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**INVESTIGATING LEADERSHIP BEHAVIOR SPAWNING
INNOVATION PERFORMANCE IN UAE'S TELECOMMUNICATION
AND ICT INDUSTRY**

Ali Abdalla Saeed Khalfan Alnaqbi

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INVESTIGATING LEADERSHIP BEHAVIOR SPAWNING
INNOVATION PERFORMANCE IN UAE'S
TELECOMMUNICATION AND ICT INDUSTRY

Ali Abdalla Saeed Khalfan Alnaqbi

This dissertation is submitted in partial fulfilment of the requirements for the degree
of Doctorate of Business Administration

Under the Supervision of Dr. Maqsood Ahmad Sandhu

February 2020

Declaration of Original Work

I, Ali Abdalla Saeed Khalfan Alnaqbi, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this dissertation entitled “*Investigating Leadership Behavior Spawning Innovation Performance in UAE’s Telecom and ICT Industry*”, hereby solemnly declare that this dissertation is my own original research work that has been done and prepared by me under the supervision of Dr. Maqsood Ahmad Sandhu in the College of Business and Economics at UAEU. This work has not previously been presented or published or formed the basis for the award of an academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my dissertation have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this dissertation.

Student’s Signature: Ali Alnaqbi Date: 16-5-2020

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Abstract

The significance of leadership behaviors come to create climate for innovation to support individual creativity within innovation performance. The purpose of this study is to investigate the association between transformational and transactional leadership behaviors, climate for innovation, individual creativity and innovation performance. Additionally, this study explored the mediation role of climate for innovation perceptions to be supportive for individual creativity. Data were collected online from 139 staff and leaders who were working in various ICT and telecommunication industry in UAE, a developing country, and SLP- SEM were used to analysis the data. The results of this study revealed positive and significant relationships between Transactional leadership and climate for innovation and individual creativity and innovation performance. Also, the findings indicated employees' perceptions of a supportive climate for innovation mediation the transformational and transactional leadership, individual creativity relationships. Organizations should invest in transformational and transactional leadership training and in the selection of leaders with this leadership style if their aim is to foster and enhance individual creativity and support innovation performance. They also should invest in organizational climate improvement in order to provide a dynamic platform for being creative and innovative in the workplace. This study is one of the first to investigate the relationships between the ICT and telecommunication organization in the UAE, such as the associations between transformational and transactional leadership, employees' sense of creativity, innovation performance and the impact of employees' perceptions of a supportive climate for innovation.

Keywords: Individual creativity, climate for innovation culture, innovation performance, transactional leadership, transformational leadership, ICT, telecommunication and innovation.

Title and Abstract (in Arabic)

□

تحري السلوك القيادي لرفع الأداء في مؤشرات الابتكار في قطاع الاتصالات وتكنولوجيا المعلومات في دولة الإمارات العربية المتحدة

الملخص

تكمن أهمية سلوكيات القيادة لخلق مناخ للابتكار ودعم الإبداع الفردي في أداء الابتكار. الغرض من هذه الدراسة هو التحقق من العلاقة بين سلوكيات القيادة التحويلية والمعاملة، ومناخ الابتكار، والإبداع الفردي وأداء الابتكار. بالإضافة إلى ذلك، استكشفت هذه الدراسة الدور الوسيط لمفاهيم المناخ للابتكار ودعمًا للإبداع الفردي. تم جمع البيانات عبر الإنترنت من 139 موظف وقيادي الذين كانوا يعملون في مختلف قطاعات صناعة تكنولوجيا المعلومات والاتصالات في دولة الإمارات العربية المتحدة، ويستخدمون SLP-SEM لتحليل البيانات. كشفت نتائج هذه الدراسة عن وجود علاقة إيجابية ومهمة بين قيادة التبادلية والمناخ للابتكار والإبداع الفردي وأداء الابتكار. كما أشارت النتائج إلى تصورات الموظفين لمناخ داعم للوساطة الابتكارية والقيادة التحويلية والتبادلية والإبداع الفردي. يجب على المؤسسات الاستثمار في التدريب على القيادة التحويلية والتبادلية إذا كان هدفهم هو تعزيز الإبداع الفردي ودعم أداء الابتكار. يجب عليهم أيضًا الاستثمار في تحسين المناخ التنظيمي من أجل توفير منصة ديناميكية لتكون مبدعة ومبتكرة في مكان العمل. تعد هذه الدراسة من أولى الدراسات التي تبحث في العلاقة بين تكنولوجيا المعلومات والاتصالات وتنظيم الاتصالات في دولة الإمارات العربية المتحدة، مثل ربط بين القيادة التحويلية وقيادة التبادلية، وإحساس الموظفين بالإبداع، وأداء الابتكار وتأثير تصورات الموظفين لمناخ داعم للابتكار.

مفاهيم البحث الرئيسية: الإبداع الفردي، مناخ لثقافة الابتكار، أداء الابتكار، قيادة التبادلية، القيادة التحويلية، تكنولوجيا المعلومات والاتصالات، الاتصالات، الإبداع.

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Dedication

To my beloved parents and family

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List of Abbreviations

AGFI	Adjusted Goodness-of-Fit Index
AMOS	Analysis of Moment of Structure
AVE	Average Variance Extracted
BTS	Bartlett's Test of Sphericity
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CIO	Chief IT Officer
CLF	Common Latent Factor
CMV	Common Method Variance
CR	Composite Reliability
EFA	Exploratory Factor Analysis
FTE	Full-time Equivalence
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
H.H	His Highness
ICT	Information and Communication Technologies; in this context, interchangeable with IT
IT	See ICT
KIM	Knowledge Integration Mechanisms
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
MLQ	Multifactor Leadership Questionnaire
MQL	Multiple Question Leadership
MSA	Measurement of Sample Adequacy

NFI	Normal Fit Index
OECD	Organisation for Economic Cooperation and Development
OPEX	Operational Expenditure
PCA	Principal Component Analysis
RMSEA	Root Mean Square Error of Approximation
SEM	Structure Equation Model
SPSS	Statistical Package for the Social Sciences Version 25.0 (IBM SPSS)
UAE	United Arab Emirates

Chapter 1: Introduction and Overview

1.1 Introduction

The ultimate objective of any commercial organization is profitability. This objective is maintained so that the organization can grow and prosper in a sustainable manner and benefit its stakeholders. However, in today's highly competitive and complex business environment, profitability and financially sustainable prosperity are a challenge that organizations struggle to overcome in a world with global competition due to open market conditions brought on by globalization trends.

In today's markets, consumers have power, more choice and easier access to products and services globally, whether using modern technology such as the Internet or others because of the global reach of many companies which makes consumer products easily accessible and available to a wider range of customers. These advancements of business operations cause an existential challenge to many organizations as they are now faced with the challenge of not only competing with local organizations but striving to compete with potential competitors who can threaten their market position at any given time. Organizations are therefore compelled in today's markets to add a "wow" factor to their products or services from the consumer perspective in order to remain relevant within their respective markets. Organizations are now more than ever required to add recognizable value to their costumers' experience in order to maintain their appeal as a valuable product or service provider.

The changes brought on by globalization trends in global markets have forced organizations to evaluate new avenues for improving the quality of their services and products by focusing on areas that have more potential for improvement so as to create or add value to their commercial activities and products. To achieve these aims, organizations have had to produce products and services of higher quality and at a lower cost to improve their profit margins (Berkhout et al., 2006). The implications of such new realities have reflected in increased challenges to organizations both in the private and public sectors that require increased innovation so as to keep up with customers' demands and expectations. This in turn translates to increased demand on all employees within an organization to generate creative ideas to contribute to their organization's innovative performance in an environment of increased competition and fast-paced performance. Employees are often regarded as an organization's main asset. They are the main driving force behind an organization's performance in any industry as they are the main point of contact between the organization and its customers. In addition, an organization's human capital is the source of creative ideas and the main driver of production in any organization. Organizations survive and thrive on creative ideas to develop and enhance their process, products and services based on their customer's feedback and market trends. Consequently, ideas are the seed from which creativity blossoms. This valuable contribution from employees is of unlimited worth to organizational success and survival (Richter & Shipton, 2004).

In today's fast-paced business environment, an organization is only able to maintain a reasonable competitive advantage via the contribution of its employees who are objective-oriented and geared towards achieving customer satisfaction by virtue of their ideas and efforts. Employees who interact directly with the organization's customers and other external stakeholders are a valuable resource for organizations

(Amabile, 1998). Every organization is comprised of different departments, each with its own group of employees and leaders and with its own set of functions. The relationship between the leaders of these departments and their respective employees is critical for the overall performance of the organization. The behavior of the leadership and the relationship the leadership maintains with the employees are critical determinants of an organization's performance and success (Kantabutra, 2006). Leadership behavior and its role in influencing the performance of its subordinates in terms of creating and sharing innovative ideas is the premise of this research effort. It is noted that certain leadership behavior trends reflect positively on the employees' creative and innovative performance, while other behaviors create a negative work environment where employees are less inclined to innovate or share creative ideas that would positively influence the overall performance of their organization.

Additionally, intrusive leadership behaviors such as micromanagement and other negative leadership behavior traits may drain employees' enthusiasm and creative drive and negatively impact the overall organization's innovative behavior. Keeley (1995) argued that leadership capable of transforming and changing employees so as to follow a collective goal can be considered unethical since it produces a "majority will that represents the interests of the strongest faction" and that "might is an arbitrary guide to the right". Therefore, leaders are encouraged to create a positive culture and a climate of productivity to stimulate employees to innovate and employ their creativity to achieve organizational objectives. Consequently, leadership as a discipline of study has gained remarkable significance historically and in contemporary academic and professional arenas as well as in the literature, This has led to the redefinition of leadership in modern relevant literature which refocuses on

its visionary, emotional, transforming and charismatic components (Oreg & Berson, 2019).

In relevant literature as in professional contexts, there are a few recognized leadership styles that come into play. Employees and leaders need to be aware of these different types and their implications on team operations within their departments so as to appropriately respond to them in a manner that is geared towards fulfilling the organization's vision and objectives. Leaders and employees should engage in productive discussions and activities that are aimed towards cultivating a positive leadership and employee relationship based on a sound knowledge of leadership behaviors.

The significant supervisory role which leadership plays towards the delivery and performance of tasks within an organization constitutes the critically significant role of leadership behaviors within an organization. The ever-changing nature of products and services is an intrinsic business risk that is brought on by social, economic and technological changes that define the competition between organizations within a certain market or an industry (Collerette et al., 2002). Robbins (1996) described the theory for leadership as a theory that “deals with people trying to make sense out of cause-effect relationships”, meaning that when an event takes place it must be attributed to an underlying reason.

When dealing with employees, leadership decision-making, direction and behavior must be clearly communicated and understood without ambiguity or hostility. Such communication should be carried out in a positive, productive and stimulating manner in order for employees to deliver the desired performance expected of them, including the contribution of innovative ideas and creative efforts that are aligned with

the organization's vision and objectives (Pasmore, 2009). Every organization has its own unique culture that is prevalent within its ranks and departments. According to McElroy and Hunger (1988), "leadership theory can be viewed as a product of the causal attributions employed by theorists in their search for the antecedents of performance". The conditions in which leadership manifests itself can be interpreted in many ways, one of which is the "suggestion that employees' perception of leadership behavior is systematically influenced by interpretations of outcomes such as group success" (Yukl & Van Fleet, 1992, p. 50). For instance, according to Gardner and Avolio (1998), behaviors demonstrated by leaders and impacting their relationship with employees strongly dictate the behavior of the employees, and their connection with their leadership.

Therefore, this dissertation puts forth evaluative information based on a study survey that attempts to explore the role of different types of leadership behaviors on the relationship between employees and their leaders so as correlate the support this relationship has on innovation performance of the employees, particularly in organizations of the Telecommunication and ICT sectors in the UAE. The research hypothesis will be evaluated and weighted based on the feedback received from the subject organizations' employees surrounding their perception of leadership behaviors and their implications on employees' generation and sharing of ideas. In addition, the research aims to investigate how leadership behavior could support employees for innovation performance. The targeted organizations are located in the United Arab Emirates (UAE) and are for-profit organizations that demonstrate remarkable efforts toward achieving commercial success in keeping with the general modernization and economic prosperity climate in the UAE. Leadership behavior in UAE organizations is of concern because of the growing shift of the local economy from a public sector-

driven economy towards a diversified free market model that is led by a strong and modern private sector to keep up with the global economic trends prevalent around the world. This direction dictates new realities for organizations operating in the UAE and requires those organizations to adopt universal standards of commercial and business operations so as to remain globally relevant and benefit from global partnerships and investments.

This organizational change is a challenging task for any organization, let alone organizations that have been operating in a primitive economy since their inception, with outdated business environment and work cultures. Such an organizational change should reflect at the core level of the organization's vision, mission and objectives. To improve an organization's culture via its employees' thinking patterns and behaviors, leadership styles and behaviors should be changed so as to strategically improve an organization's position regarding its competitive advantage via value-adding and creation to its existing products and services. Innovation is considered as one of the most important components of twenty-first century business practice, particularly in order to handle the challenges of economic sustainability and global competition. This is in line with Wellenius's assessment of non-competition domain "Telecommunications in developing countries" (Wellenius, 1977), that telecommunications monopolies generally fall short of meeting organizational needs and requirements, resulting in poor service quality and unresponsiveness to users' needs. Finally, this research effort gains its significance from the fact that technology and information play a significant role in changing human life and society. ICT and telecommunications organizations must be thoroughly studied in an effort to provide insight into organizations in the UAE, and the implications of leadership behaviors in innovative performance on them. The integrated nature of these sectors into various

industries within UAE makes them a significant driver of the nation's economy. The following are research questions to understand more about different types of leadership behaviors through the following research question: What are the factors affecting innovative performance in an established ICT and telecommunication organization? What are the appropriate behaviors of leadership which could support innovation performance? What types of leadership behavior might be exercised within the organization to encourage innovation performance? What appropriate framework could be used when measuring the different types of leadership behavior? How do different types of leadership behavior create a cultural climate within the organization to encourage innovation performance? How do different types of leadership behavior support individual creativity within a cultural climate within the organization to encourage innovation performance?

1.2 Overview

On the 21st October 2014, the UAE's Prime Minister, H.H. Shaikh Mohammed bin Rashid Al Maktoum, announced innovation components to his long-term strategic objectives aimed towards solidifying the UAE's position as a world leader in innovation by the year 2021. This is an additional pillar to the existing four pillars stated in the original strategic plan (Al-Khouri, 2012). As part of this general movement established in the UAE, a need exists for a better understanding of the role leadership behaviors play in stimulating employees to share their creative ideas with their peers and superiors within their respective organizations. This will help to increase and develop innovative performance in the organization, especially in ICT and telecommunication organizations where the role of employees is critical to the innovative performance of the organization.

Furthermore, UAE organizations are lagging behind the rest of the world in terms of new creative product development and innovative performance. In view of this, this research effort aims to highlight relevant areas in the professional context, which will help to recognize concerns and support organizations in establishing a better understanding of the relevant variables, which could contribute to an increase in sharing creative ideas among employees. In addition, the organization will better understand the connection between leadership behaviors and the motivation levels of their employees.

By virtue of the aforementioned innovation campaign championed by the UAE's government, an implied pressure exists on UAE organizations by the government to significantly improve their innovative performance to be able to compete with world class global organizations. This requires a change in the way of thinking in these organizations to improve the UAE's ranking on the criterion of innovation. Currently, the prevalent business style and strategy adopted by local organizations cannot meet the new wave of demands for innovation. This is caused by a lack of profitability-driven work culture among local organizations caused primarily by a long-standing tradition of relying on the public sector and government organizations as the main economic vehicles for driving the UAE's economy.

Organizational culture should be primarily driven by profitability the effective use of resources, global success and future revenue streams but the prerequisite for this is a positive organizational culture that contributes these organizational changes required for adopting better strategic stances (Kuratko et al., 2005). It is an undisputed fact that organizational culture is the main driver for the organization's strategy and the main inspiration for its internal work environment. As such, a better understanding

of leadership behaviors that may contribute to such organizational cultures must be established. Understanding leadership behaviors that contribute to certain organizational cultures will help researchers recommend variables that may help organizations enact change and enrich their pool of creative ideas that are supportive of innovation performance within the organization. As such, researchers' first priority is to start with investigating leadership behaviors, which will be the key to answer research questions as to how to improve innovation performance.

Leadership can support organization innovation by influencing employees in the organizations as well as entities within it. It does this by positively changing their behavior to accept and support the employees, as per Walumbwa et al. (2010) statement indicating that you can't trust a message from an individual who you don't believe in. This statement explains the important role of leadership and building trust between employees and their leadership, leading to behavior and positive reactions from employees. A multitude of research efforts and relevant literature expresses support for the significance of leadership behaviors, especially effectiveness on the performance of employees. Bennis (2007) claims that the construct of leadership can be described as a widespread process that has a greater influence on followers as well as management. House et al. (2002) stated that organizational leadership lays its focus on the activity of directing individuals or groups towards the attainment of aims and goals. Therefore, leadership is a gate for employees to be understood and guided. Similarly, leadership value signifies the degree to which the leadership process causes group success or organizational success. Leaders who are familiar with their employees' potential can be more influential in leading them towards achieving personal success and ultimately organizational success.

Bass (1998) stated that leadership value deals with the level of success on an individual level. Individuals in leadership positions are influencing, motivating and enabling to their employees, guiding them towards achieving both individual and group objectives which ultimately contribute to organizational success and objective delivery. These are a few of the roles connected to leadership and their behavior towards their employees. Additionally, according to Damanpour and Even (1984), innovation is defined as “those changes that help organizations handle with environmental changes and uncertainties not only by applying new technology but also by successfully incorporating technical or administrative changes into their organizational structure that improve the level of accomplishment of their goals”.

Therefore, innovation has to be part of the organization’s culture to help and support organizational innovation. Innovation should not be seen as a fragment of the organization but as an intrinsic requirement for enacting changes that cannot be achieved without effective leadership encouraging and supporting employees of an organization towards innovation performance. Furthermore, leadership behavior imparts significant influences on employees, inspiring them towards achieving organizational sustainability and survival by unraveling their creativity and potential in exploring opportunities. This requires leadership advocacy in addition to careful risk-taking with regards to decision-making on investments and strategic actions related to product innovation in an effort to help the organization compete against their rivals with the help of supportive employees (Rui & Yip, 2008).

Organizational success cannot be achieved by any one individual: it must be the result of a collaborative effort. To incorporate collaborative work into organizational innovative performance, employees must be encouraged to share their creative ideas

and collaborate with their peers and leaders to create a collaborative creative culture within the organization that ultimately results in better innovative organizational performance. Creating such a culture will improve an organization's competitive position from a creative and innovative standpoint, further improving the organization's products and services. The significant question for this research is how different types of leadership behaviors can motivate and inspire employees to support innovation performance. Accordingly, organizations are required to implement innovative solutions for their problems and strategic challenges based on an existing knowledge of organizational cultures and behavioral theories in the work place. This will improve their chances of surviving an increasingly competitive business environment and grow their market shares by relying on their employees' potential and aligning that with their core competencies by introducing changes to existing organizational culture to support their employees (Sarros et al., 2008).

Organizations' recognition of leadership behavior as a main driver of innovative performance among their employees is key to achieving positive organizational change and maintaining a positive organizational culture that nurtures creativity and innovation with leaders and their subordinates working collaboratively to ensure the organization's goals and objectives are achieved in accordance with its vision and mission statement.

There exists a need, however, for investigative research efforts about different types of leadership behavior and cultures that support innovative performance and create a positive climate for innovation that encourages individual creativity and sharing ideas in the context of UAE organizations. More specifically, this is needed in the ICT and telecommunications sectors as they are identified as one of the main

drivers of the nation's modern economic transformation, in addition to its traditional economic drivers such as oil and tourism. Adopting an approach that revolves around leadership behaviors will present radical solutions to the challenges faced by organizations in the subject sectors in terms of innovative and creative organizational performance. It will benefit and support organizations to adapt to market turbulences, intensifying competition and rapid technological developments affecting innovation (Fiol & Lyles, 1985). Moreover, this kind of research and understanding of the impact of different types of leadership behavior within an organization can support the development of a climate culture in the organization that leads to creativity. This is critical for any organization that is planning to embrace innovation (Druskat & Wheeler, 2003; Durham et al., 1997).

Hence, organizations should not only focus their efforts on securing costly competitive advantages, but they need to look inwards and encourage each of their employees' to be creative, which is a task that depends on appropriate and inspirational leadership behavior. In this research effort, the emphasis is placed on examining to what extent the support and encouragement of an organization's leadership provides employees with the necessary tools to take initiative and explore innovative approaches resulting in an overall improved organizational performance.

This research effort will enrich the relevant literature investigating the relationship between leadership behaviors and the innovative performance of employees by focusing on the link between leadership behavior as a construct and innovation performance within an existing particular business culture, as well as exploring the criteria that could be applied to measure factors of various organizational behaviors and their roles in the ICT and telecommunication business. The purpose of

this research effort is to shed light on the processes by which the leadership roles would support public sector organizations in the UAE's ICT and telecommunication industry to execute plans of improving innovative performance among their employees, as well as help those organizations to promote creativity as a long-term culture among their employees' ranks. In addition, the goal is to achieve a better understanding of different types of existing leadership behaviors and their impact on the organizations' employees.

The thorough review of relevant scholarly literature is expected to yield some support for the framework of leadership behavior contribution to the innovative performance of employees. This will be contrasted to the findings of the methodological framework adopted by this research effort in terms of the findings of the research's questions and hypothesis. This chapter presents an overview of the motivation that drives the interest in conducting research into this topical theme. The coverage of this section includes:

- (i) □ An overview of the UAE's ICT and telecommunication sector,
- (ii) □ The regional Telecom and ICT sectors, and
- (iii) □ The global ICT and Telecom sectors.

In addition, the chapter will cover the scope of this research effort, its foundations, problem statement, rationale, an overview of its methodological framework, and finally a summary of the research effort.

1.3 Background

The Telecommunications and ICT sectors are considered among the pillars of economic development worldwide. These sectors' contribution to the economy can be recognized in various economy-building activities. A multitude of definitions exist in

the literature to describe ICT and telecommunications. The ICTs or Information and Communications Technologies are often described as technologies utilized in the gathering, modification, editing and distribution of various types of information. According to this definition, it is noted that the Telecommunications sector can be viewed as a subset of ICTs, and together these fields can drastically impact the economic performance of a developing nation like the UAE. It is an established reality from the global economic scene that ICTs and Telecommunications can positively boost the economic performance of a country in terms of GDP. ICTs and telecommunications are viewed globally as a driver of market competitiveness of a country's products and services. These two sectors can have a significant footprint on economies from a governance perspective. They can also significantly help in the integration of global economies, substantially improving the quality of life, reduce knowledge gaps, and boost biodiversity and management standards.

The aforementioned constitutes reasonable grounds for nations especially developing economies such as the UAE to focus on performance metrics demonstrated by their respective ICTs and telecommunications sectors, such as employee performance and their contribution to their organization's innovative performance. This segment of the research effort is going to further investigate ICTs and Telecommunications sectors and the leadership implications on these sectors' performance in the global, regional and local domains so as to establish a theoretical conceptual foundation that will be supported by both the research literature review and methodological framework in the following chapters.

1.3.1 Leadership in Global ICT and Telecommunications Sectors

The Telecommunications and ICT sectors globally have a common tendency to contribute vital input towards economic development and growth. The role such industries play in various contexts ranges from providing an effective infrastructure for knowledge sharing (KS), improving business practices and organizational operations standards, boosting operations pace and increasing security of business transactions. The role leadership plays in ICT and Telecommunications globally is a significant one. It sets the general direction in which these industries are headed. This role can be observed by exploring the concepts of integrity, decision-making process and organizational change and development efforts.

A developing economies' annual expenditure on ICT and Telecommunications technologies ranges between half a billion US dollars and one trillion US dollars, as per estimations published by WISTA (2008). Developing nations' expenditure on these sectors is said to be on a rapid growth pace that exceeds that of the growth rate of OECD (Organization for Economic Cooperation and Development) economies. This growth rate of ICT and Telecommunications sectors in developing economies must withstand challenges from two main fronts: that of meeting development expectations and remaining relevant in the face of global competitiveness. In this modern era of technology-guided economic development, national leaders as well as organizational development (OD) practitioners meet exceptional challenges in their efforts to implement IT-led organizational development benchmarks, such as the examples set by successful nations such as Korea, Japan and China. These challenges manifest in different ways depending on different variables and context, but they share one common thread which is a reliance on leadership behavior, and theoretical

frameworks to effectively address challenges related to employee performance in these fields that increases their performance capacity and their innovative output in a manner that boosts the overall performance of the organization.

Conversely, the investment in effective leadership and implementation potential for management and leadership roles in the ICT and Telecommunications industries in developing economies is lagging in comparison to its state in developed economies. This existing discrepancy between financial expenditure and investing in effective leadership figures results in serious challenges such as failure of multiple e-government initiatives, unattractive investment environments, inflated costs and unstable growth rates in promising sectors in developing countries. Despite the aforementioned challenges, there exist many opportunities and advantages for ICT and Telecommunication industries in developing economies owing to late entry advantage in the rapid pace of technological advancement of today's world. Effective leadership in ICT and Telecommunications industries is a critical requirement for developing economies to be able to catch up with the developed nations' standards of ICT and Telecommunications performance benchmarks.

There is a pressing need for fundamental changes in leadership behaviors in developing nations to catch up with information-led economies. The requirement for transformational leadership to deal with the change to learning economies and a data society is especially intense. This inescapable need has not been converted into a strong interest for effective leadership improvement or properly remunerated vocations for CIOs (Chief IT Officers) mainly because of political leaders' poor understanding of the opportunities and threats displayed by the ICT revolution. Leaders of ICTs and Telecommunications organizations are expected to incorporate

the contemporary technological revolution to set the ground work for knowledge-based economies and information-rich societies that are active and relevant in the increasingly globalized economies prevalent in today's world. To do so, these leaders are required to acquire a thorough comprehension of the holistic image of modern economic drivers, be up-to-date as to the changes societies and technologies are undergoing, and possess knowledge of fundamental frameworks and skill sets required to act accordingly in implementing such endeavors, while engaging others and motivating them to follow suit.

Failure to act on the existing leadership gap in ICT and Telecommunications sectors in developing nations can be expected to cause this gap to continue widening, resulting in the waste of additional funds dedicated to the development of these sectors. Alternatively, the dedicated funds and investments may dry up, and the economies may ultimately be forced to neglect the massive opportunities and rewards that potentially lie in the development of technology-based industries. This may also result in these countries failing to catch up with their further-developed counterparts and failing to take advantage of the information revolution that constitute the fourth industrial revolution.

In developed nations and economies, leadership in ICTs and Telecommunications organizations is characterized by its ability to function effectively in the information technology domain with a thorough understanding of technical aspects in addition to professional frameworks. Leaders are able to set the general direction for their organizations' employees according to the national policies, market climate and legislative grounds. Those leaders are also able to leverage their own employees' potential so as to serve the performance objectives and innovative

performance of their organizations'. The main difference between challenges to leadership behaviors and styles in developed and developing nations in the context of the ICT and Telecommunications industry is that the formers' challenges are behavioral and managerial in nature, while the latter are a combination of behavioral and technical challenges. Leadership is expected to engage organizations to address change resistance to organize and oversee complex ventures, to positively change abilities and attitudes, avoid redundancy in operations and employee performance, in addition to asserting and inspiring the need for better innovative performance from employees in the ICT and Telecommunications industries. In terms of leadership styles, the global domain of the ICT and Telecommunications industry is divided. ICT and Telecommunications leaders of the developed economies tend to demonstrate more transformational leadership styles compared to their counterparts in underdeveloped and developed nations. In the latter countries, the most common leadership style is transactional leadership (Ernest et al., 2004).

1.3.2 Leadership in Regional ICT and Telecommunications Sectors

ICT and Telecommunications industries in the Middle East (ME) are said to be on the verge of a modern advanced-analytics revolution (Arezki et al., 2018). Despite the apparent optimism of this statement, the reality entails a lot of known and unknown challenges when the ME economies are contrasted with the advances demonstrated by the rest of the world. Additionally, other industries within the ME are also making huge advancement leaps, placing much more pressure on regional ICT and Telecommunications to retain reasonable competitive positions within their respective markets and on the global stage. As such, ICT and Telecommunication companies in the region are viewed as nothing more than backend suppliers of communications

compared to their global role as significant partners of economic development. ICT and Telecommunications service providers who do master the role of integrating digital technologies into existing business models and adopt an analytics-driven business model, manage to strategically position themselves to cultivate a positive and rewarding relationship with their costumers and achieve a better market position and brand recognition.

To achieve such an objective, these organizations find it necessary to adopt new ways of thinking, establish new effective leadership, and exhibit significant organizational-culture changes. One of the main challenges ICT and Telecommunications organizations in the Middle East region face is the high operational cost associated with their projects compared to their counterparts in the more developed economies and in other emerging markets such as Asia and Eastern Europe. An average of 15% higher cost expenditure per site has been seen in the Middle East in comparison to organizations in Asia, and 45% higher cost expenditure when compared to organizations in Eastern Europe. This cost discrepancy is even more noticeable in the top-quartile where it rises to 45% and 60% respectively. The only market in which ICT and Telecommunications costs lag behind those of the Middle East is the African market where an organizations' operational costs demonstrate differential operational costs of 25% higher than their Asian counterparts, and 60% higher than East European organizations (McKinsey, 2016). Figure 1 shows global network operational expenditure per site (OPEX).

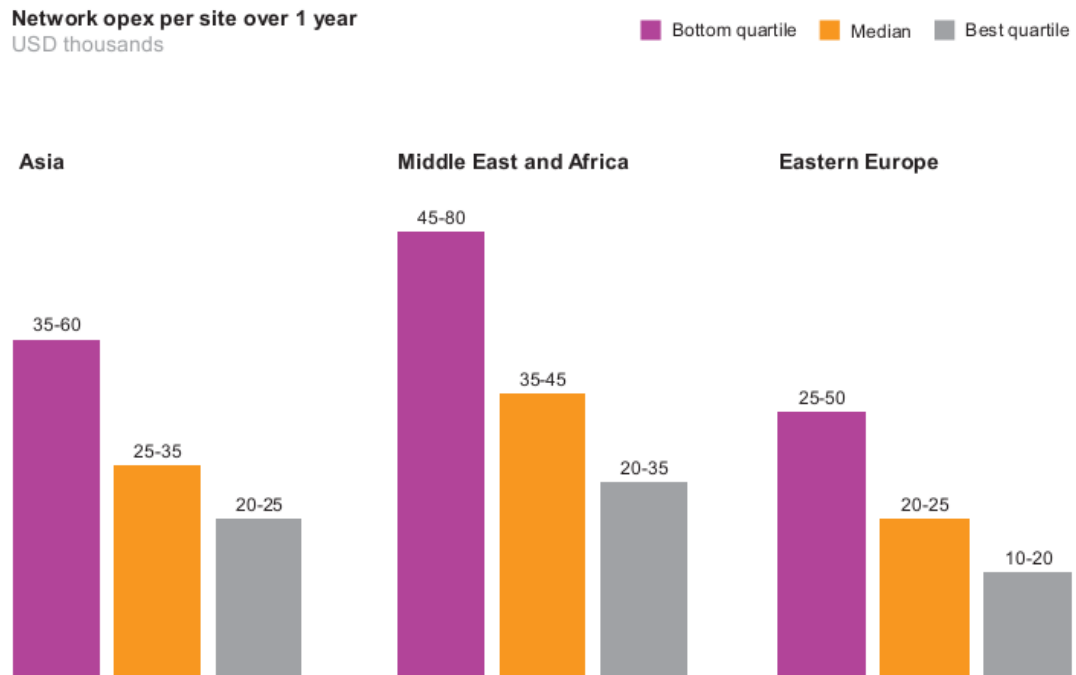


Figure 1: Global network operational expenditure per site (OPEX)

ICT and Telecommunications organizations in the Middle East also underperform compared to their counterparts in other emerging markets in terms of key performance indicators of productivity, with a margin of 30% to 60% lower productivity performance per project or location on average. In addition, significant communications productivity performance indicators such as Full-Time Equivalence (FTE), field force intervention incidents per day, incident response productivity at network operating centers, and tower-company and network-sharing deals are rare occurrences in Middle Eastern ICT and Telecommunications industry organizations compared to the rest of the world. As of 2016, the global average of network towers' ownership by ICT and Telecommunications organizations was at 68%, while it is at 20% in Africa and even lower at 10% in the Middle East. Similarly, the deployment of network-based and network-managed services in the Middle East is said to be the lowest in comparison to the world's average (McKinsey, 2016). These observations reflect poor productivity output from the employees of ICT and Telecommunications

organizations in the Middle East in comparison to the rest of the world, and even in contrast with emerging markets. This entails a pressing need in these organizations for massive organizational change efforts to overhaul the existing organizational culture and to introduce organizational cultures geared towards higher productivity, high commercial orientation and increased global competitiveness.

These goals can be achieved by focusing on leadership behaviors and styles, since leadership has long been established as a driver of organizational change and culture. This research is aimed at providing insight into the role of leadership behaviors in spawning creative and innovative performance among employees of the IT industry in the UAE by investigating the correlation of leadership behaviors and innovative employee performance in ICT and telecommunications organizations, and investigating potential approaches to resolve the associated challenges in terms of leadership behaviors to address the aforementioned challenges.

The most prevalent leadership construct in the Middle East business world and ICT and Telecommunications industries are no exception is a top-down model inspired by the traditional cultures of the region. This leadership construct, coupled with a transactional style of leadership and a high power distance culture prevailing in the region, makes little room for innovation and creativity and although it may not actively discourage employees from taking initiative, it does rather limit their enthusiasm to include only the responsibilities of their respective roles and positions within the organization, with little incentive to over-perform, especially in light of the lack of rewarding incentive programs. These characteristics of the leadership constructs in the Middle East region have serious implications on organizational culture, and subsequently on performance and productivity metrics in organizations within the

region, including ICTs and Telecommunications organizations. Leadership behaviors have frequently been the focus point of research efforts and investigative analysis in the context of organizational and managerial studies. This research effort presents thorough insight into relevant scholarly literature and academic research focused around the topic of leadership in the context of organizational development. Precisely, it focuses on the role different types of the leadership behaviors, and their ability to create and influence the existing organizational culture to achieve rewarding organizational strategy in general, and more specifically in regard to innovative performance.

Additionally, the discussion regarding the correlation and possible links between leadership behaviors and individual creativity in the professional context suggests that the two concepts intersect in the concept of organizational culture where effective leadership cultivates a positive culture in which employees are able to thrive and innovate. However, the implications of this discussion in the domain of ICTs and Telecommunications organizations has rarely been investigated especially within the scope of this research effort. A cursory literature survey generally reveals that little has been written about the potential roles of leadership behavior in the telecommunication and ICT organizations in general. Moreover, this research effort is founded on the basis of the pressing need of ICT and Telecommunications organizations in the UAE to create an organizational culture that stimulates individual innovation and creativity seeing as how these performance trends can help address the prevailing challenges the industry is facing in the UAE. These challenges are mainly reflected in poor service quality, customer/employee satisfaction, and poor key performance indicators in the telecom sector.

The study attempts to tackle potential challenges that might affect organizations' innovation in the UAE telecommunication service industries and ICT organization to unlock more of their employees' potential. In doing so, the study will introduce contextual definitions for leadership, leadership behaviors and innovation so as to identify their implications in the local context. Research efforts in this area are still relatively scarce, and the topic is still insufficiently investigated, especially in the context of the professional practices in the UAE and ICT business industries. This scarcity of different types of leadership behavior-related literature and lack of practical experience in the UAE especially for semi-government telecommunication sector organizations is considered as an institutional challenge which this study aims to address. The objective review also seeks to identify suitable models from the existing literature and professional practices to be applied to the telecom and ICT organizations locally. Although different types of the leadership behaviors are considered as essential components of a dedicated business unit to enhance the organization's innovation performance, it is necessary to build a comprehensive and clear understanding of how different type of leadership behaviors within the organization could effectively help in innovation performance. Therefore, this review covers different types of the leadership behaviors exercised in various settings, while the academic debate about the correlation of the leadership behavior with climate culture, individual creativity, and interrogation of innovation performance is further tested and corroborated with the help of the conceptual framework of the study.

1.3.3 Leadership in UAE's ICT and Telecommunications Sectors

The infancy of the ICT and Telecommunications industry in the UAE started before the official formation of the country with the declaration of unity in 1971. At

that time, the telecommunication industry in the country consisted of three small companies providing land services in the major three cities at the time: Abu Dhabi, Dubai and Sharjah. The total number of landline subscribers in the entire country at the time was limited to only 9000 subscribers, with the infrastructure lacking any true nation-wide linkage capabilities. Since then, the industry has taken great leaps, and the UAE is today considered one of the regional power houses of the ICT and Telecommunications industry with its major ICT and Telecommunications service provider Etisalat operating in Afghanistan, Egypt, Niger, Nigeria, Saudi Arabia, Sri Lanka and Pakistan (Etisalat, 2017).

Reviewing the relevant literature has yielded multiple definitions for “innovation”. These multiple definitions do not contradict each other but rather aim to define the concept of innovation from different perspectives. A common definition presented by Robertson (1974) and initially introduced by the Zuckerman Committee in 1968 describes innovation as “A series of technical, industrial and commercial steps”. Alternatively, a definition presented by Marquis (1969) describes innovation as “A unit of technological change”. In his description, Marquis referenced Schmookler’s definition of technological change as “an enterprise producing goods or services or using a method or input that is new to it”.

