0.533102333}$$

$$GoF = 0.527$$

As a guide for ascertaining the adequacy of global PLS model validity accurately, Wetzels *et al.* (2009) have provided baseline values as follows: (a) 0.1 equals to small, (b) 0.25 equals to medium and finally (c) 0.36 equals to large. The calculated GoF is 0.527, thus indicating the evidence of adequate GoF PLS model validity (Wetzels *et al.*, 2009).

4.10.1.3 Assessment of Predictive Relevance

The present study also applied Stone-Geisser test of the predictive relevance of the research model using blindfolding methods (Stone, 1974; Geisser, 1974). The Stone-Geisser test of predictive relevance is usually used as a supplementary assessment of goodness-of-fit in partial least squares structural equation modelling (Duarte & Raposo, 2010). Even though this study used blindfolding to ascertain the predictive relevance of the research model, it is worth noting that according to Sattler, Völckner, Riediger, and Ringle (2010) “blindfolding procedure is only applied to endogenous latent variables that have a reflective measurement model operationalisation” (p. 320). Reflective measurement model specifies that a latent or unobservable concept causes variation in a set of observable indicators (McMillan & Conner, 2003). Hence, endogenous latent variable in the present study was reflective in nature; a blindfolding procedure was applied mainly to the endogenous latent variable.

A cross-validated redundancy measure (Q^2) was applied to assess the predictive relevance of the research model (Hair *et al.*, 2013; Geisser, 1974; Ringle, Sarstedt, & Straub, 2012; Stone, 1974; Chin, 2010). The Q^2 is a criterion to measure how well a model predicts the data of omitted cases (Chin, 1998b; Hair *et al.*, 2013). According to Henseler, Ringle, and Sinkovics (2009), a research model with Q^2 statistic (s) greater than zero is considered to have predictive relevance. Additionally, a research model with greater positive Q^2 values suggests more predictive relevance. Table 4.12 shows the outcomes of the cross-validated redundancy Q^2 test.

Table 4.12
Construct Cross Validated Redundancy

Total	**SSO**	**SSE**	**1-SSE/SSO**
Job Performance	1936	1309.2155	0.3238

Source: Researcher

As shown in Table 4.12, the cross-validation redundancy measure Q^2 for an endogenous latent variable is above zero, suggesting the predictive relevance of the model (Chin, 1998; Henseler *et al.*, 2009).

4.10.2 Structural Model

This section presents results of the structural model and tests of hypotheses for the study. Specifically, the section is concerned with the testing of the hypotheses related to the main, mediating and moderating effects. Therefore, PLS path-approach multiple regressions were conducted for the main effects. Furthermore, using the PLS bootstrapping output, the effects of mediation and moderation were calculated.

4.10.2.1 Main Effects

To understand the main relationship effects within the constructs, SEM PLS structural model analysis was conducted. The individual contribution of each exogenous variable is represented by the standardised beta values within the PLS structural model (Chin, 1998b). The present study also applied the standard bootstrapping procedure with a number of 5000 bootstrap samples of 242 cases to assess the significance of the path coefficients (Hair *et al.*, 2013; Hair *et al.*, 2011; Hair, Sarstedt, Ringle, & Mena, 2012; Henseler *et al.*, 2009). In testing the structural model relationships, the choice of significance level was set at p<.05 and p<.01 (Hair *et al.*, 2010). Figure 4.1 and Table 4.13, therefore, show the estimates of the full structural model for main effects.

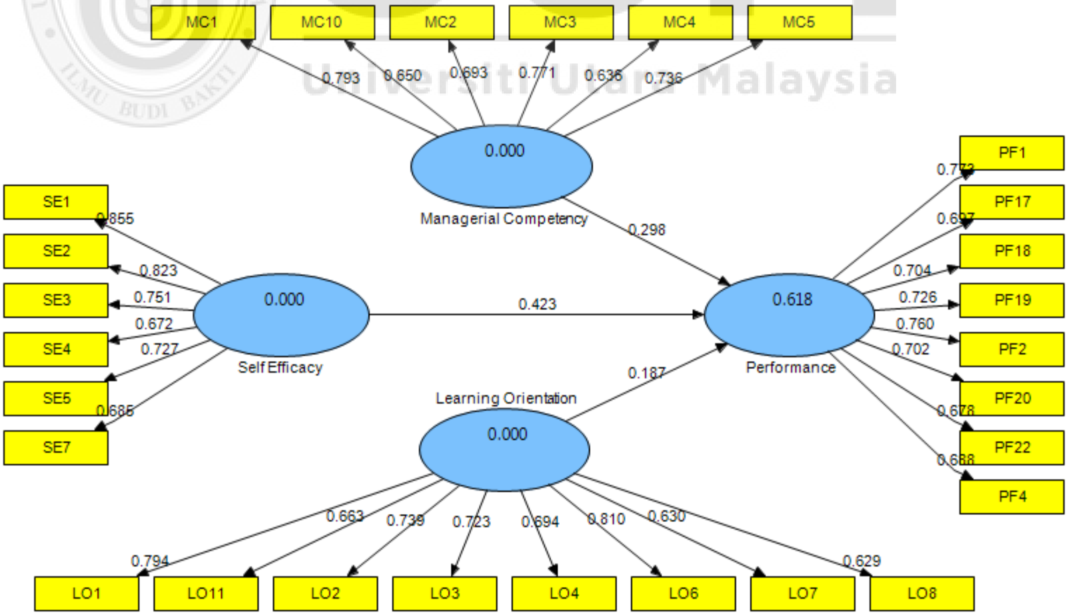

Figure 4.1

PLS Algorithm Graph for MC, SE, LO and PF

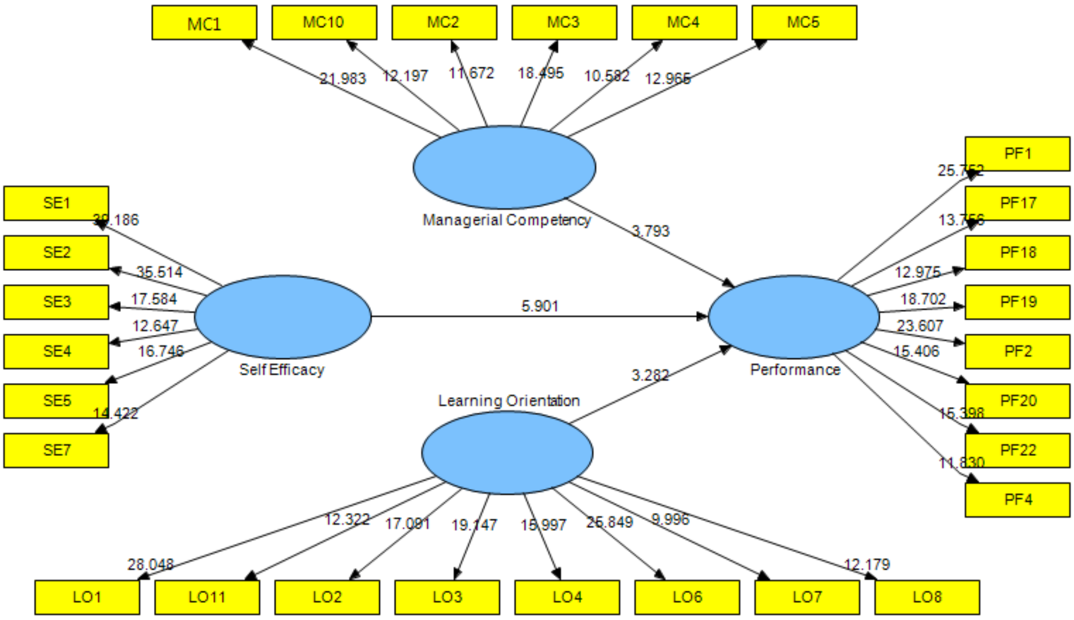

Figure 4.2

PLS Bootstrap Graph for MC, SE, LO and PF

Hypothesis 1 predicted an effect of managerial competencies on the job performance of university leaders. Results (Table 4.13, Figure 4.2) revealed a significant positive effect of managerial competencies on job performance (β = 0.298, t = 3.793), thus supporting Hypothesis 1.

Table 4.13
Results of Main Effects Hypotheses

Hypothesis	Relationship	Std Beta	Std Error	T-Value	Decision
H1	MC → PF	0.298	0.079	3.793**	Supported
H2	SE → PF	0.423	0.072	5.901**	Supported
H3	LO → PF	0.187	0.057	3.282**	Supported

Source: Researcher
**p< 0.01, *p < 0.05

Hypothesis 2 predicted an effect of self-efficacy on the job performance of university leaders. Results (Table 4.13, Figure 4.2) indicated a significant positive effect of self-efficacy on job performance (β = 0.423, t = 5.901), thus supporting Hypothesis 2.

Similarly, Hypothesis 3 predicted an effect of learning orientation on the job performance of university leaders. Results concluded a significant positive effect of learning orientation on job performance (β = 0.187, t = 3.282), again supports Hypothesis 3.

4.10.2.1.1 Assessment of Variance Explained in the Endogenous Latent Variable

Another significant criterion for assessing the structural model in PLS-SEM is the R-squared value, which is also known as the coefficient of determination (Henseler *et al.*, 2009; Hair *et al.*, 2012; Hair *et al.*, 2011). The R-squared value represents the proportion of variation in the dependent variable(s) that can be explained by one or more predictor variables (Hair *et al.*, 2010; Elliott & Woodward, 2007; Hair *et al.*, 2006). Even though the acceptable level of R^2 value depends on the research context (Hair *et al.*, 2010), Falk and Miller (1992) proposed an R-squared value of 0.10 as a minimum acceptable value. Meanwhile, Chin (1998b) suggested that the R-squared values of 0.67, 0.33, and 0.19 in PLS-SEM can be considered as substantial, moderate, and weak, respectively. Table 4.14 presents the R-squared value of the endogenous latent variable.

Table 4.14
Variance Explained in the Endogenous Latent Variable

Latent Variable	**Variance Explained (R^2)**
Job Performance	61.80%

Source: Researcher

As indicated in Table 4.14, the research model explained 62 percent of the variance in job performance. This suggested that the three exogenous latent variables (i.e., managerial competency, self-efficacy and learning orientation) collectively explained

62 percent of the variance in university leader's job performance. Hence, following Falk and Miller's (1992) and Chin's (1998b) criteria, the endogenous latent variable showed an acceptable level of R-squared value, which is considered as moderate. Having presented results of the main effects and the related test of hypotheses, the next part is presenting the analysis of mediation and related tests of hypotheses.

4.10.2.2 The Mediation Effects

Mediation test is conducted to find if a mediator variable can significantly carry the influence of an independent variable to a dependent variable (Ramayah, Lee, & In, 2011). In other words, mediation test assesses the indirect effect of the independent variable on the dependent variable through a mediator variable. Hayes and Preacher (2010) observed that mediation analysis in multivariate analysis is achieved through many techniques including (1) simple techniques that consist of the causal steps approach (Baron & Kenny, 1986) or the Sobel test (Sobel, 1982); (2) newer approaches that demand just fewer unrealistic statistical assumptions. These include the distribution of the product method (MacKinnon, Lockwood, & Williams, 2004), and (3) re-sampling approaches such as bootstrapping (Bollen & Stine, 1990; MacKinnon *et al.*, 2004; Preacher & Hayes, 2004, 2008; Shrout & Bolger, 2002).

Importantly, the mediation test used for this study was based on the PLS approach, and thus the hypotheses for the study were tested using the partial least squares (PLS) structural equations modelling (SEM) technique (Wold, 1985). The PLS-SEM technique is increasingly gaining prominence and acceptance by leadership researchers (for e.g., House, Spangler, & Woycke, 1991; Howell & Avolio, 1993) because it is suitable for testing complex multivariate main and indirect effects models like in the present study. Although PLS is popularly associated with smaller sample size (Preacher & Hayes, 2004), the technique is also used to make inferences about parameters in studies involving large sample size (Starkweather, 2011). Bootstrap is the PLS procedure used in this study to evaluate the statistical significance of relevant path coefficients. In PLS analysis, bootstrapping represents a more exact calculation of measures (Chin, 2010).

Although PLS uses path analysis and treats direct and indirect effects simultaneously, like other mediation techniques (e.g., Baron, & Kenny, 1986), there is yet not any mechanism for treating mediating models simultaneously. Specifically, the PLS technique has no formal detailed guidelines for mediation tests (Bontis *et al.*, 2007). PLS method provides only guidelines for determining if mediation among certain variables exists while other details regarding whether the mediation is partial or full still remain unresolved. However, the PLS-SEM technique has been reported to be a particularly well-suited technique for mediation study (Bontis *et al.*, 2007; Chin, 1998b; Hair *et al.*, 2013; Hayes & Preacher, 2010; Iacobucci *et al.*, 2007).