From the above observations a holistic definition of innovation can be articulated as: the initial successful introduction of a product or a process. As noted from the aforementioned, a multitude of innovative performance challenges can be observed in the local ICT and Telecommunications organizations. While the reasons for these challenges may differ, the premise of this research will focus on the role of leadership as a critical factor influencing innovative employee performance in this sector in the

UAE. As noted, many performance and organizational challenges discussed in this section can be attributed to unfavorable leadership behaviors. Hence, the focus on the role of leadership behaviors on employee performance in the remaining parts of this research effort. As noted from reviewing the literature pertaining to leadership behaviors, practices and styles in the UAE ICT and Telecommunications sector, it may be seen that the transactional leadership style is the more common leadership style practiced within organizations' belonging to this sector in the UAE. It is contention that this leadership style is not compatible with the challenges these organizations are presented with in light of globalization, global competitiveness trends and technological advancements which the industry is experiencing worldwide.

Nor does it create a positive relationship between employees and their leadership which is necessary to cultivate innovation and creativity that would reflect on employees' productivity and output.

1.4 Research Scope

This segment of the research's introduction highlights the geographical scope, time period and population parameters of the study. This research included all major cities in UAE since its main data collection tool (questionnaire) targeted the employees of thirty-five ICT and Telecommunication industry organizations operating in cities across the UAE. Some of the participant organizations operated GCC-wide (GCC, 2019), thus adding main GCC cities across the region to the geographical scope of this research effort. The time period of the research effort was rather lengthy, as it was conducted in part-fulfillment of a Doctoral thesis, extending from March 2017 to March 2019. This period included all research-related activities including data collection and the extensive review of literature associated with it. Given the scattered

nature of the survey participants' geographical locations the process of data collection took an extended period of time to ensure the collection of all participants' data. The data collection occurred in March-August 2018, while processing, analyzing and discussion of the data followed within the remainder of 2018. Towards March 2019, the research was brought to its conclusion and finalized after being carefully revised and modified.

The population of the research included 139 participants who contributed to the research data via the survey. The breakdown of the 139 respondents is: fifty-six (56) Emirati nationals, fifty (50) non-Emirati Arab nationals of different backgrounds, and thirty-three (33) respondents from other countries. All the participants were either in leadership positions or were employees in one of the thirty-five ICT and Telecommunications organizations included in the research scope. For detailed information regarding the sample population and its break down refer to Chapter 5.

1.4.1 Research Foundation

Leadership behaviors have frequently been the focus point of research efforts and investigative analysis in the context of organizational and managerial studies. This research effort presents thorough insight into relevant scholarly literature and academic research focused around the topic of leadership in the context of organizational development. Precisely, it focuses on the role different types of the leadership behaviors, and their ability to create and influence the existing organizational culture to achieve rewarding organizational strategy in general, and more specifically in regard to innovative performance.

Additionally, the discussion regarding the correlation and possible links between leadership behaviors and individual creativity in the professional context

suggests that the two concepts intersect in the concept of organizational culture where effective leadership cultivates a positive culture in which employees are able to thrive and innovate. However, the implications of this discussion in the domain of ICTs and Telecommunications organizations has rarely been investigated especially within the scope of this research effort. A cursory literature survey generally reveals that little has been written about the potential roles of leadership behavior in the telecommunication and ICT organizations in general. Moreover, this research effort is founded on the basis of the pressing need of ICT and Telecommunications organizations in the UAE to create an organizational culture that stimulates individual innovation and creativity seeing as how these performance trends can help address the prevailing challenges the industry is facing in the UAE. These challenges are mainly reflected in poor service quality, customer/employee satisfaction, and poor key performance indicators in the telecom sector.

The study attempts to tackle potential challenges that might affect organizations' innovation in the UAE telecommunication service industries and ICT organization to unlock more of their employees' potential. In doing so, the study will introduce contextual definitions for leadership, leadership behaviors and innovation so as to identify their implications in the local context. Research efforts in this area are still relatively scarce, and the topic is still insufficiently investigated, especially in the context of the professional practices in the UAE and ICT business industries. This scarcity of different types of leadership behavior-related literature and lack of practical experience in the UAE especially for semi-government telecommunication sector organizations is considered as an institutional challenge which this study aims to address.

The objective review also seeks to identify suitable models from the existing literature and professional practices to be applied to the telecom and ICT organizations locally. Although different types of the leadership behaviors are considered as essential components of a dedicated business unit to enhance the organization's innovation performance, it is necessary to build a comprehensive and clear understanding of how different type of leadership behaviors within the organization could effectively help in innovation performance.

Therefore, this review covers different types of the leadership behaviors exercised in various settings, while the academic debate about the correlation of the leadership behavior with climate culture, individual creativity, and interrogation of innovation performance is further tested and corroborated with the help of the conceptual framework of the study.

1.5 Problem Statement

According to Wellenius (1977) "Telecommunications in Developing Countries", telecommunications monopolies generally fall short of meeting minimum industry needs and requirements which reflect in poor service and product quality that does not meet the expectations of costumers. In the context of the UAE, Etisalat was the only telecom service provider for an extended period up until the reformation of the industry by a government decree in 2005. The lack of a competitive ICT and Telecommunications market in the country resulted in high pricing points, poor customer satisfaction, substandard service quality and the lack of specialized services with a one-size-fits-all model of operation incompatible with global ICT and Telecommunications standards.

The UAE telecom industry is facing challenges according to Salim (2018) which resulting from a major shift of customer expectations and market trends due to:

- The rapid growth of population and demographic changes in the local market
- Substantial socioeconomic changes.
- Fast-pace technology advancements.
- Market trends of greater emphasis on service and product quality.
- The rapid and significant evolution of costumer expectations.

1.5.1 Problem Statement in the Professional Context

The concept of inspiring and motivating employees to support the organizations' innovative performance level via effective and positive leadership behaviors and practices is a critical issue in the professional context. The widespread support for innovation across various industries is apparent in many avenues. In a speech addressing the seventh Global Entrepreneurship Summit on 24 June 2016, President Barack Obama stated that innovation is a necessary tool for entrepreneurship which is in turn an essential driver of prosperity. Establishing the connection between innovation performance and leadership behaviors in the professional context in the UAE's professional domain is essential for organizations so as to align them with the UAE government's vision of an increasingly innovation-oriented and modern economic model.

The UAE markets have changed accordingly in harmony with the government's vision to promote innovation and creativity among local organizations, which can only be achieved via overhauling traditional organizational cultures prevalent in the local professional domain. This in turn can only be achieved via effective and positive

leadership behaviors and practices which this research effort aims to support and promote by proving a positive correlation between positive leadership behaviors and employee innovative performance supported by the theoretical framework of this research effort and the review of relevant literature.

However, there is an obvious low visibility of uplifting and transformational organizational cultures supportive of an innovate environment in the local professional scene. Potentially, in each local organization, many departments have to collaborate to achieve the organization's visions and objectives. Leadership failures in these departments further weakens the position of the overall organization and as such the problem might actually be more serious and complex in nature than it appears based on a preliminary evaluation. Organizational culture is the sum of all the sub-cultures existing in each individual department within the organization whether positive or negative. These cultures contribute towards the organization's innovative performance through their employees' creative efforts and their susceptibility to sharing their creative ideas. According to Vardiman et al. (2006), go on to say that effective leadership is defined as individuals who leverage their influential positions and established authority to induce others towards goal achievement, whether those leaders are insiders or outsiders to the organization. The lack of effective and positive leadership within local ICT and Telecommunications organizations is considered one of the central problems this research effort aims to address. The concern are not only reported and discussed in the literature but also experience of the researcher's eighteen years of professional experience, most of which was gained in Abu Dhabi's as based and cross UAE for telecom industry. For a period of ten years within a management role, the researcher was subjected to challenging tasks within various ICT and telecommunication departments.

While interacting with employees and executing product introductions, the researcher realized the importance of understanding more about different types of leadership behavior and its correlation to inspire and encourage employees to alignment with organizational innovation. By operating out of such non-synchronized objectives, the operations team on several occasions missed the opportunity to share ideas, thereby possibly avoiding the issue or taking the necessary corrective action. This was entirely due to the leadership behavior and organizational culture not supporting and encouraging employees to share their concerns and ideas. Moreover, the element employees' involvement as delegation of authority could affected decision-making at the right time, which resulting in rework, waste of resources and unnecessary expenditure by the operational end-user.

1.5.2 Research Gap Analysis

Even though the reported literature confirms the significance of positive leadership behaviors in enriching organizational culture and stimulating employees' creativity through the sharing of ideas, previous research efforts rarely highlighted the influence of different types of leadership behaviors and their climate culture implications as influencing factors on employees positively innovating in the context of ICT and Telecommunications. Some previous research studies did allude to the effect of different types of leadership and different types of organizational culture on organizational performance in the private sector in general. Furthermore, there are some studies on the role that transformational leadership behaviors play in organizational innovation via motivating and inspiring employees (Sarros et al., 2008).

However, a different line of research investigates the appropriate type of leadership that can fundamentally contribute to the change of organizational culture in

terms of norms and beliefs which support organization innovation (Prajogo & Ahmed, 2006). The studies and research about UAE leadership style have been discussed and the results were less transformational and more passive-avoidant than leadership in the USA and Europe. However, leadership style in the UAE context tends to be laissez-fair in some organization. Most researchers pay attention to personal trait ethics and values, morals and authenticity of the leadership. On the other hand, some researchers focus on leadership behaviors and styles such as transformational, transactional, laissez-faire, or servant-leadership behavior.

Furthermore, the literature about the UAE leadership context is focused on leadership behaviors and their reflections addressing employees by their leadership. There are no studies that specifically targeted the UAE's telecom and ICT organizations, which indicates a literature gap in the local context of leadership behavior. Addressing this gap could be used to develop and create more of an understanding of the UAE ICT and telecommunication leadership behaviors. Consequently, the researcher will investigate the different types of leadership behaviors in a UAE ICT and telecommunication context, with the aim of filling this literature gap about UAE ICT and telecommunication sector organizations. Reviewing the relevant literature reveals research studies that address the success of leadership acting as facilitator and advisor roles in the human relations model, aiming to raise social interactions. In these roles, facilitators emphasize group harmony and consensus and energize interpersonal relationships to minimize conflict, gain employee participation in problem-solving and increase organizational resources through skills development.

Finally, Uddin et al. (2012) contribute a study about innovation in the telecom industry in the USA as being sensitive, and in the private sector the collection of data might face some challenges related to obtaining factual data needed to conduct rigorous analysis of this research topic. Because no previous studies have been conducted in the UAE ICT and telecommunication companies, this study may contribute to the relevant literature and support UAE ICT and telecommunication organizational efforts to achieve better performance standards relative to their emerging economies and developed nations' counterparts. Furthermore, the literature about the UAE leadership context is focused on leadership behaviors and their reflections addressing employees by their leadership. There are no studies that specifically targeted the UAE's ICT and telecommunication organizations, which indicates a literature gap in the local context of leadership behavior. Addressing this gap could be used to develop and create more of an understanding of the UAE ICT and telecommunication leadership behaviors. Consequently, the researcher will investigate the different types of leadership behaviors in a UAE telecom context, with the aim of filling this literature gap about UAE telecom sector organizations.

1.6 Rationale and Significance of the Study

The rationale and significance of this research effort is derived from the following:

- 1)□ The supposed reluctance of different types of leadership behaviors to adequately acknowledge the need to support and motivate employees to share their ideas for innovation performance.
- 2)□ The common prevalent culture in the UAE's professional leadership context of disregarding employees' input and viewing it as interference with leadership and a challenge for the status quo.

- 3)□ The failure to realize proper alignment of support between individual creativity and innovative performance among organizations in the UAE's professional context.
- 4)□ The ineffective culture among organizations to support innovation performance, which leadership behaviors could address by supporting a positive and stimulating organizational culture.
- 5)□ The need to influence leadership behaviors to support innovation performance by placing more emphasis on individual creativity, innovation and the sharing of ideas.
- 6)□ The lack of research efforts with closer relevance to the topic and context of this research effort.

All the aforementioned rationalizations of this research guide this effort towards starting a serious discussion about the influence of leadership behaviors on innovative performance among scholars and practitioners in the context of the UAE's ICT and telecommunications industries, with the ultimate goal of establishing an innovation-driven local industry that would contribute to a wider innovation-oriented economy nationwide, and supported by a solid foundation of theoretical and practical knowledge regarding the potentially effective role of positive leadership behaviors on employee performance.

1.7 Research Questions and Contribution

The objective of this dissertation to do a research and bridge the gaps in literature and practice, contributing to knowledge about different types role of leadership behavior to validate on increasing the chance of achieving product

innovation and this will support innovation performance via sharing employees' ideas. The main research question for this study is how different types of leadership behavior in the ICT and telecommunication organizations in the UAE can support innovation performance in organizations. Can leadership through their behaviors gain more or increase individual creativity through climate for innovation? Is this idea important for the innovation performance? Can leadership have an effect on the culture in their domain by creating climate culture? This investigation will help the organization to an understanding of the importance of increasing the sharing of ideas for individual creativity to support innovation performance.

This will help to understand more about the roles of different leadership behavior on innovation performance and climate culture. This study intends to examine both facilitating and inhibiting leadership factors to encourage employees, which may have an impact on the generation of innovative ideas and their implementation. Most studies evaluating the conclusions of leadership have relied on the Multifactor Leadership Questionnaire (MLQ) with the assumption that it is a valid and reliable instrument.

The MLQ has also been used extensively in the area (Dvir et al., 1999). On the other hand, the anthropological view questions the accuracy of leadership's ability to create an innovate culture as climate culture, because leadership are part of the organization and not separate from it. This researcher wants to understand and investigate different types of leadership behaviors through the following research question: What are the factors affecting innovative performance in an established ICT and telecommunication organization? What are the appropriate behaviors of leadership which could support innovation performance? What types of leadership behavior might be exercised within the organization to encourage innovation performance?

What appropriate framework could be used when measuring the different types of leadership behavior? How do different types of leadership behavior create a cultural climate within the organization to encourage innovation performance? How do different types of leadership behavior support individual creativity within a cultural climate within the organization to encourage innovation performance?

A major motivation for this topical theme has been the discovery that little has been written and thoroughly researched on different types of leadership and organization in the telecom industry, and that there is not any study about the UAE's telecommunication companies and few studies about ICT organizations. Thus, the purpose of this study is to enhance understanding and knowledge of these issues for those involved in the practice of organizational innovation.

This study aims to understand role of leadership behavior and its effect on employees, to reach appropriate answerable research questions through examining the interrelationship between the different types of leadership behavior (independent variables) in the framework to support organization innovation and innovation performance (dependent variable) within the ICT and telecommunication organization in the UAE organization environment. The main questions driving this study to fulfill the proposed objectives are the following: Is there any link between leadership behavior and innovation performance in the organizations in the ICT and telecommunication sector? How can leadership create a cultural climate to support innovation performance? How can climate culture support individual creativity for innovation performance?

1.8 Research Hypothesis

The theoretical framework of this research was modeled based on the extensive literary review of relevant material; and subsequently tested by the methodological framework that was designed based on a set of hypotheses formulated on the works of Sarros et al. (2008) on transformational and transactional leadership and organizational innovation stimulated by employee's innovative performance. The proposed hypotheses were inspired by the research questions in Section 1.8. These hypotheses were empirically tested, to eliminate any bias and ensure the holistic inclusion of relevant theoretical concepts.

The hypotheses formulated as part of this research are:

H₁: The two main leadership styles designated as factors in this research fit the data as determined by various indicators

H_{1a}: The seven variables of leadership behavior factors and the way they are structured as specified among its factors will fit the data as determined by various fit indicators

H_{1b}: The four transformational leadership behaviors factors are positively associated with innovation performance.

H_{1c}: The two variables of transactional leadership behavior factors are positively associated with management-by-exception active, management-by-exception passive.

H_{1d}: Contingent reward is positive associated with management-by-exception active, which is through management-by-exception passive leadership behaviors.

H_{1e}: Management-by-exception passive for leadership behavior will be positively associated with Transactional Leadership behaviors.

H_{1f}: The paths of the four transformational leadership factors to the criterion variable will be positive and significant as measured by the unstandardized regression coefficients.

H_{1g}: The path of contingent reward to the criterion variable are positive and significant as measured by the unstandardized regression coefficient.

H_{1h}: The Transactional leadership behaviors to the criterion variable are positive and significant as measured by the unstandardized regression coefficient

H_{1i}: The paths of management-by-exception active and management-by-exception passive, have a criterion variable that is negative and significant as measured by the unstandardized regression coefficients.

As with Avolio et al. (1995), other first-order models were also tested to determine whether there are more parsimonious full-range models. The models that were tested included:

- a) □ One general single-order factor.
- b) □ Two correlated single-order factors of passive and active leadership.
- c) □ Four correlated single-order factors of transformational leadership.
- d) □ Seven correlated single-order factors of transformational and transactional leadership.

1.9 Research Limitations

This research study is conducted within the following limitations:

Despite the variety of leadership behaviors prevalent in private and public organizations, the study is limited to the common leadership styles present within the

context of the semi-government organization's ICT and telecommunication organization in the UAE. The participants in the study survey are mainly from the telecom organizations in Abu Dhabi and Dubai, mainly because of the close geographical nature of both locations. This might limit the diversity of the sample population and compromise the data with implicit biases and undesired characteristics limiting the generality of the findings and results. The scope of this research can be viewed as somewhat restricted and hence cannot be taken as a standard in regard to the concepts it is testing within its context. The study encountered few published works tackling the relationship between the different types of leadership behavior and the organization innovation in both the public and the private sector, limiting the extensiveness of its relevant literature review.

1.10 Methodological Framework Overview

This section provides a general overview of the research methodology adopted from a similar piece of research with a similar premise. In this regard, end-users working in two telecom organization in Abu Dhabi and Dubai were surveyed in an attempt to capture their perceptions of the main leadership behaviors influencing employee innovative performance in the local ICT and Telecommunications industry. Those organizations in the ICT sector with familiarity have same issues which will be discussed further in Chapter 3, and it will focus on explaining the research methodology consisting of two main parts, theoretical and practical. Moreover, in the theoretical part, the research designation of an appropriate paradigm is conducted, and the practical part conducted through the quantitative procedure is adopted for data collection. The quantitative method consists of conducting a structured questionnaire

survey to collect feedback from end-users of major ICT and telecommunication organization in order to collect data required for statistical analysis.

After collecting data then the researcher will be analyzed through using the structural equation modeling (SEM) technique. SEM applied on the theoretical model to generate the structural model representing the possible relationships between the leadership behaviors and the two main criteria (i.e. “employees’ sharing ideas” and “alignment of objectives which is organization innovation”). Research questions form is the backbone of this dissertation, as they are the foundational for constructing the theoretical model and building up the questionnaire required for data collection.

1.11 Research Outline and Summary

This dissertation consists of seven chapters; each chapter is devoted to cover a specific area of the study to provide a full picture of the topic, as well as presenting coverage about the topic of research interest. The dissertation text structure as follows:

1.11.1 Introduction and Overview

This chapter provides a brief overview of the different type of leadership behaviors with diverse type of culture, the foundation and background of the study theme, statement of the research problem, nature and methodology of the study, research questions and related hypotheses, rationale, and significance of the research topic. The nature and characteristics of the UAE telecom business environment are highlighted.

1.11.2 Literature Review

This chapter focuses on search and retrieval of related scholarly works to the topical theme of this study. The literature review begins by presenting a brief about

the evolutionary track of the leadership behaviors discipline and its significance in academia and business. This chapter also covers comprehensively the historical background of leadership, as well as shedding light on the applicable roles and functions of leadership behaviors and related entities in improving approaches and support for employees sharing of ideas on organization's innovation.

Other related works on portfolio and strategy of the organization for business innovation are considered. The chapter argues that leadership behaviors are responsible for providing and using as tools for assessing the process of sharing employees' ideas and filtering its outcomes, as well as for determining those factors involved in the success or failure of project execution through appropriate responses.

1.11.3 Research Methodology

The conceptual design of the model framework is based largely on the relationships between the roles of independent and dependent variables within the context of leadership behaviors theories and applications with culture as mediator. The independent variables will be selected from proven records of leadership behaviors as appearing in the scholarly research publications.

1.11.4 Explanation of Data Procedure

This chapter provides a thorough description of the adopted method research design used in this study based on the previous studies in the same field. It positions it within a quantitative framework, justifying its use in the investigation of the potential roles in executing the strategic plan of a public sector or telecom sector organization.

This chapter assesses the data analysis of the pilot survey to find out the strengths and weaknesses of the online survey prior to its application to target participants. After

that, the correction of a pilot issue was carried out to avoid any bias in the final data collection. The Multi-regression analysis is used in analyzing collected data, which later contributed to building the conceptual framework.

1.11.5 Quantitative Analysis

This chapter offers and explains the findings of the statistical analysis of the collected and gathered data generated by the survey by employing Statistical Package for the Social Sciences (SPSS) or any other application to support the regression methods. The data representation covers the demographic description of the respondents and leadership domain, along with the tests conducted on the reliability of the dependent variable (different types of leadership behaviors as predictors), with organization culture as a mediator and independent variables (organization innovation as predictors). Validity test and testing modelling by applying both multiple/simple regression analyses was carried out to highlight the established mutual relationships between the criterion and each predictor.

1.11.6 Survey Findings, Analysis and Discussion

This chapter discusses the tested and validated findings of this explanatory study. Special focus is devoted to explaining the found interrelationships between the independent variables (different types of leadership behaviors as predictors). Likewise, the relationship between each of the leadership behaviors with the dependent variable (organization innovation in the sharing ideas as part of strategic plan gathering and execution) is examined. Such relationships would indicate the extent to which each leadership behavior role is involved in the plan processes. Moreover, this involvement could assist in the categorization of each leadership behavior role to be either positive

or negative, as well as in sorting out the leadership behavior roles in accordance with their respective degree of effectiveness in sharing more ideas from employees.

1.11.7 Conclusion and Recommendations

The dissertation closed its contents by highlighting the agreement of the generated findings with the proposed research questions and hypotheses. The generated findings will compare different types of leadership behaviors with findings from previous studies and existing empirical studies of reputable authors in the domain of leadership behavior. The thoughtful recommendations of the researcher will be devoted to using the significant results in the real world of the leadership behaviors business. Recommendations for further studies will be made to fill the knowledge gap in the leadership behaviors literature, particularly the possible role of leadership behaviors in sustaining the phases of a strategic plan.

Chapter 2: Literature Review

2.1 Introduction

Globally, there are hundreds and more of organisations serving thousands of customers and more with similar needs. All of these organisations are constantly on the look-out for new customers or clients. Some organisations are better at building their brand awareness than others. The global challenge which all organisations face is to build brand awareness by providing a product or service which many customers need. Meeting this challenge successfully affects the sustainability of the organisation. The more an organisation is able to adapt to market changes, the more successful it will be. This is where using employees' ideas to innovate and grow forms a competitive advantage (Bell et al., 2010). Although many organisations may seem alike in their product and service delivery and may seem adept at replicating processes, systems, tools and technologies from another organization, they may not be able to replicate the same success of their employees in their way of thinking their culture. This is what makes the difference in the market between a good company and a great organisation. Trying to replicating other organizations will not make an organization confident for success. The organization needs to be innovative to differentiate itself, and it distinguishes itself by involving their human resources as the main players.

Products and services may seem to be similar within organizations in the same industry. To differentiate itself, the organization must introduce innovative products and taking the lead in the market by generating and developing ideas from different domains: from external sources, e.g. customers, suppliers and competitors (Ottum & Moore, 1997), and from internal resources, e.g. marketers, engineers, accountants, and so on. Employees who are dealing with the customer as end-user have important

knowledge about their expectations and needs. This is today's greatest challenge for industries: to keep focus on their market and the competition, and not neglect their resources, internal and external. The organization's need to be different from others due to competition highlights the need to be more creative and innovative in their product and service offering. This is where employees can share their thoughts and ideas to support the organization in the innovation performance. Employees know the organization and its products and services and can provide end-user feedback. This is valuable knowledge for any organization which is looking to improve its products and services.

The search for new ideas and differentiated products and services requires collaboration between the team in the organization and an understanding of customers' needs. This means that there must be a move away from the traditional way, in which the organization had the exclusive responsibility of coming up with new product ideas, creating and developing new products, and deciding which products should be marketed. In support of this, the traditional management understanding of organizational behavior is that organizational members act as instruments of their superiors to fulfill the requirement. Instead, leadership is increasingly required to inspire subordinates to voluntarily transfer talent, experience and knowledge into the organization. This means that the facilitating and coaching roles of leadership must receive more attention. Individual employees think that generating ideas and their elaboration via interaction with other employees and leadership plays a critical role in sharing ideas and developing individuals' knowledge with new ideas (Bell et al., 2010).

According to Denison (1996), each organization has its own culture which employees will act on and react to, based on the organizational culture, Denison described culture as “the deep structure of organizations, which is rooted in the values, beliefs, and assumptions held by organizational members”. Thus, the organizational culture is the hub and core, and could be described as “organizational DNA”. It explains employees’ attitudes and way of thinking and could affect the organization’s innovation efforts if the organization culture does not support innovation and the willingness to share ideas and have discussions. Each organization has its culture of norms and beliefs. So, organizational innovation is the organization’s ability and capacity to gather new ideas to implement processes or products successfully. This confirms the importance of the sharing of employees’ ideas to achieve organizational innovation.

Innovation is affected by factors that contribute to an organization’s capacity for innovation performance and an employee’s inspiration for innovation (Ahmed, 1998). The first step in achieving innovation starts with employees in the organization, at both individual and management level. Organizational innovation depends on employees who generate and implement innovative ideas, and on leadership that encourages employees to be innovative. The current research study is investigative and exploratory in nature. It will be focusing on finding a better understanding of the different types of leadership behaviors within the organization, and to what extent different leadership behavior can support organizational innovation performance. In this study, the researcher will develop and test a model intended to explain the direct and indirect, positive and negative, impacts of different types of leadership behavior on innovation performance.

In addition, the research will further explain the understanding of leadership behavior types which help to create a cultural climate which supports innovation performance, and the extent to which a correlation exists between the different types of leadership behavior and support, and individual creativity within a cultural climate which supports organizational innovation. This chapter provides background based on the relevant literature related to the main research domains: i.e., creativity, innovation, different types of leadership behavior, climate to create culture, individual creativity, and innovation performance. The research aims at a better understanding of the role of different types of leadership behavior in enhancing and encouraging employees in innovation performance, and to build an environment necessary for organizations to become innovative (Hibbett et al., 2007). Further innovation performance, leadership behaviors and their impact on employees for sharing ideas to support more innovation will be discussed. More specifically, the culture of ICT and telecommunication organizations, and organizational innovation in the UAE discussed. The rationale for this study is rare about transformational leadership in the telecommunication and ICT sector for UAE.

2.2 The Importance of Innovation for Business Organizations

Since at least the 1980s, markets have kept changing at a rapid rate. This has required organisations to adopt different perspectives and focus, and a new set of expectations about the organizational culture. Inevitably, new approaches to the challenge of continued change have been necessary. This would affect the development of the organization and its sustainability in the market if the organization did not take any action to improve their products, and especially their leadership relationship with their employees. There is no tool or standard system which

organizations can purchase to improve company productivity. Instead, it requires an understanding of market needs, an understanding gained through employees' being in touch with their clients. This involves leadership of the organization with their employees to focus on market segmentation, product differentiation, and positioning; and on an improved sales force to maintain and gain more customers. Fundamental to any organization's success is a commitment from employees to support the organization by knowing the organisation's products and clients, and being confident to recommend the product to fit the customers' needs in terms of quality, innovation and a timely solution to satisfying a customer's problem (Tushman & Nadler, 1986).

2.2.1 Business Needs Innovation

This section will explain the need for innovation within any organization which needs to be innovative if they are to be successful in maintaining their customers and gaining more clients through innovative performance. An organization's sustainability will reflect benefit for its employees when the organization grows. It cannot achieve this goal with employees who are only following instructions; it will require the support of employees to share their ideas in order to sustain the organization and improve on its services. In turn, employees will require appropriate leadership to guide and support them (West et al., 2004).

It follows that increased competitiveness, and the speed with which business is subject to change, means that working with employees to encourage them to be more innovative provides a business with a competitive advantage (Amabile, 1998). For this reason, innovation is considered as one of the most important requirements for the twenty-first century, particularly in addressing the challenges of economic sustainability and globalization, where creative ideas are the crux for innovation.

Innovation performance will result in growth for organizations which they may be able to achieve through “disruptive” innovation¹ crucial to societies and their economies’ growth. By this means, the organization’s innovation growth does not only provide additional income for middle- and upper-income stakeholders, but also adds to the wealth of countries (Ahlstrom, 2010). Since the benefit is for everyone, this will require collaborative support from each person and department in the organization, at all levels. An explanation of the meaning of creativity and innovation in the following section will help to clarify the research point of view.

2.2.2 Creativity and Innovation Demand in the UAE

In 1980, the research literature started to discuss the importance of innovation for the organization. The importance was highlighted in a figurative sense, as well as in the literature. Literally, it is impossible to read or hear anything related to business in journals or newspapers, or to attend a business conference without reading or hearing of the importance of innovation for the country, society, organization, and individual. For example, the recent CIMI (Cities in Motion Index) announcement published by Spain's University of Navarra IESE Business School is an objective and comprehensive index of future sustainability and quality of life of inhabitants in cities around the globe (ITP, 2017). Abu Dhabi was ranked number one in the Arab cities on this Index. According to H.E. Rashed Lahej Al Mansouri, Director General of Abu Dhabi System and Information Centre (ADSIC), this shows that “Abu Dhabi has been honoured with this distinguished first place in the Middle East ranking thanks to the wise leadership and guidance of President H.H. Sheikh Khalifa bin Zayed Al Nahyan,

¹ A product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.

and the continual support of H.H. Sheikh Mohammad bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, Deputy Supreme Commander of the UAE Armed Forces and Chairman of the Executive Council”. In addition to that, “We are ... honoured by Abu Dhabi's ranking as 13 globally in the field of technology according to the prestigious index, as we consider it a direct testament of Abu Dhabi's various key achievements in the ICT sector which have positioned the capital as a role model for innovation, fresh ideas, and advanced digital solutions”.

This announcement highlights the importance of the need to support studies such as this one for the sustainability and quality of life of inhabitants in cities around the globe. It further reinforces, according to Amabile (1988), the importance of innovation for business, customers, employees and countries. The following terms relating to creativity and innovation should be defined to distinguish their main differences (Legrenzi, 2010):

- Creativity is the capability or act of thinking of something original or unusual, that is new and different. Creativity relates to the individual as well as to the group.
- Innovation is the implementation of something new. The organization implements the individual's or group's creative ideas.
- An invention is a type of innovation that involves the creation of something that has never been made before and is recognized as the product of some unique insight. The invention can be produced by the organization, building on an individual or a group's creative idea. Creativity is thus the first milestone to begin with. This is especially true of the internal process because it is related to employees, while innovation is a process or framework or method which relates to the organization as a facility for execution, to support organization innovation

and the implementation of ideas. The current research is about organizational innovation, wherein more about organizational innovation in the context of the organization's implementation to support the sharing of employees' ideas will be discussed.

The word "innovation" comes from the Latin word "novus", meaning new, and it has either of the following two meanings: "a new idea, method or device" or "the process of introducing something new" (Gopalakrishnan & Damanpour, 1994). This definition is referring to innovation as a result and outcome (Damanpour & Evan, 1984), while the second definition is more about the process for implementation which will be highlighted in general (Sarros et al., 2008). This viewpoint supports Ahmed's (1998) view that "innovation is the engine of change, that culture is a primary determinant of innovation", an idea which is also supported by Sarros et al. (2008).

Consequently, innovation is considered to be an important element in meeting the twenty-first-century challenges in relation to economic sustainability and global competition. Furthermore, Damanpour and Evan (1984) describe innovation as "those changes that help organizations handle with environmental changes and uncertainties not only by applying new technology but also by successfully incorporating technical or administrative changes into their organizational structure that improve the level of accomplishment of their goals". Employees' ideas are thus the starting seeds of innovation that require leaders to collaborate, support and motivate employees to share their ideas. This research will discuss further the ownership and responsibility for a lean process for innovation and creativity. Who is responsible for innovation, and who is accountable?

2.2.3 Innovation Responsibility

Innovation responsibility is defined by West and Farr (1990) as, “The intentional introduction and application within a role of individual, group or business of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group or wider society”. Therefore, the responsibility for innovation relies on everyone in the organization and not only on management. This will require employees in the organization to share their creative ideas and ways of enhancing the organisation. In addition, the organization cannot depend only on its own ideas, but needs to capture ideas from its employees, and process these through systems and frameworks for implementation. Consequently, creativity is the creation of innovative ideas from individuals, groups and organizations, while innovation is the effective implementation of those creative ideas by the organisation (Amabile et al., 1996). The previously mentioned study shows that most successful organizational innovation is based on a leadership style which encourages employees to share their ideas. These ideas contribute to improving the organization’s products, and support innovation. A range of other studies support the idea of the importance of the leadership’s influence and guidance on employees through management behaviors.

Bennis (2007) states that leadership has an influence on employees as well as on management in the organization. According to Zhang and Bartol (2010), leadership can be used to encourage and motivate employees to achieve positive organizational objectives and aims. House et al. (2002) state that organizational leadership should focus on the direction of employee activity towards the achievement of organizational objectives and the fulfillment of aims and goals. Since markets are dynamic and keep

changing, with new demands for innovation, leadership is required to have behaviors that encourage their employees to be creative and support the organization in its quest for innovation.

2.2.4 Innovation Culture Responsibility

Appropriate leadership can lead to a change in the organization's culture (Prajogo & Ahmed, 2006), with leadership being a core factor in the success or failure of the organization. This understanding leads to an awareness of why individuals do not share many more ideas, and what sort of support is required to promote a greater sharing of creative ideas from employees within organizations. Is it because the organizational culture is too focused on the tasks, activities, processes, procedures and operations? Or is it because the leadership behaviors do not encourage the sharing of ideas, and prevent creativity and innovation? Does leadership behavior dampen creativity and prevent employees from sharing their ideas? This research will first discuss organizational innovation, then examine organisational culture in order to know more about it, and finally deal with leadership influence and support behavior for organizational innovation.

2.3 Organizations Need Innovation Performance

According to Knight and Cavusgil (2004), a traditional pattern of organizations has operated in the domestic market for many years and gradually evolved into international trade. These early adopters of internationalization and globalization begin with a global view of their markets and develop the capabilities needed to achieve their international goals of expansion at or near the firm's founding. At this stage, the organization could change their ability to match market demand to meet customer expectations. The organizational innovation is the organization's ability to

gather new ideas in order to successfully introduce through innovative processes or frameworks new products or services. Much of the literature surrounding organisational innovation discusses the requirements for implementing an open innovation strategy (Mortara & Minshall, 2011).

2.3.1 Organizational Challenge with Innovation

The challenges of organizing for innovation are still a relatively under-explored area of research (West et al., 2014). Although the cultural perspective has been identified previously as one of the perspectives needed to develop an open innovation theory more fully (Gassmann et al., 2010), there is still a gap in the literature when it comes to the impact of sharing ideas and organization culture on innovation. Organization Innovation is affected by different factors that contribute to an organization's capacity for innovation performance, amongst which is an employee's inspiration to support innovation (Ahmed, 1998).

The first step in the process for innovation starts with employees in the organization, both individuals and management. Organizational innovation depends heavily on employees who can generate and implement innovative ideas, and on leadership that leads encourages employees to be innovative. In every sense, employees are shaped by their organization's environment and leadership behaviors.

Individuals' perception of their organizational environment as being supportive of innovation also affects the organization's culture of innovation. An organization needs idea generators, information gatekeepers and product champions who support the adoption of new practices; project managers who implement innovative projects; and leadership that actively encourages and sponsors innovation. Furthermore, there is a need to undertake an investigative study about the barriers for innovation in the

organization to determine the factors that enable employees to be more collaborative and creative. To this end, this research will attempt to first understand the different types of organizational culture and the way in which this culture supports organizational innovation.

2.4 Organizational Culture

The cooperation of individuals towards speedy innovation in the face of competition will be the key to sustainability for organizations (Sarros et al., 2008). Denison (1996) stated that culture is “the deep structure of organizations, which is rooted in the values, beliefs, and assumptions held by organizational members”. So, the organizational culture is the hub which could affect the climate for organization innovation. Sarros et al. (2008) defined organizational culture to be inherent in the tasks, activities, processes and procedures of the firm’s business, and James et al. (2007) refer to culture as “the normative beliefs (system values) and shared behavioral expectations (system norms) in an organization”. According to Beugelsdijk et al. (2006), organizational culture is precise and specific to a company; it is relatively continuous, and it can impact and influence inter-organizational relations. As a result, organizational culture is seen as a source of sustained competitive benefit to companies.

Henkel et al. (2014) report that existing cultures and corresponding organizational processes can slow down the change toward openness. They point to the need to go through a learning curve, but do not make a systematic analysis of the effects of culture. Mortara and Minshall (2011) find that internal cultural heritage may actually facilitate the adoption of open innovation and the sharing of employees’ ideas. They conclude that a firm’s cultural background can overrule other implementation

drivers and recommend further qualitative and quantitative studies to reveal the dynamics of adopting open innovation. The research of Herzog and Leker (2010) on characteristics of innovation cultures is probably the most detailed study to date linking culture and innovation, but it does not address the cultural implications of the interaction between closed and open innovation needed to integrate with leadership behaviors to encourage employees to share their ideas. Moreover, the open innovation literature lacks a connection to established theories of corporate culture researchers who derived cultural characteristics of innovative companies in a systematic way based on culture models.

2.4.1 Organizational Cultural and Leadership Behaviors with Innovation

As a researcher, the task is to investigate how leadership behavior affects the organizational culture to create a climate culture for individual creativity. The researcher needs to understand how different types of leadership behavior impact on how employees behave in organizational backgrounds. Many researchers agree on the importance of understanding leadership behaviors and its influence within organization culture, but the research has traditionally taken two rather different forms: the individual difference approach and the alignment approach with innovation performance via the creation of climate culture. According to Chatman (1989), individuals react and behave differently, and a person's behavior can best be predicted by measuring his or her personality traits, values, motives, abilities and effect, because such elements are both stable and reflect in behavior. In contrast, the "situations approach" proposes that a person's behavior can best be predicted by assessing the characteristics of his or her situation. The basic question underlying the well-known person-situation debate has been whether it is persons or situations which account for

more variation in behavior. Supreme behavioral scientists decide that both situational and personal factors influence behavior.