4.10.2.2.1 The Direct and Indirect Effects

This section presents results regarding the PLS structural direct and indirect effects before presenting the actual mediation effects for this study. Indirect effects are defined as the summation of both direct and indirect effects between two particular constructs (Albers, 2010). Additionally, Hayes and Preacher (2010) argued that indirect effect is concerned with the influence of X on Y through an intervening variable M. It is quantified as the product of paths 'a' and 'b' and is interpreted as the quantity that Y is expected to change as X changes as a result of X's effect on M which, in turn, influences Y (Hayes & Preacher, 2010). In PLS model, before actual mediation is determined, presenting the total effects is crucial because it gives a comprehensive picture of the mediating constructs' role, and as well provides insights to practitioners about cause-effect relationships (Hair *et al.*, 2013). Similarly, Preacher and Hayes (2004) argued that mediating effects are first determined by indirect effects of exogenous constructs on the endogenous constructs through a proposed mediating construct.

The results of the indirect analysis as displayed in Table 4.15 and Figures 4.3 and 4.4 indicated an indirect association between the constructs. The results indicate significant indirect relationships between managerial competency and job performance ($\beta = 0.172$; $t = 3.315$), self-efficacy and job performance ($\beta = 0.250$; $t = 4.689$), as well as learning orientation and job performance ($\beta = 0.164$; $t = 3.821$).

Table 4.15
Direct and Indirect Effects

Paths	**Beta (β)**	**Standard Error**	**T-Statistics**
MC → PF	0.172	0.052	3.315
MC → EL	0.257	0.075	3.420
SE → PF	0.250	0.053	4.689
SE → EL	0.375	0.071	5.252
LO → PF	0.164	0.043	3.821
LO → EL	0.246	0.059	4.181
EL → PF	0.667	0.048	13.927

Source: Researcher

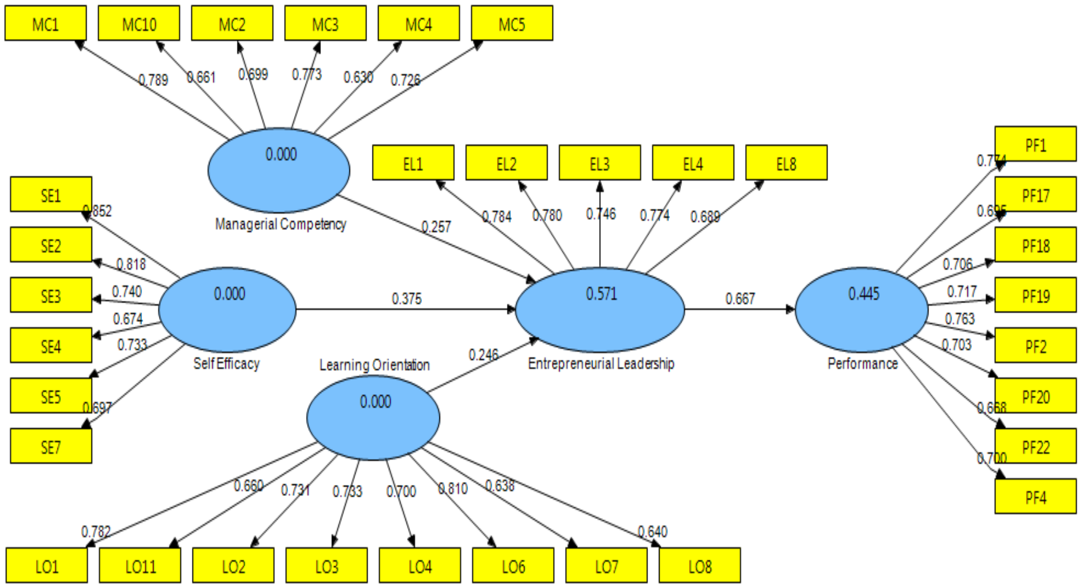

Figure 4.3

PLS Algorithm for Direct & Indirect Effects on Job Performance

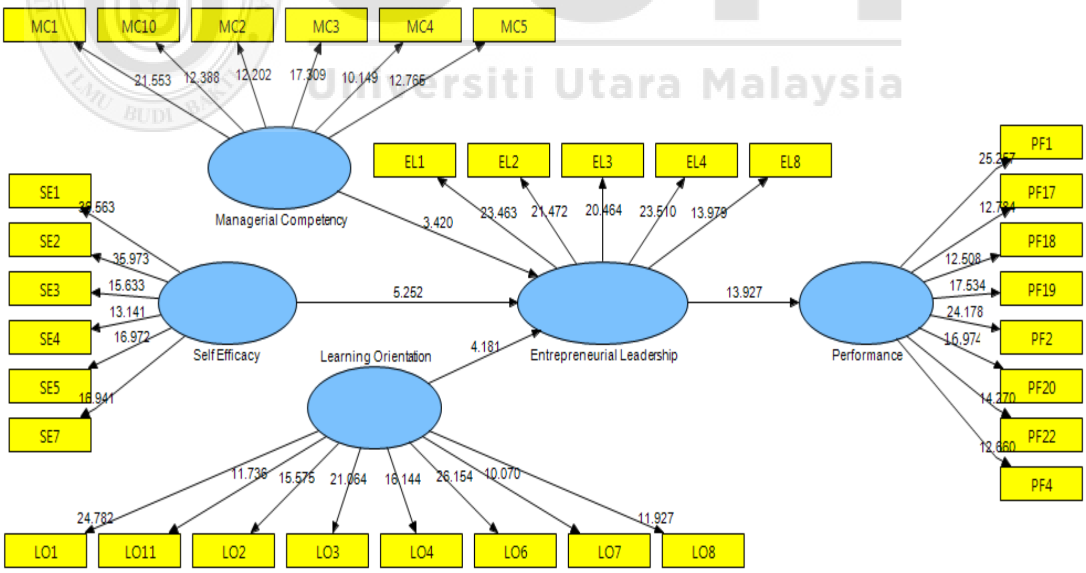

Figure 4.4

PLS Bootstrap for Direct & Indirect Effects on Job Performance

After analysis of the indirect effects within the PLS structural model, next section presents the actual results of the mediation tests for all the three proposed mediating hypotheses.

4.10.2.2.2 Mediation Results

The actual mediation effect in PLS model is determined by means of bootstrapping (with 500 re-samples) analysis together with formulated hypotheses (Hair *et al.*, 2013). Specifically, mediation is determined by multiplying the average of paths 'a' and 'b' and then dividing the obtained value by the standard error of the paths (Kock, 2013) as shown in this formula: $t = \frac{a*b}{S_{error}}$. Thus, this formula was used to determine the mediating effect of entrepreneurial leadership on all the three direct relationships of this study.

In the formula, 'a' represents the direct path between predictor variables (managerial competency, self-efficacy and learning orientation); and 'b' represents the path between entrepreneurial leadership and the criterion variable (job performance). Both paths 'a' and 'b' must be obtained from the PLS bootstrapping to ascertain the significance of their coefficients and standard error (Hair *et al.*, 2013; Kock, 2013). Finally, 'S' represents the standard error of paths 'a' and 'b'. Generally, in PLS bootstrap mediation calculation, 'T' represents the significance coefficient. Mediation is established if 'T' value is equal to or greater than 1.64 at 0.05 significance level or 2.33 at 0.01 significance level using one-tail test, or 1.96 at 0.05 significance level or 2.58 at 0.01 significance level using two-tail test (Hair *et al.*, 2010). As in this study the test is two-tail, so cut off values for two-tail were followed.

Table 4.16
T-Value Calculation

	Indirect Effect	SE	t-values
a1*b	0.171	0.052	3.288
a2*b	0.250	0.055	4.545
a3*b	0.164	0.044	3.727

Source: Researcher

Table 4.17
Bootstrapped Confidence Interval Calculation

	Indirect Effect	SE	LL	UL
a1*b	0.171	0.052	0.069	0.273
a2*b	0.250	0.055	0.142	0.358
a3*b	0.164	0.044	0.078	0.250

Source: Researcher
Note: Lower Limit (LL) = a1*b – z (SE) and Upper Limit (UL) = a1*b + z (SE)
(z value for 0.05 level is 1.96)

The mediation tests for this study were conducted to find if entrepreneurial leadership mediate the relationships between (MC, SE and LO) as exogenous variables and (PF) as an endogenous variable.

Table 4.18
Mediation Results

Hypothesis	Relationship	Std Beta	Std Error	T-Value	Decision
H4 (a)	MC →EL →PF	0.171	0.052	3.288**	Supported
H4 (b)	SE →EL →PF	0.250	0.055	4.545**	Supported
H4 (c)	LO →EL →PF	0.164	0.044	3.727**	Supported

Source: Researcher
**p< 0.01, *p < 0.05

The bootstrapping analysis showed in table 4.18 and Figure 4.4 that all the three indirect effects β = 0.171 (0.257*0.667), β = 0.250 (0.375*0.667) and β = 0.164 (0.246*0.667) were significant with the t-values of 3.288, 4.545 and 3.727 respectively. As indicated by Preacher and Hayes (2008) the indirect effects 95% Boot CI as showed in table 4.17: [LL = 0.069, UL = 0.273], [LL = 0.142, UL = 0.358] and [LL = 0.078, UL = 0.250] did not straddle a 0 in between indicating there is mediation. Thus, it can be concluded that the mediation effect is statistically significant, indicating that H4 (a), H4 (b) and H4 (c) were supported.

4.10.2.3 The Moderation Effects

This study applied a product indicator approach using Partial Least Squares Structural Equation Modelling to detect and estimate the strength of the moderating effect of dynamic environment on the relationships between managerial competency, self- efficacy, learning orientation and the job performance of university leaders. The product term approach is considered appropriate in this study because the moderating variable is continuous (Rigdon, Schumacker, & Wothke, 1998). According to Henseler and Fassott (2010) "given that the results of the product term approach are usually equal or superior to those of the group comparison approach, we recommend always using the product term approach" (p. 721).

To apply the product indicator approach in testing the moderating effects of dynamic environment on the relationships between the indicators of the latent independent variable and the indicators of the latent moderator variable need to be created, hence, these product terms would be used as indicators of the interaction term in the structural model (Kenny & Judd, 1984). Furthermore, to ascertain the strength of the moderating effects, the present study applied Cohen's (1988) guidelines for determining the effect size. Figure 4.5 and 4.6 and Table 4.20, therefore, show the estimates after applying a product indicator approach to examine the moderating effect of dynamic environment on the relationships between exogenous and endogenous latent variable.

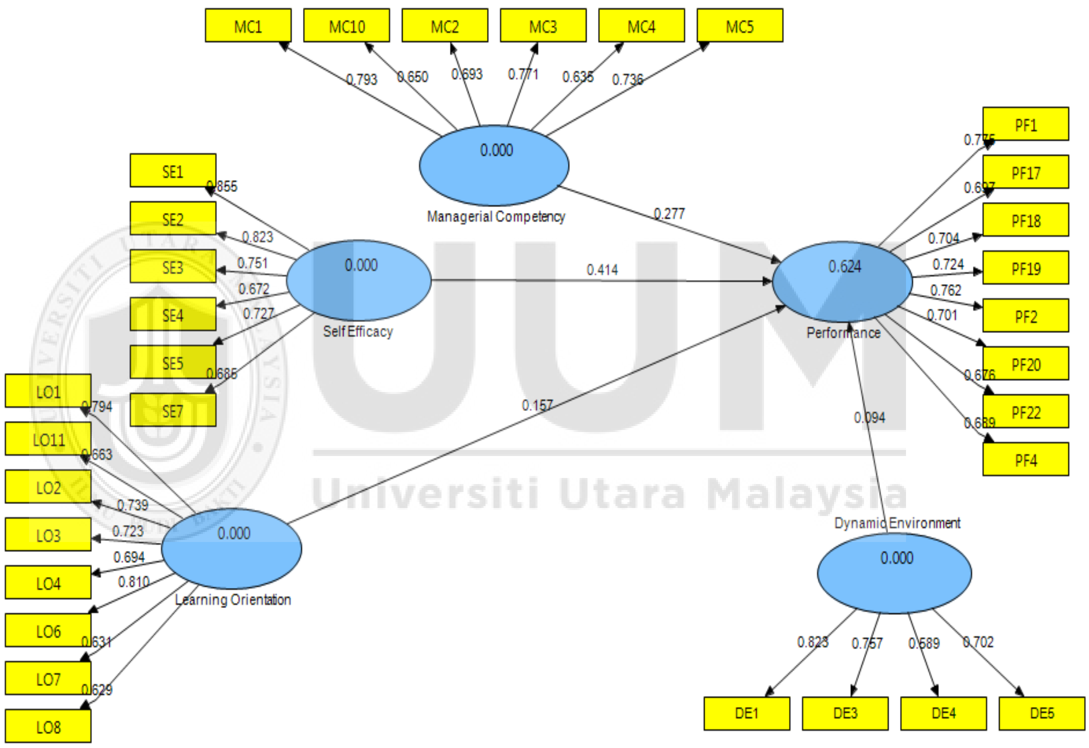

Figure 4.5

PLS Algorithm for MC, SE, LO and Moderator DE with Direct Effects on PF

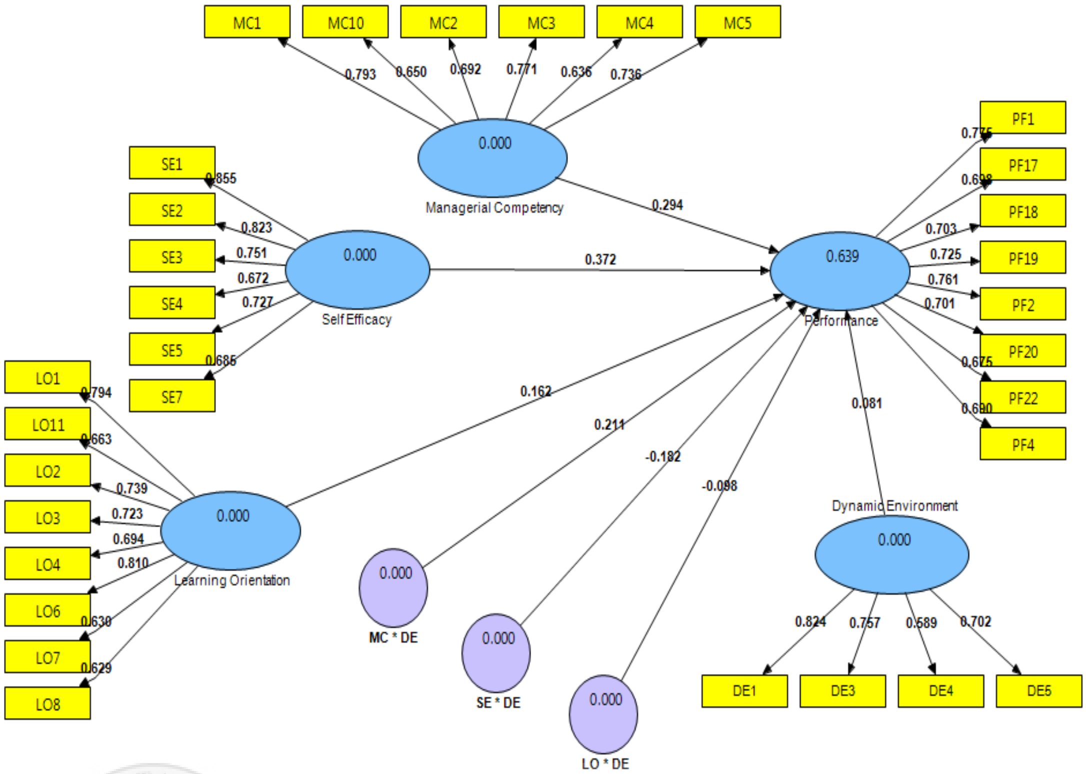

Figure 4.6

PLS Algorithm for MC, SE, LO, DE and PF with Moderation Interaction Effects

4.10.2.3.1 Determining the Strength of the Moderating Effect

In order to determine the strength of the moderating effect of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of university leaders, Cohen's (1988) effect size was calculated. Further, the strength of the moderating effect can be assessed by comparing the coefficient of determination (R-squared value) of the main effect model with the R-squared value of the full model that incorporates both exogenous latent variables and moderating variable (Henseler & Fassott, 2010; Wilden, Gudergan, Nielsen, & Lings, 2013). Thus, the strength of the moderating effect could be expressed using the following formula (Cohen, 1988; Henseler & Fassott, 2010):

$$\text{Effect Size } (f^2) = \frac{R^2_{Model\,with\,Moderator} - R^2_{Model\,without\,Moderator}}{1 - R^2_{Model\,with\,moderator}}$$

Moderating effect size (f^2) values of 0.02 can be considered as weak, effect size of 0.15 as moderate while the effect size above 0.35 may be regarded as strong (Cohen, 1988; Henseler & Fassott, 2010). However, according to Chin, Marcolin, and Newsted (2003), a low effect size does not necessarily mean that the underlying moderating effect is insignificant. Even a small interaction effect can be meaningful under extreme moderating conditions, if the resulting beta variations are meaningful, then it is essential to take these conditions into account (Chin *et al.*, 2003). The result of the strength of the moderating effect of dynamic environment is presented in Table 4.19.

Following Henseler and Fassott's (2010) and Cohen's (1988) rule of thumb for determining the strength of the moderating effect, Table 4.19 showed that the effect size for job performance was 0.04, suggesting the moderating effect is weak.

Table 4.19
Strength of the Moderating Effect Based on Cohen's (1988) and Henseler and Fassotts (2010) Guidelines

Endogenous Latent Variable	**R-Squared**		**f - Squared**	**Effect Size**
	Included	**Excluded**		
Job Performance	0.639	0.624	0.04	Small

Source: Researcher

4.10.2.3.2 Testing for Interaction Effects

Figure 4.7 showed that MC*DE beta was 0.211, SE*DE was -0.182 and LO*DE was -0.098. Just with the beta values it is not possible to confirm whether the beta is significant or not. Thus to test and see which of the 3 interaction effects are significant, a bootstrapping procedure with (500 re-samples) was run to get the t-values. Moderation is established if ‘T’ value is equal to or greater than 1.64 at 0.05 significance level or 2.33 at 0.01 significance level using one-tail test, or 1.96 at 0.05 significance level or 2.58 at 0.01 significance level using two-tail test (Hair *et al.*, 2010). As in this study the test is two-tail, so cut off values for two-tail were followed.

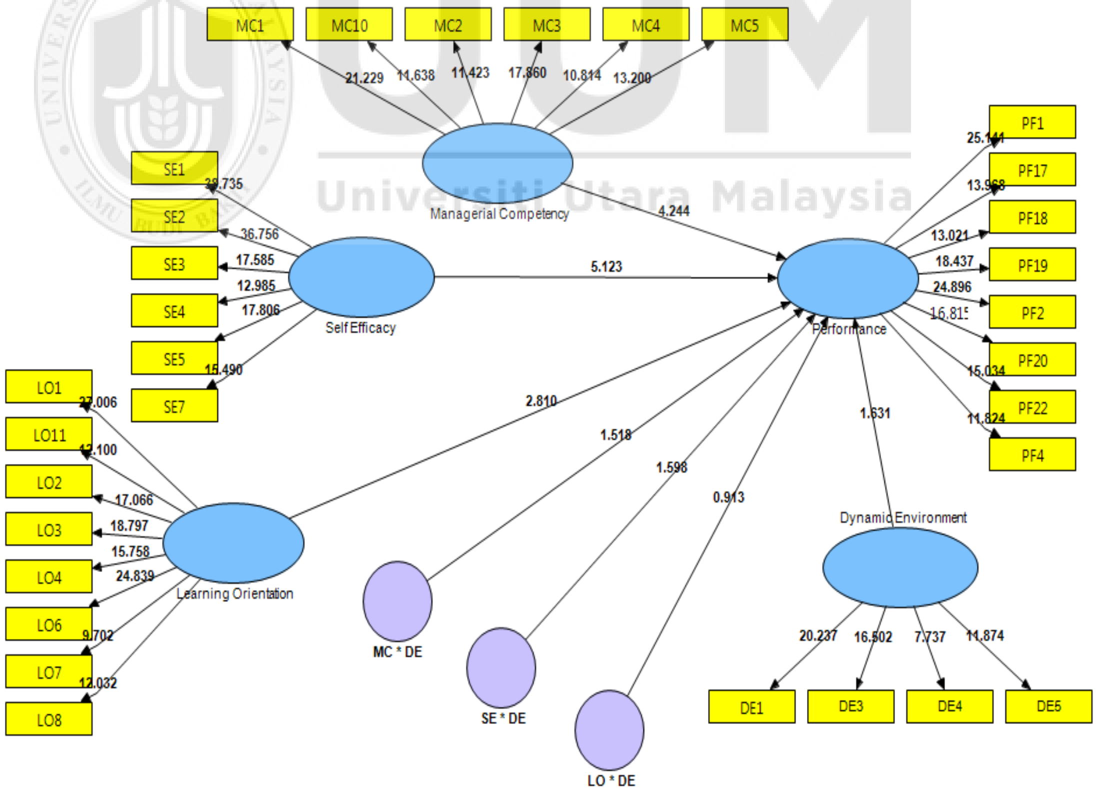

Figure 4.7

PLS Bootstrap for MC, SE, LO, DE and PF with Moderation Interaction Effects

The results shown in Table 4.20, Figure 4.7 indicated that the interaction terms representing MC*DE ($\beta = 0.211$, $t = 1.518$), SE*DE ($\beta = -0.182$, $t = 1.598$) and LO*DE ($\beta = -0.098$, $t = 0.913$) were not statistically significant. Hence, all the three hypothesis H5 (a), H5 (b) and H5 (c) were not supported.

Table 4.20
Moderation Results

Hypothesis	**Relationship**	**Std Beta**	**Std Error**	**T-Value**	**Decision**
H5 (a)	MC * DE →PF	0.211	0.139	1.518	Not Supported
H5 (b)	SE * DE →PF	-0.182	0.114	1.598	Not Supported
H5 (c)	LO * DE →PF	-0.098	0.107	0.913	Not Supported

Source: Researcher
**p< 0.01, *p < 0.05

The presented moderation results demonstrate that all of the three hypotheses were not supported. Having presented all the results including the direct, mediating and moderating effects, next and the last section of this chapter presents a general summary of the tested hypotheses in table 4.21 and the overall summary of the chapter.

4.11 Summary of Hypotheses Testing

The Following is the table of tested hypotheses and related decisions of this research study.

Table 4.21
Summary of Hypothesis Testing

Hypothesis	Statement	Decision
H1	There is a significant relationship between managerial competency and job performance of university leaders in Pakistan	Supported
H2	There is a significant relationship between self-efficacy and job performance of university leaders in Pakistan	Supported
H3	There is a significant relationship between learning orientation and job performance of university leaders in Pakistan	Supported
H4 (a)	Entrepreneurial leadership mediates the relationship between managerial competency and job performance of university leaders in Pakistan	Supported
H4 (b)	Entrepreneurial leadership mediates the relationship between self-efficacy and job performance of university leaders in Pakistan	Supported
H4 (c)	Entrepreneurial leadership mediates the relationship between learning orientation and job performance of university leaders in Pakistan	Supported
H5 (a)	Dynamic environment moderates the relationship between managerial competency and job performance of university leaders in Pakistan	Not Supported
H5 (b)	Dynamic environment moderates the relationship between self-efficacy and job performance of university leaders in Pakistan	Not Supported
H5 (c)	Dynamic environment moderates the relationship between learning orientation and job performance of university leaders in Pakistan	Not Supported

Source: Researcher

4.12 Summary

Generally, the self-reporting technique has provided appreciable support in assessing the relationships between managerial competency, self-efficacy, learning orientation and job performance of university leaders through the mediating effect of entrepreneurial leadership and the moderating effect of dynamic environment. With minor modifications, the PLS confirmatory factor analysis (CFA) has confirmed the structural composition of the six constructs (managerial competency, self-efficacy, learning orientation, job performance, entrepreneurial leadership and dynamic environment). Using the PLS technique, the multivariate analysis has statistically provided evidence of predictive relevance and the importance of entrepreneurial leadership as a good mechanism through which university leaders enhance their job performance. Specifically, results from PLS analyses have provided support for most of the hypotheses for this study.

Findings revealed significant positive main effects relationships between: (1) managerial competency (MC) and job performance (PF) of university leaders; (2) self- efficacy (SE) and job performance of university leaders (PF); and (3) learning orientation (LO) and job performance (PF) of university leaders.

Regarding the mediating effect of entrepreneurial leadership on the relationships between managerial competencies, self-efficacy, learning orientation and job performance of the university leaders, the PLS bootstrap results demonstrated that all the hypotheses were significant. These significant mediating relationships include: (1) entrepreneurial leadership (EL) mediates the relationship between managerial competency (MC) and job performance (PF) of university leaders; (2) entrepreneurial leadership (EL) mediates the relationship between self-efficacy (SE) and job performance (PF) of university leaders; and finally (3) entrepreneurial leadership (EL) mediates the relationship between learning orientation (LO) and job performance (PF) of university leaders.

Concerning the moderating effect of dynamic environment on the relationships between the three predictor variables and job performance, PLS path coefficients revealed that all three formulated hypotheses were not significant and were not supported because of their low t-values. But as far as the strength of the moderating effect is concerned this study showed a low effect size which can be meaningful under extreme moderating conditions. The next chapter (Chapter 5) further discusses the findings in detail, followed by contributions, limitations, suggestions for future research and conclusions.

CHAPTER FIVE

CONCLUSIONS

5.1 Introduction

This chapter provides the summary of the findings, discussion, suggestions and conclusions of the study. The main objective of this research was to gain a better understanding of the factors influencing job performance of university leaders in public sector institutions of higher education of Punjab, Pakistan. In order to achieve the main objective, the research measured the mediating effect of entrepreneurial leadership (EL) and the moderating affect of dynamic environment (DE) on the relationships between managerial competency (MC), self-efficacy (SE), learning orientation (LO) and the job performance (PF) of university leaders. In the previous chapter, the findings of this study were presented. This chapter starts with a recapitulation of the study followed by a section on the summary of the results of this research. Next is Section 5.3, which includes discussion on the findings of this study in the light of the tested hypotheses and literature review. Subsequently, Section 5.4 presents the contribution of study, which is divided into practical, theoretical and methodological. Then, Section 5.5 covers the limitations of the study followed by Section 5.6, which presents suggestions for future research. The conclusions covered in Section 5.7, which summarises the whole research.