Nevertheless, the challenge has been to understand concepts and methods that not only determine if person and situation variables are valid predictors of behavior, but also to determine when and to what extent person and situation variables predict behavior, and how leadership behavior could have an influence on it. This is no easy task, because interactive research must accurately represent both person elements and situation elements. This will lead to know more about why employees do not share as much as they can with the organization to help it become more innovative, and how leadership through their behaviors can support to change this.

According to Gregory et al. (2009), researchers and academics agree that shared understandings commonly arise following discussions within the team. Such discussions lead the team to have an enhanced and improved understanding of an organization's culture which leads to organizational change, and also to have positive images of the organization in customers' eyes, influenced too by leadership behavior. Many of other researchers discuss further organization culture impact. Having a set of values that is both widely shared and strongly held by members a "strong" culture may be especially beneficial to firms operating in the service sector since members of these organizations are responsible for delivering the service and for customer evaluations, important constituents of what makes up people's judgements about firms.

2.4.2 Traditional Cultural and Leadership Behaviors with Innovation

Traditional enterprise businesses are based on the standard vertical integration with dissimilar roles, dedicated to the current technology and tools as processes, and a hierarchical structure of leadership that works together to represent the organizations

with centralized decision-making. Except in emergencies, standard operating processes and procedures are followed, with little change or ability to be flexible or to adopt changes to meet the dynamic environment challenges. In many cases, this kind of structure is not suitable for today's corporations competing in a dynamic environment and presents an enormous challenge with centralizing decision. In order to survive and grow, the existing organizations need to find ways to be more agile in responding to market demands (Kuratko et al., 2005). The only possible way is to change an organizational culture that will address the market turbulence and competition intensity.

Quantitative judgments were used in defining the problem, developing statements to investigate the perspectives of participants, and selecting participants. Then, quantitative options will be implemented for analysis. This methodology can be helpful in unearthing perspectives without requiring participants to articulate these clearly themselves. It is a valuable complement to a choice of other objective evaluation measures. For example, MQL-methodology can be used to examine leadership behavior's perspectives on dealing with their employees as part of an evaluation of innovation performance. Each Organization will require and need to be more flexible, adaptive and innovative to effectively meet the changing demands of today's environment (Parker & Bradley, 2000). As discussed previously, innovation is about the implementation of creative ideas, which needs collaboration between different parts of the business.

2.4.3 Innovation Performance: Impact of Organizational Culture

Organizations are searching for a source either internal or external of sustainable competitive advantage. Innovation offers this as a critical resource. The innovation is

the principal management responsibility in many of today's organisations. The innovation would entail developing new goods and services and may help the organization to meet or even drive changing market demands. Equally, process innovation involves creating or improving methods of production, service or administrative operations. Effective process innovation may enhance organizational efficiency and responsiveness. Consequently, innovation could enhance collaboration between sections within the organization, which will provide significant additional benefits for innovation (Hoecht & Trott, 2006). A further consequence is that organizations based on vertical functional integration and a hierarchical structure of management need to meet the dynamic environmental challenges and change from their old style of producing products. Organizational culture focuses on and provides motivations for shared behavioral expectations, which are the system norms and normative beliefs. This system values work divisions and functions (Sarros et al., 2008), which will influence and affect the way individuals behave in their work environment.

A number of studies done by Khazanchi et al. (2007); Baer and Frese (2003), stated that innovation efforts may be highly disruptive, altering relationships across functional and occupational boundaries, or requiring changes to the organizational structure and culture. As Dougherty and Hardy (1996) explain, successful innovation requires managing flexibility/control tensions. Flexibility enables creativity, empowerment and the changes vital for the exploration that fuels innovation to support innovation performance. On the other hand, control provides discipline, focusing on innovation initiatives, for instance, on achieving long-term goals, leveraging core competencies, and meeting budgets. Further collaboration will be discussed between

individual creativity, climate culture, and leadership behaviors relative to this collaboration

2.4.4 Individual Creativity and Leadership Behaviors with Innovation Performance

In the marketing literature, Menon and Varadarajan (1992) claim that a firm's market knowledge must be transferred across departments before this knowledge can play a critical role. This may help employees to gain creative ideas. As demonstrated by research done by Luo et al. (2006), a firm's competitive advantage lies in its ability to transfer market knowledge across departments. Therefore, the person can capitalize on information and generate an idea. In addition to that, Luca and Atuahene-Gima (2007) stated that product innovation may be enhanced by three distinct yet highly complementary factors: (1) market knowledge, (2) cross-functional collaboration and (3) knowledge integration mechanisms.

Market knowledge refers to what the organization's knowledge should be about its customers and competitors. The collocation between whole functional in the organization will implement creativity, which refers to the degree of cooperation and the extent of representation by marketing, research and development (R&D), and other functional units in the product innovation process, which have a positive impact on organization innovation. Each of these units processes information as part of innovation performance measurement to collect feedback, which performance innovation measures through process and product.

Knowledge integration mechanisms (KIMs) refer to the formal processes and structures that ensure the capture, analysis, interpretation and integration of market and other types of knowledge among different functional units within the firm (Zahra et

al., 2000). The inability of firms to manage the interplay of these factors lies at the root of many failures in a product which forms part of innovation performance (Fisher et al., 1997). Thus, a collaboration between departments to process product is needed to ensure delivery of high-quality services to customers and involves the ability to work seamlessly across the “silos that have characterized organizational structures”. Collaborative behavior is not a compliance or requirement but it is based on cooperation and willingness. Its success is contingent upon the ability of individuals from interdependent departments to build meaningful relationships.

The fundamental challenge for managers focusing on improving customer service in the supply chain is to gain a better understanding of the antecedents and consequences of cross-functional collaboration. Consequently, the homogeneous and joint occurrence of cooperation between functions and departments will enhance cross-functional competition and cross-functional cooperation (Luo et al., 2006). Firms are efficient means by which knowledge is created, transferred and deployed for innovation performance. Firms exist to generate and integrate creativity for use in strategic action, thus the critical input in production and the primary source of value is known to innovate performance. The study has recommended the organizations to be more agile, entrepreneurial, adaptive and innovative to efficiently meet the changing demands of today’s environment (Parker & Bradley, 2000).

2.4.5 Leadership Behaviors and Climate for Innovation Culture

According to Denison and Mishra (1995) leadership is in a position to shape an organization’s culture, a view that supports the functionalist viewpoint. The interaction and discussion across functional areas leads to knowledge and experiences that can be cooperative and competitive in climate culture. According to Maltz and Kohli (1996),

the competitive environment often occurs because knowledge may be produced for specific departments to gain some advantage over their colleagues. Cross-functional competition may certainly happen from comparisons between functional units. In contrast, collaboration as a process between departments and functions, by nature, requires knowledge transfer for the common interests of the organization.

According to Vargo and Lusch (2004), collaboration between organizations as partners and between organizational functions is important for an organization's long-term survival. Luo et al. (2006) clearly address this interdepartmental interaction by examining the effects of cross-functional competition, or the joint occurrence of cooperation and competition across functional areas within a firm. However, the authors expect more cooperation in cross-functional ability than competition, which has a positive effect on a firm's innovation performance.

The collaboration and support cross-functional could care and competition may nurture productive interactions, which can facilitate internal competencies and sharing of best practice for a successful organizational culture (Luo et al., 2006). High collaboration cross-functional and supportive ability emphasizes the nature of gaining, absorbing and sharing information about customer needs and expectations, and market knowledge about demand. On the other hand, Tsai (2002) empirically demonstrated that productive interactions can be developed when there is high competition for resources across a firm's strategic business units (SBUs) because they are more likely to share information and contribute valuable knowledge stores because of the organizational culture (Luo et al., 2006). The cooperative capability may generate better problem-solving in satisfying customer needs and higher performance to lead and support organizational innovation. Consequently, the functional level will be

predicted within the firm the joint occurrence of cooperative ability and competition provides and supports organizational innovation.

2.4.6 Leadership, Climate for Culture and Individual Creativity

Having looked at the history of the topic, the literature on leadership can be broadly characterized into a number of important stages. Initial leadership studies focused on categorizing the personality traits which characterized successful leaders. According to the “trait” theory, successful leaders are born with certain characteristic qualities which distinguish them from non-leaders. But the trait theory has difficulty in categorizing and authenticating exactly what these leader characteristics are, and from this emerged the ‘style’ and ‘behavioral’ approaches to leadership. These newer theories shifted the emphasis away from the characteristics to the style and behaviors adopted by the leader.

A main and key conclusion or result of these studies was that more successful leaders who adopt democratic or participative styles. The early studies focused on identifying the ‘one best way of leading’. But like the trait theories, a major weakness of style and behavioral theories is that they ignore the important role which situational factors play in determining the effectiveness of individual leaders (Mullins, 1999). It maybe this limitation that gives rise to the ‘situational’ and ‘contingency’ theories of leadership which shift the emphasis away from ‘the one best way to lead’ towards a context-sensitive leadership. Even though each study highlights and emphasizes the importance of different factors, the general tenet of the situational and contingency perspectives is that leadership effectiveness is dependent on the leader’s diagnosis and understanding of situational factors, followed by the adoption of the appropriate behaviors to deal with each circumstance.

There are two contradictory institutes of thought about the role of leadership and climate culture. The first school the functionalist school states that leadership is the architect of cultural change, or through visible activities or through the representative role. The second school the anthropological school questions the ability of leadership to be “able to create culture; that is, leadership is part of the culture”. Both schools agree on the possibility of leadership behaviors to change the culture for their employees. Furthermore, the organization needs to be agile in the face of environmental change to adapt it, based on market demand and customer needs which will require organizations to develop greater leadership capability (Fiol & Lyles, 1985). Leadership behaviors could help to support and create a climate culture to support innovation performance for organizations.

There is evidence from other researchers that supports the functionalist viewpoint, in which leadership is in a position to shape the organization’s culture (Denison & Mishra, 1995). Climate culture and leadership are inter-connected, according to Schein (1992). Schein explains the relationship between leadership and climate culture in the context of the organizational life cycle as inter-connection. Thus, during the process of organizational formation, the founder of a company creates an organization which reflects his or her values and beliefs. In this logic, the originator creates and shapes the cultural traits of their organization. However, as the organization develops and time passes, the created culture of the organization exerts an influence on the leader and shapes the actions and style of the leader. Through this dynamic ongoing process, leadership creates and is in turn shaped by the climate culture.

In summarizing the consensus of opinion on the links between climate culture and leadership, Bass and Avolio (1997) mirror the argument of Schein (1992) by suggesting that the relationship between the two concepts represents an ongoing interplay in which the leadership shapes the culture and is in turn shaped by the resulting climate culture. Bass (1985) demonstrates the relationship between leadership and climate culture by examining the impact of different behaviors of leadership on culture. He argues that transactional leadership tends to operate within the confines and limits of the existing culture, while transformational leaders frequently work towards changing the organizational culture in line with their vision. Similarly, Brown (1996) observes that good leadership needs to develop the skills that enable them to alter aspects of their culture in order to improve their organization. This will support innovation performance.

2.4.7 Innovation Performance and Individual Creativity

The previous literature discussed different aspects of climate culture as one of the most commonly discussed thoughts in the fields of management and organizational theory. One replication of the fame of the culture concept is the increasing number of theoretical perspectives and organizational disciplines which utilize the concept. It is debatable whether the academic acceptance of culture, without the usual disagreements and skepticism associated with new concepts, is an indication of the supposed importance of the concept. However, this is not to conclude that there is agreement on the meaning and relevance of the concept. On the contrary, there is widespread disagreement on the scope of the organizational culture concept. Therefore, it is valid to note three main issues. Primarily, many researchers and studies note that treating culture as a unitary concept reduces its value as an analytical tool.

Secondly, culture cannot be equated with control and power, and thirdly, there is disagreement on whether organizational culture can be easily changed. One of the major reasons for the common popularity of and attention in climate culture stems from the argument (or assumption) that certain organizational cultures lead to superior outcomes in innovation performance. What is not in dispute is that the three concepts have an impact direct or indirect on the organization's performance (Denison, 1996).

Many studies and researchers argue that the innovation performance of an organization is dependent on the degree to which the values of the culture are widely shared between the employees. The claim that climate culture is linked to individual creativity to support innovation performance is founded on the perceived role that culture can play in generating competitive advantage. Krefting and Frost (1985) propose that the method in which organizational culture may create competitive advantage is by defining the boundaries of the organization in a manner that facilitates individual interaction, or by limiting the scope of information processing to appropriate levels.

In the same way, it is disputed that commonly shared and strongly held values enable management to predict employee reactions to certain strategic options, thereby minimizing the scope for undesired consequences (Ogbonna, 1993). Theorists also discuss that supportable competitive advantage arises from the creation of organizational competencies that are both superior and imperfectly imitable by competitors. To this end, it is argued that the 'uniqueness quality' of climate culture makes it a potentially powerful source of generating an advantage over competitors by presenting their knowledge and experience. Indeed, many commentators have advised

organizations to exploit the multiple advantages which could be offered by culture rather than focusing on the more tangible sides of the organization.

Early researchers who link culture to individual creativity as a driver of innovation performance are unequivocal in their claims. A design of this is imitative from the works of the so-called 'excellence writers' who argue that successful organizations are distinguished by their ability to promote cultural values which are consistent with their chosen strategies. While this view met with early popularity, the principal tenets of the argument have been subjected to extensive criticism. By the 1990s, researchers assessing the links between culture and innovation performance were more cautious. For example, Gordon and DiTomaso (1992) both propose that there is a link between certain cultural characteristics and innovation performance objectives such as innovation, but each adds a number of conditions. In particular, they note that culture will remain linked with superior support personal creativity to drive innovation performance only if the culture is able to adapt to changes in environmental conditions. Furthermore, the culture must not only be strong (widely shared) and the same values shared between employees, but it must also have unique qualities which cannot be imitated.

Nevertheless, more recently studies and research, it has been proposed and advised that the relationship between climate culture and individual creativity is tenuous. Definitely, the increasing popularity of the resource-based understanding of competitive advantage suggests that the degree to which a culture can be theorized to determine a sustainable advantage is subject to the value, imitability and sustainability of the culture concerned. Overall, the literature on organizational culture is numerous and various. The culture is linked to organizational performance based on the

productivity is founded on the claim by many researchers that. While some theorists have questioned the universality of a climate culture link, sufficient evidence exists to suggest that organizational culture is associated with innovation performance. Sharman and Johnson (1997) note that one of the strongest factors influencing people's involvement in idea-suggestion is their perception of the working climate which is organizational culture. Creativity theory proposes that when a facilitates is happening in the working environment for idea generation, knowledge-sharing and creative problem solving can be different; individuals in that environment are more likely to generate creative ideas that involve unique concepts or new applications of existing concepts. Therefore, the culture of any business organization requires a new product development (NPD) so that new ideas or propositions are handled effectively within the business, which is a belief stated by Cooper and Kleinschmidt (1995) about NPD team climate. Nevertheless, when an organization is working on developing NPD projects to promote new product ideas by involving different team members on behalf of different departments, there is a probability of failure due to either unsuccessful new products or poor coordination and relations between the functional specialists or success. Organizations that focus extensively on explaining the concepts of climate culture and individual creativity which leadership behaviors could create are closely connected to the employees' experiences within their organization and the resultant behavior that is shaped through their leadership behaviors (Patterson et al., 2005). The main difference between organizational culture and climate culture is that organizational culture instills suitable states of mind that shape the employees' behavioral patterns in accordance with their shared values and beliefs. In addition to that, organisational culture can be measured by employing qualitative techniques (e.g. interviews, case studies and observation) and by quantitative techniques through the

number of participants who share their ideas, since their outcomes are descriptive in nature (Sparrow, 2001).

Climate culture, on the other hand, is behaviorally oriented, and can be understood only by qualitatively measuring per person the impact of the employee's feelings and perceptions about their organization on their behavior and reactions as influenced by leadership behavior. The above clarifies that, though the concepts of organizational culture and team climate share strong similarities, extensive research has defined them as parallel and non-overlapping discipline concepts (Schneider, 2000). In brief, team climate may be referred to as a surface manifestation of culture, reflecting the obvious, explicit and observable facets of behavior. For that reason, there is a general belief in leadership roles within an organization's culture which could initiate change through creating a climate culture of innovation, in the process of changing the organizational culture to support innovation performance as the main differentiator of success (Sarros et al., 2008).

2.4.8 Creating a Climate Culture for Innovation

Different types of organisational culture and how they relate to the organization's objectives will be discussed. Siehl and Martin (1990) discussed the cultural impact on innovation performance of the "direct culture-performance innovation link". They suggest that the organization culture should be integrated and widely shared within the employees. Organization culture can be developed as "rituals" and "organizational stories", as an explanation or illustration of particular cultural characteristics. Each organization culture value will be imposed and integrated amongst employees and then taken to be a predictor of a future organizational objective.

According to Peters and Waterman (1982), previous studies conducted an investigation about organization culture in sixty-two financial organizations. Their findings found a link between a “strong culture” and greater achievement of organization performance objectives. Furthermore, Kilmann et al. (1985) conducted an investigation into organization culture and found out that a strong culture can have a main achievement impact on the accomplishment of the business due to its pervasive influence throughout the organization. Denison (1996) did a study of thirty-four organizations representing twenty-five different industries and find evidence of two indices: “organization of work” and “decision making”, which were found to be strongly correlated with financial performance. Gordon and DiTomaso (1992) replicated Denison’s (1996) study, but for eleven US insurance organizations. “They found that a strong culture, regardless of content, in which a substantive value was placed on the value of ‘adaptability’, was associated with stronger performance, at least in the preceding three years.” The findings highlighted the importance of a cultural value of “adaptability” for the achievement of organization objectives.

Kotter and Heskett (1992) further confirmed these findings with an investigation of 207 organizations from twenty-two diverse segments industries. They found that there was a relationship between the strength of the business culture and the organizational objectives. On the other hand, there was also evidence of an organization with a strong culture but poor performance, as well as companies with a weak culture and excellent performance. The researchers did another type of investigation but with a smaller subgroup of twenty-two organizations with more in-depth exploration. All organizations had a similar culture with equal strength, but there were twelve organizations having a more significant output from the same matched group in the same industry segment of ten organizations. The outcome of the

investigation showed that twelve organizations with a more “appropriate” culture for their corporate industry and environment performed better.

The result conforms with Chatman and Jehn (1994) study when they found that different organizations in the industries had developed different cultural patterns to suit their business demands and reach their organizational objectives. However, in their study, Chatman and Jehn (1994) asked the participants to sort items based on the values according to the extent to which the items were characteristic of the organization. The OCP (Organizational Culture Profile) covers fifty-four “value statements” that gather organizational values, developed by O’Reilly et al. (1991), the OCP has published an extensive review of academic and practitioner-oriented writings on organizational values and culture. Chatman and Jehn (1994) used R-type and Q-type factor analysis to develop an understanding of organization cultural profiles and associate with the value as a universe of possible descriptors of organizations. The current research will study this approach to understand more and how it can be used in his study. This will help to avoid the limitation in the OCP-range typologies, where there is a possibility that some of the characteristics or perceptions of organizational culture may not be fully captured. This strategy was adopted to ensure that items sorted were purely evocative of their organization’s culture, without value judgments to the method of Q-sorts.

2.5 Leadership Behavior

According to Thoha (1990), leadership behavior is the norm of behavior used by an individual when that individual tries to influence the behavior of others. Organizational behavior involves leadership, according to Robbins (1998). This is seen as a central and fundamental part of the management function an important

determinant of organizational success, and a significant main component of the organizational system. Weick (1978) claims that leadership acts as a medium or promoter to incorporate organizational resources in the process of familiarizing the organization to the external environment. Leadership is therefore the hub and driver of employee behavior.

According to Barge and Schlueter (1991), “the main function of leadership is to facilitate the construction of an organizing system” that will fulfill the organization’s goals and objective. Vaill (1978) states that those leaders must be “experts in the techniques of the system’s basic activity”, in using and combining human and technological resources to reach the organization’s objectives. Consequently, leadership knowledge and understanding of systems in the organizational system combine to act as important elements of the leadership function. According to Boulding (1985), that organization system refers to “anything that is not in confusion and a structure that exhibits order and pattern”. Boulding goes on to elaborate by saying, “Virtually all systems consist of components or parts. These are subsystems, the relationships among which constitute the larger system”.

Hopeman (1969) adds that the organizational system “is a set of objects together with relationships between the objects and between their attributes”. He describes the organization system as, “The management of large-scale operations, faced with a multitude of technological changes and staffed by highly competent specialists, requires, above all else, skill integration and synthesis” (Hopeman, 1969, p. 3). This has a reflection on leadership itself because leadership must be viewed from a systems perspective, where it is at the core and hub of the organizational system. Each aspect of the organization has different components of the system which could include the

relationships, rewards, structure, purpose, and policies and procedures of the organization to support and help the organization to deal with any external environment change. This will require a person who knows the organization system. Hence, according to Weisbord (1987), the leadership of an organization has the knowledge and information to guide and influence the other categories, and thus sustain their coherence and stability in pursuing the organization's objective and purpose. Yukl (2002) discussed the leadership approach of causal effects but argued that outcomes of effect are delayed in determining employees' effort and organizational results. This will help to know and understand more about the effects of leadership outcome and interaction with their employees, by understanding the sub-systemic nature of leadership behaviors. Leadership is able to synthesize and incorporate its employees through their behaviors to compensate for deficiencies in the system and changes in the environment, and to maintain the system's stability.

The responsibility of those in positions of authority is large in terms of how the destiny of the system is governed, how decisions are made, and how individuals in the organization are working, and ultimately the organization itself can benefit. Most of the problem around 94% of all difficulties that might occur in an organizational system are as a result of the system itself because of "constriction". However, those who have authority the management and leadership behaviors are the only ones who can change this since they determine who works in it, the structure and environment, and ultimately how individuals behave. The solution is to delegate authority and power to the employees and engage with decision-making for any issue and problems.

There are five traditional types of leadership behaviors which will be discussed in the coming pages, and some or all can be found in any organization. However, one

modern leadership approach in particular is discussed as a new leadership model. This is “Transformational Leadership”, which is believed to hold some of the solutions and answers to support organizational innovation and sustainability. This theory, proposed by Bass (1985) and later revised by Bass and Avolio (1997), has been the emphasis of numerous research inquiries in this discipline, and has helped to change views of the leadership paradigm to what it is today. Transformational leadership has gained much attention in the literature and from researchers who have examined the hypothesized links between transformational leadership and various organizational outcomes. This is important, because of the linkage between transformational leadership and improved organizational outcomes. However, researchers can still not ignore other leadership behaviors which could be influential in the organization. Nevertheless, there appears to be strong empirical and theoretical reasons to justify the resources invested by the scholarly community in understanding the antecedents and consequences of leadership behaviors with organizational innovation as depicted in the theory characterized by Bass (1998); Bass and Avolio (1997). According to Kuhnert (1994), transformational leadership is necessary for employees and leaders to be developed to their highest possible potential and to support the organization towards achieving its objectives. By delegating and considering the individual, leaders help themselves and others to continually learn and become more autonomous and independent, which contributes to long-term organizational innovation. This helps employees to be creative and to value their own thinking, discussions and ideas.

This is an important link to investigate since increased autonomy and an employee-centered approach contributes to increased employee satisfaction and motivation and thus to organizational outcomes in the innovation. Yammarino (1994) claimed that transformational leadership has an effect on employees in the

organization in both direct and indirect ways. Leadership can use transformational leadership to make teams more creative and support organizational innovation by developing their members to be more effective in meeting the organization's goals and reducing inter-group conflict (Atwater & Bass, 1994). This applies not only to a team who is directly supervised but also to cross-functional teams. Waldman (1994) claimed that transformational team leaders can improve productivity by increasing the learning and development of team members and concurrently managing overlapping phases of product development to reduce product development cycle times. Importantly, of all the leadership behaviors, transformational leadership encourages employees to make their own decisions (Bass, 1998). He showed that transformational leadership enhances the process of organizational decision making, by allowing information to flow freely so that the organization can discover and correct problems, find the suitable explanations to those problems, and implement them effectively.

It looks like in theory to be harmonious with a variety of managerial functions, and useful in a wide-ranging of situations and across many levels of analysis that were hitherto discrete from previous leadership theories. Therefore, it may be general in its application and unifying in its method. Even though the brief description above directs that research into leadership has gone through periods of skepticism, recent interest has showed on the importance of the leadership role to the success of organizations. one of the most respected researchers on leadership is Fiedler (1996) has discussed and showed a recent treatise on the importance of leadership by arguing that the effectiveness of a leader is a major cause of the success or failure of a group, companies or even an entire country. Indeed, it has been argued that one way in which organizations have sought to cope with the increasing volatility and turbulence of the

external environment is by training and developing leaders and equipping them with the skills to cope.

These claims are based on the assumption which assumption requires critical review and investigation based on the direct link between leadership and the accomplishment of organizational aims such as innovation. This. Many celebrated cases of a direct leadership behavioral link may be found in several anecdotal accounts of improvements of company outcome attributed to changes in leadership. Nevertheless, in the empirical studies about the links between leadership and innovation performance to know lacking. This is the detailed study of the impact of leadership on performance in the somewhat surprising context such as of Icelandic fishing boats. In the case of Thorlindsson (1987) proposes the differences in the performance of diverse fishing boats, under some conditions, which can be accounted for by the leadership skills of captains. Three-year age, Thorlindsson (1987) exposed that the leadership qualities of the boat captains accounted for 35-49 percent of the variation in the catch of different crews. Other studies which explore the links between leadership and performance and behaviors correspond with the re-emergence of the “one best way to lead” argument. Significance is the resurgence of interest in leadership behaviors, which is commonly referred to as transformational leadership. An amount of studies and researchers theorize that transformational leadership is linked to organizational performance. Hypothetically, it is claimed that the variables of visionary and inspirational skills and capability for the transformational leadership to motivate employees or followers to deliver superior performance (Quick, 1992).

It should be noted, however, that organizations do not enjoy only one type of leadership but have a mixture of leadership behaviors within the organization and even

within a department. As summary, many of the above evidence existing as supporting the claim of a leadership behaviors link is anecdotal and frequently over-emphasizes the “transformational” role of leaders in organization successes. The study will discuss other leadership behaviors which the researcher will explore further. On the other hand, there are different studies have replied to the observation of Porter and Mckibbin (1988) that supporting this claim is either inconclusive or empirically suspect. In the study limited of research findings in this area proposes the need to investigate additionally the nature of the relationship between leadership behavior and innovation performance.

A variety of research and literature supports the claim of the importance of leadership and its behavioral influence on employees. Bennis (2007) stated that leadership has an influence on employees as well as on management. According to Zhang and Bartol (2010), leadership can be used to encourage and motivate employees to achieve positive organizational objectives and aims. House et al. (2002) noted that certain types of leadership can be a hindrance and discourage and demotivate employees to achieve positive organizational objectives and aims. In contrast, he stated that organizational leadership focuses on directing employees’ activity towards the organization objective and the fulfillment of aims and goals, even for innovation. Furthermore, Lipshitz (1989) stated that leadership is the act of motivating people to achieve certain goals without the need of coercive means, and is a required attribute communicated in terms of behavior to influence employees’ perceptions towards task goals.

Since markets are dynamic and changing, with new demands for innovation, leadership is required to have behaviors that encourage employees to be creative and

support the organization in its quest for innovation. The organisation's leadership, through their behavior, will act as intermediaries to change individual participation attitudes and to adopt behaviors that are consistent with innovation demands. Appropriate leadership could affect and lead to change in the organization's environment and culture with a leader being a core factor in the success or failure of a group or organization. Ogbonna and Harris (2000) noted the significant role of leadership, saying that, "Only through leadership can one truly develop and nurture a culture that is adaptive to change". Ostroff et al. (2003) identified leadership as an emerging and developing process that acts on common firm environments and cultures. According to Ogbonna and Harris (2000), there is attention and focus on the importance of the leadership role for the success of organizations. This explains the important role of leadership in driving organizations to success or failure. This dissertation will discuss further the different types of leadership behaviors and their impact on innovation in the organization. The following section will discuss further different type of leadership behaviors.

2.5.1 Leadership

An unpredictable future and the increasing threat of more rapid and complex change are the cause of increased management concern about how their products and services will adapt. Customer demands is also increasing, both in terms of product sophistication and quality, and volume. Keeping traditional customer base while developing new markets is increasingly difficult. These demands have dramatically changed perceptions of leadership, specifically with regard to the respective roles played and relationship between the leader and employee. Most of today's discussions around leadership and management theory deal with this division of roles between

leader and employee in achieving the organisation's mission. This is the equation which the organization is trying to solve, by questioning the extent to which employee behavior is aligned with organizational objectives. These challenges are influenced to a large extent by leadership behaviors which in turn affect employee behavior (Podsakoff et al., 1996).

The organisation's leadership works with their team by communicating and discussing the work and the way it is to be accomplished. When leadership communicates positively through their behaviors, they bring out everyone's best response. On the other hand, when they communicate negatively through their behaviors, this leads to dissonance. The behavior of leadership is important to understanding because of the open-loop nature of the work system. In general, people rely on reaction connections through behaviors with each other. Employees, especially, tend to take behavior prompts from their leadership, or replicate their leadership behaviors. Leadership tends to speak more, to guide their employees and observe them. According to Burke and Collins (2001), different types of leadership behaviors exist in each organization, with each behavior having advantages and disadvantages. This will be explored further in the following section. Some companies have several leadership behaviors within the organization, depending on the tasks that need to be completed and the individual departmental needs. The organization will be required to know more about their leadership behavior and the most appropriate leadership behaviors to support organization innovation. Some leaders are not even aware of their behaviors; they think they are doing well for the organization and are supportive of their employees through their behaviors.

Leaders and management, in general, cannot do anything alone to solve problems without the support of others, especially employees. In today's complex world, problems need to be solved jointly and collectively with the team who have expertise and resources. For these reasons, much importance is placed on promoting teamwork and open dialog through discussion and strong leadership (Jones & Rudd, 2008).

This will help the team to share their ideas to enhance the operation, solve the problem and support others. Nevertheless, this is not an easy task for the leadership to complete. According to Jones and Rudd (2008), this is because of the complex challenges created by globalization which emphasizes an organization which capitalizes on its resources to solve problems efficiently, making the most of available skills. Leaders must recognize the creativeness of all the organization's members across multiple disciplines. The organization requires support from all employees to share their suggestions and ideas. Those suggestions and ideas must be executed swiftly and professionally to support organizational innovation. Leadership must promote collaboration and teamwork through listening to employees with their sharing of ideas that could be a solution and creative way of problem solving. In order to make change and gain acceptance from employees, leadership has to recognise employees' contributions by finding ways to identify and solve complex problems and challenges through employee suggestions and ideas.

This may require a shift to become part of the organizational culture, leading employees through a process of consultation, training and development in an organized manner. Leaders through their leadership behaviors can support this need and become a process for leaders rather than relying solely on their content knowledge and

expertise. The survival of the organization and the development of effective leadership will need to include employees, peers, and senior management. In order to use the thinking skills of other people, leaders will have to engage them in the process of thinking innovatively and creatively, rather than telling them what to do. When leadership concentrates on the process of finding and solving important problems, they concentrate on the process (Jones & Rudd, 2008). Therefore, it is important to provide employees with opportunities to participate by having the chance to demonstrate and present their thoughts and opinions and share their ideas about the problem.

These thoughts and opinions can be part of leadership behaviors considered and incorporated into management decisions together with employees. Jones and Rudd (2008) show that employees are more willing to accept change when they have contributed to and participated in the change process. Jones and Rudd (2008) talk about employees' objectives and personal goals known as Path-Goal Theory by understanding the successful leader and management as someone who engages employees by reconciling their personal goals with those of the group. Leadership is not simply a matter of leaders and employees. It is the relationship brought about as a result of behaviors between leaders and employees within a social group. Effective leadership is about supplying a vision, creating social power, and directing that power so an individual can realize that vision.

The study of leadership also addresses the subject of goal accomplishment. Within the group, the leader influences the setting of the path and the achievement of goals. Leadership involves guiding and leading a group toward some activity or accomplishing some task. This direction includes explaining and expressing a direction according to external and environmental contingencies for the leader's

employees (Zaccaro & Banks, 2001). The best leadership behaviors are within the realm of Transformational Leadership because this theory includes the idea of inspirational motivation as one way of inspiring employees to envision attractive future positions (Jones & Rudd, 2008). In an attempt to understand leadership behaviors, researchers have studied many lines of theory. Transformational Leadership, which has emerged as a dominant approach, is contrasted in many studies to Transactional Leadership. Both transformational and transactional leadership are active leadership styles whereby the leader intervenes to solve and prevent problems from occurring. Numerous studies have also contrasted these two styles of leadership to laissez-faire leadership and others, which may be descriptive of inactive leadership styles (Podsakoff et al., 1996).

2.5.2 Leadership Behavior and Motivation Theories for Individual Creativity

The question of to what extent leadership style influences individual motivation has been extensively discussed in the research on leadership. Leadership is less a specific set of behaviors than it is creating an environment in which people are motivated to produce and move in the direction set out by the leader. Researchers are intent on highlighting the impact of leadership behaviors on their employees. Leadership has the ability to change employee's commitment to the work by producing the right environment and directing activities which create a climate culture of employee support. Because of this, the researcher is interested in capturing employee feedback about their leader's behaviors and their own reaction to it. This research is as important for the people being led as it is for the leadership. Herzberg (1964), for example, has described in his theory of employee "satisfaction" the two elements that

lead to employee satisfaction the true “motivators” and other factors, the absence of which led to employee dissatisfaction. He called these “hygiene” factors.

Leadership, therefore, should keep its focus on increasing satisfaction and decreasing dissatisfaction amongst employees. Leaders have to influence others’ behavior through the conscious application of motivation theories that will satisfy employees’ needs. Murray (1938) mentions in his theory that people have different requirements and needs such as achievement or authority and not everyone has the same needs. The leader has to know what people value and they influence their employees’ actions by defining what behaviors will lead to a desired set of outcomes. Goal setting theory has similar methods by proposing that people have to be motivated to achieve goals and targets, and this motivation provides the drive to achieve it through influencing their behavior.

The selection and definition of goals/objectives and standards of performance rotates between leader and employees depending on the style of leadership being exercised. In a laissez-faire style, for example, the leader delegates most of the responsibility for decision-making to the employees. This style is contrasted with an autocratic style whereby the leader exercises strict control over employee actions and behaviors. A democratic style falls somewhere in between wherein the leader consults with employees on objectives and means to achieve them, and makes a decision based on their input. Added to this mix, reinforcement theory stems from a behaviorist viewpoint and states that behaviors are controlled by their consequences.

Today, leadership styles may be classified as either traditional or modern. The traditional theories encompassed the laissez-faire, Autocratic and Democratic descriptivism, but these are increasingly seen as simplistic and exclusive. Many of the

old concepts have been merged and are now described as “transactional” and “transformational” leadership. These types of leadership will be discussed further in coming sections. The impact of a leader’s style is crucially important, not only for the outcomes it encourages, but also because employees’ own performance evaluation is measured against the achievement of these outcomes.

2.5.3 Traditional Leadership

2.5.3.1 Laissez-Faire

The study of leadership styles usually focuses on the constructive and positive aspects of the leader’s behavior, behavior which adds to levels of employee satisfaction, and encourages innovative and creative employee input and outcomes (Barling et al., 1996). Although relatively limited, empirical research on destructive leadership behaviors and their possible negative impact may add to understanding, despite their possibly devastating consequences for employees as well as the organization as a whole (Zellars et al., 2002). For example, Ashforth (1994) describes manifestly destructive behaviors of “petty tyrants” who are arbitrary, have self-aggrandizing behavior, belittle employees, lack consideration, have a forceful style of conflict resolution, discourage initiative, and use non-contingent punishment (e.g. punishing all for the faults of a few). Tepper (2000) also supports this point of view by describing “abusive supervision” by superiors who are engaged in the sustained display of hostile verbal and nonverbal behaviors. Destructive management may not be limited to active aggression but may also include managers who lack creativity and fail to provide initiative and direction. Such lack of leadership can have an equally detrimental effects on employees’ job satisfaction and support for the organization’s objectives. The latter style is characteristic of laissez-faire management.

Buss (1961) describes aggressive behavior in terms of three pillars: physical, verbal, and the way in which direction at work is communicated, which could be one pillar or a combination of both. Consequently, antagonistic leadership behaviors in dealing with employees are not necessarily active and manifest, but may be a combination of pillars, and include both passive and indirect behaviors. The pillars of inactive and indirect behavior could deliver the wrong message to an employee, that could be important information or feedback (Neuman & Baron, 2005). This kind of behavior may lead to a failure to support employee when there is a need to support a client or customer.

Bass and Avolio (1997) describe laissez-faire leadership as “the absence of leadership, the avoidance of intervention, or both. With laissez-faire (avoiding) leadership, there are generally neither transactions nor agreements with followers. Decisions are often delayed; feedback, rewards, and involvement are absent; and there is no attempt to motivate followers or to recognize and satisfy their needs”.

Two kinds of poor leadership behaviors may be described in terms of active or passive elements (Kelloway et al., 2005). The first type consists of aggressive or abusive behaviors where the manager is unhelpful in an active manner. Examples include behaviors such as yelling, making fun of employees, abusing employees by name, and threatening employees with job loss and pay cuts. These kinds of behaviors are comparable to many of the destructive behaviors described by Ashforth (1994).

The second (passive) type consists of either neutral or avoidance of communication and interaction with employees. This kind of behavior is comparable to many of the negative behaviors described by Bass and Avolio (1997). According to Lewin et al. (1939), laissez-faire leadership represents leadership behaviors where the

leader has been nominated and still physically occupies the leadership position, but where he or she has more or less abdicated from the responsibilities and duties assigned to him or her. Accordingly, laissez-faire leadership behavior is not only a lack of presence, and therefore a type of zero leadership, but it implies not meeting the legitimate expectations of the subordinates and/or superiors concerned.

Skogstad et al. (2007) state that many office stressors could be caused by poor leadership such as laissez-faire. This could lead to role ambiguity, role conflict, and the perceptions of low-quality interpersonal treatment by the leader, with subsequent consequences in the form of stress reactions and strains. However, empirical studies supporting a correlation between laissez-faire leadership as a predictor of office stressors and its consequence in the form of strains are scarce. Studies of laissez-faire leadership behaviors have mainly focused on its direct relationship with job satisfaction, cohesiveness, and productivity of employees (Bass, 1998). Exposure to laissez-faire leadership behavior has been shown to be negatively associated with employees' job satisfaction as well as satisfaction with the leader and leadership behaviors (Judge & Piccolo, 2004). In line with this, a laissez-faire style has also been seen to be negatively related to the group-level safety environment, defined as preventive actions considered or taken by the superior. In addition, Kelloway et al. (2006) have found that safety-specific passive leadership has an expectation of safety-related variables such as safety consciousness and a safe environment.

Kelloway et al. (2006) stated that poor leadership is a root cause of role stress may be supported by studies on task and relations concerned with leadership behaviors and their relationship with role stressors. A variety of studies show strong negative correlations between constructive forms of leadership (leader initiating structure,

leader consideration) and office stressors such as role conflict and role ambiguity. Other studies support the possibility of poor communication with the employee being related to role stress, whereas low communication frequency is associated with high levels of role ambiguity. The studies mentioned discuss a strong negative relationship between role stress and having a leader who initiates structure and is thoughtful. This indicates that laissez-faire leadership abdication from the responsibilities and duties assigned to the superior may be positively related to the experience of role stress. Laissez-faire leadership behavior may create frustration and stress within employees due to lack of satisfactory leadership, which could also be a consequence of interpersonal pressures and escalated conflict levels. The frustrations for both experienced and inexperienced staff within the office environment may also result in antisocial behavior in the work arena.

Kelloway et al. (2006) also state that rude, aggressive or punishing leadership behaviors are causes of office stress, which may lead to destructive in-group behaviors, such as isolating and excluding employees within the office or department. This will result also in an unhappy employee coming to the office. Leymann (1996) focused on lack of leadership as a situational constraint, claiming that poor managerial performance such as a lack of intervention in interpersonal conflicts may lead to escalated interpersonal conflicts, even resulting in someone in the department being bullied. Hence the notion that laissez-faire leadership may be a precursor of interpersonal conflicts even among employees who seem reasonable. When the superior has abdicated his or her responsibilities, high levels of conflict between employees may be the result, a primary duty of managers being to handle such conflicts.

In summary, laissez-faire is the leadership behavior which lacks direction, lacks supervision of employees, and fails to provide regular feedback to those under supervision. This leadership style reduces the productivity of employees in need of supervision. The laissez-faire style results in no leadership or supervision efforts from managers, which can lead to poor productivity, lack of control and increasing costs. This style as behavior does not motivate employees. In this study, the questionnaire measures the existence of a “Non-leadership” factor, called laissez-faire, which refers to behaviors of leaders who avoid making decisions and are inhibited when exercising their leadership.

2.5.3.2 Autocratic

This type of leadership behavior is also seen to have a negative impact on team members, resulting in reduced productivity and commitment from employees because of stress. The negative consequences for employees and organizations also leads to increased staff turnover and absence. Known causes of the stress to employees relate to a sense of control, lack of social support and performance pressure. However, the overall effect of leadership behavior on employees’ stress is not always sufficiently clear. Although a few studies have discussed this, less positive forms of leadership such as autocratic leadership have received insufficient attention. For purposes, autocratic leadership to stress is related.

According to Samuelson and Messick (1986), the team members do not want to deal with autocratic leadership and have him make all the decisions for the team. Team members would prefer to split resources equally among themselves to avert a resource crisis. The team would also like to propose solutions to problems between themselves and vote democratically on problem-solving rather than discuss anything with an

autocratic leadership. Further discussions in the literature generally describe autocratic leadership as not paying attention to the socio-emotional needs of the team to maintain unity and promote the team as a viable social entity. Autocratic leadership scores particularly low on the factor of “consideration” identified by the Ohio State studies. This autocratic leadership influence of consideration is strongly related to employee satisfaction and motivation. Empirical evidence demonstrates that autocratic leadership negatively influences team members’ stability (Van Vugt et al., 2004) and feelings of being content and happy. Employees do not favor autocratic leaders and are thus negatively aroused because these type of leadership behaviors do not motivate employees to show loyalty or to share their ideas.

This is because autocratic leaders are more controlling, limiting employees’ suggestions and limiting also their voice and participation in decision-making processes as a team (Russell & Stone, 2002). Autocratic leadership is known to lead and control the process of discussing opinions and ideas, leading to the actual decision being taken away from the team. In this situation, an aggressive and controlling leader discourages employee loyalty and dedication to the leader and the organisation. Autocratic leadership has primarily been described as the leader making all the decisions. However, Peterson (1997) argued that autocratic leadership is also defined in terms of how the leader directs and behaves during the process leading up to the decision.

Van Vugt and De Cremer (1999) conducted an investigation with a number of volunteers in different groups with different leadership behaviors in a variety of situations. Some teams succeeded while others failed, which gave the failed teams a chance to experiment further. They also had an opportunity to change their leader in

order to improve their chances of success. The result of the experiment following a range of different leadership behaviors, the autocratic leadership style was least preferred. Arrow et al. (2000) believe that autocratic leadership is not a preferred option for any organization because this type of leadership threatens the stability of the team member. An organization is based on a number of employees, forming part of the team, and the team's stability rests on its ability to operate as an intact system over an extended period (Arrow et al., 2000). This is threatened by an autocratic leadership style.

Van Vugt et al. (2004) conducted another experiment in which the researchers formed participants into groups of nine team members. The outcome from this experiment was that the majority of the team wanted the team to be allowed to discuss decisions. The members that were part of an autocrat leadership team felt that they were being controlled, because they wanted more input into group decision-making (Tyler & Smith, 1998). Many researchers have found a negative correlation between job turnover of employees which can be regarded as exit behavior based on their leadership and could be also seen as opportunities for employees to influence management when they experience work-related problems. These results are consistent with research on the exit-voice effect.

The studies that were discussed give a feel for the level of freedom expected by employees, and an understanding of the conditions which support employee satisfaction. This includes a willingness of management to give employees decision-making freedom on how they think about and go about solving work-related problems (Samuelson & Messick, 1995).

Understanding employees' opinion and views by allowing them to be part of the decision may have important consequences for a team's ability to share their ideas and suggestions for improvement. Autocratic leadership expects managers to make decisions alone, without the input of others. Managers own and has authority and impose their will on employees. No one challenges the decisions of autocratic leaders. This leadership style works well with employees who require close supervision, but it does not motivate employees.

2.5.3.3 Participative

The participative leadership style is also described as democratic leadership behavior. The literature often describes three broad types of leadership behaviors, namely autocratic, democratic, and laissez-faire (Bass, 1998). The democratic style is sometimes described as being the opposite of the autocratic style in that it looks to the common good of employees and the organisation. Democratic leadership behavior will engage and include each member of the group in the decision-making method. Colquitt et al. (2009) discussed an autocratic behavior as the leader who takes the decision alone without discussing anything with others or asking for the opinions of employees. Employees, of course, may be able to share valid information or idea as a suggestion that the leader needs.

Not all leaders ignore employees' feedback or suggestions or exclude them from the decision-making process. A leader who is presented with a problem or who is looking for a suggestion or idea, should rightly go to the employees who are most closely associated with that aspect of the business. This type of leader is more facilitator than decision-maker. But while employees can share suggestions and ideas during the decision-making process, the final judgment and decision as authority

remains in the hands of the leader. So, the leader can gain more ideas by engaging employees to share their ideas but still, the final decision is that of the leader and may or may not be aligned with the employees' suggestions.

Based on the leadership theory of Kouzes and Posner (1987), democratic leadership behaviors conform to a pattern of organizing, directing and controlling, and confirm the importance of taking care of the human resources as a key element in the organisation (Tambunan, 2003). Democratic leadership can engage and involve either participative (shared) or consultative decision-making. The attraction of democratic leadership is that it will not take or initiate any action without making decisions in collaboration with team members after dialogue with team members about their suggestions and opinions. This is in contrast with laissez-faire leadership behaviors which do not have or seek control over employees but allows them full freedom to decide for themselves what to do and how and when to do it again, in contrast with autocratic leadership behaviors. In a democratic team, members will support each other to achievement jobs and tasks. Leadership has not solved any issue or problem without consulting their team members in their groups. In addition, participative leadership improves and enhances employee morale since employees contribute to the decision-making process and feel that their opinions matter.

When the organization or company needs or requires to make changes within the organization, the participative leadership style helps employees accept changes easily because they play a role in the process. This style meets challenges when companies need to make a decision quickly. The behavior associated with this style is to motivate employees, but only for a short time.

2.5.4 Modern Leadership

2.5.4.1 Transactional

According to Bass (1985), earlier leadership models were focused on ‘transactions’ between leaders and employees. These transactions relating to tasks and roles for each member of the team, with mechanisms and instructions for reward when achieving a required outcome or output, and punishment for not completing the task. This type of leadership behavior is called Transactional Leadership and is limited to influencing only basic changes in employees’ behavior. A paradigm shift was required to persuade employees to transcend their self-interest for the greater good of the organisation, and to reach challenging aims and objectives. Bass claimed that transactional leadership requires linking roles and tasks with the reward system for completion of tasks or objectives. Each activity must be monitored by the leader, and he would take corrective action or intervene only when standards were not met.

Transactional leadership forms agreements or contracts with employees to achieve specific work objectives by assigning work according to individuals’ capabilities and identifying the reimbursement and rewards that can be expected upon successful completion of the assessment or tasks. Its main focus and attention is on setting standards and either passively waiting for mistakes to occur before taking action, or by closely monitoring performance for the occurrence of any mistake (Bass & Avolio, 1997). The leadership transactional includes an obligation to build trust and maintain a relationship where mutual benefits can be exchanged (Downton, 1973).

Downton goes on to say that the leadership transactional has two different actions: positive and negative. The leader uses positive actions such as rewards contingent on good performance, and negative actions to coerce in the form of

punishment for non-fulfillment. A system may derive its legitimacy from the manipulation of rewards as well as punishments. However, this type of leadership can push the team to perform only through a system of rewards and punishment, without inspiring and motivating employees.

Consequently, this limitation in the leader's ability to influence employees except at a basic level is not enough to support organizational innovation. Different types of leadership is explored that could make employees "transcend" their self-interest and reach challenging goals. Bass believed that "transformational" leaders could support change within organizational environments and form emotional relationships with employees unlike the transactional leader. The transactional leader accepts the status quo, is reactive and not proactive, and places emphasis on creating material relationships with employees (money, perks, a corner office).

The way of thinking which differentiates Transactional and Transformational Leadership is that transactional leadership places emphasis and attention on the "what," whereas transformational leaders emphasise and pay attention to the "why" of employee performance and behavior. In the Transactional methodology, the leader dishes out rewards for delivering good performance, but the agreements could also include punishment. The latter is typically a less productive form of leadership and can create anxiety, hostility or guilt in employees, especially if the self-esteem of the employees is damaged.

In any transaction, less radical changes can be promoted quite effectively. Whatever change is envisaged should be introduced incrementally, suggesting that transactional elements may be more important in this type of society. The conditional reward factor from leadership is the basis of the positive and helpful element of

transactional leadership (Bass, 1998; Bass & Avolio, 1997). Here the leadership pressures an exchange and promises and delivers rewards, while the passive management-by-exception entails waiting, and intervenes only if standards are not met, or when things start to go wrong.

Burns (1978) points out that leadership in research has generally been conceptualized as a transactional or a cost-benefit exchange process. Transactional leadership theories are all founded on the idea that leadership and their employees' relations are based on a series of exchanges or implicit bargains between leadership and employees. The general notion is that, when the job and the environment of the employees fail to provide the necessary motivation, direction and satisfaction, the leader through his or her behavior will be effective by compensating for the deficiencies. The leader clarifies the performance criteria in other words, what is expected from employees and what they will receive in return. Several transactional theories have been tested extensively. Some have received considerable empirical support. Examples are a "path-goal" theory and "vertical dyad" theory. Managers use transactional leadership like any other leadership behavior which takes on certain tasks to perform and provides rewards or punishments to team members based on performance results. Managers and employees member set prearranged goals together, and employees agree to follow the direction and leadership of the manager to accomplish those goals. The manager possesses the power to review results and train or correct employees when team members fail to meet goals. Employees receive rewards such as bonuses when they accomplish goals. The behavior associated with this style could be used to motivate employees. Table 1 shows the contrasting traditional and modern leadership theories.

Table 1: Contrasting traditional and modern leadership theories

Traditional leadership	Modern leadership	Similarity
Laissez-faire	Transactional-Exception passive	Both types of leadership do not interfere but the employees to act without leadership involvement.
Autocratic	Transactional-Exception active	Both types of leadership interfere and rely on the employees to act without leadership involvement.
Democratic	Transactional-Contingent Reward	Both types of leadership will discuss expectations and requirements with employees to do action and restrict leadership involvement to the achievement.

2.5.4.2 Transformational

Transformational leadership depends on high levels of communication to meet goals and objective. This type of leadership motivates employees and enhances productivity through communication and high visibility about the future. It requires the involvement of management to meet the goals. The leaders keep focusing and looking at “the big picture” within an organization, and delegate minor tasks to the employees to accomplish goals. The behavior associated with this style could be used to motivate employees.

As discussed previously, while the transactional leaders could motivate their employees through rewards or punishment but could not exceed expected outcomes, transformational leadership typically motivates and inspires employees to do more than originally expected. Hater and Bass (1988, p. 695) describe transformational

leadership thus: “The dynamics of transformational leadership involve strong personal identification with the leader, joining in a shared vision of the future, or going further beyond the self-interest exchange of rewards for compliance”.

Transformational leadership tries to extend and increase the interests of employees, which will lead to creating awareness and acceptance within employees of the purposes and drives of the team member, and motivate each employee to go beyond their self-interests for the good of the team and its member (Yammarino & Bass, 1990). Yammarino and Bass (1990, p. 151) also add this note: “... transformational leadership articulates a realistic vision of the future that can be shared, stimulates subordinates intellectually, and pays attention to the differences among the subordinates”. Tichy and Devanna (1990) contribute to transformational leadership by highlighting the transforming effect this leadership has on organizations as well as on individuals. By describing and defining the need for change, creating new visions and mobilizing commitment to these visions, leadership can ultimately support, transform and change the organization. This kind of transformation will lead employees to achieve more by raising the awareness of the importance of tasks and activities and the value of designed outcomes, getting employees to transcend their own self-interests and altering or expanding employees' needs, according to Bass (1985). The leadership theory proposes a positive relation between transformational/transactional leadership and other factors such as organizational commitment, job involvement, job satisfaction, and organizational citizenship behavior. However, based on the cumulative evidence thus far, one could expect transformational leadership to have a stronger influence compared to others. Confirming previous discussions, Judge and Bono (2000, p. 754) stated about the Multi-Leadership Questionnaire: “The MLQ ratings do not include some possibly applicable outcomes, such as organizational

assurance or overall job satisfaction. Although one would expect that the subordinates of transformational leaders are more satisfied with their jobs and more committed to their organizations, with a few exceptions... there is little evidence to support these linkages.”

Many studies indicate that transformational leadership produces higher levels of result compared to other leadership styles (Podsakoff et al., 1996). Also, attitudes towards employee job satisfaction will increase to support organization innovation. This will lead to greater job involvement and organizational commitment to present distinct ideas. Research indicates that these work-related variables are likely values of each other. This is because of a positive emotional reflection on the job situation (job satisfaction) when viewing the value of their job. In addition to cognitive belief reflecting one's psychological identification with the organisation (job involvement), researchers have indicated that these two attitudes to a specific job are different from one another and from organizational commitment which focuses on the individual's identification with the organization as a whole (Brown, 1996).

Trott and Windsor (1999) explain the findings that indicate that staff nurses are more satisfied with transformational leaders and that their level of satisfaction increases as the leader uses a more participative style. Hater and Bass (1988) also found transformational leadership to be positively correlated with how effective subordinates perceive leaders, how much effort they say they will expend for the leader, how gratified and support they are with the leader, and how well subordinates perform as rated by the leader. Burns (1978) was the first to present the concept of transformational leadership, and he highlighted the differences between transactional and transformational leadership. Organizational management theorists and

researchers, who truly encourage (Judge & Piccolo, 2004) and develop their employees to achieve beyond expectations, consider transformational leadership to be the most appropriate style (Bass, 1985). This style stimulates the process of thought (i.e. beliefs and values) and cognitive behavior (i.e. attitudes and attributes) of employees.

In the past twenty years, there are a large of studies and discussion have gathered on transformational and transactional leadership theory. Initially start with Burns (1978), who is the first introduced the ideas of transformational and transactional leadership in the leadership domain. Furthermore, additional contribution to Burns concept by Conger and Kanungo (1998) in term of the difference between transformational and transactional leadership and what leaders and employees are offer one another and support. Additionally, Transformational leaders offer further and higher to exceed the short-term goals and concentrations on needs. On the different side, the Transactional leaders is stress on the proper discussion of resources. Because transactional leader provides followers some changes, there interest in changing is different from the transformational leadership. More common is transactional leadership than transformational leadership, if less dramatic in its consequences is achieved.

Bass (1985) proposed his theory of transformational leadership on Burns' (1978) conceptualization, with several modifications and explanations. Primarily, Bass did not accept and agree with Burns especially on the transformational and transactional leadership represent opposite ends of a single continuum. But, Bass (1985), claimed and clarified that transformational and transactional leadership are not isolated concepts, and more argued that the best leaders have both transactional and

transformational. Furthermore, Bass elaborated considerably on the behaviors that visible transformational and transactional leadership.

Although the theory has went through many modifications, in the most recent version there are four variables of transformational leadership, three variables of transactional leadership, and a non-leadership dimension. The four variables of transformational leadership are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence is the degree to which the leader behaves in worthy ways that cause followers to identify with him or her. Inspirational motivation is another way of support by leaders to challenge employees to change or increase their morals to higher, communicate optimism about future final goal attainment and deliver meaning for the current task at hand. Intellectual stimulation is the method and way to which the leader challenges norms, takes risks, and solicits followers' ideas. Leaders with this quality stimulate and encourage creativity in their employees. Finally, Individualized consideration is alternative method and way of degree to which the leader appears and listens to each follower's needs and requirement to acts as a mentor or coach to the follower.

2.5.5 ICT Organizational Leadership

Organizations are busy with product lifecycles and operational activities, and they may find it hard to find the time to deal with market demand, customers' needs and other requirements, such as monitoring that operational teams are completing their activities. This will require more focus and a need to capture more data for new products and services. So, organizations require managers to handle operations, and not only focus on that but also to motivate employees. The organization therefore

requires leadership behavior to change employees' participation on the operation, and to focus on innovation and sharing of ideas.

So, why do organizations require leadership, and what is the difference between a manager and a leader? The manager handles day-to-day activities, such as operations, but leadership must think and act strategically and be a long-term visionary. Thinking strategically is preferable to thinking operationally, since it can help organizations to overcome challenges. In addition, there is a difference between transactional leaders and managers, and other types of leadership and management. Since ICT organizations have an appraisal system to frequently review staff performance, the ICT organization could possibly require the following leadership behaviors.

The transactional leadership's emphasis and attention are on supervision in the organization, personal performance, and group performance. It is worried with the status of operations and daily progress toward goals. The transformational leader works to improve the motivation and engagement of employees by leading and guiding their behavior toward a shared vision. A transactional manager is a part of a team that controls the coordination of transactions over one or more resources.

The transactional manager is responsible for creating transactional objects and managing their stability. However, while the transactional leader also identified as a managerial leader has an emphasis on the role of supervision, organization and group performance, transactional leadership is a style of leadership in which the leader promotes compliance from their followers through rewards and punishments. Transformational leadership is a way and behaviors of leadership where a leader works with subordinates or employees to identify needed change, creating a vision to guide the change through inspiration, and executing the change in dynamic ways with

committed followers of a group. The contingent reward system is the way of a motivation-based system that is used to reward those that meet their identified goals. It provides positive reinforcement for a job well done (Bass, 1998).

According to McClelland (1994), competent leadership depends on being concerned about an effective or superior performance in workplace circumstances and conditions. Competency can be defined as a customized set of behaviors, skills and attitudes that can be used to predict or distinguish the performance of an employee within a business. This is about how leaders manage work efficiency, but this dissertation is not about a leader's fitness for the job; it is about how a leader can positively impact organizational innovation through their behavior. Thus, it leads to believe that leadership style in the UAE context tends to be of the *laissez-fair* style.

The previous review of the literature which discussed Ogbonna and Harris (2000) views on the relationship between leadership and culture, noted that many commentators believe that the routine or objective of an organization is dependent on the conscious alignment of employee values with the adopted values of company. This evidently indicates that organizational culture and leadership are linked. The following is a review of the literature on this issue. One way of uncovering the relationship between culture and leadership is to examine how culture has been conceptualized in organizational theory.

2.5.6 ICT Leadership Behaviors and Climate Culture

According to Smircich (1983) who identified two methods to the study of the cultural phenomenon in organizations: the first one is the culture as an organizational variable, and the second is culture seen as something which can be manipulated concluded by leadership. Thus, the nature, direction and impact of such manipulation

is dependent on the skills and abilities of the leadership behaviors. The common of the literature and articles which extols the virtues of transformational leadership demonstrates widespread support for this view. The way of the thinking, feeling and responses of leaders in the organization are shaped by the culture if it is considered that the culture is seen as an integral part of the organization (Schein, 1992). The latter observes that organizational culture and leadership are intertwined. He illustrates this inter-connection by looking at the relationship between leadership and culture in the context of the organizational life cycle to create climate culture for the employees.

Thus, during the process of organizational formation, the founder of a company creates an organization which reflects its values and beliefs. In this sense, the founder creates and shapes the cultural traits of the organization. However, as the organization develops over time, the created culture of the organization exerts an influence on the leadership and shapes the actions and style of the leadership. In this dynamic continuing process, the leader creates and is in turn shaped by the organizational culture. In brief the consensus of opinion on the commons and links between organizational culture and leadership, Bass and Avolio (1997) mirror the argument of Schein (1992) by suggesting and highlighting that the relationship between the two concepts signifies an ongoing interaction in which the leader shapes the culture and is in turn shaped by the resulting culture. Bass (1985) establishes and concern about the relationship between leadership and culture by examining the impact of different styles of leadership on culture.

He argues that transactional leadership behaviors tend to operate within the confines and limits of the existing culture, while transformational leaders frequently work towards changing the organizational culture in line with their vision. Similarly,

Brown (1996) observes that good leaders need to develop the skills that enable them to alter aspects of their culture in order to improve their organization. While there is no shortage of claims that leadership and culture are linked in the literature, there have been few empirical examinations of the nature and performance implications of this link. One exception is a current study of organizational change in the United States federal civil service. Hennessey concludes that leadership played a major role in nurturing the appropriate organizational culture which helped to improve the implementation of specific government reforms (Ogbonna & Harris, 2000).

Hennessey further argues that “the most effective leaders foster, support and sustain organizational cultures that facilitate the type of management reform envisioned by ‘reinventing government’ and the attendant increases in effectiveness and efficiency” (Hennessey, 1998, p. 523). The above review finds that the links between leadership and culture have each been studied separately. Interestingly, some of empirical studies have combined the simultaneous examination of organizational culture, leadership style and performance. While some writers suggest that (1) the behavior of the leader effects the organization; (2) certain types of culture are linked to superior leadership; and (3) culture and leadership are connected, the precise nature and form of interaction between these three thoughts is not fully understood. Clearly, further research is necessary to identify, explore and elucidate the character and pattern of association between organizational culture, leadership style and innovation. However, some literature-based conclusions can be drawn. Therefore, further transformational leadership behaviors will be discussed first, then the other leadership behaviors.

2.5.7 Cultural Leadership Creation

The purported relationship between leadership style and performance is based largely on anecdotal evidence while the links between organizational culture and performance are supported by empirical studies (Gordon & DiTomaso, 1992). Other studies suggest that leadership behaviors shape the nature of organizational culture (Schein, 1992). The literature on organizational culture describes the role and ability of leadership in ‘creating’ and ‘maintaining’ particular natures of culture. It is also suggested that the ability to understand and work within a culture is a prerequisite to effective leadership (Ogbonna & Harris, 2000). Innovation requires skills, knowledge and ideas from each individual as part of a collaboration that supports the integration of internal processes that combine activities into a productive structure, not a fragmented organization. This will require a degree of homogeneity from individuals within the organization, and someone to lead them to be innovative and to create unique products or enhance the organization’s processes, with the role of leadership being to encourage individuals (De Medeiros et al., 2014). Therefore, the firm culture has been conceptualized as a facilitator of the relationship between transformational leadership and a climate of organizational innovation (Amabile et al., 1996; Deshpande et al., 1993).

2.5.8 Leadership and Organization Culture with Innovation

Ogbonna and Harris (2000, p. 780) found a link between innovative culture and participative leadership as a forecaster of organizational innovation. Leadership that encourages individuals to add value to the organization and to learn about innovation will have an overall positive effect on the organization. Therefore, the joint occurrence of cooperative and competitive behaviors can exist at multiple levels in the

organization, such as SBUs, different functions, multiple departments, and task groups. As discussed before about the leadership of organizations who could help to shape work culture that contribute to a climate of organizational innovation (Amabile, 1998). According to Ancona and Caldwell (1987), the transformational leadership has very significant role to support and promote innovation within organization, which will support and ensure the long-term survival of an organization. This leadership is associated with cultures of innovation and high- performing organizations to lead cultural change (Ogbonna & Harris, 2000).

2.5.9 Transformational Leadership and Climate Culture with Innovation Performance

Transformational leadership is based on the behaviors of leaders who inspire and motivate followers, who directly or indirectly report to leadership to perform and achieve more in the organizational goals and interests. These leaders have the capacity to motivate and inspire employees to exceed expected levels of work (Sarros et al., 2008).

Podsakoff et al. (1990) propose Four behaviors or factors as variables to measure transformational leadership (Figure 2).

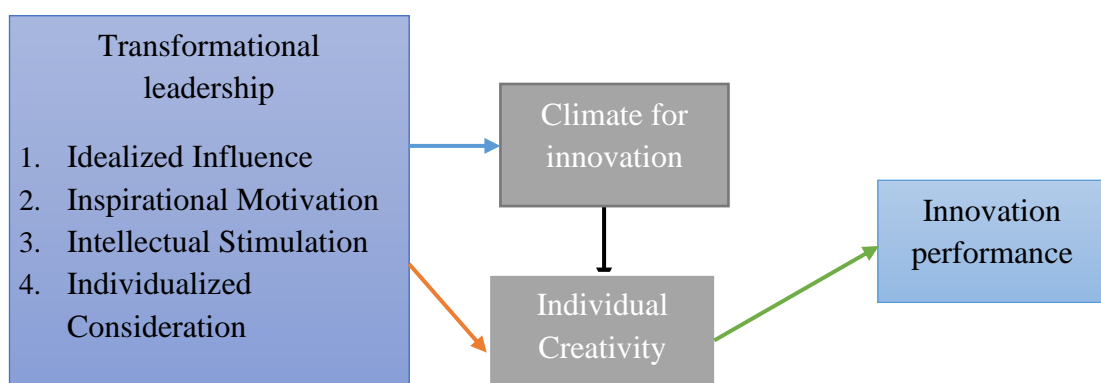


Figure 2: Transformational leadership

Raelin (2003) defined the concept of the team as the creation or improvement of “leaderful” communities where leadership truly holds the center to show followers. This is aligned with other research undertaken by Bass and Avolio (1997), which shows that transformational leadership is positively linked with work culture (e.g. loyalty and commitment, job satisfaction); work improvement (e.g. marketing or sales); employee creativity; and employee happiness (mental and physical health, occupational safety). UAE telecommunication and ICT organizations have an appraisal system based on the Balanced Scorecard whereby each line manager and leader should appraise their direct employees regularly, resulting in a frequent performance review discussion with all staff.

The following are unique objectives of this research:

1. □ Examine the relationship between leadership behaviors and innovation performance in telecommunication and ICT organizations
2. □ Examine the ability of leadership to create a climate for innovation which supports individual creativity for innovation performance.
3. □ Examine the leadership behaviors which support individual creativity for innovation performance.

2.5.10 Transactional Leadership and Organizational Innovation

Transactional leadership is a different style of leadership to transformational leadership and involves the leader managing employees through a system of rewards and punishments. There are three elements to transactional leadership: contingent reward, proactive exception management and reactive exception management.

Contingent reward is another degree to the leader sets up constructive communications and dialog with employees to explain and simplify expectations and

establishes the rewards guidelines associated with meeting these result and expectations. Moreover, Proactive exception management discusses and explain to the degree to which` the leader takes and involve to corrective action on the basis of results of follower transactions. Howell and Avolio (1993) note that the difference between proactive exception management and reactive exception management lies in the timing of the leader’s involvement.

Proactive leaders monitor and focus on their employees’ behavior, expecting problems and taking the lead to correct actions before the behavior creates serious difficulties. In contrast, the reactive leader does not do anything until the behavior has created problems. Bass (1998) definite that the increased result depends on the degree to which “transformational leadership styles build on the transactional base in contributing to the extra effort and performance of followers”. In addition, Bass (1998) went further in commenting “the best leadership is both transformational and transactional”. Therefore, Howell and Avolio (1993) agreed with Bass’s statement by stating that transformational leadership accompaniments transactional leadership, and that effective leadership build on the supplements transactional leadership with that that effective leadership build on the supplements transactional leadership with transformational leadership (Figure 3).

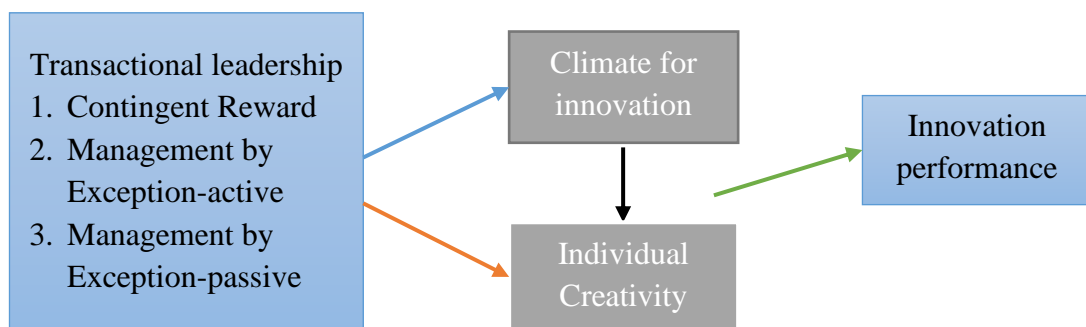


Figure 3: Transactional leadership

2.5.11 Transformational Leadership and Transactional Leadership

As discussed before and above, transformational leadership styles build on the transactional base in contributing to the work and performance of employees. However, according to Conger and Kanungo (1998), in replying to Bass (1998), the difference between transformational and transactional leadership is in terms of what the leaders and followers can do and offer one another. Transformational leadership offers a purpose that exceeds short-term goals and focuses on higher-order principal needs. Transactional leadership is focused on the correct exchange of resources. If transformational leadership could result in followers or employees identifying with the needs of the leader, the transactional leadership gives followers something they want in exchange for something the leader wants.

Transformational leadership is considered by a leader's ability to articulate a shared vision of the future, intellectually stimulate employees and attend to individual differences in the workforce (Lowe et al., 1996). Conversely, transactional leadership is focusing on rewards and punishment for employees' actions as a form of "give and take". Hence, the reason to select transactional and transformational leadership for the current study is that the potential to generate new product ideas can be supported through developing a work team's cognitive, moral, communicative, collaborative, physical and business skills potential (Podsakoff et al., 1996). This could be realized through the transformational leadership variables and practices of inspirational motivation, individualized consideration, idealized influence and intellectual stimulation. Dealing with highly complex and dynamic processes of product innovation requires highly committed and effective work teams to assure project success (Figure 4).

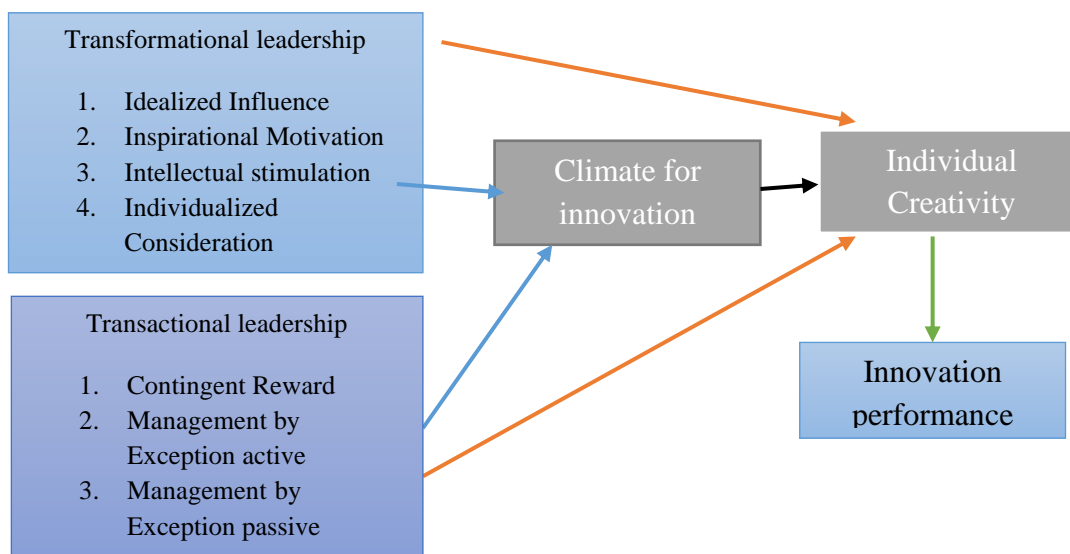


Figure 4: Transformational and transactional leadership

Having discussed leadership potential and its link to idea generation potential, In the following sections the concepts of creativity and new idea generation potential and their interconnection will be described.

2.5.12 Leadership and Performance Innovation Process Support

Transformational leadership in the empirically and theoretically has been linked to a diversity of organizational outcomes, including innovation performance (Waldman et al., 2001). In addition, Jung et al. (2003) stated that transformational leadership could enhance innovation through engaging and collaborating with individual's personal value systems (Bass, 1985; Gardner & Avolio, 1998), thus increasing levels of motivation to achieve higher levels of performance, and encouraging individuals to think creatively. In addition, in the other studies for example Elenkov and Manev (2005) discussed about on the influence of 270 top managers European countries on innovation in different organizations and result were that the sociocultural environment was significant in the leadership innovation relationship and recognized that leaders are positively influence innovation processes

in organizations. This is consistent with previous research. Leadership has an effect on creation, sharing and transforming through collaboration between individual networks for innovation and learning. Another study by Jung et al. (2003) of 32 Taiwanese organization, found that transformational leadership had significant and positive relationships with organizational innovation as it was facilitated by “an organizational culture in which employees are encouraged to freely discourse and try out innovative ideas and approaches”.

A further study on the same subject, however, did not identify specific transformational behaviors and properties that have an effect on organizational innovation, but the researcher did propose that intellectual inspiration and the capacity to continually challenge employees encourages innovation (Jung et al., 2003, p. 539). The research which was discussed earlier suggested as common sense that intellectual inspiration is the extent to which the leadership inspires employees to rethink and uplift the ways they perform their day-to-day activities and engage in problem-solving activities. So, a leader’s intellectual inspiration leads to new ideas and experimentation that are integral to the process of innovation, and to the leader’s views and vision of the process (Elenkov & Manev, 2005). However, the positive relationships between the factors of transformational leadership and innovation performance are not always specified (Sarros et al., 2008).

2.5.13 Leadership and Climate Culture

The associations between the transformational leadership dimension of vision, organizational culture and an environment for organizational innovation suggest that the stronger these linkages, the greater the likelihood of innovative work practices occurring (Sarros et al., 2008). The effective leader acts in facilitator and advisor roles

in the human relations model, aiming to raise social interactions. In addition, facilitators emphasize group harmony and consensus, energize interpersonal relationships to minimize conflicts, gain employee participation in problem-solving, and increase organizational resources. Leaders as advisors assist subordinates to develop job-related competencies with empathy and consideration (Yang, 2007).

Robbins and Barnwell (1994) refer to organizational culture as shared values, beliefs or the same views held by employees within an organization or organizational function or units. Shared values create an organizational culture and provide norms for employees' behavior in the organization. Therefore, according to research results, an effective organizational culture is one of the important components influencing an organization's ability to survive and succeed in the long term. Sveiby and Simons (2002) focus on culture as "the values, beliefs, and assumptions that influence the behaviors and the willingness to collaborate". An organizational culture containing openness and incentives successfully facilitates the integration of individual competencies into organizational collaboration through learning, knowledge creation and sharing within the organization (Gupta et al., 2000).

Yang (2007) research into organizational culture in collaboration with management emphasized creating a collaborative environment, and specifically stated collaboration as being "mutually sharing norms of behavior". According to Sveiby and Simons (2002), there are three levels of collaboration within an organization: a business unit, an immediate superior, and co-employees in a workgroup. His research demonstrates how the components of collaboration and trust must be incorporated into the organizational culture for it to be successful. Sveiby and Simons highlighted the importance of encouraging collaboration between these three levels and noted that

sharing is maximized when employees have collaboration at all three levels of the organizational hierarchy. The traditional organizational behavior understanding of management is that organizational members act as instruments of their superiors. However, this perspective is no longer seen to secure long-term success, and leaders are increasingly required to inspire subordinates to voluntarily transfer talent and experience into the organization. This means that the facilitating and coaching roles of leaders must receive more attention (Roth, 2003).