5.2 Recapitulation of the Study

This research focused the subject of performance improvement of university leaders'. Questionnaires were distributed to leaders of public sector universities of Punjab, Pakistan and collected data were then analysed using the partial least squares (Smart PLS) software. The analysis was carried out based on the research framework, which was represented by job performance as the dependent variable, independent variables that consisted of managerial competency, self-efficacy, learning orientation, while the mediating and moderating variables were entrepreneurial leadership and dynamic environment respectively. Overall, this study has succeeded in advancing the current understanding of the performance improvement of university leaders by providing answers to the following research questions:

1. Is there a significant relationship between managerial competency and job performance of university leaders in Pakistan?
2. Is there a significant relationship between self-efficacy and job performance of university leaders in Pakistan?
3. Is there a significant relationship between learning orientation and job performance of university leaders in Pakistan?
4. Does entrepreneurial leadership mediate the relationship between managerial competency and job performance of university leaders in Pakistan?
5. Does entrepreneurial leadership mediate the relationship between self-efficacy and job performance of university leaders in Pakistan?
6. Does entrepreneurial leadership mediate the relationship between learning orientation and job performance of university leaders in Pakistan?

7. Does dynamic environment moderate the relationship between managerial competency and job performance of university leaders in Pakistan?
8. Does dynamic environment moderate the relationship between self-efficacy and job performance of university leaders in Pakistan?
9. Does dynamic environment moderate the relationship between learning orientation and job performance of university leaders in Pakistan?

Regarding the direct relationships between exogenous latent variables and endogenous latent variable, the findings of this study indicated that all 3 hypotheses were supported. The results of the PLS path model showed that managerial competency was significantly and positively related to job performance. Self-efficacy was also found to be significantly and positively related to the job performance of university leaders. Findings further revealed that learning orientation was also found significantly and positively related to job performance.

With respect to entrepreneurial leadership as a mediator on the relationships between exogenous latent variables and endogenous latent variable, results provided empirical support for all the three hypotheses. Entrepreneurial leadership was found to mediate the relationship between managerial competencies and job performance. Similarly, entrepreneurial leadership was also found to mediate the relationship between self-efficacy and university leader's job performance. The results also revealed that entrepreneurial leadership was found to mediate the relationship between learning orientation and job performance.

Results from PLS path coefficients, however, revealed that moderating effect of dynamic environment on the relationships between the three predictor variables and job performance were not supported because of their low t-values. But as far as the strength of the moderating effect is concerned this study showed a low effect size which can be meaningful under extreme moderating conditions.

5.3 Discussions

This section discusses the study's findings in the light of relevant theories and findings of previous research.

5.3.1 Direct / Main effects

This section discusses results concerning all the three direct relationships between: (1) managerial competency as exogenous variable and job performance of university leaders' as an endogenous variable; (2) self-efficacy as exogenous variable and job performance of university leaders' as an endogenous variable; and (3) learning orientation as exogenous variable and job performance of university leaders as an endogenous variable.

5.3.1.1 Relationship between Managerial Competency and Job Performance

It is perhaps safe to say that majority would agree that there are (at least) two important roles that are significant to the success of any business, leading and managing. Institutions require both functions in order to succeed (Kent, 2005). In the leadership and contemporary management literature, it is more and more acknowledged that isolating management from leadership is unhelpful, and both should harmonise each other (Mintzberg 2009a, 2009b; Bennis, 2009). Brown (2001) suggested that successful leaders have to develop both leadership and managerial traits and behaviour. In order to facilitate leaders to deal with the modern, complex and multifaceted needs, modification at several levels have to be made and they must be prepared with the new competencies and essential skills in sequence with modern developments (Trivellas & Reklitis, 2014). It is claimed that the two procedures, although different, cannot efficiently work without each other (Kent, 2005). There must be a continuous changing of hats or hand off, within a single manager/leader to be effective. The leader part of the manager/leader creates the sense of direction and vision and the manager works out how to get there in terms of the accurate substitute path, obtaining and distributing the resources that are required. Yang (2003) considered that it is compulsory to equal the new demands on the role of university leaders with an extent of managerial skills. Important basic managerial competency models situated in the literature captures leadership skills; intra-personal skills; business skills and interpersonal skills as important for successful managerial performance (Asumeng, 2014). Whiddett and Hollyford (2003) described managerial competencies as, knowledge, set of specific skills and behaviours that persons show in the successful performance of tasks inside the organisation. Hypothesis H1 of this study states that there is a significant relationship between managerial competency and job performance of university leaders in Pakistan.

Results presented in previous chapter found support for the first hypothesis at the 0.01 level of significance ($\beta = 0.768$, $t = 21.989$, $p < 0.01$). The result means that managerial competency was observed to be a significant determinant of university leaders' job performance.

It has been observed that most of the leaders have attended the management related training programmes or coaching sessions /workshops to improve their managerial competencies to cope with the present day needs, to be more effective in their jobs and tasks, to sustain and to move further in their positions. This is also supported by Boyatzis (2009) who stated that competencies can be developed among adults through workshops, coaching sessions, training programmes, by studying or through performance reviews.

The findings are in line with previous studies. McClelland's (1971) research strongly recommended that there were behavioural variables that predicted job performance successfully. He named these variables 'competencies'. Many researchers appear to have the same opinion that if managers have a firm set of competencies, then they will be victorious in improving firm performance (Mohd-Shamsudin & Chuttipattana, 2012). Mitchelmore and Rowley (2010) found in their research that, a major module in the study of competencies is exploring the life-long characteristics of individuals which result in a performance or success in work and in an institution. Bucur (2013) believed that intervention and prediction for enhancing managerial performance can gain an immense advantage from managerial competencies concept. Iversen (2000) declared it is rational to conclude that there are some managerial competencies that are causally connected to superior and/or effective performance in a job. Lado *et al.* (1992) also concluded in research that the capitalisation of personal competencies and human resources has been shown to a competitive advantage of institutions that can improve performance. There is an increasing body of literature that has confirmed a positive connection between managerial competencies and performance (Mahembe, 2011). Aziz *et al.* (2005) findings also claimed the same that proficiency in management competencies will eventually guide to efficient and successful task achievement.

The results are also consistent with social cognitive learning theory which proposes a comprehensive causal structure that deals with the growth of competencies in individuals and its effect on the regulation of their behaviours (performance). Knowledge (competency) structures symbolising the strategies, rules and models of successful action serve as cognitive guides for the building of difficult patterns of behaviour (performance). This very much applies to the leaders in universities because through their competencies they would be able to perform better. This study contributes to the field of knowledge by further opening up and clarifying the relationship that exists between managerial competency and performance of university leaders.

5.3.1.2 Relationship between Self-Efficacy and Job Performance

Bandura (2000) supported the significance of self-efficacy in leadership setting by saying that when confronted with setbacks or obstacle, those with a strong faith in their abilities will strengthen their efforts to master the challenge. Self-efficacy beliefs are sturdy predictors and determinants of the level of achievement that person finally achieve (Iroegbu, 2015). Efficacious educational leaders have traits that let them be more determined in chasing goals. But, efficacious leaders are also realistic in the sense that they adapt their strategies to the current situation so that they do not misuse time attempting ineffective strategies (Osterman & Sullivan, 1996). When tackling problems, efficacious leaders infer failure as a lack of effort or use of an inaccurate strategy rather than a lack of ability. Leaders with higher levels of self-efficacy believe that by changing their strategy or doubling their efforts, they will achieve goals and realise victory (Versland, 2009). Studies grounded on self-efficacy theory have found that personal efficacy affects the objectives people opt, their ambitions, how much energy they will put on a set task, and how long they will persevere in the face of obstacles, difficulties and disappointments (Maurer, 2001). With increased self-efficacy, persons believe that they do have the suitable skills to productively perform a job or execute well with little to no outer assistance or reliance (Hsieh *et al.*, 2012; Pajares, 2005). Bandura (1994) described self-efficacy as persons' beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Hypothesis H2 of this study states that there is a significant relationship between self-efficacy and job performance of university leaders in Pakistan.

Results presented in previous chapter found support for the second hypothesis at the 0.01 level of significance ($\beta = 0.768$, $t = 21.989$, $p < 0.01$). The result means that self- efficacy was observed to be a significant determinant of university leaders' job performance.

It has also been found that most of the people at key positions in the universities have to face lots of pressures and obstacles from different sources, some of them are genuine and some of them are just fake, but these university leaders have to cadre all these stresses and to respond all the challenges. These pressures stimulate them with high self-efficacy and to show higher efforts towards those challenges. So in this way through their high self-efficacy, they show efficiency and effectiveness. Research by Hassan *et al.* (2015), also confirmed that hindrances often encourage the person with increased self-efficacy to superior efforts. The university hires leaders who have a good track record or achievements, or people got these positions on the basis of their past good performances. So once they got the key positions they already have the confidence which they got from their previous experiences to prove their selves with more good performances. Holzberger *et al.* (2013) and, Valiante and Morris (2013) proved that past performances drive to radiate the confidence that influences the fabrication of another excellent performance.

The finding is in line with previous studies. Eden (1992) confirmed that leadership is the method through which managers' elevated performance expectancy and increased self-efficacy which, in turn, enhance performance. Gist and Mitchell (1992) noted that numerous researches have confirmed the significance of self-efficacy for enhancing performance in the organisational framework. Since self-efficacy has been generally linked to performance, it should not be a surprise that it has been the focus of many researches. In the area of entrepreneurial self-efficacy, numerous empirical researches have found a positive link between performance and a general measure of self-efficacy (Torres & Watson, 2013). Bandura and Locke (2003) deduced in a wide literature review on self-efficacy, that self-efficacy is a dominant predictor of job performance. McCormick *et al.* (2002) assessment of the pertinent self-efficacy and leadership literature also validated the argument that leader's higher self-efficacy beliefs play a role towards leadership performance. It has been revealed that greater levels of self-efficacy direct to improved performance in some educational assignments (Javanmard *et al.,* 2012; Bandura, 1997). Versland (2009) found in his research that those persons with higher levels of self-efficacy for a given job will certainly perform better than those with lower beliefs. Those individuals who are deficient in self-efficacy about particular tasks often will not even try those tasks. Olusola's (2011) investigation outcomes highlighted two things. The first recognised that job satisfaction, intrinsic motivation and self-efficacy predict the work performance of industrial employees. The second offered the idea that each of these constructs predicts the work performance of employees. Studies done by Wood and Bandura (1989); Bandura and Schunk (1981) and (Bandura 1977b, 1982, 1986) on the effects of self-efficacy established that self-efficacy is the most effective determinant of performance. In the Judge and Bono (2001) meta-analysis, self-efficacy had the second powerful connection with performance, second only to common mental capability. Whereas common mental capability is hard to change, self-efficacy may be modifiable. Cherian and Jacob (2013) carried out a meta-analysis which examined the individual research outcomes related to the connection between employee motivation, self-efficacy, and job-related performance of the personnel. From the outcomes of the research, it was noticed that self-efficacy theory can be implemented to job-related performance. Individuals with higher self-efficacy have a more built-in interest in the jobs, more eager to use their effort, and demonstrate more determination in the face of setbacks and hurdles. Consequently, they perform more effectively.

The results are also consistent with social cognitive learning theory which proposes a comprehensive causal structure that deals with the growth of self-efficacy in individuals and its effect on the regulation of their behaviour (performance). Self-efficacy beliefs influence performance through two mediating mechanisms: task strategy development and individual motivation. The ability to practice self-influence by own challenge through evaluative reaction and goal setting to one's own performances gives a key cognitive mechanism of self-directedness and motivation (Bandura, 1991; Locke & Latham, 1990). This very much applies to the leaders in universities because through their self-efficacy beliefs they are able to perform better in the face of extreme turmoil in the highly unstable environment. This study contributes to the field of knowledge by further opening up and clarifying the relationship that exists between self-efficacy and job performance of university leaders.

5.3.1.3 Relationship between Learning Orientation and Job Performance

Learning orientation is conceptualised as the endeavour to raise the organisational values that affect the tendency of the organisation to generate and use knowledge (Sinkula *et al.*, 1997). Learning orientation is perceived as a fundamental approach towards learning, i.e., the managerial and organisational characteristics that assist the organisational learning procedure (Real *et al.*, 2014). Learning orientation is positively linked to performance, such as organisational innovativeness, new product success and profitability and superior growth (Westerlund & Rajala, 2010; Hanvanich *et al.*, 2006; Brachos *et al.*, 2007). Maes and Sels (2014) believed that learning is a key element of any effort to advance organisational performance and competitive advantage. Senge (1990) suggested that firms seeking change and performance improvement must focus on learning, whilst De Geus (1988) declared that being excellent at learning is one aspect that extremely thriving organisations have in common. Learning orientation demonstrates positive variation in the performance on both non-economic and economic indicators (Hishamudin *et al.*, 2010; Hishamuddin & Roland, 2009). Learning helps behavioural transformation, which would ultimately direct to enhanced performance (Slater & Narver, 1995). Learning is the gaining and the development of new knowledge which has the potential to impact behaviour, and more notably it may consequence with value creation or new behaviours (Hakala, 2011). Learning orientation as the person's internal driving power, induces the person to get new knowledge and skills, to seek challenge, looking ahead to learn from the growth and challenges, which facilitate to improve his/her creativity (VandeWalle *et al.*, 1999; Gong *et al.*, 2009; Amabile, 1988). Hypothesis H3 of this study states that there is a significant relationship between learning orientation and job performance of university leaders in Pakistan.

Results presented in previous chapter found support for the third hypothesis at the 0.01 level of significance ($\beta = 0.768$, $t = 21.989$, $p < 0.01$). The result means that learning orientation was observed to be a significant determinant of university leaders' job performance.

It has been observed that universities and their leaders are focusing on faculty development by offering them scholarships for higher studies from abroad, offer encouragement by paying extra for extra evening classes, and by providing resources to facilitate them that's simplifies learning in an adequate way. Dragoni and Kuenzi (2012) reported the same findings by saying that leaders that are bred with a learning orientation outlook give more concentration on all above discussed points that does influence their performance positively. It has also been observed in the culture of learning in the universities; it might be due to the HEC regulations that every faculty member has to contribute towards research and innovation. And one of the category of universities' ranking in Pakistan is based on the research and innovation output. It also adds towards the students enrolments because students prefer to join those universities which are better in research and innovation (learning orientation) ranking. These could be reasons that university leaders themselves are good at learning orientation and they also promote this culture in their universities. This reason is also supported by Real *et al.* (2014) who said learning orientation is a management dedication to advocating a culture that promotes learning orientation as one of its core values and afterwards this learning allows for continuous improvement in performance (Lages, Silva, & Styles, 2009).

The finding is in line with previous studies. Sadler-Smith *et al.* (2001) and Spicer, (2002) found the affiliation with performance, and it is the higher-order; active learning that is recognised as leading higher performance. Prior researches revealed that learning orientation indirectly affects both gaining through innovation and firm performance (Pramono *et al.*, 2015). Slater and Narver (1995) declared in their research that organisation which has the capability to learn rapidly than their competitors will be high performing and sustain in the market. Spicer (2004) on the other side also confirmed about learning orientation in his research that it demonstrated an important positive affiliation with financial performance and was also positively and considerably associated with non-financial performance for SMEs. The outcomes of numerous studies exposed that firms with the variables of learning, market and innovation orientation, can successfully advance performance

(Nazdrol *et al.*, 2011; Ozmen & Deniz Eris, 2012; Julian, 2010). Ellinger *et al.* (2002) reviewed the learning orientation's affiliation to different measures of performance in his research and found that these researches have validated some positive relations between learning orientation and performance. Empirical results also confirmed that learning orientation has a considerable positive effect on extensive innovation and performance (Lee & Tsai, 2005; Hughes *et al.*, 2008). Studies by Atuahene-Gima *et al.* (2005), Farrell and Oczkowski (2002), Mavondo *et al.* (2005), Liu *et al.* (2002), and Limpibunterng and Johri (2009) established that firms with higher levels of learning orientation demonstrate higher performance than firms having lower level of learning orientation, mainly in strongly and unstable competitive environments.

The results are also consistent with social cognitive learning theory which proposes a comprehensive causal structure that deals with the growth of learning in individuals and its effect on the regulation of their behaviours (performance). Psychological theories have concentrated on learning through the influences of one's behaviours or through the organisations in which they work or through social networks. This basic form of learning influences directly person's actions and their performances. This very much applies to the leaders in universities because through learning they are capable of performing better in the face of extreme chaos in the highly changing environment. This study contributes to the field of knowledge by further opening up and clarifying the relationship that exists between learning orientation and job performance of university leaders.

Having discussed the direct effects of three predictors on the job performance of university leaders', next section discusses the mediating effect of entrepreneurial leadership on the relationships between the three predictors and job performance.

5.3.2 Mediating Effect of Entrepreneurial Leadership

Three hypotheses (H4a, H4b, H4c) were formulated and tested regarding the mediating effect of entrepreneurial leadership on the relationships between the managerial competency, self-efficacy, learning orientation and the job performance of universities leaders. Results from the PLS analysis demonstrated that all three hypotheses were found to be significant and positively and strongly validated.

By definition entrepreneurial leadership is the procedure of making an entrepreneurial vision and motivating a group to act out the vision in uncertain and high-velocity environments (Kuratko, 2007; Gupta *et al.*, 2004; Chen, 2007; Surie & Ashely, 2008). An entrepreneurial leadership style is distinguished by giving autonomy to personnel. When giving autonomy to the personnel they get the opportunity to carry out efficiently because they work self-directed, creatively and independently (Arshad *et al.*, 2014). Several studies suggested that organisational factors impact the procedure of devising leadership (Wang *et al.*, 2012; Bagheri *et al.*, 2013), and that a new type of business leader must emerge and be prepared to lead and face enhanced uncertainty and competitiveness in these dynamic marketplaces (McGrath & MacMillan, 2000). They described these new sorts of business leaders as 'entrepreneurial leaders'. These leaders are equipped with the advanced capability to create new ideas, tendency to discover new opportunities, propensity to execute the innovative ideas to enhance the performance of the firm, the capability to confront the challenges and the ability to influence personnel to be innovative (Fernald *et al.,* 2005; Gupta *et al.,* 2004; Cogliser & Brigham, 2004; Chen, 2007; Thornberry, 2006). Kempster and Cope (2010), Gupta *et al.* (2004) and Tarabishy *et al.* (2005) suggested that a new kind of entrepreneurial leader is needed in the competitive and turbulent environment that firms confronting today. One aspect of firms with increased growth potential could be its entrepreneurial leadership style (Pihie *et al.,* 2014; Leitch *et al.,* 2013; Kuratko, 2007). Firms that are guided by entrepreneurial leaders build and manage their own environments, are more productive, and become more creative in the procedure as they build and recognise their vision. Entrepreneurial leaders then empower workers to act on this vision to drive the organisation onward (Kotelnikov, 2005). The notion of entrepreneurial leadership has become more and more significant because organisations have to be more entrepreneurial to improve their performance, their capability for long-term survival and adaptation (Prieto, 2010). Hypotheses examining the mediating effect of entrepreneurial leadership are as follows:

H4a: Entrepreneurial leadership mediates the relationship between managerial competency and job performance of university leaders in Pakistan.

H4b: Entrepreneurial leadership mediates the relationship between self-efficacy and job performance of university leaders in Pakistan.

H4c: Entrepreneurial leadership mediates the relationship between learning orientation and job performance of university leaders in Pakistan.

Result presented in previous chapter found support for the (H4a, H4b, H4c) hypotheses at the 0.01 level of significance ($\beta = 0.171$, $t = 3.288$, $p < 0.01$), ($\beta =$

0.250, $t = 4.545$, $p < 0.01$) and ($\beta = 0.164$, $t = 3.727$, $p < 0.01$) with the indirect effects 95% Boot CI: [LL = 0.069, UL = 0.273], [LL = 0.142, UL = 0.358] and [LL = 0.078, UL = 0.250] respectively. The results conclude that the mediation effect is statistically significant on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of university leaders.

One thing that has been observed and worth mentioning is that understanding of entrepreneurial leadership and its effects have secured significance because public organisations are now realising that entrepreneurial quests diminish aim ambiguity and increase performance. As entrepreneurship is determined by the leadership and governance of higher education institutions (O'Connor, 2012), Nayyar and Mahmood (2014) found the same thing that most public sector tertiary education institutions in Pakistan do. They are becoming more conscious that entrepreneurial attempts and opportunities are keys to encouraging in providing better service to the public, increasing efficiency and in improving performance, and one of the key characteristics of this leadership behaviour is autonomy. By giving autonomy to staff will give them more opportunity to carry out tasks efficiently because they work self-directed, creatively and independently (Arshad *et al.,* 2014).

Results regarding the mediating effects represent the major contributions for this study because the literature was unable to find much evidence to support the claim of mediation of entrepreneurial leadership, therefore, the questions of why and how the mediation of entrepreneurial leadership took place were answered by a couple of studies but mainly with theoretical explications. Therefore, important theories including resource-based theory (Penrose, 1959) and contingency theory (Fiedler, 1972) have provided a theoretical basis for the new findings.

Hunter (2013) studied the mediating role of entrepreneurial leadership in an investigation of the competitiveness of SMEs in the UK south-west food and drink manufacturing. His results showed a partial mediation where the causal relationship between social capital and entrepreneurship process was confirmed.

Nordin (2008) found in his research that the local and universal movements in universities, as well as the varying internal and external atmosphere, show many challenges to the leaders in universities. Hence, there has been a belief of implementing entrepreneurial leadership to enhance institutional performance (Mohtar & Rahim, 2014). As higher education institutions find themselves working in a more market-oriented and competitive environment, they require to be flexible and capable of responding rapidly to market stresses and signals. Thus, many university leaders have begun searching for ways to make their universities more autonomous and entrepreneurial. Also, it is expected that entrepreneurial leadership has a positive connection with firm performance (Mohtar & Rahim, 2014). This is very much in line with the mediating role of entrepreneurial leadership found in this study, so it is interpreted in order to make universities more autonomous university leaders should start practising entrepreneurial leadership behaviour as a tool to enhance performance and to respond external environment challenges.

Researchers and authors have recognised that entrepreneurial thinking is essential to organisational achievement in the private sector (Covin & Covin, 1990; Zahra *et al.*, 1995); as well as the public sector (Ramamurti, 1986; Sandford, 2000). Since then, entrepreneurship has become one of the significant thoughts in the theoretical domain of resource-based theory and in the area of strategic management (Todorovic, 2004; Barney, 2001; Bruton & Rubanik, 2002; Alvarez & Busenitz, 2001). As per Alvarez and Busenitz (2001), resource-based theory and the entrepreneurship have the identical level of examination, the resource and, as entrepreneurship is an opportunity-seeking behaviour, it is now known as a resource (Todorovic, 2004). As per to Wernerfelt (1984; 1995), resources are divided into organisational resources, human resources and physical resources which are worth creating resources. As in public sector universities, the human resources regarded for this study are the university leaders. To be a world-class university on the basis of performance is a long and ongoing process and consists of the struggle of their leaders to achieve a competitive advantage and thus achieve superior performance and financial stability and independence for their institutions. Innovative human resource (entrepreneurial university leaders) contributes to the organisations' achievement and superior performance through their effective performance.

Contingency approaches and theories to leadership comprise many factors, facets or dimensions. Fiedler (1972) in his contingency-based model proposed that leaders must have an authoritative leadership style. He additionally clarified that leaders must own the exceptional leadership skills and/or style essential for meeting the requirements of a specific situation, adaptive to environment, and in some cases know which approach best fulfils the requirements of the environmental situation that prevails. To sum up, there are many behaviours in leadership that may be of worth to university leaders but this unique behaviour of entrepreneurial leadership that is applicable to university leaders might allow them to perform their jobs more efficiently in the dynamic environment.

It can be concluded from the above discussion that Resource Based Theory supports the view of individual university leader's performance and its impact on overall institutional performance. Contingency Theory supports the unique leadership behaviour (entrepreneurial leadership) to respond obstacles, challenges and turmoil university leaders are facing currently due to the highly changing or dynamic environment.

This study contributes to the field of knowledge by further opening up and clarifying the mediating effects of entrepreneurial leadership that exist between managerial competency, self-efficacy, learning orientation and job performance of university leaders, next section discusses the fifth hypothesis regarding moderating effects of dynamic environment on the relationships between the above-mentioned predictors and job performance.

5.3.3 Moderating Effect of Dynamic Environment

Three hypotheses (H5a, H5b, H5c) were formulated and tested regarding the moderating effect of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of university leaders. Results from the PLS analyses demonstrated that all three hypotheses were found to be insignificant.

Environmental dynamism symbolises the rate of transformation in an environment. Wijbenga and van Witteloostuijn (2007) described environmental dynamism as the rate at which the services of firms and the choice of consumers vary over time. Dynamism stems from the proceedings of industry customers or competitors as well as changes in overall demand and developments in technology (Chi *et al.,* 2009; Nandakumar *et al.,* 2010). The environmental dynamism has to be a necessary aspect for the source of productivity and strategy development (Idris & Momani, 2013), as in dynamic environments, the laws concerning to resources and their values are more flexible, as marketplaces reconfigure in unanticipated ways (Senyard *et al.,* 2015). Studies propose that organisations require abilities dealing with quickly changing environments to take benefit of new opportunities and recompose resources (Malik & Kotabe, 2009). To maintain a competitive advantage in an unstable market environment, firms not only have to create, gather and keep resources but also need to evaluate regularly the functionality of their market knowledge and assets (Fang *et al.,* 2014). Working in dynamic environments realise organisations recognise the requirement for adaptation and change and thereby encourage the endeavours of the organisation to create more dynamic capabilities that can better acknowledge to a dynamic environment (Zahra *et al.,* 2006). Ellis and Shpielberg (2003) discussed that firms come to know their environments only through leaders' viewpoints. Hypotheses examining the moderating effect of environmental dynamism are as follows:

H5a: Dynamic environment moderates the relationship between managerial competency and job performance of university leaders in Pakistan.