2.6 Innovation Performance

According to Smith (1998) in-depth study about creativity, there are almost 172 methods for generating ideas. Psychologists and management experts explain the phenomenon of idea generation, called heuristics, as the underlying logic and impact of experience-based techniques for problem-solving, learning, and discovery to propose solutions. Creative thinking starts when individuals are faced with decision-making requirements and need to explore effective problem solutions, requiring them to be flexible in choosing from a range of choices to gain maximum benefits, opportunities and changes to support their routine life. Hence, decentralizing authority and assigning decisions to teams so that they are empowered can result in creating mid-points of innovation and excellence at various levels to ensure an enhanced level of organizational operational effectiveness (Figure 5).



Figure 5: Idea process

2.6.1 Innovation Performance Product and Process

Hung et al. (2011) discussed innovation performance as happening in two areas: processes and products with services ; and that innovation is “an idea, product or process, system or device that is perceived to be new to an individual, a group of people or firms, an industrial sector, or a society as a whole” (Rogers, 2010, p. 11). Damanpour (1991) describes organizational innovation as being a combination of developing and implementing new ideas, systems, products or technologies. This is independent of an organization’s internal research, which may involve process and product innovation.

A considerable number of researchers have shown that there are two main reasons why companies establish these relationships: firstly, to reduce costs and risks, and leverage economies of scale (Buganza & Verganti, 2009), and furthermore, to acquire new technical skills or technological capabilities. Vertical collaboration with customers and suppliers allows a company to acquire knowledge about new technologies and market and process improvements, thus obtaining results more quickly in terms of innovations.

During the last decades, increasing attention has been paid to the collaborative role of the final customer. Fritsch and Lukas (2001), for example, stressed the key role of clients in obtaining successful product innovations, mainly derived from the possibility of acquiring market information via the direct involvement of the customer in the new product development process.

There are some studies and research demonstrated that collaboration with customers is beneficial for a company whose aim is to introduce more novel or complex product innovations (Amara & Landry, 2005).

Furthermore, suppliers could also be considered as another enablers to the reduction of risks and lead times in produce development, as well as enhancing flexibility, creation quality and market adaptability. On the other hand, the collaboration with competitors could be also concerned, its purpose is to carry out mainly basic research and to establish standards (Nieto & Santamaría, 2007). The company benefit may obtain and do adoption of an open innovation model, Dahalander and Gann (2010) referred to four main types of openness: revealing, selling, sourcing and acquiring. The authors explained the benefits related to each as follows:

1. □Revealing: this type of openness aiming with how organization disclose internal resources without immediate financial rewards, seeking indirect benefits to the focal firm. The benefits are in gaining legitimacy from the external environment, fostering incremental and cumulative innovation.
2. □Selling: this type of openness refers to how firms commercialize their inventions and technologies through selling or licensing out resources developed in other organizations. Benefits: internally commercially or commercialize products that are “on the shelf”, outside partners may be better equipped to commercialize inventions to the mutual interests of both organizations.
3. □Sourcing: this type of openness aiming to how organization can use external sources of innovation. Benefits: to have access to outside organization and a wide array of ideas and knowledge, discovering radical new solutions to solving problems.
4. □Acquiring: this type of openness refers to acquiring input to the innovation process through the marketplace. Benefits: gaining access to resources and knowledge of partners, leveraging complementarities with partners.

2.6.2 Characteristics

The traditional method for generating innovative ideas for problem-solving through creative thinking is built upon the adoption of “out-of-the-box” reasoning. To be truly original and innovative, such a reasoning approach does not follow systematic patterns of initiating the thought process by placing the problem first to encourage brainstorming until the desired solution is reached. Conflicting with this out-of-the-box thinking is a modern method to new idea generation through creativity logic of thinking “inside-the-box”, an enhanced process for innovation. Theorists in favor of this view defend the concept with the logic that humans think in outlines, or operate within their bounded rationality, and usually depend upon thinking factors knowledge, familiarity and experience during the problem-solving process. Inside-the-box thinking is a process of exploring solutions while remaining within one’s familiar surroundings and using the help of set patterns embedded in creativity.

2.6.3 Innovation Performance Process

New Product Development (NPD) goes through different stages for the success, survival and renewal of organizations. According to various research studies done for Product Development and Management Association, AMR Research, Booz-Allen and Hamilton (1982), around 70-85% of leading companies in the United States follow the “stage-gate” model to drive their new products to the market, and there is almost the same trend in the rest of the world. The stage-gate system is a cutting-edge operational roadmap for the implementation of a new product project from idea to launch stage (Figure 6) (Shahid & Nabeshima, 2007).

- □ Stage Gate

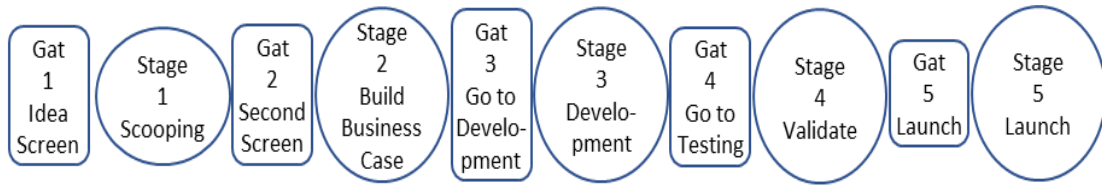


Figure 6: Stage gates (Source: Booz-Allen & Hamilton, 1982)

2.6.4 Innovation Performance Product

Individuals will share their ideas through organizational processes, systems and guidelines to result in new services or products or both. The idea will go through the stage gates after capture and discovery for further investigation and explanation. After passing the idea screening gate and entering the next stage, the product idea enters the scoping stage and, if cleared, it crosses the second gate to be established as a business case. This requires input from different teams for implementation and readiness. After demonstrating that there is a feasible business case, the product idea passes the third gate: development. A product development being a prototype goes through testing and validation to avoid any issue in the launch service and operation. After passing the test and going through the required validation if necessary, it crosses the final gate into product launching. The final stage is the post-launch review that records the overall success or failure of the product through market feedback (Shahid & Nabeshima, 2007). The NPD stage-gate process highlights the interconnectivity between the different sections of the organization.

2.7 Conceptual Framework

Transactional and transformational leaders manage their employees by having a clear understanding of where the company is going, sharing the vision for the future

of the organization with the group, and motivating them either physically or psychologically (Sarros et al., 2008). The latter study, which was conducted outside UAE and based on the private sector, used the variables of transformational leadership measurement and found that the factor of “Articulates Vision” had the strongest connection with the environment for organizational innovation. The main reason of this outcome is due to the fact that visionary leadership was associated with organizations that were reported to deliver satisfactory resources, funding, personnel and rewards to innovate, as well as making time for employees to pursue their creative ideas. This outcome is very important for organizations to understand the power of organizational culture and ideas. These leadership behaviors are far reaching and motivated and demand a vast amount of time and energy from leaders and employees.

Consideration of the feelings and personal needs of followers and providing individual support, along with leadership vision and setting high-performance expectations, are important elements of effective leadership, and will encourage employees to share their creative ideas. According to Anderson and West (1998), an innovative environment is maintained by securing different elements. Firstly, shared vision and clear objectives should be communicated to employees so that they can understand the future direction of their organization. Secondly, employees should be given the opportunity to participate in the decision-making process so that they feel empowered and engaged in building the future of the organization. Thirdly, clear performance measures should be defined and used during periodic employee appraisals either to reward or punish. And finally, employees should be provided with all types of support to enable them throughout the strategy execution process. This support may include a combination of training, IT tools, mentoring and coaching.

Studies by Billsberry et al. (2005), which investigated collaboration in organizational culture from an individual or functionalist perspective, are similar to those done by Sarros et al. (2008). Employee collaboration may be seen as a measurement of culture in work units and is common in organizational culture research with the focus on the behavioral expectations and normative beliefs of those who work in these units. According to Sarros et al. (2008), organizational culture could play a role in facilitating the relationship between transformational leadership and establishing an environment for organizational innovation.

The Sarros et al. (2008) study, which investigated transformational leadership in private-sector organizations in Thailand, found that transformation leadership had a positive effect on a competitive, performance-oriented organizational culture due to the positive relationship between organizational culture and organizational innovation. This study has been selected for comparison as it is similar to this research into the culture of private-sector companies with a focus on the significance of profit, competition and performance as a driver of organizational behavior.

According to the Sarros et al. (2008) study, organizational culture facilitates the relationship between transformational leadership and the establishment of a culture for a climate of organizational innovation. It can be found in theoretical work concerning the importance of transformational leaders sharing a vision with their followers to inspire change and promote the acceptance of goals. As discussed before on previous researchers such as Strange and Mumford (2005) who defined vision as “a set of beliefs about how people should act, and interact, to make manifest some idealized future state”.

The transformational leader needs to know more about vision and beliefs because these are major drivers of behavior (Antonakis & House, 2002), are connected to ambitions of the change in organizational culture. When there is a feasibility and some information are sharing about the vision and provide guidelines could help to direct employee efforts toward innovative work practices and outcomes (Amabile, 1998). Kavanagh and Ashkanasy (2006) also identified that “change is accomplished through the leader’s implementation of a unique vision of the organization ... designed to change internal organizational cultural forms”. Furthermore, the culture is the mirror through which leader vision is demonstrated and helps build the environment necessary for organizations to become innovative. Adding to Elenkov and Manev (2005), leader behavior could inspire employee contribution and encourage new ideas, which is fundamental to the innovation process. Yukl (2002) stated that specific leadership behaviors may influence innovation through compliance as part of the organizational culture. This is consistent with Moran and Volkwein (1992), who argued that the environment reflects the shared knowledge and meanings embodied in an organization’s culture (Figure 7).

• □ Conceptual Framework

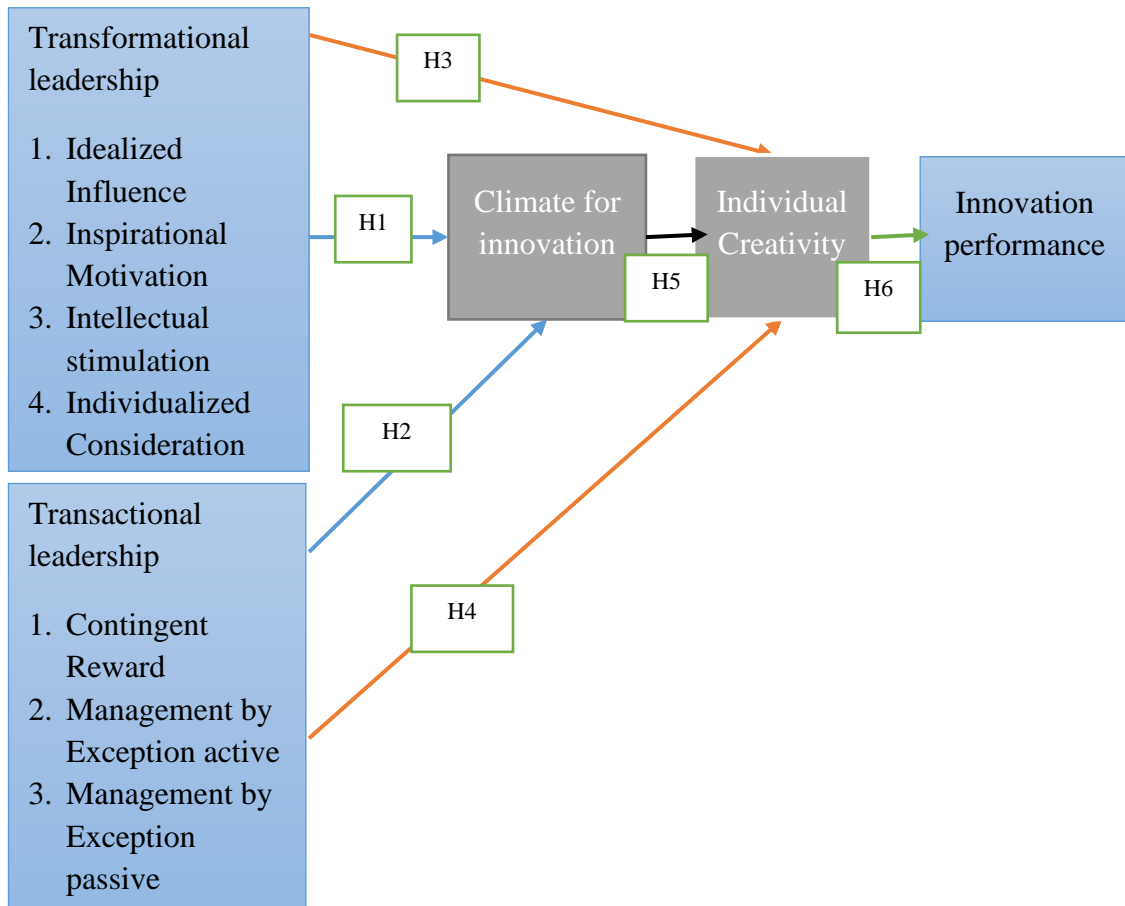


Figure 7: Conceptual framework

Chapter 3: Research Methodology, Method of Measures and Descriptive Analysis

3.1 Introduction

A range of methodologies has been developed over time to address specific factors apposite to leadership behaviors' support and impact. This chapter will give details about the methodological perspectives in the research for investigating the potential impact of leadership behaviors on innovation performance within the semi-government and private sector organizations in the UAE. The survey information will examine the correlation between different independent and dependent variables of interest from which to answer the research questions outlined previously. As discussed in the introductory chapter, the leadership role and responsibility functions as a strategic enabler to support innovation performance of the organizations to achieve their strategic objectives.

Understanding more about the types of leadership behavior and their effect on innovative performance helps to understand more about the variables which support innovation performance. Scholarly research is much concerned with leadership behaviors in the field of management. Research in this field is focused on revealing the leadership behaviors positive and negative that could either be substantiated or improved upon.

An online questionnaire-based survey was administrated to targeted samples including employees and leadership who manage a team of employees in the target organizations. The survey focused on investigating their perceptions towards leadership behaviors in their respective organizations, particularly behaviors in support of innovation performance. The objective of detailing the research method

here is to explain and discuss how this study was conducted by means of gathering up and analyzing data and information related to the research questions of the study. The method adopted by this study seeks to establish facts, make predictions, and test hypotheses of the relationship between the proposed variables in the theoretical framework.

3.2 Philosophical Assumptions and Research Approach

Understanding philosophical matters is a necessity because it could support in guiding the researchers to determine the kind and form of data to be collected, as well as the appropriate research approach to tackle the problems. In order to ensure satisfactory outcomes, researchers should thoroughly understand philosophical issues prior to conducting their research (Hair, 2006). Philosophical assumptions help the researcher to find an appropriate methodology to provide answers to the proposed research questions. The nature of the present study was considered relevant to social science research, and in particular management research, within the field of innovation performance for leadership behaviors in the management context.

In the realm of social science research, there are two prevailing and contrasting philosophical traditions, namely Positivism and Social Constructionism. Positivism is the approach of the natural sciences that emphasizes the use of organized methods that combine deductive logic of existing theory with precise empirical observations of individual behaviors, in order to formulate and confirm hypotheses that can be used to predict general patterns of human activity (Hair, 2006). Social constructionism or interpretivism focuses on understanding and explaining the reality of why people, individually or collectively, have different experiences and perceptions, rather than

searching for external causes and fundamental laws to explain their behavior (Hair, 2006).

The reasoning behind social constructionism is inductive. In other words, it proceeds from systematically analysing socially meaningful actions through the detailed observation of people in a natural setting, to arrive at general principles/laws of how people create and maintain their social worlds (Hair, 2006). The current study adopted the positivist approach. It began by consulting well-established Telecom and ICT organizational entities as well as related theories and literature and deduced a conceptual model that contains a set of hypotheses logically linking the proposed variables.

3.3 Overview

Chapters 1 and 2 of the study have discussed the research background and literature review in the context of leadership behavior giving rise to innovation performance, climate for innovation, individual creativity and innovation performance. The role of leadership and management responsibility in any function is a strategic enabler to support the innovation performance of the organization in achieving its strategic objectives and plans. The objective of this chapter is to explain the study strategy, discuss study design, and demonstrate the operationalization of the research model constructs, and the instruments adapted to measure them. Additionally, the data sources and procedures for data collection will be defined, before examining the methods of data analysis. Furthermore, this chapter will review the comprehensive theoretical underpinning of the dissertation, and outline the investigative methodology used in this dissertation. This will support a discussion of the methods of analysis and the research paradigm that were addressed while conducting this research. Polonsky et

al. (2011) explained that the methodology section has to provide the reader with the road map of what is to be done and a justification by answering why it is done, allowing the reader to understand how data were collected and examined. This will provide a guideline of source of data and how and where information is to be gathered and presented, linked to the objectives of the study.

3.4 Research Questions

This research aims at providing a better understanding of the mediating role of “climate for innovation” and “individual creativity” between leadership behaviors (Transformational and Transactional) and innovation performance. Moreover, the research examines the role of the relationship between individual creativity and innovation performance. Research questions are addressed within the context of the UAE Telecommunication and ICT industry.

The key research question investigated is:

1. □ To what extent do leadership behaviors, climate for innovation, and individual creativity align with innovation performance?

The subsidiary questions investigated are:

2. □ How does leadership behavior and climate for innovation relate to individual creativity?
3. □ How does leadership behavior and individual creativity relate to innovation performance?
4. □ What practical lessons can this study provide to support the UAE Telecommunication and ICT companies' policies that aim to enhance individual creativity and innovation performance?

This study will examine leadership behavior as a means of encouraging and engaging with employees to create a climate culture of creativity, which may have a direct positive or negative impact on innovation performance.

3.5 Research Paradigm

Research philosophy is significant as it helps the researcher to improve the research methods used, and to clarify the research strategy, including the type of evidence collected, the way it is interpreted, and the way research questions are answered. A research philosophy also enables and assists in research methodology and method evaluation, thus avoiding unnecessary work through the avoidance of inappropriate approaches during the early stages of research. In addition, the philosophy helps the researcher to be more creative in selecting or adapting the research methods. The research paradigm for this study includes paradigms, epistemology, positivism, and elements of ontology objectivism as they represent beliefs, truth and the nature of reality. The assumption is that there exists a physical and social reality external to the researcher that can be examined through the development of testable hypotheses.

The research takes up the positivist paradigm that is reinforced by the ontological assumption of realism. Positivists will adopt quantitative research methods in gathering data and investigating phenomena, and hold that the scientific method establishes the objective nature of knowledge and limits the researcher's role in data collection and interpretation. As such, research findings are based on observable facts that are discovered by operationalizing the related constructs so that they can be measured.

In general, the positivist paradigm regularly follows a deductive approach, while an inductive approach is usually associated with the phenomenological paradigm. The deductive approach starts with a broader theory, then cascades down into a narrow, specific train of hypotheses that are used to test the theory. The last step is to collect and analyze data that will support, strengthen, or refute existing theories.

Consideration of the research paradigm remains crucial to a study's design and method, since it forms the foundational beliefs and sets the path of the study. Consequently, the present study preferred the positivist paradigm in consideration of the research objectives that it intended to accomplish. With such a paradigm, it became possible to observe some of the themes related to the topic, to determine the underlying concepts and practices, to test the hypothesized correlations, and to answer the research questions in a structured way.

3.6 Research Methods-An Overview

Research methods cover three functions:

- 1.□ Explain issues.
- 2.□ Ways of measuring issues.
- 3.□ Gather data to analyze issues.

This dissertation proposes to cover the planned area of study so as to gather sufficient evidence in order to examine effectively the problems raised in the research objectives, by means of data gathering, collection and analysis. These activities may be summarised by way of identifying a suitable sample and size for study, formulating the inquiry (hypotheses, questions, etc.), and estimating the degree of confidence in the findings during the analysis of data. The above elements are incorporated in the

selection of a suitable research methodology, as well as specific instruments for data collection and analysis.

Blaxter (2010) explain the difference between two important terms: 'methodology' and 'method'. The term 'method' refers to a specific means of collecting data, whereas methodology refers to the strategies surrounding the use of the multiple methods of data collection as required by different attempts to achieve a higher degree of reliability and validity. Initial consideration prior to designing a research proposal is to identify a framework for conducting the study. A research approach is a discipline within which knowledge is acquired by different research methods. Many research methodologies are used in the research studies in the project management domain. Research methods can be classified according to a number of dimensions into qualitative-quantitative, exploratory-confirmatory, descriptive-inferential, manifest-latent, and metrical/non-metrical.

3.7 Adopted Research Method

It is necessary to adopt a particular methodological approach to plan and handle the research problem. The gathered data provides appropriate answers to the research questions that are raised. Various approaches have been employed for specifying the suitable framework and the method for gathering the required data. A study of the relevant research literature is necessary in deciding which methodologies are most suitable for collecting reliable information to conduct and complete the study. This, in turn, assists the researcher in making rational decisions to adopt the research method that fits the nature of the research problems under investigation. With regard to the theme of this study, many published works have employed survey questionnaires (Blaxter, 2010).

The quantitative method is an empirical research approach where the data are in the form of numbers. Quantitative research tends to involve relatively large-scale and representative sets of data and is often falsely in viewing presented and perceived as being about the gathering of facts. It also tends to focus on exploring small numbers of cases or examples which are experienced as being interesting in achieving detail in depth rather than from a broader perspective. The survey-based data will be close-ended responses and will lead to the in-depth study of individual cases (Blaxter, 2010). The aim of the present study is to emphasize a theory developed from reality rather than the generation of theory. The literature review revealed that the nature of this study is similar to many other management studies using various quantitative methods. Therefore, this study adopted a quantitative-based questionnaire approach, which built on the refinement of existing research works in the leadership behaviors research domain.

The questionnaire-based survey allows the gathering of required data remotely from a large sample of participants. The accumulated data have been quantitatively analyzed to measure and rate the validity and stability of the proposed leadership behaviors framework. The first approach will be to use the Multifactor Leadership Questionnaire (MLQ) to understand leadership behaviors in the target organizations, Telecommunication and ICT. This will help later to know the leadership impact on innovation performance. Then Structural Equation Modeling (SEM) analysis will be used to measure statistically the significant relationship between the framework's constructs. SEM is a statistical method of data analysis that is frequently used when a quantitative variable is examined in relation to a variety of other factors. The research design for this study is therefore based on positivist epistemology whereby the variables of interest can be measured and have one reality through survey instruments.

3.8 Research Framework

The appropriate quantitative research method for this study has been selected to achieve the research objectives. The investigator primarily uses post-positivist claims for developing knowledge (i.e., reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), by employing a strategy of inquiry surveys to collect the required data. The survey is usually associated with a research approach purposely addressed for asking specific structured questions to the concerned group(s) of people (Blaxter, 2010). However, some related meanings of the survey are being questioned by the researcher as real facts. Studies reveal the advantages and disadvantages of the survey in quantitative research as detailed below:

- □ Advantages

- a. □ An appropriate survey sample enables generalized results.
- b. □ Online surveys are relatively easy to administer and do not require fieldwork to gather data.
- c. □ With a good response rate, surveys can provide much data relatively quickly.

- □ Disadvantages

- a. □ The data in the form of tables, pie charts and statistics become the focus of the research report, with a loss of linkage to wider theories and issues.
- b. □ The data provide snapshots of points in time rather than a focus on the underlying processes and changes.
- c. □ The researcher is often not in a position to check first-hand the understandings of the respondents to the questions asked. Issues of truthfulness and accuracy are thereby raised.

The survey trusts on breadth rather than depth for its validity. This is a crucial issue for small-scale researchers (Blaxter, 2010). Thus, conducting a research investigation involves a structure or a method within a planned framework of the procedure. The current research study and its related concepts involve a valid research problem, an aim, objectives and research questions to be methodology driven. Furthermore, the following study characteristics are considered to be pertinent to the nature of this study and expected response rates:

- a) Sampling method: This characteristic is either probability or convenience sampling. Probability sampling could be made through random, stratified and cluster sampling designs. Probability for this study is chosen, since sampling will be from Telecommunication and ICT organizations. Then data to Telecommunication and small and large ICT organizations will be clustered. In contrast, convenience sampling is a non-probability method to include a sampling of individuals or groups in various settings such as academia or in the workplaces. This will not be used.
- b) Target population characteristics: Demographic variables such as gender, age, educational level, job position and responsibilities are to be considered. The online survey will be sent to each target category Etisalat, Du, small-medium business ICT organizations and large ICT organizations separately to gather data.
- c) Questionnaire length: The length of the instrument is determined by the number of items to be answered in the questionnaire. The questionnaire length in terms of short and long forms does not necessarily reflect the quality of the research under investigation, i.e., the short forms in some

studies could be equal in quality of data generated to long forms in other studies.

- d) □ Response facilitators: Response facilitators included preliminary notification of the participants prior to distributing the printed questionnaire by postal service or online survey by email. Following up on the completion of the distributed questionnaires is necessary to ensure a satisfactory rate of responses.
- e) □ Appeals: The participants may be encouraged to complete the survey by the contents of the covering letter which accompanies the questionnaire. Different appeal approaches may be used in trying to motivate the target sample to reply promptly. For instance, tell the participants that their feedback would add value to the completion of the research objectives (Blaxter, 2010).

3.9 Research Strategy and Plan

A research strategy is a method of approach developed by a researcher that presents steps to highlight how to answer primary research questions; this will facilitate the conducting of research in a systematic way, rather than in an unstructured way. This approach will formulate a plan by which tasks and activities of searching and assessing information are carried out. The research strategy keeps the researcher concentrated and focused on the objective by providing guidelines and reducing confusion. The research strategy is a roadmap examination of the phenomenon of interest. Zajac and Shortell (1989) further proposes that a research strategy is a general direction and steps to the conduct of research. A research plan provides details to identify important research goals and objectives, and recognizes gaps in the knowledge

and the philosophical underpinnings of the research. In addition, a research plan will point to triggers for the sources of data and ways of gathering data, with consideration of issues pertaining to the collection of data and possible ethical dilemmas (Saunders, 2007).

Saunders (2007) have proposed several research strategies to help the researcher, the most critical point for consideration being the selection of an appropriate strategy for the research study. Some of the common research strategies adopted by different researchers in the field of business and management are: the experiment, case study, survey, longitudinal study, grounded theory, archival research, cross-sectional study, and participative inquiry. In the social sciences study, a cross-sectional study (also known as cross-sectional analysis, transverse study, or prevalence study) is a type of observational study that analyzes data from a population or representative subset at a specific point in time, i.e. cross-sectional data. A cross-sectional study research strategy has been chosen as the most appropriate option for this study.

This study is a quantitative research strategy of inquiry through a deductive approach. Existing knowledge was relied on to shape the hypotheses, which has been tested by using the primary data collected by means of a survey. The main quantitative research strategy is about collecting numerical data to test the hypothesis with the help of statistical tools. The analysis tested the understanding and hypothesized relationships between the variables by using appropriate statistical techniques in order to assess and model the relationships. Furthermore, the study has two parts: theoretical and empirical. The theoretical part is presented through articulating the literature review on the topic and observation of existing theories; the empirical part is presented using a quantitative research strategy, as this allows the description of the

characteristics of a large population (Saunders, 2007). Figure 8 shows research plan flow.

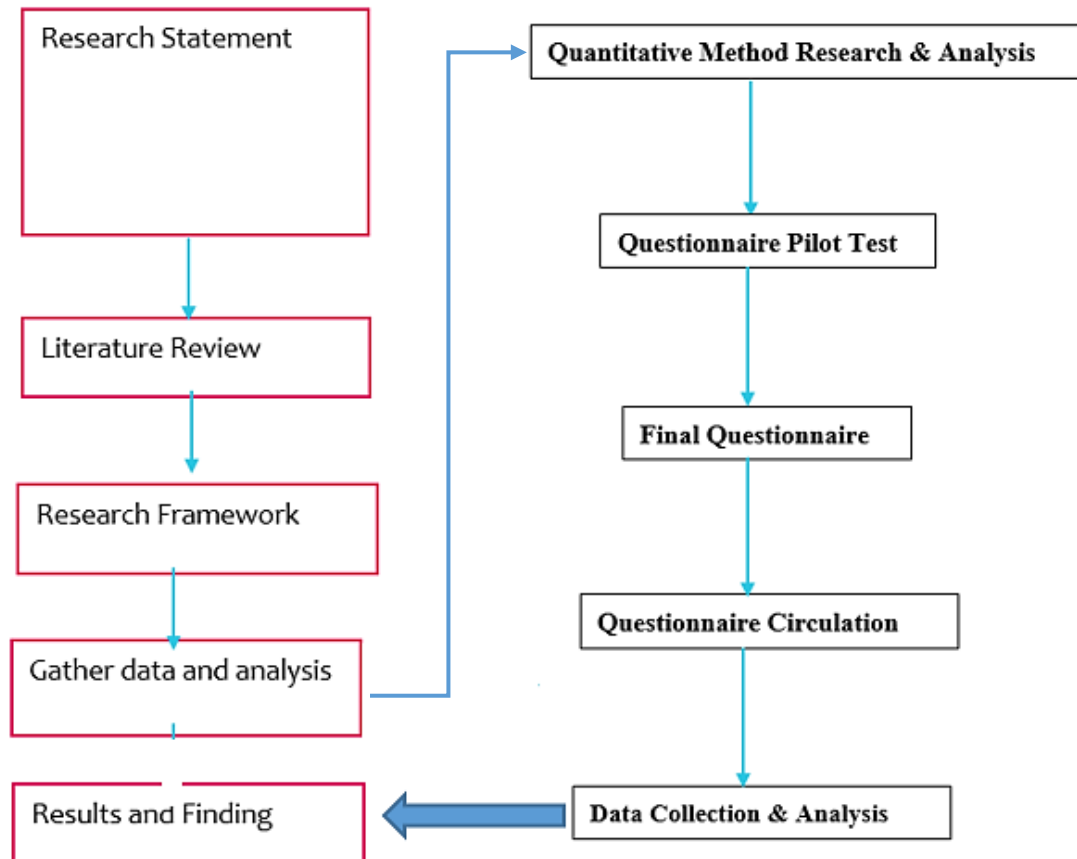


Figure 8: Research plan flow

The following steps were followed to generate the information required for the study:

1. □ Read, review and synthesize existing theoretical and empirical research and critique in the literature (Chapter 2);
2. □ Develop the research conceptual model and propose the research hypotheses (Chapter 3);
3. □ Articulate research questions (Chapter 3);
4. □ Gather and read previous surveys in this area to design the survey items (Chapter 3);

- 5.□ Before gathering data, conduct a pilot survey for the questionnaire on a small sample to pre-test an understanding of the required responses, provide further information on the applied measures, and incorporate additional context-oriented wording, if required. The pilot survey assists in both knowing and refining the research instrument, and establishes the validity and reliability of the instrument prior to distributing it to the actual sample (Chapter 3);
- 6.□ Finalize the survey questionnaire and distribute to the target sample of respondents (Chapter 4);
- 7.□ Gather responses and analyze data in adherence to the methodological standards (Chapters 4 and 5);
- 8.□ Discuss the survey findings and results with reference to the relevant literature on the topic (Chapters 6);
- 9.□ Summarize the data, conclusions, and contributions to the literature (Chapter 7);
- 10.□ Based on the outcome and with reference to the limitations of the present study, make recommendations for future study and research (Chapter 7).

Several stages were involved in conducting the research plan in this study (see Figure 7). Firstly, the identification of the research problem during the initial stages of the study based on a preliminary literature review. In an attempt to obtain the most accurate data potential, only the most current of the previous literature was used. The existing literature was reviewed until existing gaps could be identified within the domain of the research. Then, study research questions were formulated, again through a review of the existing literature, together with research aims and objectives, and formulation of the research problem. At the same time, the literature was examined to identify the most appropriate theoretical framework and key constructs relevant to the research domain. A conceptual framework was developed and adapted for specific

scientific purpose. The data were collected via a quantitative approach using an online questionnaire survey developed as the source of primary data. The data validation was checked for multivariate outliers or any missing data, and to test normality. The data were analyzed using the structural equation modeling (SEM) and MLQ method similar to methods used in the existing literature (Paulsen et al., 2013). The application used Smart PLC for SEM with path analysis and analysis of moment of structure. Smart PLS is a software with graphical user interface for variance-based structural equation modeling (SEM) using the partial least squares (PLS) path modeling method. In the final stage, the results of the quantitative survey, in alignment with the relevant literature findings, was discussed. The aim was to test the conceptual model used in previous research and examine the research hypotheses. The survey strategy supported and allowed to obtain data from the target population domain. The quantitative approach of gathering data through surveys is an accepted method for handling data which can be operationalized by descriptive and inferential statistics (Saunders, 2009).

3.10 Research Design

The objective of the research design was to provide a master plan for an investigative study and procedures for conducting a controlled research study (McMillan & Schumacher 2010). Canback et al. (2003) have discussed and explained research design as a framework to measure and analyze data collected and directed towards addressing specific research questions. This study is designed with the intention of examining the antecedents and consequences of leadership behaviors in the context of the UAE Telecommunication and ICT industry, and the mediator effect of climate for innovation with further focus on the effect of leadership behavior on individual creativity.

The following theories transactional and transformational of leadership are developed by Burns (1978) and Bass (1985) which explained and extended by using a constructive/developmental theory to explain how critical personality differences in leaders prime to either transactional or transformational leadership styles. The dissimilarity between two levels of transactional leadership is extended, and a three-stage developmental model of leadership is proposed.

The first stage of the research involves conducting a literature review in the context of Telecommunication and ICT leadership in UAE. The scope of the research within a context of Transformational leadership was selected with consideration of Idealized Influence. Idealized influence is one off the charismatic element of transformational leadership in which leaders turn out to be role models who are respected, appreciated, and emulated by followers (Avolio & Bass, 2002). Accordingly, employees demonstrate a high level of trust in such leaders (Jung & Avolio, 2000). Idealized impact in leadership also includes integrity in the method of ethical and moral conduct.

An integral component of the idealized in the development of a shared vision by transformational leader's role. It helps employees to have a look at the innovative state, while inspiring acceptance through the alignment of personal values and interests to the collective interests of the group's purposes. Sharing decision and risks is one off Transformational leaders' charisma with followers (Avolio & Bass, 2002).

- Inspirational motivation: the first variable off the Transformational leaders is inspire and motivate for others or employees by “providing meaning and challenge to their followers’ work” (Avolio & Bass, 2002). The team have to change their “aroused” while “enthusiasm and optimism are displayed”

(Bass, 1998, p. 5). This sympathetic of the leadership (transformational) would like and encourage to associations with employees through interactive communication, which forms a cultural bond between the two participants to a shifting of values by both parties toward common ground. The employees are inspired through their leader by seeing the good-looking future state, while collaborating expectations and representative a commitment to goals and a shared vision.

- □ Intellectual stimulation: this is a second variable for Transformational leaders to support and help their followers' efforts "to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways" (Avolio & Bass, 2002). Employees' mistakes have to not counting, but this help team to avoid repeat the same and add lesson learned to the creativity which is openly encouraged and support offer. Transformational leaders could seek their followers' ideas and creative solutions for problems or issue, thus understanding followers' problem and way of solving. The intellectually stimulating leader do not accept current issue and looking and seeking to encourage followers to try different way and new approaches but emphasizes rationality (Bass, 1998).
- □ Individualized consideration: Third variable for the transformational leader to spend more attention to their employees built on the individual follower's needs for achievement and growth. So, the requirement from leader to do and acts as a mentor to coach and developing employees in a supportive climate to "higher levels of potential" (Bass, 1998, p. 6). The considerate leader recognizes and demonstrates acceptance of the followers' individual differences in terms of needs and desires. This will

lead the transformational leader to have two-way communication through effective listening. Part of the method leader is developing followers or employees by delegating or assigning tasks and then unobtrusively monitoring those tasks – checking to see if additional support or direction is needed. The individualized effort consideration and transformational leadership behaviors is empowerment of employees or followers (Behling & McFillen, 1996).

Eventually, transformational leaders could develop or increase influence over followers. For example, several research studies have documented the power of transformational leadership in establishing value congruency and trust. Transformational leaders gain a respect and trust from their Followers. Therefore, they conform their values to those of the leaders and transfer power to them. As conclusion, the transformational leader explains and presents the vision in a clear and appealing manner, explains how to attain the vision, acts confidently and optimistically, expresses confidence in the followers, stresses values with symbolic actions, leads by example, and empowers followers to achieve the vision. There are variables for transformational leadership (Idealized influence, Inspirational Motivation, Intellectual Simulation and Individualized Consideration) according to Stone et al. (2004). This was contrasted with a Transactional leadership model.

The first variables of transactional leadership which would like to explain is contingent reinforcement or contingent reward. As result the leader would like to rewards employees or followers for attaining the specified performance levels. Reward is contingent on effort expended and performance level achieved. Some of research

and literature are significant on the association between this kind of leader behavior and employees or subordinate performance and satisfaction.

The second and third variables of transactional leadership are two similar types of management-by-exception. When practicing management-by-exception a leader only takes action when things go wrong and standards are not met. Leaders could be avoiding and do not giving directions if the old ways work, and they allow followers to continue doing their jobs as always if performance goals are met. Active and passive are two types of management-by-exception. The active form characterizes a leader who actively seeks deviations from standard procedures and takes action when irregularities occur. The passive is one of characterizes leaders who only take action after deviations and irregularities have occurred. The difference between the two is that in the active form the leader searches for deviations, whereas in the passive form the leader waits for problems to materialize (Hater & Bass, 1988).

So, the variables of transactional leadership are: Contingent Rewards, Management by Exception (active and Management by Exception-passive). According to Den Hartog et al. (1997), several transactional theories have been tested extensively, and some have received considerable empirical support, one example being the path-goal theory. The version theory of transformational leadership has created the furthestmost research was formulated by Bass and his colleagues. They transformational leadership define as mainly in terms of the leader's effect on followers, and the behavior used to achieve this effect. The followers feel trust, admiration, loyalty and respect toward the leader, and they are motivated to do more than they were originally expected to do. The fundamental influence process is designated in terms of motivating followers by making them more aware of the

importance of task outcomes and inducing them to transcend their own self-interest for the sake of the organization. Transformational leadership is dissimilar from transactional leadership, which involves an exchange process to motivate follower compliance with leader requests and organization rules.

According to Yukl and Van Fleet (1992), leadership theories are a hybrid approach to leadership and include elements of many other theoretical approaches to leadership (e.g., traits, behaviors, attributions and situations). In addition, the climate for innovation as discussed by the four-factor theory of facet-specific climate for innovation which was derived from these reviews is described. Cognitive style describes the way individuals think, perceive, and remember information; it also refers to a person's individual problem-solving and decision-making approaches, which are considered part of creative processes. According to Kirton's (1976) who create and discussed adaptive-Innovation theory which is one of the most popular cognitive style models applied to the investigation of creative problem solving. Kirton (1976) describe that everyone could be located on a continuum ranging from an "ability to do things better" (Adapters), to an "ability to do things differently" (Innovators).

Arundel and Bordoy (2002) have explained and describe that "modern innovation theories stress the diffusion of knowledge among many different actors". This means that innovation is a social process that happens when people interact with others and their knowledge is exposed, assimilated, shared and finally transformed to produce new knowledge. Disruptive Innovation Theory, advanced by Christensen and Raynor (2003), was built up based on a series of previous technological innovation studies. In 2003, Christensen and Raynor published his influential book entitled *The Innovator's Dilemma*, which put him at the forefront of the study of technological

innovation in commercial enterprises. The book, which became a bestseller at the time, articulated in a comprehensive and detailed manner the basic theory of disruptive technology.

According to Yu and Hang (2010), disruptive innovation happens in a process. Accordingly, this research's conceptual model was developed for testing along with the associated predictions developed in the form of hypotheses. The second stage was to identify suitable measurement tools for each of the identified antecedents and consequences, ensuring their statistical quality and applicability in the context of the Telecommunication and ICT industry, and relevant studies in leadership behaviors.

The third stage of the research included collecting data through a survey questionnaire. The research created a conceptual model and related hypotheses which are applied to the collected data. The research concludes with the study's limitations, by suggesting several managerial and practical implications, and the possible future direction of the research.

3.10.1 Quantitative Approach Identification on the Context of Social Science

This dissertation will apply quantitative methods similar to other researchers in the same area which was discussed previously (Barbuto et al., 2000). The scientific method usually adopts a quantitative approach to investigate observable phenomena in empirical research. This allows to quantify observable phenomena by translating the observations into quantitative data, which can be translated into mathematical and computational terms. This process and mechanism is known as "operationalization" (Schunk, 2012). A definition of operationalization is that it is a process to measure phenomena that are not directly measurable because their existence is usually indicated by other phenomena. Therefore, the process will attempt to clarify an ambiguous

concept, making it clearly measurable and understandable through empirical observations.

The first stage is to develop hypotheses related to the phenomena. These outline the scenario based on the literature available on leadership behavior, climate for innovation, individual creativity and innovation performance. The second stage requires a method of measurement, which is central to quantitative research. The literature of management demonstrates that measurement provides the connection between empirical observation and organizational observation using quantitative relationships (Zhao et al., 2012). The quantitative data and statistical analysis allows for the testing of significant causal relationships between constructs. The most important element for research is understanding and breaking down an issue to its proximate and conclusive constructs. These pieces are essential for addressing the research problem, developing hypotheses, and testing theories through observational and instrumental techniques that offer statistical data.

The literature available in the context of management and leadership, change management, development leadership and management studies include a type of observation study that analyzes data collected from target populations in a specific area or a representative sample at one specific time. Typically, a study is considered to be a sample representation of the general population under investigation, and the research is bounded to a single timeframe. The cross-sectional research design is based on correlational research, as it aims to examine the relationship between two or more variables to determine whether such a relationship exists (Trochim et al., 2016). According to Gray et al. (2009), correlational design examines the direction and strength of the relationship between two or more quantifiable variables. In such a

design, relationships among facts are pursued and interpreted. In terms of the advantages of correlational design, it is straightforward, inexpensive, and does not consume a considerable amount of time. It is also beneficial in identifying relationships that may later be evaluated more explicitly. In correlational research, data can be collected in natural settings to allow consideration of real-world complexities. The current study utilizes a comprehensive cross-sectional survey developed after the operationalization of eighteen research model constructs, for the purpose of testing the identified hypotheses with the aim of answering the research questions.

3.10.2 Instruments Used to Operationalize the Research Model

In the present study, a pool of forty-one items was developed for the survey questionnaire based on the predominantly referenced studies using the same scale in the relevant literature (see Appendix). Two surveys were conducted: the first aimed at the organizations' leadership, and the second aimed at the staff, according to Walumbwa and Hartnell (2011). This approach encouraged a balanced response between leadership and staff. In the surveys, leadership assessed the staff, and staff assessed the leadership. To the knowledge, this kind of approach has not been carried out before.

The present study survey is categorized into five sections. Section 1 covers demographic questions such as gender, organization category, age, nationality, qualification, experience and occupation. Section 2 considers leadership behavior (which included twenty-one constructs) according to MQL from the portal. Section 3 deals with climate for innovation, which includes five constructs. Section 4 covers individual creativity, which includes five constructs. Finally, Section 5 covers

innovation performance, which includes nine constructs. A copy of the questionnaire and measurement scale is presented in the Appendices.

3.10.3 Independent Variables

Leadership behaviors included Transformational leadership and Transactional leadership styles. These were previously and current way of measurement by a twenty-one-item scale through the Multifactor Leadership Questionnaire (MLQ), conceptually developed and empirically validated to reflect the complementary dimensions of transformational and transactional leadership, with sub-scales to further differentiate leader behaviors that was adapted from Schaubroeck et al. (1989).

The research used MLQ since this is a standard apparatus for measuring a range of leadership behaviors. In addition, another tool was developed in order to investigate transformational leadership only. This was the Transformational Leadership Inventory (TLI) developed by Podsakoff and colleagues (Podsakoff et al., 1996). In evaluating the leadership behaviors, the convergent validity of both the MLQ and the TLI is assessed. The TLI method in this study will not be used, since the dissertation objective is to investigate leadership for both transactional and transformational behaviors. This is similar to the other studies like Avolio et al. (1995); Barbuto et al. (2000); Afsar et al. (2014), which investigated the transformational leadership behavior scales of the MLQ. The outcome of these studies showed high and significant convergent reliability of the leadership scale (< 0.70). This gives further credibility to the validity of the MLQ, and further validates leadership behavior variables and the test hypotheses to support employees' sharing of ideas.

3.10.4 First Mediator Variable (Climate for Innovation)

The climate for innovation questionnaire created by Anderson and West (1998) was used to measure the following scopes:

- Innovation proposals are welcome in the organization.
- My leadership actively seeks innovative ideas.
- Innovation is perceived as too risky and is resisted.
- People are not penalized for new ideas that do not work.
- Leadership is supporting innovative ideas, experimentation and creative processes.

Abbey and Dickson (1983) concluded that climate is an important predictor of innovation. Hülshager et al. (2009) reported that support for innovation was one of the primary predictors of innovation to emerge in their meta-analysis of prior work. Specifically, Amabile (1998) isolated a creativity-conducive environment as one of the critical factors for innovation, suggesting that climate is a key driver for innovation. Therefore, a climate supportive of creativity should allow team members to feel more comfortable in taking risks, trying new things, and exchanging information. This type of climate is more likely to lead to greater involvement in creative processes. Also, Anderson and West (1998) found that support for innovation emerged as a predictor of overall team innovation, and for reported novelty and number of innovations.

The original scale consisted of five items. The responses were measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Alpha coefficients ranged between 0.84 and 0.94 indicating acceptable levels of internal homogeneity and reliability for all five factors.

3.10.5 Second Mediating Variable (Individual Creativity)

Individual creativity instruments connect with leadership behaviours and innovation performance. Creativity has been defined as a judgment of the novelty and usefulness (or value) of something. Psychological research on creativity has tended to focus on individuals and intra-individual factors. Researchers from other domains, particularly sociology, have focused on more macro issues concerning the influence of the environment on creativity. The macro perspective has also been associated with an interest in innovation: “the intentional introduction and application ... of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the process or organisation...” (West & Farr, 1990, p. 9). One study that attempted to link individual creativity to group creativity, and to show the impact of group processes on each of these, was reported by Taggar (2002). This study showed that aggregated (summed) peer ratings of group members’ creativity were predictive of externally rated group creativity ($r = 0.56$, $p < 0.01$) among working on assignments in teams.

3.10.6 Dependent Variables

The last section of the survey questionnaire comprised a range of dependent variables. The innovation performance instruments include the measuring of process and product and service performance within companies before production by using a nine-item measure adapted from Syamil et al. (2004).

Morris (2011) argues that measuring innovation performance presents problems for the process itself, because innovation involves a venture into the unknown, and trying to pin these unknowns down too fast may make them harder to recognize and realize. The measurement can also undermine the spirit of creativity, learning,

discovery and intelligent risk-taking that the innovation process requires if the wrong things are measured at the wrong time using the wrong mechanism. In addition, empirical studies have found that many organizations tend to focus only on the measurement of innovation inputs and outputs in terms of spending, speed-to-market and numbers of new products, and ignore the processes in between (Adams et al., 2006). It is therefore critical to create a measurement model providing a useful basis for managers to monitor and gauge innovation performance, detect faults and identify repairs, in order to support and help the organization to build its capacity to innovate systemically.

Innovation can take place in three broad areas; process, product and organizations. Innovation is a process, service, system or device that is perceived to be new to individuals or organizations, an industrial sector or society. Organizational innovation combines the implementation and development of products, systems, ideas and technologies (Damanpour, 1991). The external determinants include technology, customers and competitors. An objective innovation performance measurement usually evaluates the number of new approved projects, published reports and obtained patents. Technological innovation has become progressively complex, costly and risky due to strong competition, rapid and radical technological changes, and changing business processes. Adoption of technological innovation depends on the willingness to try new production systems, processes and methods.

An organization with high capacity to innovate is believed to have the ability to convert employees' ideas into services and products that is designed to match the customer needs which is demonstrated in the adoption of new administrative practices, new technology implementation, and building new products and services (Zaugg &

Thom, 2003). Furthermore, these organisations are able to achieve corporate renewal, develop a competitive advantage and achieve higher performance levels.

Organizational innovation refers to the development of new services, products or new administrative systems giving rise to an important source of sustainable competitive advantage. An organization's innovativeness is closely associated with its ability to utilize its knowledge resources (Subramaniam & Youndt, 2005).

Process innovation entails improving and creating new methods of production and services, and the adoption of new components to the organization's processes such as task specifications, equipment and information flow. By aligning resources and capabilities, process innovation could enhance the management systems by improving processes, products and technologies which may reduce or eliminate redundancies and problems (Rainey, 2006). Process innovation involves examining the improvement possibilities of the technologies used to create and produce the products and developing tools to deploy these improvements.

Product innovation refers to the development and introduction of new products and services to the market or the improvement of existing products and services in terms of appearance, quality or function. Product innovation is considered as an organizational learning process and may support innovation efficiency and effectiveness. It can be triggered by internal factors such as company values, management and human resources, and technology. On the other hand, the external factors are competition, customers and external environment culture. Product innovation is perceived as a planned process that exploits existing knowledge obtained from practical experiences to develop new products that fulfil the needs of customers and end users (Tan & Nasurdin, 2011). Therefore, the study will focus on internal

organizational factors that helps to understand the relation between individual creativity and innovation performance. These variables impact the innovation performance process, product and service.

Administrative innovation meaning or mentions to the changes in administrative processes or organizational structures such as personnel recruitment, resources allocation, and the structuring of tasks, authority and rewards (Damanpour, 1992) which leadership can support through their behaviors. It is involved when firms adopt innovations that include the implementation of new methods for decision making and distributing responsibilities among staff and between firm activities and units. In addition, it covers new concepts for the structuring of activities such as executing new organizational models, which combines the initiatives to manage the organization's knowledge into its employees' daily routines (Amalia & Nugroho, 2011).

Innovation literature has distinguished between exploitation and exploration based on the allocation of resources. Exploration refers to experimentation with new possibilities while exploitation refers to classification and extension of existing resources and competences. As exploitation and exploration are fundamentally different in structures and routines, firms need to specialize. Others, however, attempt to achieve exploitation and exploration at the same time. These contradictory innovation approaches create variability and competing tension denoted by the term "ambidexterity" (Andriopoulos & Lewis, 2009).

Exploitation and exploration are radically different modes of innovation and learning. Exploitation involves improvement, selection, efficiency, implementation, execution and production. In contrast, exploration includes flexibility, search, risk taking, experimentation, variation, innovation and discovery. The objective of

exploitation is to increase the efficacy of systems and processes by leveraging the gained knowledge through the repetition of routines and through the continuous modifications the organization makes to increase the proficiency and reliability of tasks. Exploration, on the other hand, entails the search for opportunities in emerging markets, and the development of radical technologies. This requires firms to follow radical innovation strategies to obtain competencies and utilize the acquired knowledge (Andriopoulos & Lewis, 2009).

Despite the fact that exploitation and exploration present contradictory forces on an organization, they are both still important for long-term survival. Organizations focusing on exploitation risk at the expense of exploration become trapped when the environmental conditions change, while those focusing on exploration at the cost of exploitation often don't succeed to develop the appropriate competencies to capture advantages. Researchers attempting to examine how balance can be achieved between exploitation and exploration present two main adaptive strategies: ambidexterity and punctuated equilibrium.

Hartley (2013) advocates that not all innovations are effective or imply improvements, and innovative efforts could fail and can lead to unanticipated effects which could be either beneficial or harmful. Managers should not presume that intentions to innovate will by themselves enhance creativity and innovation; they need to implement the appropriate systems to encourage creativity and innovation. Innovation initiatives tend to be determined by employees' knowledge, expertise, and commitment as key factors in the value creation process.

The consensus view of all these models is that innovation does not just happen, and it is not inevitable, and it does not just take place on an entirely unpredictable basis

(Smith, 2010). This implies that at the firm level, systems that ensure an efficient control of the processes followed need to be established. Equally important is to monitor the company's progress so as to assure that a creative use of their limited resources is fostered (Davila et al., 2009). This raises the question of what is the most appropriate system to encourage innovation and creativity?

When approached, survey participants were supported and encouraged to answer the questionnaire. Respondents were assisted to complete the questionnaire correctly.

Table 2 summarizes the measurement tools used to develop the survey approach.

Table 2: Measurement tools used to develop the survey

Construct	Sub-construct	Item code	Items	Author
Transformational	Idealized Influence	A.1	"I feel good being around my staff."	Bass (1985)
		A.2	"I have complete faith in my staff."	
		A.3	"I am proud to be associated with my staff".	
	Inspirational Motivation	B.1	"I can express with a few simple words what we could and should do to my staff"	
		B.2	"My staff provide pleasing images about what I do"	
		B.3	"My staff helps me find meaning in work"	
	Intellectual stimulation	C.1	"Staff enable me to think about old problems in new ways"	
		C.2	"My staff provide me with new ways of looking at puzzling things"	
		C.3	"My staff get me to rethink ideas that they had never questioned before"	
	Individualized Consideration	D.1	"My staff help me develop themselves"	
		D.2	"The staff let me know how they think, and what they are doing"	
		D.3	"I give my staff personal attention."	

Note: More details about measurement tools used to develop survey in the appendix

The literature has helped to shape the questionnaire and the item measures employed that supported the researcher in establishing context and helped to garner feedback on several defined response choices. The survey had different sections that participants were asked to respond to, and the first section gathered demographic information. Respondents were asked to mark their responses by selecting a correct field or circle, thereby making the survey more user-friendly. In Sections 2 to 6, participants were asked to respond by indicating to what extent they agree with a given statement based on the five-point Likert scale, with scores ranging from 1 (strongly disagree) to 5 (strongly agree). The simplicity and ease of responding to the survey by using a Likert scale facilitates response, according to Johns (2010). The responses were compared across different questions, and empirical interval data was used to analyze responses. The questionnaire was prepared using a close-ended form so that participants' responses could be monitored to discover any change from the participants. The objective was to minimize bias for acquiescence by including both positively and negatively worded questions.

The demographic questions were presented in the survey Section 1. The beginning of the survey, to gather some information, is the start of engagement with participants. These are non-threatening questions to "warm up" the participants. Some participants were recognized to be reluctant to answer some of the demographic questions, such as their name. Cavana et al. (2001) suggested that awareness of the study content would equip participants with the confidence required to be open about their personal information. This could well be the case in this study as in the UAE cultural openness is challenged by declaring personal information.

According to Murray (1999), a major influence on the level of participation is the design of the questionnaire survey; this impacts on both the response rate and the quality of information collected. Saunders (1997) explained that many of elements must be considered to maximize reliability and validity factors by carrying out the following steps: paying attention to the form the questionnaire takes, wording of questions, way of presenting questions, and clear explanations for the purpose of the questionnaire. Moreover, as suggested by Cavana et al. (2001), the methods by which the study's constructs are scaled, classified and coded are also important. As a result, attention was given to several aspects of the survey sections. First, the questionnaire was developed to be understandable by all participants and to acknowledge participants' home language, making it understandable in meaning and thought processes in the UAE context. To ensure this, the researcher sought clarity of the questionnaire language in simple English that participants could understand. A copy of the questionnaire in English is presented as an Appendix.

3.10.7 Research Procedures and Sample Selection

The generalizability of the study is based on the representativeness of the respondents. The participants of this study include experienced UAE national and expatriate employees across all departments and units at selected ICT and Telecommunication organizations in Abu Dhabi, Dubai and other emirates in the UAE. Different job titles are represented, including managerial and non-managerial positions. Sampling collection methods were divided between two categories: probability sampling and non-probability sampling (Tyrrer et al., 2016). Probability sampling can further be separated into several types, such as simple random, and systematic sampling, and non-probability sampling techniques including snowball,

quota, purposive, accidental, and theoretical sampling. The difference between the two categories is summarized in Table 3.

Table 3: Probability and non-probability sampling

No	Probability sampling	Non-Probability sampling	Reference
1	The chances of individuals in the broader population being selected for the sample are known	The chances of individuals in the broader population being selected for the sample are unknown	(Henry, 1990)
2	Each element in the population has a known non-zero chance of being selected using a random selection procedure	Each element in the population has a chance to be not selected using a random selection procedure	(Visser et al., 2000)
3	Less risk of bias	High risk of bias	(Cohen et al., 2003)

According to Tyrer et al. (2016), probability sampling is more accurate in determining a population's true characteristics as it allows all members of the population to have an equal chance of being selected. This study used a stratified random sampling technique in the selection of respondents. This method of sampling involves dividing a population into smaller groups known as strata, which groups are formed to reflect members' shared attributes or characteristics. Probability sampling is thus appropriate when a researcher wishes to generalize the study's findings, as it seeks representativeness of the wider population, and allows two-tailed tests to be administered in the statistical analysis of quantitative data. The respondents' contact details were gathered by random sample and from each division, chosen with an association proportional to the size of that division compared to the population. Every company is considered in the UAE context and each division in the sample of

employees is chosen at random from each ICT and Telecommunication company. A random sampling was adopted, shared between the thirty-six ICT and Telecommunication companies, from which employee and leadership samples were chosen by simple random sampling. This technique (probability and simple random sampling) gave the study a representative sample minimized for bias errors.

The researcher's advisor and co-advisor evaluated the questionnaire to provide feedback about any ambiguities. They reviewed the questionnaire's items to verify their suitability and to ensure that all items completely addressed every aspect of the research questions. A pilot test was conducted to evaluate the design and methodology before the beginning to gather data for the research, before the official distribution of the questionnaire. The objective of starting with a pilot test was to investigate on a small sample group how well they understood and responded to the content and language of the questions. In addition, it was an opportunity to enhance or eliminate ambiguous questions, and thus minimize bias (Zikmund et al., 2013). A pilot test was performed on ten individuals and leadership participants from the study's target population. They were asked to comment on various aspects of a list of items corresponding to the constructs, including the wording of the scales, questionnaire format, and length of time. Their feedback was used to improve and enhance the wording of the questions, thereby reducing the possibility of respondents interpreting the questions in different ways. The pilot participants indicated that the questionnaire time for completion of around thirty minutes was suitable, and that the questions were clear.

In light of this feedback, some slight modifications were made. Furthermore, instructions on how to answer the questions were included on the first cover page, and

clarifying phrases were inserted into each section. Based on these efforts, the survey was considered to be suitable for data collection. After assessing the pilot survey study, the final survey was generated as an online copy to use through Google Form. There were two surveys: one for individual staff and the other for leadership. Employees surveyed were informed about the purpose of the study and encouraged by the primary researcher to participate fully. Leadership survey participants were informed about the purpose of the study and were encouraged to participate. The assurance regarding confidentiality was communicated in the survey's covering letter. To clarify any questions arising from respondents, a direct way of contacting the primary researcher was provided.

3.10.8 Data Sources and Collection

This section presents the detailed procedures of data collection undertaken to assess the conceptual model. The section gives an overview of the statistical tools used in analyzing the collected data, along with the analysis stage following the confirmed validity and reliability of the model variables. In order to start gathering data for this study, an approval was generated from the United Arab Emirates University Social Sciences Research Ethics Committee. Various issues were addressed arising out of the ethical codes of conduct for research (see introduction to survey in the Appendix), including a participant information sheet that detailed the objectives of the research and a consent form that addressed issues related to confidentiality, privacy, and any potential issues associated with participation in the research. The company selection was based on accessibility to their employees and leadership. Individual and leadership in the companies were assured that no identification of the employer/organization would be provided, and that reference would only be made to its entity.

The study survey required support and approval from the management of the companies, but during discussion the companies initially declined to support the research. However, through communication with a team in the companies, they were able to support the gathering of data. Individual respondents are typically more willing to comply with a request if it is made by an individual perceived as having appropriate authority to support them. The distribution of the survey questionnaire to individual and leadership in different companies for study was carried out between May 2018 and September 2018. A paper questionnaire and a covering letter were used to collect the data necessary to meet the purpose and objectives of the study.

The covering page was designed to encourage participation. The first paragraph described the nature and the purpose of the study, and the second paragraph included a request for participation in the study, followed by statements guaranteeing anonymity and the extent to which confidentiality of information would be maintained. An assurance that participation was voluntary and that any individual approached may withdraw from participation at any time was also included. This approach provided the primary researcher with the opportunity to convey the importance of the research personally to the respondents. An online survey supported by new technology made it easy and convenient to collect and analyze the completed questionnaires.

3.10.9 Statistical Tools

Statistical analysis of the data received from the returned questionnaires has been performed by using the IBM SPSS (Statistical Package for the Social Sciences) and AMOS application. The SPSS included a data reliability test, frequencies, percentages and the cross-tabulation between independent and dependent variables. The structural equation modeling is helpful and useful to compare models from different groups of

data. In this study, data will be collected from different groups were used to test whether the same factor relationship is prevalent across studies and whether these factor relationships predict relevant dependent measures. Since a discrete number of studies were utilized to test the hypotheses, each study's data was the unit of analysis. As usual of studies that discussed and reported the means, standard deviations and inter-correlations of the factors with one another, and with a dependent measure, were utilized. From that data, covariance matrixes were constructed for each study because they are deemed more useful in multiple-group comparisons. The covariance matrixes formed the multiple groups for a test of model invariance to determine whether the implied model is consistent across multiple groups. In this study of Hypotheses were tested by the analysis of various fit indices that measure the discrepancy between the hypothesized and observed covariance matrixes. The AMOS SEM software program was utilized to analyze the data and to report the relevant fit indices (Arbuckle & Wothke, 1999).

3.10.10 Data Analysis Procedure

Detailed data analysis covering both descriptive and inferential statistical analyses is presented in Chapters 4. According to Van Blerkom (2017), the descriptive analysis provides various profiles of the respondents, such as gender distribution, age profile, occupation category, nationality and percentage other nationalities, based on different items in the demographic section. In addition, the analysis offers a variety of other information from the survey statistics, such as mean, frequency, standard deviation, ratio, skewness and kurtosis indices. The first action after gathering the data was to screen it to ensure its accuracy, completeness, and quality. The questionnaires for normality are examined, ensuring no data were missing and that there were no

outliers, thus making the data fit for further statistical analysis. All the above analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 25.

3.10.11 Sample Size

A sample is a subgroup of a population that is representative of the entire target population. The sample size has been determined according to the Godden (2004) calculation. The calculations were based on a confidence level of 95%, ratio of population characteristics available in the sample (50%), confidence interval = 0.05, and population size. Godden (2004) suggested that two calculation processes must be applied: the first for a sample size for an infinite population (where the population is around 10,000). And then a sample size for a finite population (where the population is fewer than 5,000). The sample size can be determined by the following equation:

$$N * \frac{Z^2 (P)(1-P)}{c^2} \text{ divide on the } N - 1 + \frac{Z^2 (P)(1-P)}{c^2}$$

Z = confidence level (95%), c = confidence interval or margin of error = 0.05

P = percentage of population picking a choice (worst case of the sample 50%)

N = Total population (the total population derived from ICT and Telecommunication in UAE was estimated at 5,000 employees)

Table 4: Survey response rate

Particular	Value
Population Size (N)	5000
Critical Value (95% confidence level) (Z)	1.96
Margin of Error (e)	0.05
a) Sample Proportion (uncertain) (p)	0.5
b) Sample Proportion (p)	0.05
Sample Size (n)	357
Sample Size (n)	72

Thus, a sample of 357 is considered to be valid for the present study. Five hundred questionnaires were administered, resulting in 139 useful responses with an overall response rate of 28% (see Table 4).

The main reason of the valid responses to ensure representative of the larger population, a non-response bias test was used to compare the early and late respondents. Chi-square tests showed no significant difference between the two groups of respondents at the 5% significance level, implying that a non-response bias is not a matter for concern (See Table 5).

Table 5: KMO and Bartlett's test results

No. of invitations	Valid responses	Response rate %
500	139	Approx. 28
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.956
Bartlett's Test of Sphericity	Approx. Chi-Square	6426.777
	df	703
	Sig.	.000

3.10.12 Preliminary Analysis

One of the survey questionnaire is a self-report study which is a type of survey questionnaire collecting respondents read the question and select a response by themselves without interference. A self-report is like other method by involves asking a participant about their feelings, attitudes, beliefs and so on. Two of the examples of self-reports which are questionnaires and interviews; self-reports are often use as a way of gaining participants' responses in observational studies and experiments. Self-report studies have validity problems. Patients in a clinical setting

may exaggerate symptoms in order to make their situation seem worse, or they may under-report the severity or frequency of symptoms in order to minimize their problems. Participants might also simply be mistaken or misremember the material covered by the survey. To avoid or at least mitigate this type of bias, two types of survey were used by allowing leadership to provide feedback on their employees, and employees on their leadership.

After the data collection and before proceeding with model analysis, basic statistical data screening was performed. The t-test is for dependent samples, which compares the means of two variables or measurements. The test assumes that the data in the two variables are normally distributed. After the data collection and before proceeding with model analysis, data screening was performed using multivariate and univariate outlier identification to indicate data normality. Additionally, missing data were detected and thereafter a preliminary factor analysis for the survey components was conducted to examine the common method variance (CMV), reliability, and scale uni-dimensionality of each construct. This test is considered to be essential because the independent variables and dependency variables data used in this study are entirely self-reported, and so are prone to CMV. Accordingly, Harman's single-factor test was conducted to check if the scale items were uni-dimensional. Second, a common latent factor (CLF) check was conducted using analysis of moment of structure (AMOS 25) confirmatory factor analysis (CFA) to capture the path of common variance among all the observed variables in the model. This test is essential to determine that CMV does not affect the standardized path coefficients.

3.10.13 Structural Equation Modelling (SEM)

After ensuring that the normality and factorability assumptions had been tested, the analysis process was carried out by adopting structural equation modeling with maximum likelihood estimation (SEM) with AMOS 25 to examine the fit of the study's measurement and structural models. Following the two-step modeling method suggested by Anderson et al. (2013), the two-step modeling method begins by evaluating the validity of the measurement model and is followed by the conducting of the structural model assessment by testing standardized path coefficients. The rationale for this two-step approach is to ensure that conclusions emanating from structural relationships were drawn from a set of measurement instruments with desirable psychometric properties. The assessment of the measurement model for the study's sample was performed by estimating discriminant and convergent validities, as well as internal consistency. Convergent validities were evaluated through item loadings on their related factors; discriminant validities were examined through a comparison between the average variance that the constructs and their measures share to the variances the constructs themselves share.

After the measurement model had been checked by means of discriminate and convergent validity, it was appropriate to proceed with the structural model. However, to assess the structural model and hypothesis, the study adopted SEM using AMOS 25 with maximum likelihood estimation. The structural model standardized path coefficients (β values) were tested for their respective significance levels, as well as for the coefficients of determination coefficient (R^2 values). The significance of testing the structural model is to examine the hypothesized relationships included in the study's proposed conceptual model. Cohen et al. (2003) suggested that the fit of

both the measurement model and structural model be conducted prior to analyzing interaction effects (mediation and mediation relationships).

3.10.14 Hierarchy Linear Model (HLM)

Just for this additional information approach is to ensure that conclusions emanating from the Hierarchy Linear Model were drawn from a set of measurement instruments. Hierarchical levels of grouped data are a commonly occurring phenomenon. For example, in the education sector, data are often organized at student, classroom, school, and school district levels. Maybe in the meta-analytic research procedure, participant and results data are nested within each experiment in the analysis. In repeated measures research, data collected at different times and under different conditions are nested within each study participant (Raudenbush & Bryk, 2002). Analysis of hierarchical data is best performed using statistical techniques that account for the hierarchy, such as Hierarchical Linear Modeling (HLM). So, the HLM is a difficult form of ordinary least squares (OLS) regression that is used to analyze variance in the outcome variables when the predictor variables are at varying hierarchical levels; for example, students in a classroom share variance according to their common teacher and common classroom.

Previous studies have development of HLM, hierarchical data was commonly assessed using fixed parameter simple linear regression techniques. However, these techniques were insufficient for such analyses due to their neglect of the shared variance. An algorithm to facilitate covariance component estimation for unbalanced data was introduced in the early 1980s. This part of development explained and allowed for widespread application of HLM to multilevel data analysis. (For

development of the algorithm which can be understood by seeing Dempster et al. (1977), and for its application to HLM see Dempster et al. (1981)).

Following this advancement in statistical theory, HLM's popularity flourished (Raudenbush & Bryk, 2002). HLM accounts for the shared variance in hierarchically structured data. The technique accurately estimates lower level slopes (e.g., student level) and their implementation in estimating higher-level outcomes.

3.10.15 Mediation Analysis

Baron and Kenny (1986) claim that there are three conditions that must be met to prove that the mediational effect is taking place:

- 1) □ An independent variable should be significantly related to the mediator (A leads to B)
- 2) □ The mediator should be significantly related to the dependent variable (B leads to C)
- 3) □ The relationship of the independent variables and dependent variables diminishes when the mediator is introduced into the model (A leads to B which, in turn, leads to C).

According to Hair et al. (2016), from a theoretical perspective the most common application of mediation is to “explain” why a relationship between an independent variable and dependent variable exists. Hence, it allows the verification of the mechanisms that underlie the cause-effect relationship.

3.11 Reliability and Validity

Achieving perfect reliability and validity is the core part of the statistical analysis of the method; however, it requires a complicated approach to achieve acceptable

results. The general concepts of reliability and validity are covered in the following discussion. The particular techniques selected for the study are included also in the discussion.

3.12 Reliability

The general concept of reliability is to focus on the dependability and consistency of the measuring instruments. The two main types of reliability are stability reliability or stability across time and representative reliability, or stability across employees in the telecom and ICT organizations. The main causes that influence the reliability of research instruments, including the wording of the questions, physical setting, respondent's mood, nature of interactions, and SEM effect of an instrument. Based on the suggestions proposed by Neuman (2011), several factors could help in improving the reliability of the present study through:

- (i) Having a clearly conceptualized construct, because reliability increases when the measurement involves only one concept.
- (ii) Using the level of measurement of the instrument by having more detailed questions to cover the attributes of the leadership behaviors, the climate for innovation, individual creativity and innovation performance than using several questions to measure each attribute using appropriate scaling.

The alpha scale reliability is a measure of internal consistency of a scale, and values above 0.70 indicate satisfactory reliability. The composite scale reliability is also reported which provides a measure of reliability, and values above 0.70 are deemed satisfactory. According to Bagozzi and Yi (1998), a value above 0.60 is satisfactory. Furthermore, the average variance extracted by the constructs, which is

the average squared factor loading, is also reported. Values greater than 0.50 indicate that the measurement items account for more variability than error.

The loading of the items on their respective constructs using confirmatory factor analysis and partial least squares analysis based on a pooled sample of 1,394 is also reported (Avolio et al., 1995). Based on the data presented by Avolio et al. (1995), the MLQ appears to be a reliable and valid instrument.

3.12.1 Accepting Goals

As seen in Bass and Avolio (1997); Bass (1998), inspirational leadership is now referred to as “accepting goals”. This is characterized by behaviors that provide meaning, challenging goals, a sense of vision and mission, and belief that the individuals can reach goals or objective which they maybe have originally thought difficult or impossible to achieve. The alpha scale reliability of this item is 0.91, its composite scale reliability is 0.88, and its average variance extracted is 0.65 (Avolio et al., 1995). These scores meet all cutoff criteria. Furthermore, all factor loadings using partial least squares analysis and confirmatory factor analysis exceeded the minimum value recommended by the literature.

3.12.2 Inspirational Motivation

As seen in Bass and Avolio (1997); Bass (1998), inspirational leadership is now referred to as “inspirational motivation”. This is characterized by behaviors that provide meaning and support personnel during challenging goals, provide a sense of vision and mission and the belief that the individuals can reach goals which they may have originally thought difficult or impossible to achieve. The alpha scale reliability of this item is 0.91, its composite scale reliability is 0.88, and its average variance

extracted is 0.65 (Avolio et al., 1995). These scores meet all cutoff criteria. All factor loadings using partial least squares analysis and confirmatory factor analysis exceeded the minimum value recommended by the literature.

3.12.3 Intellectual Stimulation

According to Bass (1998); Bass and Avolio (1997), “intellectual stimulation” refers to employees questioning underlying assumptions publicly, reframing problems, finding creative solutions to difficult problems, and developing the potential of followers to be able to solve problems in the future. The alpha scale reliability of this item is 0.90, its composite scale reliability is 0.89, and its average variance extracted is 0.66 (Avolio et al., 1995), thus meeting all cut-off criteria. All factor loadings using partial least squares analysis and confirmatory factor analysis exceeded the minimum value recommended by the literature.

3.12.4 Individualized Consideration

According to Bass (1998); Bass and Avolio (1997), the construct of “individualized consideration” explains the leadership’s behavior in focusing on the growth and development of each follower, providing them with new opportunities to learn, and giving them personalized attention. Here the leader delegates challenging tasks to the followers, and instead of checking-up and controlling them, the leader coaches, mentors and teaches them in an attempt to help them reach those goals. The alpha scale reliability of this item is 0.90, its composite scale reliability is 0.86, and its average variance extracted is 0.61 (Avolio et al., 1995), thus meeting all cut-off criteria. Furthermore, all factor loadings using partial least squares analysis and confirmatory factor analysis exceeded the minimum value recommended by the literature.

3.12.5 Contingent Reward

The contingent reward factor has remained intact and forms the basis of the constructive element of transactional leadership behavior (Bass & Avolio, 1997). Here the leader stresses an exchange and promises and delivers rewards when the follower reaches predefined goals. The alpha scale reliability of this item is 0.87, its composite scale reliability is 0.85, and its average variance extracted is 0.59 (Avolio et al., 1995), thus meeting all cut-off criteria. Furthermore, all factor loadings using partial least squares analysis and confirmatory factor analysis exceeded the minimum value recommended by the literature.

3.12.6 Management by Exception-Active

The transactional leadership scales have also been expanded. The contingent aversive reinforcement factor has been divided into two distinct elements: (a) management-by-exception active, and (b) management-by-exception passive. The former is a corrective transaction, whereby the leader actively watches for deviations from the norm and takes action when outcomes do not match standards. The alpha scale reliability of this item is 0.74, its composite scale reliability is 0.76, and its average variance extracted is 0.46 (Avolio et al., 1995), thus meeting all cut-off criteria except for the average variance extracted. Since the scale exceeds the reliability estimates it appears to be consistently measuring its common factor. All factor loadings exceeded the minimum cut-off point, except for item 22, where one of the loadings using confirmatory factor analysis is reported to be 0.37. Perhaps the word complaints should not be used, as it may be interpreted as referring to the leadership's complaining behavior, and not the fact that the leader focuses on complaints when standards are not met. Item 22 could perhaps be improved by eliminating the word

complaints to read “Concentrates his/her full attention on dealing with mistakes, and failures.” Another possibility is to specify what is meant by complaints as follows: “Concentrates his/her full attention on dealing with mistakes, failures, and complaints when standards are not met”.

3.12.7 Management by Exception-Passive

Passive management-by-exception entails waiting and intervening only if standards are not met, or when things go wrong. The alpha scale reliability of this item is 0.82, its composite scale reliability is 0.85, and its average variance extracted is 0.60 (Avolio et al., 1995), thus meeting all cut-off criteria. All factor loadings exceeded the minimum cut-off point, except for item 17 where both the loadings as measured by confirmatory factor analysis and partial least squares analysis are reported to be 0.37. Although the item is clearly an indicant of passive management-by-exception, the idiom is not simple and could confuse respondents. This is further complicated by the use of a double negative. Perhaps the item should read, “Shows that he/she is a firm believer in ‘Fix it only if it is broken.’” This, however, loses the power of the idiom. Perhaps an entirely new item should be considered, for instance, “Intervenes only when standards are not met”.