H5b: Dynamic environment moderates the relationship between self-efficacy and job performance of university leaders in Pakistan.

H5c: Dynamic environment moderates the relationship between learning orientation and job performance of university leaders in Pakistan.

Results presented in previous chapter found no support for the (H5a, H5b, H5c) hypotheses at the 0.01 / 0.05 level of significance, indicated that the interaction terms representing MC*DE (β = 0.211, t = 1.518), SE*DE (β = -0.182, t = 1.598) and LO*DE (β = -0.098, t = 0.913) were not statistically significant. Even though PLS path coefficients revealed that all three formulated hypotheses were not significant and were not supported because of their low t-values, but as far as the strength of the moderating effect is concerned this study showed a low effect size of 0.04, which does not necessarily mean that the underlying moderating effect is insignificant. According to Chin *et al.* (2003), even a small interaction effect can be meaningful under extreme moderating conditions.

Results regarding the moderating effects of the dynamic environment also represent the contribution for this study. Evidence about moderation was answered in the light of past studies as well as theoretical explications. The research on the dynamic environment is very diverse, contradictory and interesting, specifically the past research with reference to performance. First, have a look at the studies that are in line with results of this study then see the flip side, means the studies that are contradictory.

Some research says the dynamic environment has a moderating influence on performance, but some say that there is less influence of dynamic environment if the leaders respond the environment with strong leadership style, like entrepreneurial leadership style, so there would be low or no effect of the dynamic environment. Like, Homburg *et al.* (1999) found that higher management in firms tends to have a smaller affect on performance in dynamic rather than constant environments, but there is a requirement of adaptation and change by organisations. Zahra *et al.* (2006) study found by improving dynamic capabilities, an organisation can better acknowledge to a dynamic environment. So it means that the environment is not a big deal for those leaders who are competent, capable and having a strong leadership style. They can easily handle such environment without much affecting their performance.

One interesting and unique thing that many researches mentioned with respect to deal with environmental dynamism is the element of entrepreneurialism in the leadership behaviour. Like Beckford (1995) found in his research that the entrepreneurial procedure cannot be detached from the environmental perspective of entrepreneurs, which is also the main contribution of this study that mediating entrepreneurial leadership behaviour can enhance the job performance of university leaders and give them more potential to alleviate the effect of dynamic environment. Ensley *et al.* (2006) also supported this view by saying that entrepreneurial leaders could do good to adjust their leadership actions as per the environmental situations in which their organisations function. Preston (1994) also focused the same issue of leadership by saying, university leaders are experienced with crucial changes in their external and internal environments that influence their general functioning and leadership jobs covering how they comprehend, infer and build their leadership roles. Again the focus is on building leadership role that is best to respond the crucial changes in their external environment.

Hanna (2003) concluded the same thing in her research especially with higher education institution's perspective that a vital challenge is the capability to be adaptable, flexible and know how to solve the problem so as to meet the demands of an increasingly complex and dynamic environment. Statistical results of this study recommend the same that through adopting entrepreneurial leadership style which covers all these aspects e.g., adaptability, flexibility and problem-solving capabilities university leaders would be able to meet the demands of the increasingly dynamic environment. So it can be said that due to entrepreneurial leadership behaviour, the dynamic environment doesn't have moderation on the performance of university leaders in this study.

Idris and Momani (2013) found in his research that firms require strategic management approach grounded on non-traditional strategies and managerial philosophies to deal with environmental dynamism seeking to realise higher performance. This is what this study found that managerial competencies have a strong influence on performance. If university leaders will be well versed with management capabilities they respond the environmental dynamism in a better way without compromising their performance.

It has been observed that now universities are hiring young, competent and skilled staff especially in the case of faculty. They are working close with the department heads and the leaders of the university. This young pool of energetic people seems to be one of the sources to meet the challenges of the global and dynamic environment. As it is indicated by Subrahmanyam and Shekhar (2014), building a sturdy pool of skilled individuals is emerged to be unavoidable to meet requirements of the challenges of the international environment. Also by Ling and Yan-bin (2012), being alert and conscious of the changes in the environment weaken and cripple the influence of environmental changes on performance. Secondly during data collection it has also been observed that in most of the cases leaders of universities are not working alone, but they are working in a very intact heterogeneous team of mixed staff including middle age professors and young male and female PhDs, and the research says diverse top management teams perform excellently in dynamic environments (Hambrick & Mason, 1984). Thirdly as it is mentioned earlier public tertiary education institutions in Pakistan have started becoming conscious about entrepreneurial culture, it also helps them to cripple and weaken the influence of environmental changes on their performances, as it is mentioned by (Covin & Slevin, 1989), accepting the idea of entrepreneurship can address uncertainties in dynamic and turbulence environment.

If it is viewed from the perspective of theory, the contingency view argues that firm's performance initiates from a fit between environmental factors and firm structure and proposes that mechanic structures are successful in steady environments whereas organic organisational structures are more effective in dynamic environments (Donaldson, 2001). Organic organisations are complementary to entrepreneurial leaders rather than the conventional type of leaders because entrepreneurial leaders possess more ability to perform effectively in the dynamic environment.

As per Bandura's (1989) Social Cognitive Theory (SCT) where cognitive process, behaviour and environment relate with one another, under SCT, individual's environment and behaviour affect each other. The research has recognised the environment of entrepreneurs as the main element affecting their entrepreneurial actions (Ucbasaran *et al.*, 2000). Means it's the environment that pushes the leaders to switch their leadership style and actions towards entrepreneurial and due to this entrepreneurial style there is less influence of dynamic environment on their performances.

On the other side, many researchers found the moderating effect of dynamic environment on a performance like, (Gilley & Rasheed, 2000) mentioned in his study that the moderating role played by environmental dynamism is well supported in the literature by cases reviewing a range of correlations between organisational performance and firm variables. Khandwalla (1977) also found dynamism shows ambiguity that undermines the capability of managers to anticipate future actions as well as their affect on the organisation. Gül (2011) and Akgün *et al.* (2008) linked environmental dynamism straight with performance. Nadkarni and Narayanan (2007) have documented empirical support discussing that unpredictable and turbulent environments affect organisation's performance. Zahra's (1996) observation that environment plays a moderator role was well documented by many studies including Chen *et al.* (1998), Rauch and Frese (2007), Wijbenga and Witteloostuijn (2007), and Okhomina (2010).

This study contributes to the field of knowledge by further opening up and clarifying the moderating role of dynamic environment on the job performance of university leaders, but there is still a need to further explore this variable and its moderating effect, next section discusses the contribution of study.

5.4 Contributions of Study

This study extends the understanding of the mediating influence of entrepreneurial leadership and the moderating effect of dynamic environment on the relationships between managerial competency, self-efficacy, learning orientation and job performance of university leaders in Pakistan and in the overall education industry in general. As education sector is increasingly becoming global, this study is an early attempt to analyse the factors that influence the job performance of leaders in universities in Pakistan. This region is a booming market with a high growth of student population and significant economic power that will continue to develop drastically in the upcoming years. This scenario demanded the examination of the variables under study in order to have an insight regarding performance enhancement that can play a crucial part in overall performance improvement of universities in a well-planned manner.

5.4.1 Practical Contribution

The practical contribution of this study is discussed in two different perspectives; namely, managerial and for policy makers. This study offered significant values for practitioners since it had many managerial implications. First, there is a significant role of the three determinants; managerial competencies, self-efficacy and learning orientation for the effective and efficient performance of leaders which ultimately impact the organisational performance of the institutions of higher education in Pakistan. These are the leaders who established the quality management practices within their faculties. This implies that all the activities conducted by the employees should be of highly performance oriented. Second, the results of the study regarding the significant impact of entrepreneurial leadership on the university leaders' job performance implies that the leaders of schools/faculties in the higher education institutions of Punjab, Pakistan should establish and further develop an entrepreneurial cultural that encourage pro-active behaviour, innovation and risk tolerance as learning opportunities and growth drivers.

Focusing the effect of mediation of entrepreneurial leadership on the relationships between three determinant factors, and the leader's job performance of the higher education institutions in Punjab, Pakistan provides some insights into how the integration of entrepreneurialism in their leadership behaviour can help in building the competitive advantage to increase the overall performance. This study, however, could be very informative and of a significant value for policy-makers for many reasons. First, it revealed the importance of quality initiatives to the university leader's performance which affects the overall organisational performance of higher education institutions in Punjab, Pakistan in particular and thus to the overall economy in general. Towards that end, policymakers can help university leaders to achieve a high level of products and services quality and offer them the required training and consultation. Second, this study shows the significance of entrepreneurialism to the organisational performance. Therefore, policy makers can facilitate the organisations to be entrepreneurial by providing incentives and opportunities and by encouraging the training and consultation.

Many researchers such as Russell and Russell (1992) stated that for entrepreneurialism to be enhanced, all the organisational members should be engaged and involved in knowledge activities. Moreover, there must be a guide for policy-makers in using entrepreneurial leadership to create and enhance the competitive advantage of an organisation. Having emphasised that the higher education sector is the heart of the economy of any country and one of the effective drivers of the economic prosperity, therefore, the policy-makers should give more attention to the higher education institutions when planning for the long-term development process.

5.4.2 Theoretical Contribution

Despite the extensive research work that has been carried out in the entrepreneurial and leadership literature in the light of the contingency theory and organisational change, in other words, the results call for further research to resolve this inconsistency. Moreover, in view of the lack of empirical studies investigating the influence of three determinants i.e., managerial competency, self-efficacy and learning orientation on the university leader's job performance and on its implications in the presence of entrepreneurial leadership and dynamic environment in the higher education institutions of Punjab, Pakistan, this study indeed offered an attempt to fill this theoretical gap in the existing literature.

The past research revealed little empirical research work to study the relationships between these three determinant factors and the job performance of leaders in the context of the higher education industry. In addition to that, most of the work related to this has been far from empirical-based research work. Therefore, this study added towards the scarce empirical research stream particularly in the context of one of the developing countries like Pakistan. Second, the presence of entrepreneurial leadership is the first attempt by this study to identify it as a mediator in the context of higher education institutions in Punjab, Pakistan, in addition to studying and analysing the three important predictors of university leaders' job performance.

5.4.3 Methodological Contribution

This study has explored a relatively new tool of analysis (i.e., PLS) to explain the structural relationship between the constructs of this study. The PLS tool is a general model that comprises principal components techniques, canonical correlation, multiple regression, multivariate analysis of variance among others. Hence, the present study's use of this relatively new tool of analysis has some important methodological contributions.

The use of PLS tool provides an opportunity for testing the robustness and predictive power of the tool in a study that explores integrative relationships of variables under study. The PLS tool provided a new framework for comparisons of results obtained from previous studies that used different tools of analysis. Thus, the current study represented a unique methodological contribution to studied variables found in the literature. The adopted scale was subject to reliability and validity tests. Results of convergent and discriminant validity showed acceptable results that went beyond the minimum thresholds. Finally, PLS principal component analysis was used to refine and fit the data for this study, thus provided new knowledge about the effects of PLS PCA on entrepreneurial leadership, dynamic environment, managerial competency, self-efficacy, learning orientation and the job performance constructs. The PLS confirmatory and validation processes for the six measurements of this study represented a methodological contribution to the literature by providing additional validation about the constructs in a new methodological perspective. It also provides future researchers with an extended example of the method used for the testing mediator and moderator with the utilisation of bootstrapping and confidence interval (CI). By using the bootstrapping method as confirmation of the mediation effect, this study allows the researcher to further investigate the quasi-paradoxical relationships which otherwise overlooked in traditional mediation analyses.

5.5 Limitations of Study

As other researches, this study also has some limitations and deficiencies, and thus the above conclusions and contributions should be generalised with caution. Firstly, the study is limited only to leaders of the universities. Secondly, this study focused on only one region, Punjab in Pakistan. Even though the study population (leaders of the university) is homogeneous all over Pakistan, the level of regions' educational development and other demographic variables may hinder the generalisation of results. Thirdly, this study was undertaken only in one country (Pakistan) therefore, the results may not be applicable in other countries both within Asia and beyond.

Fourthly, this study did not include other stakeholders in the education sector in Pakistan particularly the government as such, the views of respondents from only one angle (the universities) were considered. Fifthly, cross-sectional survey was adopted for this study in which data was collected within the period of only four and a half month. The problem of using the cross-sectional survey is that the studied variables might change over time. A change in management policy, leadership style or economic situation could have an impact on the research variables. Because this study is not longitudinal, it has a specified expected period of completion of three years; a longer period for data collection is not feasible.

Sixthly, this study only focused on the leaders of Punjab, Pakistan's public sector higher education institutes, indicating limited scope of the study. Also, the scope of this study is limited to academic institutions; the results might differ in case of other service industries. Seventhly, the model presented in this study is too small in scope to examine all factors that might influence leader's job performance of public sector universities in Punjab, Pakistan.

5.6 Suggestions for Future Research

The identified limitations of the study above formed the basis for future studies based on the scope of this study. Firstly, this study was confined to one province that was Punjab in Pakistan; future studies have the opportunity to include other regions in Pakistan for comparative analysis or all the five provinces to be able to provide the basis for generalisation. Secondly, this study was only conducted in Pakistan; future studies may consider the applicability of similar studies in other Asian countries or beyond or other service industries to validate the findings and implementation of the research theoretical model. Thirdly, since only the views of leaders of the universities were considered in this study, future studies may consider involving participants from the ministry of education or higher education commission to be able to strike a balance. Also, this study did not aim at comparing the leaders with private sector universities of Punjab, Pakistan; it is recommended that future research should consider this.

Fourthly, the present study is cross-sectional in nature because of time and cost constraints. In the future, longitudinal studies can be conducted in order to have a deeper insight and understanding of the behaviour of university leaders over a longer period of time. Fifthly, this study has theoretically demonstrated the predictive validity of its model. However, future research may come in to investigate other variables that may improve the variance explained by the present model. In addition, future studies should consider various conditions under which performance is more or less effective. Sixthly, suggestions for mediating and moderating variables, the future study can investigate the possible use of other leadership styles as a mediating variable. Similarly, this study suggests future studies to investigate the possible use of personality factors such as conscientiousness, emotional stability, openness to experience and extraversion as moderating variables.

5.7 Conclusion

Taken together, the present study has provided additional evidence to the growing body of knowledge concerning the mediating influence of entrepreneurial leadership on the relationships between managerial competency, self-efficacy, learning orientation and the job performance of universities leaders in a dynamic environment. Results from this study lend support to the key theoretical propositions. In particular, the current study has successfully answered all of the research questions and objectives despite some of its limitations. While there have been many studies examining the predictors of university leaders' job performance, however, the present study addressed the theoretical gap by incorporating entrepreneurial leadership as a significant mediating variable. The study has also managed to evaluate the moderating role of dynamic environment on the relationships between the exogenous and endogenous variables. The results of the findings pave the way for more future studies to be conducted in this area.

In addition to the theoretical contributions, the results of this study provide some important practical implications to organisations, policymakers, stakeholders and managers. Furthermore, on limitations of the current study, several future research directions were drawn. In conclusion, the present study has added valuable theoretical, practical, and methodological ramifications to the growing body of knowledge in the field of university leadership, job performance measurement and improvement, entrepreneurship and leadership, managerial competencies, self-efficacy and learning orientation, particularly in higher education sector.

Not amazingly, it has been recommended that a capability to build and support leaders who able to manage complexity, partnering successfully, involving people in the vision, and leading through transformation is 'not a luxury but a strategic need' for present day universities (Fulmer *et al.*, 2000).

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APPENDICES

APPENDIX I

DATA COLLECTION LETTER

OTHMAN YEOP ABDULLAH
GRADUATE SCHOOL OF BUSINESS
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA

UUM
Universiti Utara Malaysia

Tel: 604-928 7118/7119/7130
Faks (fax): 604-928 7160
Laman Web (Web): www.oyagsb.uum.edu.my

KEDAH AMAN MAKMUR • BERSAMA MEMACU TRANSFORMASI

UUM/OYAGSB/K-14
25 August 2014

TO WHOM IT MAY CONCERN

Dear Sir/Madam

DATA COLLECTION

PROGRAMME: DOCTOR OF PHILOSOPHY
SUPERVISOR: PROF. DR. ROSLI MAHMOOD

This is to certify that the following is a postgraduate student from the OYA Graduate School of Business, Universiti Utara Malaysia. He is pursuing the above mentioned course which requires him to undertake an academic study and prepare an assignment. The details are as follows:

NO.	NAME	MATRIC NO.
1.	Abdul Wahab	95200

In this regard, I hope that you could kindly provide assistance and cooperation for him to successfully complete the assignment given. All the information gathered will be strictly used for academic purposes only.

Your cooperation and assistance is very much appreciated.

Thank you.

"SCHOLARSHIP, VIRTUE, SERVICE"

Yours faithfully

ABDUL SHAKUR BIN ABDULLAH
Assistant Registrar
for Dean
Othman Yeop Abdullah Graduate School of Business

c.c - Student's File (95200)

Universiti Pengurusan Terkemuka
The Eminent Management University

APPENDIX II

QUESTIONNAIRE

SURVEY ON ROLE OF ENTREPRENEURIAL LEADERSHIP ON THE JOB PERFORMANCE OF UNIVERSITY LEADERS

Dear Respondent,

This research is designed to collect information about the entrepreneurial leadership influencing job performance of university leaders with special reference to the mediating role of entrepreneurial leadership and the moderating role of dynamic environment in independent – dependent variables relationship. Entrepreneurial leadership refers to the behavioural aspect of leaders to foster the process of organisational innovation by recognising and exploiting new opportunities to improve the performance of the organisation, solving problems creatively and using resources effectively. By asking the following questions we would be able to understand to what extent your leadership is entrepreneurial. For each statement, please circle the number that indicates the extent to which you agree or disagree based on the following scale.

1- Strongly Disagree
2- Disagree
3- Slightly Disagree
4- Neutral
5- Slightly Agree
6- Agree
7- Strongly Agree

Your contribution is very important for this research. All the information collected in this research would be strictly confidential and only meant for academic purposes. We really appreciate your time and participation.

Note: The researcher will donate Rs. 12/- to Edhi Foundation for flood victims on every filled received back questionnaire. So please fill and return to make your contribution.

Sincerely,

Abdul Wahab
PhD Scholar
Matric No. 95200
Mob: +92-333-4384412
s95200@student.uum.edu.my
School of Business Management
University Utara Malaysia

Dr. Rosli Mahmood
Professor (Entrepreneurship & SMEs)
Email: rosli@uum.edu.my
School of Business Management Email:
University Utara Malaysia

A. Job Performance **SD** **SA**

1	I am capable of adapting leadership style to fit varying situations	1	2	3	4	5	6	7
2	I am capable of recognising when a decision is required	1	2	3	4	5	6	7
3	I can act with proper swiftness when making decisions	1	2	3	4	5	6	7
4	I am able to assist departmental goal setting	1	2	3	4	5	6	7
5	I encourage faculty to achieve departmental objectives and goals	1	2	3	4	5	6	7
6	I am monetary responsible	1	2	3	4	5	6	7
7	I put an effort to get suitable alternatives involved in problem resolving	1	2	3	4	5	6	7
8	I am able to recognise when a group requires further guidance	1	2	3	4	5	6	7
9	I effectively interact with a group to guide them to fulfill a job	1	2	3	4	5	6	7
10	I understand needs, concerns and personal issues of others	1	2	3	4	5	6	7
11	I am capable of resolving conflict	1	2	3	4	5	6	7
12	I show sensitivity in dealing with individuals from different backgrounds	1	2	3	4	5	6	7
13	I effectively deal with individuals concerning emotional problems	1	2	3	4	5	6	7
14	I recognise what information necessary to be communicated to others	1	2	3	4	5	6	7
15	I can perform effectively under pressure	1	2	3	4	5	6	7
16	I can perform effectively during opposition	1	2	3	4	5	6	7

		SD						SA
17	I can handle negative and positive feedback properly	1	2	3	4	5	6	7
18	I can make clear oral presentations of ideas or facts	1	2	3	4	5	6	7
19	I am able to express ideas clearly in writing	1	2	3	4	5	6	7
20	I interact nicely with students	1	2	3	4	5	6	7
21	I communicate effectively with other academic departments within the university	1	2	3	4	5	6	7
22	I do my job effectively with department professionals	1	2	3	4	5	6	7
23	I communicate effectively with alumni	1	2	3	4	5	6	7
24	I demonstrate a clear view of the professional and academic norms of the department	1	2	3	4	5	6	7
25	I make easier, faculty scholarly activities	1	2	3	4	5	6	7
26	I facilitate faculty quality in teaching	1	2	3	4	5	6	7
27	I encourage achievement and development among students	1	2	3	4	5	6	7
28	I have an effective working relationship with other leaders in the university	1	2	3	4	5	6	7
29	I represent my department interests in communication within the university	1	2	3	4	5	6	7
30	I effectively communicate college and university decisions and orders to department	1	2	3	4	5	6	7

B. Managerial Competency

		SD						SA
1	I have the capability to plan, prioritise and execute according to schedule	1	2	3	4	5	6	7
2	I know the best use of skills and resources within the group or department	1	2	3	4	5	6	7
3	I have the capability to plan and prioritise work	1	2	3	4	5	6	7
4	I am capable of performing both short and long term planning and distributing resources effectively	1	2	3	4	5	6	7

5	I have the ability to behave firmly, honestly and backup my words with action	1	2	3	4	5	6	7
6	I have the capability to ensure work performance through effective discipline	1	2	3	4	5	6	7
7	I am capable of creating and capitalising on opportunities for competitive advantage	1	2	3	4	5	6	7
8	I possess very good computer expertise to carry out job function	1	2	3	4	5	6	7
9	I have the capability to anticipate and fulfill customer needs and trends	1	2	3	4	5	6	7
10	I have the capability to evaluate and use information for justification and solve problems	1	2	3	4	5	6	7
11	I have the capability to evaluate and interpret data into beneficial information by applying statistical tools	1	2	3	4	5	6	7

C. Self-Efficacy **SD** **SA**

1	I am capable of accomplishing majority of the goals that I have assigned to myself	1	2	3	4	5	6	7
2	When facing complicated tasks, I am sure that I will succeed in them	1	2	3	4	5	6	7
3	Generally, I believe that I can achieve outcomes that are significant to me	1	2	3	4	5	6	7
4	I believe I can accomplish at most any aim to which I prepare my mind	1	2	3	4	5	6	7
5	I am capable to successfully overcome many challenges	1	2	3	4	5	6	7
6	I am certain that I can work effectively on many different tasks	1	2	3	4	5	6	7
7	As compared to other persons, I can perform majority tasks very nicely	1	2	3	4	5	6	7
8	Even when things are hard, I can work quite well	1	2	3	4	5	6	7

D. Learning Orientation SD SA

1	I basically accept that our university's capability to learn is the key to our competitive advantage	1	2	3	4	5	6	7
2	The basic values of our university include learning as a key to improvement	1	2	3	4	5	6	7
3	The perception throughout our university is that employee learning is an investment, not an expense	1	2	3	4	5	6	7
4	Learning in my university is perceived as a key commodity essential to assure organisational survival	1	2	3	4	5	6	7
5	There is a commonality of goal in my university	1	2	3	4	5	6	7
6	There is a total consensus on our organisational vision across all levels, functions, and departments	1	2	3	4	5	6	7
7	All employees are devoted to the objectives of this organisation	1	2	3	4	5	6	7
8	Employees view themselves as partners in charting the direction of the organisation	1	2	3	4	5	6	7
9	We are not afraid to reflect critically on the shared assumptions we have made about our customers	1	2	3	4	5	6	7
10	Employees in this institution understand that the very way they see the marketplace must be constantly questioned	1	2	3	4	5	6	7
11	We constantly judge the quality of our activities and decisions over time	1	2	3	4	5	6	7
12	There is a good deal of organisational conversation that keeps alive the lessons learned from history	1	2	3	4	5	6	7
13	We always evaluate ineffective organisational activities and communicate the lessons learned widely	1	2	3	4	5	6	7
14	We have specific systems for sharing lessons learned in organisational activities from department to department (division to division, group to group)	1	2	3	4	5	6	7
15	We put little effort in sharing lessons and experiences	1	2	3	4	5	6	7

E. Entrepreneurial Leadership SD SA

1	I often come up with profoundly advanced ideas related to the services my university is offering	1	2	3	4	5	6	7
2	I often come up with ideas of totally new services that our university could offer	1	2	3	4	5	6	7
3	I would like my subordinates to challenge the current approach within which we carry out business activities	1	2	3	4	5	6	7

4	I challenge and push my subordinates to behave in a more innovative way	1	2	3	4	5	6	7
5	I am creative	1	2	3	4	5	6	7
6	I create processes that enable subordinates to ignore the unnecessary rules, regulations and bureaucratic senselessness of the organisation	1	2	3	4	5	6	7
7	I build a culture in which staff is rewarded for attempting different and new things even if they don't work out in the end	1	2	3	4	5	6	7
8	I am passionate about my work	1	2	3	4	5	6	7
9	I am versatile	1	2	3	4	5	6	7
10	I show patience in complex situations	1	2	3	4	5	6	7
11	I like to do more with less to prove my skills	1	2	3	4	5	6	7
12	I usually look for less expensive ways to run the department/university while creating superior value for the beneficiaries	1	2	3	4	5	6	7
13	I would preferably like to hire key players because of personality, not only due to outstanding qualifications or resumes	1	2	3	4	5	6	7
14	I understand the importance of acquiring funds and other resources outside the normal channels	1	2	3	4	5	6	7
15	I am visionary	1	2	3	4	5	6	7
16	I am a risk taker	1	2	3	4	5	6	7