3.13 Validity

Validity is related to measuring the fitness of the empirical indicator and the conceptual definition of the construct. Some measurements of validity are: (face) validity, content validity, concurrent and predictive criterion validity, and convergent and discriminant construct validity (Neuman, 2011). Related to face and content validity, the researcher scrutinized the instrument through conducting a peer review to maximize the logical links between the questions and research objectives to be sure

that the coverage of the topics researched is balanced. In terms of criterion validity, the researcher compared the instrument to other relevant existing studies to increase the concurrent and predictive validity of the study. Since distinct patterns of relationships emerged among the constructs, and since these patterns were generally predicted or explained by a theoretical framework, one can draw certain conclusions about the validity and reliability of the MLQ.

Validity refers to whether an instrument measures what it purports to measure; that is, its accuracy. Validity represents construct and predictive validity. The former refers to the interrelationship of the constructs; if the constructs “behave” as expected, this has a positive bearing on the instrument’s construct validity. The structural model of the MLQ appears to satisfy the requirement for a validated instrument as indicated by the model fit and how it compared to the other models. As regards the measurement model of the instrument, the fact that the structural model is valid has direct implications for its measurement model.

Current results do not support firm conclusions about the instrument’s criterion validity since the independent variables were analyzed separately and the dependent measure was collected at the same time as the independent measure and from the same source. Nevertheless, based on what was reported above, the MLQ constructs related to the criterion measure in line with the full-range theory and with results of previous research. Transformational and contingent reward leadership were positively related to perceived effectiveness, while passive-avoidant leadership was negatively related. Where results were not as expected (e.g., concerning management-by-exception active), they were clearly explained by the theory, were logical, and were supported by other empirical research for those moderating conditions. Based on the results of

this study pertaining to the construct validity of the MLQ, it is possible to conclude that the instrument does adequately represent the full-range theory. Reliability is concerned with replicating the results of a measurement instrument. It also supports the measurement model's internal consistency, that is, the consistent interrelationship of the items among each other. Whether or not the right construct is being tapped is not of issue, but rather whether the same construct is being consistently measured. Since information on the item level was not available in this study, tests of strict factorial invariance were used to test the model's consistency. Based on those sets of results, it can be concluded that the MLQ is measuring the same constructs across groups and is therefore reliable. This is because the fit of the seven-factor model was acceptable across samples while constraining the measurement model to equality across groups, which implies that the instrument must be measuring its variables or constructs reliably across those groups considering sampling without error.

3.14 Questionnaire Design

The primary instrument of the quantitative approach is the questionnaire, which is considered as one of the most widely used social research techniques. The idea of formulating precise written questions for those whose opinions or experience one is interested in seems an obvious strategy for finding the answers to the issues that are of interest. The initial questionnaire (prototype) was developed with reference to the other studies in the same area as MQL: personal creativity, the climate for innovation culture and innovation performance. The structure of the questionnaire based on the proposed conceptual framework consists of seven independent variables and a dependent variable. Pertaining to this study, the scope of the questionnaire encompasses an evaluation of the leadership behaviors involved in the innovation performance of

Telecom and ICT organizations. For the purposes of this study, a questionnaire was developed to collect data from the target sample population dealing directly or indirectly with the leadership and employees within their own organization. Researchers in the social sciences interested in adopting questionnaire research stress the importance of the wording to be clear, comprehensible and understandable in the proposed questionnaire statements.

According to Blaxter (2010), the words in the composed questions should not be ambiguous or imprecise. Within this scope of wording clarity, the questionnaire is designed to include both open-ended and closed questions. Both types of questions are important for collecting the data, and therefore they cover both words and numbers to analyze participants' perceptions quantitatively. According to this scope, a significant advantage of open-ended questions as a tool for gathering data is that "They provide the space for thinking so that the respondents can express their ideas according to the question given by the researcher".

This instrument could help in gaining rich and usable information, which supports the analysis and reliability of the gathered information and data. Many researchers indicate that the questionnaire technique provides reliable research information because the target participants are keen to respond to the questions explicitly and in confidence. The literature identifies that an effective questionnaire has clarity, is simple to respond to, has significance, consistency, anonymity and reliability, and the research should not be expensive to conduct.

The proposed questionnaire was based on a five-point Likert scale to include the following options ranging from strong agreement (5) to strong disagreement (1). The questionnaire consisted of five parts:

- (i) □ Demographic information
- (ii) □ Type of leadership behaviors in the hosting organization
- (iii) □ Climate for innovation culture
- (iv) □ Individual creativity
- (v) □ Innovation performance in general (See Appendix)

The survey addresses leadership and other employees separately, with four survey forms. Two forms address the two telecom service providers (Etisalat and Du), and the other two address SMB and leading ICT organizations. The five parts of the survey questionnaire consist further of sixty-four sub-questions to cover primary demographic information of the target participants and organizations to get as many possible aspects of leadership behaviors as possible.

Part Two is particularly dedicated for gathering a wide range of leadership behaviors for rating the support of employees, as well as the interrelationship between the two independent variables. The questionnaire covers the leadership behaviors from the perspective of this exploratory study.

The emergence of the Internet has popularized the use of the web-based surveys in conducting quantitative research on a wide spectrum of social studies, intensively in business and end-customer attitudes, in the belief that the web survey guarantees a high rate of participants' responses (Shih & Fan, 2008). The questionnaire in this study is a web-based tool, written in an online form (Google Form™).

3.15 Ethical Considerations

The ethical considerations applied to this research emanate from the need for the study to be credible and trustworthy regarding data collection, rights, values, social principles, and individual convictions. This study complied with the United Arab

Emirates University guidelines for conducting social research by securing the necessary ethics clearance from the Social Sciences Research Ethics Committee prior to commencing the collection of data from research participants. Strict confidentiality and anonymity were maintained at each stage of the research process from selecting samples to reporting findings. The organizations under study granted permission after having been provided with a general explanation of the nature of the study in the research packet. The study's participants also gave their consent to the purpose, aim, and objectives of the present study before proceeding. The participants took part in the study on a voluntary basis and anonymity was assured, and the participants were not identified during the final survey throughout the study in order to ensure honest and truthful responses. As stated in previous sections, the participants had the right to withdraw from the research at any stage in accordance with ethical research protocol (Vogt et al., 2014). In addition, the study conformed to the agreed standards of conduct of social science research, which mandates voluntary participation, no harm to participants, the maintaining of anonymity and confidentiality, the avoidance of deception, and rigorous data analysis and reporting.

3.16 Questionnaire Pilot Test

3.16.1 Introductory Procedures

The principal supervisor of this dissertation initially thoroughly revised the structure and clarity of the questionnaire. He also checked the relevance of its set of proposed questions to the research problem and hypotheses prior to conducting a pilot test. The pilot test was necessary to highlight the strengths and weaknesses of its contents, concerned primarily with accumulating the required data from respondents whose work experience is relevant to the research subject of the questionnaire. This

step is important to pre-test the research technique and appropriateness of the questions for collecting user data. A pre-test was conducted with ten participants in order to assess how well participants understood the contents of each question, to detect questions that may be ambiguous or unclear in meaning, and to identify questions where the respondents were reluctant to answer or disclose information. The questionnaires, with covering letters, were emailed through the link to the relevant employees after excluding the ten people used for the pre-test. To investigate sample biases such as non-response bias and control variable bias, ten employees who didn't participate in the initial survey were contacted to check their basic information. The discussions focused merely on giving them a further explanation about the research topic, which gained the researcher permission to conduct the pilot-test survey.

The pilot-test questionnaire was sent to a selected sample of two employees and four leadership experts to answer the questions and return their feedbacks. The experts were also asked to provide any comments or suggestions to improve the questionnaire. Such comments were used in restructuring and modifying the prototype to produce the final version of the questionnaire as a data collection instrument. The pilot test has run from 20th June to 25th August 2018. All ten participants (100%) responded and returned complete and usable questionnaires. Their responses to the pilot survey were incorporated in modifying the final version of the questionnaire. Moreover, their feedback proved that there were no issues of ambiguity reported by the participants

3.16.2 Data Collection and Analysis

The survey collected data from Telecom and ICT companies, with ICT companies categorized into two segments: Small and Medium Business (SMB), and large businesses, according to the number of employees. Large companies were

classified as those with more than 400 employees. Data were collected for both genders, and participants were given the option to add his or her name to the survey, since there may have been cultural objections to providing names.

Figure 9 provides the breakdown on gender and job status, showing good representation from both male and female staff and between leadership/employee status. The majority of participants male and female were aged 30-40 years.

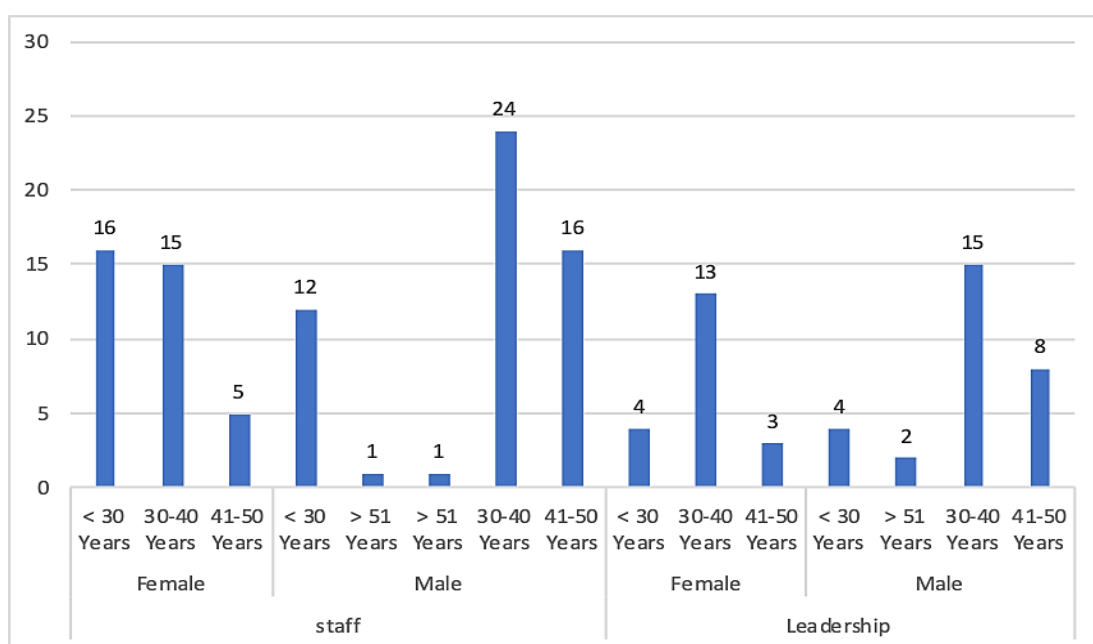


Figure 9: Participates aging group

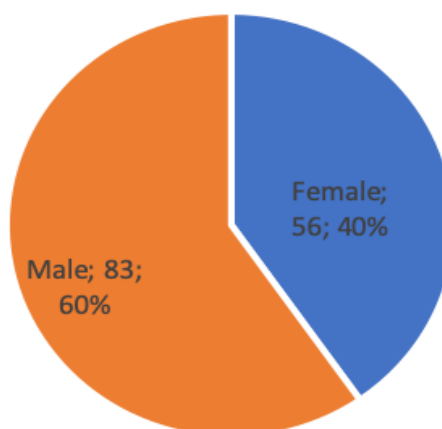


Figure 10: Number of survey participants

The number of participants in the survey is shown in Figure 10. By comparing between two groups (staff and leadership) sampling in SPSS and sig is 0.461 which is good data.

3.17 Reliability

The accumulated data respondents' pilot entered into SPSS for performing the statistical analysis. Cronbach alpha tests were performed to determine internal consistency on the criteria of the proposed seven leadership behaviors; each variable handled with set factors. The Cronbach alpha for leadership behaviors criteria at 0.961 showed adequate consistency for the study, as shown in Table 6.

Table 6: Cronbach alpha pilot test for leadership behavior criteria

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.958	.961	21

The values of Cronbach alpha tests for leadership behaviors (as independent variables), Value Sustainability were found to be more than 0.954, as shown in Table 7.

Table 7: Cronbach alpha test for leadership behaviors criteria

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	58.54	205.936	.742	.	.956
Q2	58.69	203.064	.829	.	.955
Q3	58.62	205.590	.599	.	.958
Q4	58.62	210.590	.658	.	.957
Q5	59.46	204.936	.597	.	.958
Q6	58.54	203.936	.746	.	.956
Q7	58.85	207.474	.660	.	.957
Q8	58.62	204.423	.829	.	.955
Q9	58.92	197.244	.815	.	.955
Q10	59.08	203.244	.829	.	.955
Q11	58.54	202.769	.788	.	.955
Q12	58.92	209.077	.577	.	.958
Q13	59.15	206.641	.686	.	.956
Q14	58.69	207.564	.733	.	.956
Q15	58.46	211.936	.641	.	.957
Q16	58.92	205.244	.795	.	.955
Q17	59.15	206.474	.882	.	.955
Q18	59.38	206.256	.591	.	.958
Q19	58.69	207.897	.719	.	.956
Q20	59.08	213.910	.663	.	.957
Q21	58.46	199.603	.718	.	.956

Likewise, the test value of the innovation performance (dependent variable) was found to be 0.984. The generated values proved an adequate consistency for the study, as shown in Table 8.

Table 8: Cronbach alpha pilot test for innovation performance criteria

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.983	.984	13

The values of Cronbach alpha tests for innovation performance, as dependent variables, value Sustainability were found to be more than 0.980, as shown in Table 9.

Table 9: Item-total statistics for Cronbach alpha pilot test

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	41.83	206.515	.918	.	.981
Q2	41.75	208.386	.946	.	.981
Q3	42.17	203.788	.750	.	.985
Q4	41.92	199.356	.897	.	.982
Q5	42.00	202.182	.868	.	.982
Q6	42.00	197.273	.958	.	.980
Q7	41.92	201.720	.935	.	.981

Note: More details used to develop survey in the appendix

An analysis of the factors was also carried out in the pilot study using the Extraction Method of Generalized Least Squares to confirm validity for the seven leadership behaviors, which ranged from 0.570 to 0.962, as shown in Table 10. These results of the reliability and validity pilot test provided a confidence that the instrument

was clear and understandable. These findings have given the researcher a green light to go forward to the next stage for surveying a large sample of participants.

Table 10: Pilot test validity for the leadership behaviors

Communalities	Initial	Extraction
Q1	1.000	.805
Q2	1.000	.855
Q3	1.000	.910
Q4	1.000	.570
Q5	1.000	.802
Q6	1.000	.900
Q7	1.000	.962
Q8	1.000	.946
Q9	1.000	.951
Q10	1.000	.872
Q11	1.000	.880

Note: More details used in the appendix

An analysis of the factors was also carried out in the pilot study using the Extraction Method of Generalized Least Squares to confirm validity for the seven innovation performance. These ranged from 0.619 to 0.952, as shown in Table 11. These results of the reliability and validity pilot test provided a confidence that the instrument was clear and understandable. These findings have given the researcher a green light to go forward to the next stage for surveying a large sample of participants.

Table 11: Pilot test validity for innovation performance

Communalities	Initial	Extraction
Q1	1.000	.869
Q2	1.000	.912
Q3	1.000	.619
Q4	1.000	.831
Q5	1.000	.786
Q6	1.000	.935
Q7	1.000	.894
Q8	1.000	.771
Q9	1.000	.901
Q10	1.000	.688
Q11	1.000	.901
Q12	1.000	.952
Q13	1.000	.923

Table 12 lists the cumulative percentages of the variance that were accounted for by the current and preceding factors. The model reveals that, for instance, in the first row in Table 12 a cumulative value of 84.475% is shown, which indicates that the first-factor accounted collectively for 84.475%, of the total variance.

Table 12: Pilot test of cumulative percentages of the total variance

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	10.982	84.475	84.475	10.982	84.475	84.475
2	.669	5.146	89.621			
3	.386	2.969	92.590			
4	.354	2.720	95.310			
5	.186	1.431	96.740			
6	.155	1.196	97.936			
7	.133	1.022	98.958			
8	.076	.585	99.544			
9	.049	.376	99.920			
10	.010	.080	100.000			
11	1.001E-013	1.005E-013	100.000			
12	-1.001E-013	-1.011E-013	100.000			
13	-1.017E-013	-1.134E-013	100.000			

3.18 Questionnaire Distribution

All organizations in the Telecom and ICT companies are using the appraisal as a measurement for staff performance either at end-of-year, quarterly or every six months, depending on the organization's policy. The questionnaire is written in English because all the organizations are communicating internally and externally in English. Therefore, the survey was written in English only. The target organization list

was collected from the vendor management system, which Telecom are using for any communication to obtain quotations (see Table 13). The survey was broadcast to everyone via social media, a contact person in the organization and friends to support the gathering of data and to seek support. The online questionnaire version was broadcast to the participants drawn from the following organizations and to all functions and segments as sample and full details in appendix:

Table 13: List of target Telecom/ICT companies

SN	Vendors	Location
1	Sultan Special Systems	Abu Dhabi
2	Falcon Eye	Abu Dhabi
3	CommScope	Dubai
4	CCS	Dubai
5	Al Rustamani group	Dubai-across UAE
6	Du	Abu Dhabi-Dubai-across UAE
7	Ateco	Abu Dhabi-Dubai
8	Etisalat	Abu Dhabi-Dubai-across UAE

3.19 Limitations of the Study

Commonly, every research study faces certain limitations relating to time, physical location, sample population, and the approval for conducting the field study. The potential limitations that would be facing this research study could be as follows:

1. □ The geographical locations of the selected organizations are scattered, making the simultaneous reach quite difficult.

2. □ For the same reason, it was difficult to conduct face-to-face interviews with the leadership and staff personnel. An online questionnaire was found to be practical.
3. □ Participants often refused to share their contact details, which needed to be kept optional

However, there is no conflict of interest in the research topic, data collection, or using the collected data in the authorship of this dissertation. An official permission was provided with a covering letter to reach the potential groups participating in the online survey. This allowed the researcher to assure the participants that all the information obtained would be treated in confidence, and that the researcher has permission to start a discussion about leadership behaviors to identify the main factors that affect the alignment of innovation performance to organizations in proposing the hypotheses.

3.20 Chapter Summary

This chapter reiterates the purpose of this study, has presented the research questions, and explained the nature of the research strategy and the research design. It also shows how the sample of participants was selected, explains the survey questionnaire instrumentation and research procedure, and discusses the collection of the data sources in addition to the methods used to analyze data. The chapter also explains the ethical considerations in conducting the current research and the research guiding paradigm. Further, this chapter discusses the purification of measures and descriptive analysis, the model and hypotheses testing, and the data analysis results with the aim of answering the research questions with a focus on the key contributions of this study.

Chapter 4: Explanation of Data Procedure

This chapter will explain the data screening and preparation procedure that assured the quality of the replies and their consequent use in the statistical analysis. Initially, the data screening included checking for missing data, the presence of outliers, verification of the distribution assumptions, and testing of common method bias to ensure that the data was accurate, complete and suitable for a multivariate statistical analysis. Additionally, the descriptive analysis of the data provides some qualitative insights to investigate, describe and discuss the data obtained in terms of value and contribution to the aims of the research. Furthermore, it focuses on the purification and computation processes of the measuring instruments. In this process, Cronbach Alpha is used as an indicator of reliability of the scale measurement. Finally, validity of the measures was considered, and factor analysis was used to examine it. Results of the statistical analysis are used for further analysis in Chapter 5 for hypothesis testing and to interpret the findings in the context of the research aims.

It is important to highlight that Chapter 4 and the following Chapter 5 are aimed specifically at presenting the statistical results from the analysis. Chapter 6 will interpret and discuss the implications and findings of Chapters 4 and 5 within the context of the literature discussed in Chapter 2. In other words, these two chapters (4 and 5) are restricted to presentation and analysis of the collected data, without drawing general conclusions or comparing results to those of other researchers. The conclusion and recommendations of these results are discussed in the final chapter.

4.1 Data Screening

An important step to take before starting was “cleaning” the data once they have been collected for analysis (Tabachnick & Fidell, 2007). An initial step in formulating

the data for analysis was the process of data elimination for incomplete responses, editing, coding and data entry to the Statistical Package for the Social Sciences (SPSS). This is an important step to screen data against quality standards to discover any errors. Subsequently, each variable was labelled as uniquely coded into a format suitable for SPSS Version 25. This step facilitated the computer software analysis of the data. Data was exported from an Excel spreadsheet to SPSS for analysis.

4.2 Missing Data

Filtering and quality check for the missing data is an important second check of unreliability and bias. One way of dealing with missing data is simply to omit it when missing values are small and non-random; or these variables could be replaced or deleted from the study. The decision may be based on the sample size if it is large and/or when the respondents have not answered all the questions in the survey. The deletion of variables with missing data is also recommended if these variables are not critical to the study (Tabachnick & Fidell, 2007). Based on this understanding, an analysis of missing values was conducted. The results revealed no cases of missing data, because the surveys with completed data were the only ones to be included, and since this number of completed surveys generated sufficient respondents. In the present study, 139 collected responses were checked and cleaned (Table 14).

Table 14: Kolmogorov-Smirnov results: tests of normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Idealized Influence total	.167	139	.000	.869	139	.000
inspirational Motivation total	.141	139	.000	.898	139	.000
intellectual Stimulation total	.144	139	.000	.903	139	.000
individualized consideration total	.139	139	.000	.905	139	.000
contingent reward total	.135	139	.000	.911	139	.000
management by exception total	.118	139	.000	.925	139	.000
Management by Exception passive total	.143	139	.000	.916	139	.000
Climate for innovation culture 1	.250	139	.000	.854	139	.000

4.3 Outliers

According to Tabachnick and Fidell (2007), the normality of data is considered an important assumption of many statistical tests, and data normality is affected by outliers because outliers should be detected and resolved. Survey responses could elicit unusually high or low values that make them distinctly different from others. Such responses are known as univariate outliers. These outliers represent cases with an extreme value in one variable. Conversely, such responses could be a unique combination of several responses that stand out from other responses across multiple variables, as in the case of multivariate analysis (multivariate outliers), which outliers

are cases with strange combinations of scores on two or more variables. The outliers could increase error variance and reduce the power of statistical tests through biasing estimates of substantive interest (Osborne & Overbay, 2004). There are many possible ways of dealing with outliers once they are identified. If they are few, it is better to remove them from the study; for example, if a question is not well structured. But if the question is well structural then it is better to keep.

Kolmogorov-Smirnov and Shapiro-Wilk's tests of normality in statistical assessment were used to assess the normality of the data. This was because values of the Shapiro-Wilk test are consulted when data number a data set with a p value of less than .05 rejects the null hypothesis. The results of the Kolmogorov-Smirnov test limitation of the normality tests is that the larger the sample size, the more likely to get significant results. Thus, you may get significant results with only slight deviations from normality when sample sizes are large but in this dissertation the sample is less than requirement.

Skewness is a degree distribution value between range of +1.5 to -1.5 which is considered quasi-normal for a data set and is called symmetric if it looks the same to the right and left of the centre point. Furthermore, although the previous test shows results that differ significantly from the normal distribution, it has been reported that for large samples normality tests may yield significant results even in cases of a small deviation from normality (Oztuna et al., 2006). AMOS 25 was used to assess the occurrence of multivariate to identify any multivariate outliers within the data. The metric for estimating is how far each case is from the centre of all the variables' distributions. The Mahalanobis distance test has identified seventeen cases that have an outlier (Table 15).

Table 15: Multivariate outliers test results (mahalanobis distance method)

Number	Mahalanobis d-squared (Distance)	P (Probability)
24	88.070	.000
59	75.305	.000
73	68.959	.000

The Mahalanobis Distance was compared with a Chi-Square distribution with degrees of freedom equal to the number of independent variables at a significance level of $p < 0.001$. In total seventeen cases were found to exhibit the presence of multivariate outliers. All seventeen cases were removed to avoid any bias in the subsequent statistical analysis.

4.3.1 Normality

The normality assumption refers to the bell-shape for the data distribution for each variable. Using SPSS 25.0, a skewness-kurtosis approach tested the statistical values of univariate normality for each variable, and found that they were within their respective levels. As reported in Table 16, all the given values support the normality of univariate distribution, as all values of skewness were recognised to be below their cut-off point of “3”, and not more than 8 were found of all values of kurtosis (Kline, 2005).

Table 16: Partial display normality test results for all items

Descriptive Statistics								
	N	Mean		Std. Deviation	Skewness		Kurtosis	
Idealized 1	139	2.23	.067	.792	-.436	.206	-1.276	.408
Inspirational 1	139	2.01	.065	.761	-.024	.206	-1.264	.408
Intellectual 1	139	2.00	.068	.808	.000	.206	-1.465	.408
Individualized 1	139	2.06	.069	.818	-.121	.206	-1.497	.408
Contingent 1	139	1.98	.071	.838	.041	.206	-1.578	.408
Exception 1	139	2.19	.070	.822	-.360	.206	-1.428	.408
Passive 1	139	1.92	.067	.790	.142	.206	-1.380	.408
Idealized 2	139	2.06	.073	.866	-.112	.206	-1.665	.408
Inspirational 2	139	2.12	.068	.803	-.226	.206	-1.412	.408
Intellectual 2	139	1.92	.067	.790	.142	.206	-1.380	.408

Note: More details used in the appendix

4.3 2 Method Bias Verification

The method bias verification is to observe variance in an endogenous variable. This variance is not only due to the relationship between the model constructs, but also because of the variance introduced by the measurement method. The cause may be from participants who wish to make their responses reflect images of themselves, or from a bias due to the simultaneous collection of data concerning both the independent and dependent variables, or the ambiguity of the survey items themselves. The follow methods may be used to check bias.

4.3.3 Harman's Single Factor

Harman's Single-Factor Test was run to check and validate method variance. Harman's Single Factor test includes all the items from all the model constructs, to study factor analysis in order to determine whether most of the variance can be accounted for by one common factor. The goal of the test is to check whether a single factor could account for more than 50% of the variance. The results shown in Table 17 indicate that a single factor could only account for 30.407% of the variance, which is far less than the accepted threshold of 50%. This confirms that the survey responses are free from significant method bias and that it was acceptable to proceed with the model analysis and more details in the appendix.

Table 17: Results of Harman's single-factor test method for bias

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	30.151	57.983	57.983	29.743	57.199	57.199
2	3.751	7.214	65.197			
3	1.841	3.541	68.737			

Extraction Method: Principal Axis Factoring

4.3.4 Latent Factor

Latent factor analysis cannot test after Harman's Single Factor, but after CFA was carried out in order to test the percentage of variance explained by a latent factor. CFA model was used first then latent factor analysis, which contained all the model constructs and introduced a common latent factor (CFA is explained in the next step).

Accordingly, this assessment was conducted after CFA, with the purpose of examining data readiness. The observed variables were connected in the model constructs with the common latent factor and constrained the paths to be equal. The results of AMOS version 25 demonstrated that this common latent factor explained of the shared variance in all the observed variables. Hence, the common latent factor analysis also confirmed that common method bias is not a major concern in the data used for the present study.

4.4 Descriptive Analysis

This section provides general information about respondents. The aim is to provide a brief account of the profile of the study sample. Frequency analysis is used to distribute the participants according to the following characteristics:

- Gender
- Staff / leadership
- Age of respondent
- Education certification
- Experience
- Nationality

4.4.1 Gender

By knowing who are respondents which were asked to indicate their gender by select Male or Female. Table 18 shows that 60% of the respondents were males and 40% were females. This indicates that there was a reasonable balance between males

and females within the sample, which reflects the ICT and Telecom policy in the UAE of supporting equal opportunity.

Table 18: Gender of respondents

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	Female	56	40	40	40
	Male	83	60	60	100
	Total	139	100	100	

4.4.2 Staff / Leadership Status

Regarding their position in the organization, the majority of the respondents were classified as staff (65%), with 35% occupying leadership roles. Table 19 summarize the distribution of sample by organizational position.

Table 19: Leadership status

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	Leadership	49	35	35	35
	Staff	90	65	65	100
	Total	139	100	100	

4.4.3 Age

In terms of age, nearly half of the respondents were between 30-39 years old (48%), 26.0% of the respondents were aged between 20-29 years old, 23% were 40-49 years old, and a small minority (approximately 3%) were over 50 years old Table 20 summarizes the distribution of sample by age.

Table 20: Age of respondents

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	20-29 Years	36	26	26	34.2
	30-39 Years	67	48	48	74
	40-49 Years	32	23	23	97
	50 Years or Older	4	3	3	100
	Total	139	100	100	

4.4.4 Education

Table 21 shows that more than half of the participants (56%) have earned a bachelor's degree. Twenty-two participants (16%) received Diploma's or less degrees. Approximately 29% of the survey participants (41 participants) received PhD/Doctorate degrees.

Table 21: Education of respondents

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	Diploma	22	16	16	16
	Bachelor's degree	78	56	55	71
	Ph.D./Doctorate	41	19	19	90
	Total	141	91	90	

4.4.5 Respondents by Job Function

Table 22 indicates that nearly half (43%) of the respondents were working in the CIT and Engineering function (60 respondents). 39 of the respondents were working in the Business and Sales function (28%). Moreover, 17 of the respondents reported that they were working in the Marketing function (13%). 9% of the respondents were coming from the Administrator and Human Resource function (13 respondents). Finally, few respondents are working in the Finance function (10 respondents).

Table 22: Respondents by job function

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	Administrator / Human Resource	13	9	9	9
	Business / Sales	39	28	28	37
	CIT and Engineering	60	43	43	80
	Finance	10	7	7	87
	Marketing	17	13	13	100
	Total	139	100	100	

4.4.6 Experience

Table 23 shows the distribution of work experience. The majority of the participating respondents (43%) had 15 or more years' work experience, and 23 respondents (17%) had between 10-14 years' work experience.

Table 23: Respondents by experience

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	Less than 5 years	16	11	11	11
	5-9 Years	40	29	29	40
	10-14 Years	23	17	17	57
	15 Year or more	60	43	43	100
	Total	139	100	100	

4.4.7 Respondents by Nationality

Table 24 reveals that 40% of the respondents in this survey were Emirati nationals, and 60% were expatriates. The UAE private employment initiative introduced a few years ago focuses on recruiting UAE Nationals as the main part of its “Emiratization policy”, especially within governmental departments. Notwithstanding this policy, 60% of the respondents were expatriates.

Table 24: Respondents by nationality

		Frequency	Percent %	Valid Percent %	Cumulative Percent %
Valid	UAE	56	40	40	40
	Non-UAE	50	36	36	76
	Asia	26	19	19	95
	Other	7	5	5	100
	Total	139	100	100	

4.5 Reliability Analysis

There are a number of reasons for ensuring the reliability and validity of the constructs after entry and recording processes have been completed. The first reason is that a reliable and valid construct improves the methodological rigour of the research. Second, it provides a more meaningful explanation of the phenomena that are being investigated. The aim was to remove items if they had low correlation, unless they represented an additional domain of interest in this study to measure the reliability. This is a common procedural method used by researchers for guaranteeing the reliability of a multi-item scale.

The objective of a correlation measure is to determine the relationship of a particular item to the rest of the items in the same dimension. The procedure ensures that the items making up the dimension share a common core. In this cleansing process, each item score of 0.30 or above would then be considered highly reliable to be retained for further analysis. Moreover, the establishment of reliability was also made on the basis of the average correlation among items within a dimension, which is a matter of “internal consistency” (Nunnally, 1978).

Coefficient alpha, known as Cronbach’s Alpha, is the basic formula for determining reliability on the basis of this internal consistency. According to Nunnally (1978), a reliability of 0.60 would be sufficient. This technique has proved to be a good estimate of reliability in most research situations. The following section presents the results of the reliability analyses which were carried out for all the measuring constructs in the questionnaire. Computing the correlation and testing with coefficient alpha constitutes the process of analysing reliability. The correlation and the Cronbach Alpha coefficient are observed to be very popular in the field of social science research.

All the items were found to have a high correlation, above the acceptable level of 0.30. As shown in the last column of below, the reliability coefficients ranged from 0.861 to 0.969, which is significantly higher than the acceptable level of 0.60 (Nunnally, 1978). Those results confirm that reliable scales were used. This study calculates the reliability for every single variable. Table 26 shows the reliability coefficient and total item correlations for all the study constructs.

The core question raised in this regard is: “Does the presence of the leadership create a climate of innovation culture within the context organization?” Twenty-one criteria were proposed to measure feedback of the successful creation of a climate innovation culture within the range: not effective (1), to very effective (5), with a neutral midpoint of (3).

4.5.1 Reliability Test of Dependent Variable

Cronbach alpha test was performed to determine internal consistency on the twenty-one proposed performance criteria, along with each of the twenty-one sets of leadership behaviors to support innovation performance. The Cronbach alpha for leadership behaviors scored 0.968 to show an adequate consistency for the study, as highlighted in Table 25.

Table 25: Reliability statistics-Cronbach alpha test for leadership behaviors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.967	.968	21

However, the Cronbach alpha tests for each criterion belonging to the strategic plan execution, including meeting scope of the strategic plan, developing stakeholders’

trust and satisfaction, completed within the estimated cost, achieved within timeline, alignment of the initiative outcomes to organizations' objectives, and meeting community needs were found within a range between 0.967 to 0.964. These test results showed an adequate consistency for the study as shown in Table 26.

Table 26: Item-total statistics: Cronbach alpha test for leadership behaviors

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Idealized Influence 1	40.04	162.158	.785	.	.965
Inspirational Motivation 1	40.26	163.353	.755	.	.965
Intellectual Stimulation 1	40.27	161.983	.778	.	.965
Individualized consideration 1	40.21	160.761	.828	.	.965
Contingent reward 1	40.29	163.369	.679	.	.966
Management-by-exception 1	40.09	161.906	.767	.	.965

Note: more details in the appendix

4.5.2 Reliability Test of Independent Variables

4.5.2.1 Innovation Performance

The Cronbach alpha test for Innovation Performance variable was found to be at 0.976 to show an adequate consistency for the study as highlighted in Table 27.

Table 27: Reliability of innovation performance items

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.976	.976	13

Whereas, the Cronbach alpha tests for the sub-criteria including innovation process and product were found to range between 0.975, and 0.973 respectively. These test results showed an adequate consistency for the study, as shown in Table 28.

Table 28: Reliability of product/service and process innovation data

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Prod & Serve Innovations 1	42.55	160.858	.829	.766	.975
Prod & Serve Innovations 2	42.62	157.310	.862	.798	.974
Prod & Serve Innovations 3	42.57	160.030	.798	.718	.975
Prod & Serve Innovations 4	42.61	156.776	.853	.812	.974
Prod & Serve Innovations 5	42.56	158.726	.856	.821	.974
Prod & Serve Innovations 6	42.59	156.128	.881	.802	.974
Prod & Serve Innovations 7	42.55	155.901	.885	.803	.974
Prod & Serve Innovations 8	42.55	156.075	.870	.775	.974
Prod & Serve Innovations 9	42.49	158.382	.878	.827	.974
Innovation process 1	42.59	161.693	.828	.746	.975
Innovation process 2	42.63	159.105	.856	.786	.974
Innovation process 3	42.54	158.163	.893	.881	.973
Innovation process 4	42.62	157.151	.892	.881	.973

4.5.3 Reliability Test of Mediator and Mediator Variables

4.5.3.1 Climate for Innovation

The Cronbach alpha test for strategic management variable was found to be at 0.874 to show an adequate consistency for the study as highlighted in Table 29.

Table 29: Reliability of climate for innovation data

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.871	.874	5

However, the Cronbach alpha tests for each criterion belonging to the strategic plan execution including meeting scope of the strategic plan, developing stakeholders' trust and satisfaction, completed within the estimated cost, achieved with timeline, alignment of the initiative outcomes to organizations' objectives, and meeting community needs were found to be at 0.823, 0.867, 0.873, 0.838, and 0.812 respectively. These test results showed an adequate consistency for the study as shown in Table 30.

Table 30: Reliability of strategic plan execution data

	Scale Mean	Scale Variance	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha
Innovation are welcome	13.53	18.135	.799	.680	.823
My leadership actively seeks creative ideas	14.06	18.075	.607	.442	.867
Innovation is perceived as risky	14.10	19.120	.571	.340	.873
People are not punished that do not work	13.81	17.211	.718	.598	.838
Leadership is supporting creative ideas	13.78	16.852	.820	.688	.812

4.5.3.2 Individual Creativity

The Cronbach alpha test for the individual creativity variable was found to be at 0.961 to show an adequate consistency for the study as highlighted in Table 31.

Table 31: Reliability of individual creativity data

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.960	.961	13

The Cronbach alpha tests for each criterion belonging to the individual creativity items found range between 0.963, and 0.955 respectively. These test results showed an adequate consistency for the study as shown in Table 32.

Table 32: Total statistics for individual creativity

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Individual creativity 1	43.01	151.152	.822	.717	.956
Individual creativity 2	43.26	146.527	.805	.708	.956
Individual creativity 3	43.08	150.755	.794	.698	.957
Individual creativity 4	43.20	148.582	.863	.777	.955
Individual creativity 5	43.13	146.766	.854	.789	.955
Individual creativity 6	43.35	147.882	.814	.706	.956
Individual creativity 7	43.39	150.442	.732	.622	.958
Individual creativity 8	43.24	146.983	.856	.764	.955
Individual creativity 9	43.49	154.165	.548	.428	.963
Individual creativity 10	43.58	149.564	.719	.571	.959
Individual creativity 11	43.17	149.071	.833	.740	.956
Individual creativity 12	43.19	148.448	.859	.802	.955
Individual creativity 13	43.35	147.967	.803	.711	.956

4.6 Validity Analysis

This section will discuss further about the test validity measure and scale development for variables for this study. A different step has been followed through the scale development process and use of exploratory factor analysis. This type of procedure is to tolerate the reliability and validity of the data.