F. Dynamic Environment **SD** **SA**

1	Competitor universities continually revise their strategies according to the market needs / trends	1	2	3	4	5	6	7
2	As compared to my university, other higher education institutions are spending more on R&D to a source of additional revenue as to be self-sufficient	1	2	3	4	5	6	7
3	In contrast to my university, other competitor universities are spending more on advertisement	1	2	3	4	5	6	7
4	Variations in university's customer preferences in the market are frequent	1	2	3	4	5	6	7
5	Variations in laws and regulations from higher education commission / bodies like accreditations, quality assurance, funding, infrastructure etc. are frequent	1	2	3	4	5	6	7

G. General Information

Gender

Male	
Female	

Age (in years)

25 - 29	
30 - 35	
36 - 40	
41 - 45	
46 - 50	
Above 50	

Qualification

Professional	
Masters	
MS / M. Phil	
PhD	
Postdoc	

Academic Position

Professor	
Associate Professor	
Assistant Professor	
Lecturer	

Designation

Deputy Vice Chancellor	
Dean	
Deputy Dean	
Director / Chairman	
Head of Department	

Name of Department

(e.g., Computer Sciences)

Experience (in years)

Academic Experience

2 – less than 5	
5 – less than 10	
10 – less than 15	
15 – less than 20	
20 and more	

Experience as a University leader

2 – less than 5	
5 – less than 10	
10 – less than 15	
15 – less than 20	
20 and more	

No. of employees you are leading

Less than 10	
10 – less than 20	
20 – less than 30	
30 – less than 40	
40 – less than 50	
50 and more	

THANK YOU

APPENDIX III

MISSING VALUES REPLACEMENT

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases	Creating Function
			First	Last		
1	PF6_1	1	1	242	242	SMEAN(PF6)
2	PF13_1	1	1	242	242	SMEAN(PF13)
3	PF23_1	1	1	242	242	SMEAN(PF23)
4	PF27_1	1	1	242	242	SMEAN(PF27)
5	PF28_1	1	1	242	242	SMEAN(PF28)
6	MC5_1	1	1	242	242	SMEAN(MC5)
7	MC6_1	1	1	242	242	SMEAN(MC6)
8	LO7_1	1	1	242	242	SMEAN(LO7)
9	LO10_1	1	1	242	242	SMEAN(LO10)
10	LO12_1	1	1	242	242	SMEAN(LO12)
11	EL3_1	1	1	242	242	SMEAN(EL3)
12	EL7_1	1	1	242	242	SMEAN(EL7)
13	EL12_1	1	1	242	242	SMEAN(EL12)

APPENDIX IV

TESTS OF NORMALITY

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PF1	0.181	242	0	0.888	242	0
PF2	0.292	242	0	0.841	242	0
PF3	0.247	242	0	0.876	242	0
PF4	0.23	242	0	0.86	242	0
PF5	0.204	242	0	0.872	242	0
PF6	0.227	242	0	0.871	242	0
PF7	0.203	242	0	0.871	242	0
PF8	0.256	242	0	0.866	242	0
PF9	0.216	242	0	0.878	242	0
PF10	0.228	242	0	0.859	242	0
PF11	0.255	242	0	0.863	242	0
PF12	0.25	242	0	0.858	242	0
PF13	0.212	242	0	0.879	242	0
PF14	0.239	242	0	0.886	242	0
PF15	0.222	242	0	0.845	242	0
PF16	0.216	242	0	0.876	242	0
PF17	0.213	242	0	0.88	242	0
PF18	0.23	242	0	0.867	242	0
PF19	0.231	242	0	0.885	242	0
PF20	0.221	242	0	0.858	242	0
PF21	0.231	242	0	0.872	242	0
PF22	0.221	242	0	0.88	242	0
PF23	0.226	242	0	0.872	242	0
PF24	0.222	242	0	0.879	242	0
PF25	0.227	242	0	0.874	242	0
PF26	0.224	242	0	0.864	242	0
PF27	0.23	242	0	0.845	242	0
PF28	0.228	242	0	0.882	242	0
PF29	0.209	242	0	0.87	242	0
PF30	0.218	242	0	0.849	242	0
MC1	0.218	242	0	0.859	242	0
MC2	0.245	242	0	0.873	242	0
MC3	0.216	242	0	0.859	242	0
MC4	0.222	242	0	0.887	242	0
MC5	0.215	242	0	0.848	242	0
MC6	0.235	242	0	0.857	242	0

APPENDIX IV (CONTINUED)

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MC7	0.248	242	0	0.862	242	0
MC8	0.196	242	0	0.892	242	0
MC9	0.225	242	0	0.89	242	0
MC10	0.233	242	0	0.878	242	0
MC11	0.221	242	0	0.872	242	0
SE1	0.202	242	0	0.871	242	0
SE2	0.23	242	0	0.88	242	0
SE3	0.256	242	0	0.865	242	0
SE4	0.235	242	0	0.879	242	0
SE5	0.225	242	0	0.878	242	0
SE6	0.207	242	0	0.854	242	0
SE7	0.228	242	0	0.875	242	0
SE8	0.212	242	0	0.877	242	0
LO1	0.211	242	0	0.851	242	0
LO2	0.232	242	0	0.885	242	0
LO3	0.195	242	0	0.874	242	0
LO4	0.229	242	0	0.864	242	0
LO5	0.187	242	0	0.884	242	0
LO6	0.213	242	0	0.871	242	0
LO7	0.234	242	0	0.873	242	0
LO8	0.228	242	0	0.899	242	0
LO9	0.19	242	0	0.905	242	0
LO10	0.21	242	0	0.896	242	0
LO11	0.199	242	0	0.892	242	0
LO12	0.222	242	0	0.884	242	0
LO13	0.227	242	0	0.878	242	0
LO14	0.208	242	0	0.902	242	0
LO15	0.223	242	0	0.872	242	0
EL1	0.233	242	0	0.854	242	0
EL2	0.228	242	0	0.879	242	0
EL3	0.218	242	0	0.893	242	0
EL4	0.186	242	0	0.886	242	0
EL5	0.185	242	0	0.88	242	0
EL6	0.198	242	0	0.876	242	0
EL7	0.194	242	0	0.897	242	0
EL8	0.224	242	0	0.866	242	0
EL9	0.231	242	0	0.883	242	0
EL10	0.239	242	0	0.881	242	0
EL11	0.233	242	0	0.897	242	0
EL12	0.215	242	0	0.881	242	0
EL13	0.219	242	0	0.879	242	0
EL14	0.223	242	0	0.893	242	0
EL15	0.208	242	0	0.893	242	0

APPENDIX IV (CONTINUED)

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EL16	0.189	242	0	0.884	242	0
DE1	0.201	242	0	0.88	242	0
DE2	0.204	242	0	0.908	242	0
DE3	0.204	242	0	0.908	242	0
DE4	0.173	242	0	0.919	242	0
DE5	0.187	242	0	0.907	242	0

APPENDIX V

DESCRIPTIVE STATISTICS AND SKEWNESS

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
PF1	242	1	7	5.3678	1.30792	-0.92	0.156
PF2	242	1	7	5.4959	1.10167	-1.21	0.156
PF3	242	1	7	5.4835	1.15668	-0.973	0.156
PF4	242	1	7	5.7521	1.09908	-1.027	0.156
PF5	242	1	7	5.6488	1.17573	-0.91	0.156
PF6	242	1	7	5.5062	1.29512	-1.054	0.156
PF7	242	1	7	5.5909	1.13507	-0.982	0.156
PF8	242	1	7	5.5785	1.17549	-1.063	0.156
PF9	242	1	7	5.5702	1.22102	-0.95	0.156
PF10	242	1	7	5.6694	1.11488	-1.112	0.156
PF11	242	1	7	5.5702	1.13288	-1.099	0.156
PF12	242	1	7	5.6074	1.22509	-1.125	0.156
PF13	242	1	7	5.3859	1.32187	-1.033	0.156
PF14	242	1	7	5.4091	1.22644	-0.876	0.156
PF15	242	1	7	5.3099	1.3991	-1.291	0.156
PF16	242	1	7	5.4917	1.2794	-1.006	0.156
PF17	242	1	7	5.2851	1.27101	-1.002	0.156
PF18	242	1	7	5.4835	1.19201	-1.094	0.156
PF19	242	1	7	5.5661	1.14043	-0.816	0.156
PF20	242	1	7	5.6818	1.18864	-1.097	0.156
PF21	242	1	7	5.5702	1.197	-0.98	0.156
PF22	242	1	7	5.562	1.16585	-0.927	0.156
PF23	242	1	7	5.5104	1.19164	-1.056	0.156
PF24	242	1	7	5.5661	1.14407	-0.901	0.156
PF25	242	1	7	5.5248	1.17786	-1.02	0.156
PF26	242	1	7	5.6777	1.12471	-1.05	0.156
PF27	242	1	7	5.6473	1.25738	-1.278	0.156
PF28	242	1	7	5.5145	1.13086	-0.922	0.156
PF29	242	1	7	5.5744	1.2805	-1.004	0.156
PF30	242	1	7	5.5992	1.28205	-1.241	0.156
MC1	242	1	7	5.4215	1.19995	-1.208	0.156
MC2	242	2	7	5.6736	1.02096	-0.773	0.156
MC3	242	1	7	5.6322	1.14918	-1.13	0.156
MC4	242	1	7	5.5868	1.08685	-0.763	0.156
MC5	242	1	7	5.6598	1.19491	-1.244	0.156

APPENDIX V (CONTINUED)

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
MC6	242	1	7	5.6307	1.13073	-1.145	0.156
MC7	242	1	7	5.6033	1.06611	-1.08	0.156
MC8	242	1	7	5.3471	1.21683	-0.872	0.156
MC9	242	3	7	5.5124	1.12767	-0.548	0.156
MC10	242	1	7	5.5207	1.23972	-0.937	0.156
MC11	242	1	7	5.6074	1.18024	-0.954	0.156
SE1	242	1	7	5.3223	1.3948	-1.091	0.156
SE2	242	2	7	5.4793	1.13853	-0.867	0.156
SE3	242	1	7	5.5868	1.18895	-1.082	0.156
SE4	242	1	7	5.6322	1.09368	-0.86	0.156
SE5	242	1	7	5.5124	1.13134	-0.932	0.156
SE6	242	1	7	5.6281	1.17464	-1.163	0.156
SE7	242	1	7	5.3471	1.28322	-1.04	0.156
SE8	242	1	7	5.5207	1.17441	-0.964	0.156
LO1	242	1	7	5.3926	1.19769	-1.278	0.156
LO2	242	1	7	5.5744	1.08011	-0.761	0.156
LO3	242	1	7	5.4587	1.19488	-1.02	0.156
LO4	242	1	7	5.4959	1.26638	-1.146	0.156
LO5	242	1	7	5.4711	1.16715	-0.877	0.156
LO6	242	1	7	5.0909	1.34812	-1.109	0.156
LO7	242	1	7	5.3154	1.21545	-1.031	0.156
LO8	242	1	7	5.4008	1.20187	-0.697	0.156
LO9	242	1	7	5.2727	1.18076	-0.711	0.156
LO10	242	1	7	5.2905	1.17665	-0.813	0.156
LO11	242	1	7	5.3347	1.27843	-0.9	0.156
LO12	242	1	7	5.2241	1.17353	-0.957	0.156
LO13	242	1	7	5.2727	1.34195	-0.997	0.156
LO14	242	1	7	5.3223	1.32461	-0.74	0.156
LO15	242	1	7	5.0331	1.61905	-0.959	0.156
EL1	242	1	7	5.2231	1.28178	-1.235	0.156
EL2	242	1	7	5.3306	1.14789	-0.989	0.156
EL3	242	2	7	5.444	1.21453	-0.751	0.156
EL4	242	1	7	5.4339	1.20415	-0.785	0.156
EL5	242	1	7	5.5744	1.15798	-0.813	0.156
EL6	242	1	7	5.3884	1.23485	-1.054	0.156
EL7	242	1	7	5.2365	1.34738	-0.88	0.156
EL8	242	1	7	5.5702	1.30639	-1.056	0.156
EL9	242	2	7	5.3967	1.31053	-0.754	0.156
EL10	242	1	7	5.4628	1.23262	-0.912	0.156
EL11	242	1	7	5.3512	1.18627	-0.754	0.156

APPENDIX V (CONTINUED)

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
EL12	242	1	7	5.4523	1.24857	-1	0.156
EL13	242	1	7	5	1.33575	-1.043	0.156
EL14	242	2	7	5.281	1.1682	-0.736	0.156
EL15	242	1	7	5.2397	1.32655	-0.879	0.156
EL16	242	1	7	5.2851	1.41909	-0.972	0.156
DE1	242	1	7	5.2107	1.31738	-1.043	0.156
DE2	242	1	7	5.2769	1.26302	-0.684	0.156
DE3	242	1	7	5.2355	1.30682	-0.703	0.156
DE4	242	2	7	5.2438	1.18184	-0.362	0.156
DE5	242	1	7	5.2149	1.23037	-0.727	0.156