4.6.1 Leadership Behavior Variables

Based on the literature review, seven constructs have been identified as leadership behaviors. These behavior constructs include Individualized Consideration, Intellectual Stimulation, Inspirational Motivation, and Idealized Influence associated with Transformational Leadership; Contingent Reward; Management by Exception (active) and Management-by-Exception (passive) associated with Transactional Leadership. The constructs were validated, and the different items included have been submitted to the factor analysis. The results of factor analysis are discussed below. Specific requirements must be met before factor analysis can be successfully applied. One of the key requirements is to measure the constructs by using interval scales; the 5-point Likert scale in the survey questionnaire fulfilled this requirement. A number considerations account for the use of a Likert scale. The first is that participants communicate interval properties in their responses, and produce data that can be assumed to be interval-scaled. The second reason is that in the management and leadership literature Likert scales are almost always treated as interval scales. A third reason is that the sample size should be more than 100, since the researcher generally cannot use factor analysis with fewer than fifty observations. This requirement has also been fulfilled because there were 139 respondents in this research. The results of the factor analysis tests are discussed briefly below:

4.6.1.1 Bartlett's Test of Sphericity

The twenty-one items representing the seven predictors (leadership behaviors) have been submitted to the factor analysis. The reason for using Exploratory Factor Analysis (EFA) is that this instrument has not been explored before. The results of EFA yielded a seven-factor solution that accounted for 87.606% of the variance extracted. The result for Bartlett's Test of Sphericity (BTS) was large at 16 728.836, and the associated significance value was negligible ($p=0.00$). This shows that the data were appropriate for factor analysis.

4.6.1.2 Kaiser-Meyer-Olkin Measure of Sampling Adequacy

The Kaiser-Meyer-Olkin (KMO) for measurement of sample adequacy (MSA) gives the computed KMO as 0.949, which is adequate and above the acceptable level (see Table 33).

Table 33: KMO and Bartlett's test (1)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.949
Bartlett's Test of Sphericity	Approx. Chi-Square	7875.268
	df	1326
	Sig.	.000

Source: Analysis of survey data

As the above requirements were met, the researcher concluded that factor analysis was appropriate for this data set so that the procedures for factor analysis could be performed.

4.6.1.3 Results of Principal Component Analysis Extraction Process

Principal Component Analysis (PCA) is commonly used for purposes of data reduction to translate variable space into optimal factor space. Factor analysis is related to principal component analysis, in which factor analysis too involves linear combinations of variables. Factor extraction results using PCA are given in Table 34. It should be noted that an eigenvalue of 1.0 is used as the benchmark in deciding the number of factors (Hair et al., 2016).

Table 34: Principal component analysis extraction results (1)

Total Variance Explained							
#	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
1	29.964	57.624	57.624	29.964	57.624	57.624	24.518
2	3.780	7.270	64.893	3.780	7.270	64.893	22.047
3	1.877	3.610	68.503	1.877	3.610	68.503	1.779
4	1.424	2.739	71.242	1.424	2.739	71.242	22.753
5	1.255	2.414	73.657	1.255	2.414	73.657	9.589
6	.957	1.841	75.498				
7	.849	1.632	77.130				
8	.807	1.552	78.682				
9	.730	1.404	80.085				
10	.668	1.286	81.371				

Note: The details used in the appendix

4.6.1.4 Extraction Method: Principal Component Analysis

An initial (un-rotated) solution identified twenty-one items and seven factors with eigenvalues of more than one, accounting for 87.606% of the variance (see Table 35). As shows, all twenty-one items score communalities that range from 0.689 to 0.943. Therefore, it could be concluded that a degree of confidence in the factor solution has been achieved.

Table 35: Communalities (1)

	Initial	Extraction
Idealized 1	1.000	.719
Inspirational 1	1.000	.647
Intellectual 1	1.000	.751
Individualized 1	1.000	.753
Contingent 1	1.000	.616
Exception 1	1.000	.774
Passive 1	1.000	.545
Idealized 2	1.000	.800
Inspirational 2	1.000	.781
Intellectual 2	1.000	.767
Individualized 2	1.000	.643
Contingent 2	1.000	.700
Exception 2	1.000	.674

Note: The details used in the appendix

4.6.2 Leadership Behaviors, Climate for Innovation and Individual Creativity

Based on the literature review, seven factors have been identified to represent leadership behaviors for Transformational and Transactional Leadership. These behaviors include Individualized Consideration, Intellectual Stimulation, Inspirational Motivation, and Idealized Influence associated with Transformational Leadership; Contingent Reward; Management by Exception (active) and Management-by-Exception (passive) associated with Transactional Leadership.

To validate the constructs, the different items included have been submitted to factor analysis. The results of the factor analysis are discussed after next.

4.6.2.1 Bartlett's Test of Sphericity

The twenty-one items that were submitted to factor analysis represent the management behaviors of Individualized Consideration, Intellectual Stimulation, Inspirational Motivation, and Idealized Influence associated with Transformational Leadership; Contingent Reward; Management by Exception (active) and Management-by-Exception (passive) associated with Transactional Leadership. The results of Exploratory Factor Analysis (EFA) yielded a nine-factor solution that accounted for 94.3% of the variance extracted. The result for Bartlett's Test of Sphericity (BTS) was large at 9221.870, and the associated significance value was negligible ($p=0.00$). This shows that the data were appropriate for factor analysis.

4.6.2.2 Kaiser-Meyer-Olkin Measure of Sampling Adequacy

The Kaiser-Meyer-Olkin (KMO) for measurement of sample adequacy (MSA) gives the computed KMO as 0.943, which is adequate, and above an acceptable level (see Table 36).

Table 36: KMO and Bartlett's test (2)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.943
Bartlett's Test of Sphericity	Approx. Chi-Square	9221.870
	df	231
	Sig.	.000

As the above requirements were met, the researcher concluded that factor analysis was appropriate for this data set so that the procedures for factor analysis could be performed.

4.6.2.3 Results of Principal Component Analysis Extraction Process

Factor extraction results using Principal Component Analysis (PCA) are given in Table 37. It should be noted that an eigenvalue of 1.0 is used as the benchmark in deciding the number of factors (Hair et al., 2014).

Table 37: Principal component analysis extraction results (2)

Total Variance Explained							
#	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
1	29.964	57.624	57.624	29.96	57.62	57.62	24.59
2	3.780	7.270	64.893	3.78	7.27	64.89	22.04
3	1.877	3.610	68.503	1.87	3.61	68.50	1.78
4	1.424	2.739	71.242	1.42	2.74	71.24	22.75
5	1.255	2.414	73.657	1.25	2.41	73.65	9.59
6	.957	1.841	75.498				
7	.849	1.632	77.130				
8	.807	1.552	78.682				

- □ Extraction Method: Principal Component Analysis

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Note: Details used in the appendix

- □ Extraction Method: Principal Component Analysis

An initial (un-rotated) solution identified thirty-eight items and nine factors with eigenvalues of more than one, accounting for 82.511% of the variance. As Table 38 shows, all fifty-two items score communalities that range from 0.545 to 0.847. Therefore, it could be concluded that a degree of confidence in the factor solution has been achieved.

Table 38: Communalities (2)

	Initial	Extraction
Idealized 1	1.000	.719
Inspirational 1	1.000	.647
Intellectual 1	1.000	.751
Individualized 1	1.000	.753
Contingent 1	1.000	.616
Exception 1	1.000	.774
Passive 1	1.000	.545
Idealized 2	1.000	.800
Inspirational 2	1.000	.781
Intellectual 2	1.000	.767
Individualized 2	1.000	.643
Contingent 2	1.000	.700
Exception 2	1.000	.674
Passive 2	1.000	.730

Note: More details in the appendix

4.7 Chapter Summary

This chapter outlines the preliminary analysis of the collected surveys. This entailed first encoding, editing and entering the data into SPSS. This was followed by the reliability and validity tests, which covered all the research constructs to find the extent to which the measurements are reliable and valid. Item-to-total correlation was calculated for each variable. As shown previously, all variables have acceptable reliability values ranging from 0.861 to 0.969, which was significantly higher than the acceptable level of 0.60 (Nunnally, 1978), and therefore acceptable for further analysis.

Chapter 5: Quantitative Analysis: Model and Hypotheses Testing

5.1 Introduction

Chapter 3 and 4 has discussed, cleaned and validated the data which was collected from the fieldwork, and has presented an exploratory analysis of different aspects of leadership behaviors in ICT and Telecom companies. In this chapter, a further discussion is presented about the main stage of the data analysis, namely hypotheses testing.

SPSS/AMOS/Macro Process version 25 was used to analyse the data. The aim of this thesis as discussed in Chapter 1 is to develop a better understanding of the impact of leadership behaviors, climate for innovation and individual creativity on innovation performance. In turn, the effect of leadership behaviors on individual creativity in the ICT and Telecom industry in the UAE is examined. In addition, a model that integrates leadership behaviors, climate for innovation and individual creativity on innovation performance will be tested.

As explained in Chapter 1, this research efforts to discourse the leadership behaviors of Individualized Consideration, Intellectual Stimulation, Inspirational Motivation, and Idealized Influence associated and align with Transformational Leadership. Contingent Reward; Management-by-Exception (active) and Management-by-Exception (passive) associated with Transactional Leadership. Chapter 4 contributed partially to the answer of the research question, while this chapter contributes further to the full answer of the three subsidiary research questions.

5.2 Measurement Models

It is important to note that, as recommended by Anderson et al. (2013), an Exploratory Factor Analysis (EFA) was conducted (see Chapter 4) before testing the full latent model, using principal components analysis with Varimax rotation. For the leadership behavior, the results of EFA yielded a seven-factor solution that accounted for 87.606% of the variance extracted (Chapter 4).

5.2.1 Confirmatory Factor Analysis (CFA)

By conducting a Confirmatory Factor Analysis (CFA) before examining the model, all the constructs together were considered. It is important to highlight, from a methodological point of view, that individualized analyses of each of the dimensions were made (the measurement model), in order to carry out a prior refinement of the items used in their measurement. Having established the different measures, a CFA was conducted. This research used both a structural model before test (which includes all the constructs in one model, also called an inner model), and a measurement model in which each construct has a separate model, also called an outer model (Hair et al., 2016).

5.2.1.1 Confirmatory Factor Analysis for the Leadership Behaviors

In conceptualizing the leadership behavior construct, as discussed in the methodology in Chapter 3, it is a second-order construct that consists of four Transformational leadership behavior components: Individualized Consideration, Intellectual Stimulation, Inspirational Motivation, and Idealized Influence.

Similarly, in conceptualizing the Transactional leadership behaviors construct, as discussed in the methodology in Chapter 3, it is a second-order construct that

consists of three first-order components: Contingent Reward; Management-by-Exception (active) and Management-by-Exception (passive).

The results, shown in Figure 11, support the proposed factors solution, Transformational and Transactional leadership behaviors.

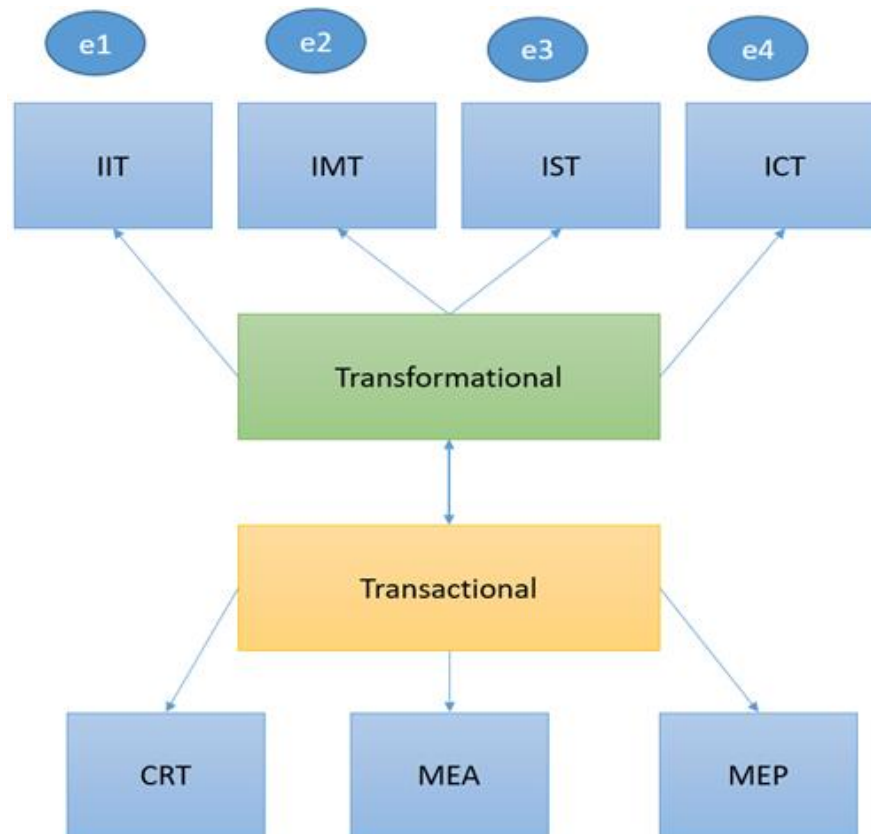


Figure 11: The main and sub-constructs of leadership behaviors

Confirmatory factor analysis (CFA) was conducted to verify the theorized construct of the latent variables, namely the main antecedents (Transactional and Transformational) of leadership behavior and its seven observable sub-constructs, namely: Transformational leadership behavior components: Individualized Consideration, Intellectual Stimulation, Inspirational Motivation, and Idealized Influence. In addition, the Transactional leadership behaviors components: Contingent Reward; Management-by-Exception (active) and Management-by-Exception

(passive) associated with Transactional Leadership. SPSS AMOS version 25 was used to carry out the confirmatory factor analysis. Figure 11 shows the main antecedents (Transactional and Transformational) of leadership behaviors.

It was decided that items with a factor loading and R^2 less than 0.5 will be excluded. All the factor loadings on the main and sub-constructs are higher than 0.5. The results of the measurement model, which are the indicators of the latent variable of Figure 11, are shown in Table 39. All the factor loadings are sufficiently high, and the high values of Cronbach's Alpha, Composite Reliability (CR) and Average Variance Extracted (AVE) also reflect high internal consistency and reliability of the main construct and all the sub-constructs.

Table 39: The fitness indices for leadership behaviors

Statistic	Index value Obtained	Suggested Acceptable Level
Chi-square significance	0.05	> 0.01
CMIN/DF	5.891	<6
AGFI	0.811	> 0.80
NFI	0.899	> 0.85
TLI	0.860	>0.80
CFI	0.914	>0.90
RMSEA	0.188	<0.20

The fitness indices are listed in Table 39. Chi-square significance of 0.05 reflects a Goodness-of-Fit of the suggested measurement model. In addition, the Adjusted Goodness-of-Fit statistic (AGFI) 0.811, and other indices show that the model has a good fit and is aligned with the suggested statistic proposed by experts, such as the

Normal Fit Index (NFI) = 0.899 (>0.85), the Comparative Fit Index (CFI) = 0.914 (≥ 0.90), which were also employed as measures of incremental fit. The Chi-Square divided by Degrees of Freedom (CMIN/DF) = 5.891 (<6), the Root Mean Square Error of Approximation (RMSEA) = 0.166 (<0.20), and Tucker-Lewis Index (TLI) = 0.860 also support the conclusions.

Both Cronbach's Alpha and the Composite Reliability Index can take any value between 0 and 1, with values between 0.7 and 0.9 considered as satisfactory (Hair et al., 2016). Table 40 gives a summary of values for Cronbach's Alpha, the Composite Reliability Index and Average Variance extracted for all the model constructs. The values suggest that all the measurement constructs are both valid and reliable and can be used for path analysis. Table 41 shows the leadership behaviors consequences.

Table 40: Leadership behavior confirmatory factor analysis results

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.967	.968	21

Table 41: Leadership behaviors consequences

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Idealized Influence 1	40.04	162.158	.785	.	.965
Inspirational Motivation 1	40.26	163.353	.755	.	.965
Intellectual Stimulation 1	40.27	161.983	.778	.	.965
Individualized consideration 1	40.21	160.761	.828	.	.965
Contingent reward 1	40.29	163.369	.679	.	.966
Management-by-exception 1	40.09	161.906	.767	.	.965
Management-by-Exception passive leadership 1	40.35	163.853	.699	.	.966
Management-by-Exception passive leadership 2	40.22	159.460	.842	.	.964
Inspirational motivation 2	40.15	160.535	.857	.	.964
Intellectual stimulation 2	40.35	161.041	.846	.	.964
Individualized consideration 2	40.10	162.236	.756	.	.965
Contingent reward 2	40.35	162.621	.711	.	.966
Management-by-exception 2	40.46	166.120	.558	.	.967
Management-by-Exception passive leadership 2	40.31	161.896	.727	.	.966
Idealized Influence 3	40.17	161.173	.816	.	.965
Inspirational Motivation 3	40.31	161.607	.812	.	.965
Intellectual Stimulation 3	40.40	163.212	.779	.	.965
Individualized consideration 3	40.50	163.991	.699	.	.966
Contingent reward 3	40.25	163.552	.771	.	.965
Management-by-exception 3	40.38	163.426	.754	.	.965
Management-by-Exception passive leadership 3	39.99	159.659	.641	.	.967

5.2.1.2 CFA for Climate for Innovation and Individual Creativity Consequences

Similarly, confirmatory factor analysis (CFA) was conducted to verify the theorized construct of the variables of climate for innovation and individual creativity construct. The results, shown in Table 42, support the proposed two order constructs, comprising the climate for innovation and individual creativity consequences constructs.

As was the case with the components of the climate for innovation, it was decided that items with a factor loading and R^2 of less than 0.5 will be excluded. All the factor loadings on the main and sub-constructs are reasonably high. The results of the measurement model which are the indicators of the latent variable are shown in Tables 43 and 44. All the factor loadings are sufficiently high, and the high values of Cronbach's Alpha, Composite Reliability (CR) and Average Variance Extracted (AVE) also reflect high internal consistency and reliability of the main construct and all the sub-constructs (Figure 12).

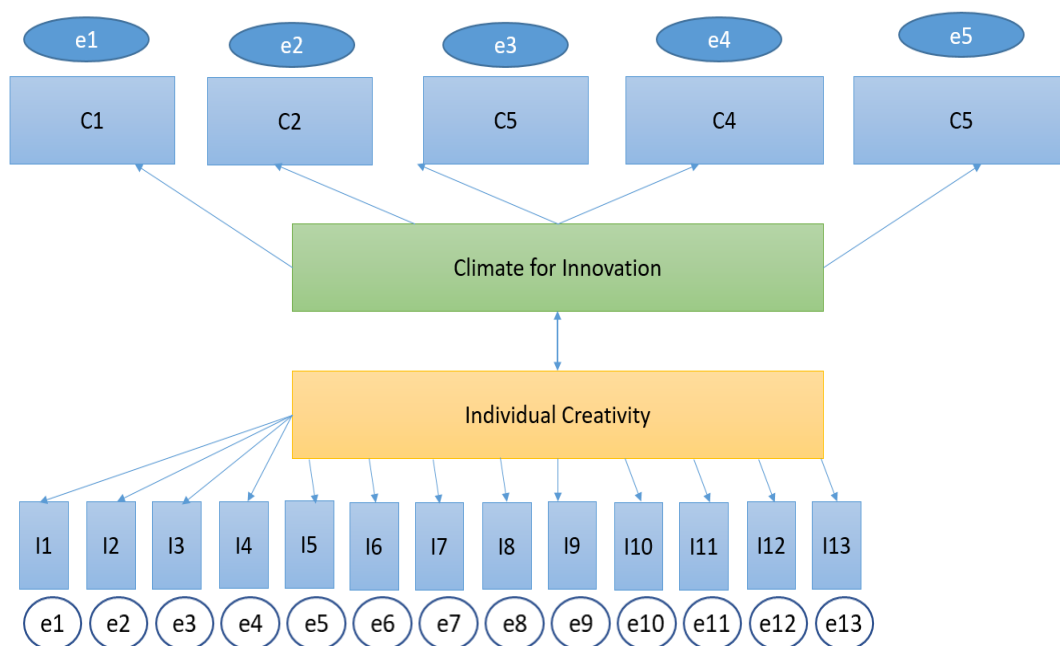


Figure 12: Climate for innovation and individual creativity constructs

Table 42: Fitness indices for climate for innovation and individual creativity consequences

Statistic	Index value Obtained	Suggested Acceptable Level
Chi-square significance	0.05	≥ 0.01
CMIN/DF	2.117	< 3
AGFI	0.805	≥ 0.80
NFI	0.886	> 0.85
TLI	0.927	≥ 0.90
CFI	0.934	≥ 0.90
RMSEA	0.090	< 0.10

The fitness indices are listed in Table 42. Although Chi-square significance = 0.05, the other indices show that the model has a good fit and is aligned with the suggested statistic such as Adjusted Goodness-of-Fit Index (AGFI) = 0.805 (≥ 0.80), the Comparative Fit Index (CFI) = 0.934 (≥ 0.90), the CMIN/DF = 2.117 (< 3), the Normal Fit Index (NFI) = 0.886 (> 0.85), and the Tucker-Lewis Index (TLI) = 0.927 (≥ 0.90).

Analysis of the survey data was conducted to determine whether the leadership behaviors were statistically significant to support innovation performance. The R Square of the seven proposed leadership behaviors revealed that the constructs predicted and explained 75.7% of the variance of with adjusted R² values significant at the 0.05 level, as presented in Table 43.

Table 43: R square of proposed leadership behaviors

	R Square	R Square Adjusted
Climate for innovation Culture	0.592	0.586
Individual creativity	0.849	0.845
Innovation Performance	0.759	0.757

Further analysis was conducted on Path Coefficients to determine whether the leadership behaviors and other variables were statistically significant to support to innovation performance. The result for variables is good as presented in Table 44.

Table 44: Path coefficients

	Climate for innovation Culture	Individual creativity	Innovation Performance
Transformational leadership	0.408	0.063	
Transactional leadership	0.371	0.159	
Climate for innovation Culture		0.743	
Individual creativity			0.871

A test was also conducted to measure the indirect effect between variables to support innovation performance (Tables 45 and 46). The test indicated that the climate for innovation culture is an important variable in supporting innovation performance to the extent of 64.7%. Transformational leadership behaviors have an indirect impact on individual creativity through climate for innovation culture to the extent of 30.3% but transactional leadership behaviors have the higher number to support innovation performance indirectly to the extent of 37.8%.

Table 45: Specific indirect effects (1)

	Individual creativity	Innovation Performance
Transformational leadership	0.303	0.319
Transactional leadership	0.276	0.378
Climate for innovation Culture		0.647

Table 46: Specific indirect effects (2)

Variables	Innovation Performance
Transformational leadership → Climate for innovation Culture → Individual creativity	0.303
Transactional leadership → Climate for innovation Culture → Individual creativity	0.276
Transformational leadership → Climate for innovation Culture → Individual creativity → Innovation Performance	0.264
Transactional leadership → Climate for innovation Culture → Individual creativity → Innovation Performance	0.240
Transformational leadership → Individual creativity → Innovation Performance	0.055
Transactional leadership → Individual creativity → Innovation Performance	0.138

5.2.2 Convergent Validity Analysis

Convergent validity describes the extent to which items of a specific dimension or construct converge or share a high proportion of variance (Hair et al., 2016). Convergent validity can be evaluated by three criteria (Hair et al., 2016). Firstly, factor loading for an item is at least 0.6 and significant. Secondly, construct reliability is a minimum of 0.60 (See Table 47). Finally, average variance extracted (AVE) for a construct is larger than 0.5. Table 48 summarizes the results of the convergent validity analysis. Note that all of the scales had an acceptable convergent validity.

Table 47: Construct reliability and validity

	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Climate for innovation Culture	0.874	0.886	0.91	0.671
Individual Creativity	0.961	0.964	0.966	0.688
Innovation Performance	0.975	0.976	0.978	0.784
Transactional Leadership	0.878	0.877	0.925	0.804
Transformational Leadership	0.954	0.954	0.967	0.878

Table 48: Convergent validity analysis

Constructs	Composite Reliability	AVE
Transformational leadership	0.967	0.878
Transactional leadership	0.925	0.804
Climate for innovation culture	0.910	0.671
Individual creativity	0.966	0.688
Innovation performance	0.978	0.784

5.2.3 Discriminant Validity Analysis

Discriminant validity is the distinctiveness of two conceptually similar constructs (Hair et al., 2016). This indicates that each construct should share more variance with its items than it shares with other constructs. Discriminant validity is present when the variances extracted by the constructs (AVE) from each construct are

greater than the square of the inter-correlations. As seen in Tables 49 and 50, all latent constructs had the squared root of AVE higher than their inter-correlation estimates with other corresponding constructs (the factor scores as single item indicators were used to calculate the between-constructs correlations); this implied that the constructs were empirically distinct. Put differently, the results of the discriminant validity tests indicate that all the correlations among factors are significant and discriminant. For example, climate for innovation culture' squared root of AVE is 0.671, which is less than any squared correlation among the other constructs, i.e. 0.688, 0.784 and 0.804, which means that Transformational leadership behaviors as a construct is statistically distinct.

Table 49: Discriminant validity analysis

Correlations					
	Climate	Individual	Innovation	Transactional	Transformational
Climate for innovation culture	0.819				
Individual Creativity	0.910	0.829			
Innovation performance	0.849	0.871	0.885		
Transactional leadership	0.759	0.781	0.722	0.897	
Transformational leadership	0.760	0.778	0.710	0.949	0.937

Note: Diagonal values are squared roots of AVE; off-diagonal values are the estimates of inter-correlation between the latent constructs.

5.3 Hypotheses Testing

Path analysis has been used to analyse the data. It is a multivariate analytical methodology for empirically examining sets of relationships in the form of linear causal models. The aim of Path analysis is to test the direct and indirect relationships

of each hypothesised link on the basis of knowledge and theoretical concepts which have a path coefficient denoted as the standardized regression coefficient.

Path analysis does not establish causal relations with certainty, but is used for quantitative interpretations of potential causal relationships. A path diagram represents the proposed antecedents and consequents among the variables in the model. Arrows are used to symbolize the hypothesized relationships and the direction of the influence in the model. When specifying a path model, a distinction is drawn between exogenous variables and endogenous variables. The influence of exogenous variables is outside the model, and endogenous variables have influence within the model.

Figure 13 depicts the proposed structural model that reflects the relationships between the constructs. The result of value of the path coefficient associated with each path represents the strength of each linear influence. The structural equation-modelling (SEM) package, AMOS 25, has been used to test the hypotheses developed in the model.

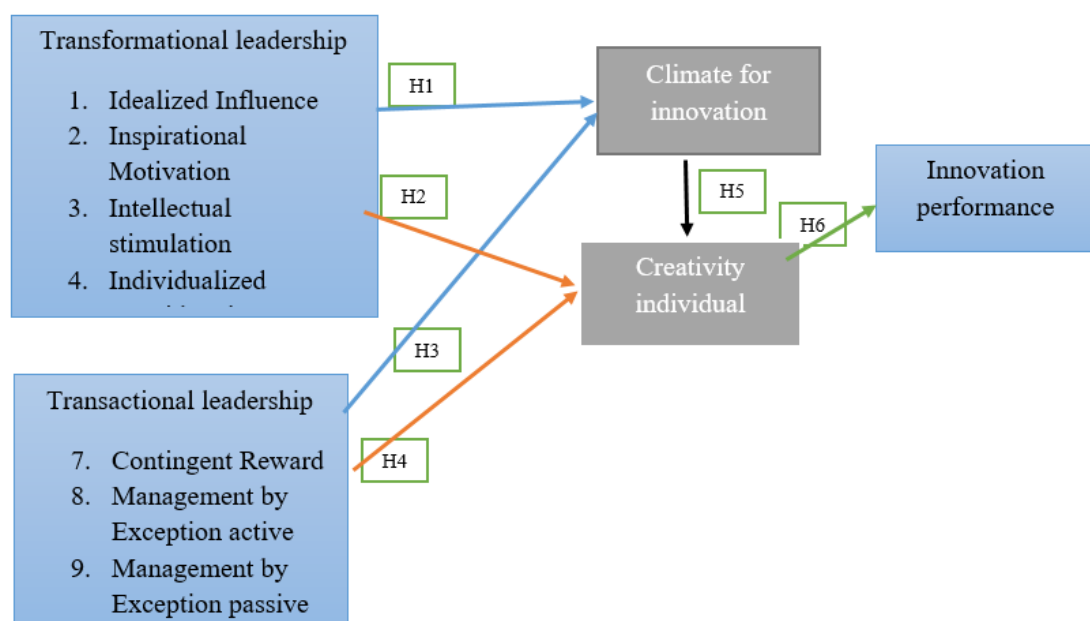


Figure 13: Conceptual model for research

5.3.1 Structural-Model Testing

Finally, given that the purpose of the study was to test the hypothesized causal relationships among the constructs of the model, the structural equation-modelling package, AMOS 25, has been used (see Figure 14). The factor means were employed as single item indicators to perform path analysis, applying the Maximum Likelihood Estimates (MLE) procedure. A more detailed analysis of the results and measures for model fit is reported in Table 51.

To apply the MLE procedure for estimating the model, the constructs must satisfy the criterion of multivariate normality. Therefore, for all the constructs, tests of normality, i.e. skewness (degree of symmetry), kurtosis (degree of peakedness/flatness) were conducted. Table 51 indicated no departure from normality as most of the results are close to one, i.e. +/- 1. Thus, once normality was confirmed for all the constructs, it was decided to proceed with the use of the Maximum Likelihood Estimation (MLE) method to estimate the model parameters. The reliability of the constructs was assessed by item-to-total correlations and Cronbach's Alpha reliability coefficient (see Chapter 4).

Furthermore, as discussed in Chapter 4, to assess the presence of multivariate outliers, the analysis of Mahalanobis distance (D^2) was carried out using AMOS to identify any multivariate outliers within the data. Mahalanobis' distance (D^2) is a metric for estimating how far each case is from the centre of all the variables' distributions, i.e. the centroid in multivariate space. The Mahalanobis Distance was compared with Chi-Square distribution with degrees of freedom equal to the number of independent variables at a significance level of $p < 0.001$. The Mahalanobis distance

test has identified seventeen cases having an outlier (Table 50). All seventeen cases were removed to avoid any bias in the subsequent statistical analysis.

Table 50: Assessment of normality

Descriptive Statistics								
	N	Mean		Std.	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Idealized 1	139	2.23	.067	.792	-.436	.206	-1.27	.408
Inspirational 1	139	2.01	.065	.761	-.024	.206	-1.26	.408
Intellectual 1	139	2.00	.068	.808	.000	.206	-1.46	.408
Individualized 1	139	2.06	.069	.818	-.121	.206	-1.49	.408
Contingent 1	139	1.98	.071	.838	.041	.206	-1.57	.408
Exception 1	139	2.19	.070	.822	-.360	.206	-1.42	.408
Passive 1	139	1.92	.067	.790	.142	.206	-1.38	.408
Idealized 2	139	2.06	.073	.866	-.112	.206	-1.66	.408
Inspirational 2	139	2.12	.068	.803	-.226	.206	-1.41	.408
Intellectual 2	139	1.92	.067	.790	.142	.206	-1.38	.408
Valid N (Listwise)	139							

Note: More details in the appendix

Since there is no definitive standard of fit, a variety of indices is provided along with suggested guidelines. The Chi-Square Significance (X^2) test was not statistically significant at a 1% level (probability level= 0.014), which indicated an adequate fit. The other fit indices, together with the squared multiple correlations, indicate a good overall fit with the data (CFI = 0.888, AGFI = 0.899, TLI = 0.875, RMSEA = 0.100, RMR = 0.055). Since these indices (Table 52) confirm that the overall fit of the model to the data was good, it was concluded that the structural model was an appropriate basis for hypothesis testing.

Table 51: Research indices

Statistic	Suggested	Obtained
Chi-Square Significance	≥ 0.01	0.01
Goodness-of-fit index (GFI)	≥ 0.70	0.728
Adjusted Goodness-of-fit index (AGFI)	≥ 0.80	0.899
Comparative fit index (CFI)	≥ 0.85	0.888
The Tucker-Lewis coefficient (TLI)	≥ 0.85	0.875
Root Mean Square Residual (RMR)	≤ 0.05	0.088
Root mean square residual (RMSEA)	≤ 0.10	0.100

5.3.2 Mediation Hypotheses

The causal effects of job demand and job resources on an individual job performance may be direct or indirect or both. In this case, the total causal effects were calculated. More specifically, the indirect effects are the multiplicative sum of the standardized path coefficients. The total effects are the sum of the direct effect and all the indirect effects. Table 52 shows the direct, indirect and total effects of the suggested factors.

Table 52: Direct, indirect, and total effects

Criterion Variable	Predictor variables	Direct Effect	Indirect Effect	Total Effect
Transactional leadership	Climate for innovation culture	0.371	0.00	0.371
	Individual creativity	0.159	0.276	
Transformational leadership	Climate for innovation culture	0.408	0.00	0.408
	Individual creativity	0.063	0.303	

Following the recommendations of Hair et al. (2016), the mediating role of climate were examined for innovation and individual creativity in the relationship between the proposed antecedents (Transactional leadership behaviors and Transformational leadership behaviors) and innovation Performance. As shown in Table 52, the findings are (Direct Effect = 0.243, Total Effect = 0.041, $P < 0.01$), Job resources (Direct Effect = 0.300, Total Effect = 0.765, $P < 0.01$) and Individual Work Performance. Therefore, Hypotheses 6 and 7 were supported. After the results of confirmatory factor analysis, the hypotheses of each stage have been tested. The results summary of hypotheses testing is presented in Table 53.

Table 53: Results of hypothesis testing

Hypotheses	Results
H1. Transformational leadership is positively related to climate for innovation culture.	Accepted
H2. Transformational leadership is positively related to individual creativity	Rejected
H3. Transactional leadership is positively related to climate for innovation culture.	Accepted
H4. Transactional leadership is positively related to individual creativity.	Accepted
H5. Climate for innovation is positively related to individual creativity.	Accepted
H6. Individual is positively related to innovation performance	Accepted
H7. Climate for innovation culture will mediate the relationship between Transactional leadership behaviors and individual creativity.	Accepted
H8. Climate for innovation culture will mediate the relationship between Transformational leadership behaviors and individual creativity.	Accepted
H9. Individual creativity will mediate the relationship climate for innovation culture between Transformational leadership behaviors and performance innovation.	Rejected
H10. Individual creativity will mediate the relationship climate for innovation culture between Transactional leadership behaviors and performance innovation.	Accepted

- □ Analysis further finding with previously finding in the existing literature.

Therefore, in this regard, the researcher will discuss further on the findings of this study and explain where these findings stand with respect to the existing literature as per the following which are supported and align with this study:

- A. □ A supportive climate and culture for creativity and innovation is vital to advance and enhance these facets of employees' behaviors. Wan et al. (2005) discussed that "what is ultimately of crucial importance to organisations is the nurture and development of an innovation-supportive culture".
- B. □ According to Cheung and Wong (2011). Leader relations' support was found to have a direct impact on employee creativity. This finding demonstrates that a leader's continuous concern and care for his or her employees' socio-emotional needs are significant elements for generating more creative ideas.
- C. □ According to Cheung and Wong (2011) surprisingly, leader task support was not found to exert a direct impact on creativity. One reason may be that the provision of task support alone is not sufficient to stimulate creative work. This is because employees may not be fully aware of when and how to use such support to enhance their creative performance. The other reason is that service employees relied relatively more on empathy rather than equipment or information in building close interactions with customers.
- D. □ According to Cheung and Wong (2011) compared with leader task support, leader relations' support is more salient because it has a direct impact on employee creativity. This finding enriches the past creativity literature that does not differentiate between task and relations support as predictors of creativity

E. □Stojcic et al. (2018) Support to the long line of investigation suggesting that there is a positive relationship between the decision of firms to innovate, their innovation expenditure, innovation output and productivity. These findings suggest that the effectiveness of the innovation process, i.e. the ability of firms to meet requirements of their customers has positive effect on productive efficiency.

One the other hand, study and explain where these findings stand with respect to the existing literature as per the following which are not supported or align with this study:

A. □Transformational leadership is positively related to employee creativity. This finding is consistent with the results of Shin and Zhou (2003), which suggest that in an Asian context, followers are prone to remain loyal and to rely strongly on a transformational leader to encourage and guide the followers to a new work frontier.

Chapter 6: Conclusion and Recommendations

6.1 Leadership Behaviors

The primary research questions focus on exploring the nature and pattern of leadership behaviors which support individual creativity for innovation performance within Telecommunication and ICT organizations in the UAE, as well as developing evaluative criteria for measuring leadership behaviors performance. The conceptual leadership behaviors model revealed a significant contribution of such behaviors for individual creativity by creating a climate culture for innovation. Each behavior is varied in level of importance depending upon the establishment history of the leadership behaviors, along with the level of the organization maturity and culture within the public organizations.

The researcher strongly recommends that the performance of these leadership behaviors could improve the Telecommunication and ICT organization's influence on individual creativity by creating a climate culture for innovation to effectively manage own performance innovation. With reference to the proposed hypotheses that were highlighted in Chapter 1, and in association with the generated results and findings that were discussed in Chapter 5, this study has confirmed a strong interrelationship between meeting and achieving leadership behaviors support for individual creativity by creating a climate culture for innovation that could be added to the leadership behaviors in the organizations' units. The SEM analysis highlighted an established strong relationship between leadership behaviors and the proposed individual creativity.

SEM analysis further revealed that these constructs have predicted and explained 72.9% of the variance of individual creativity construct with adjusted R² values,

significant of the benefits of leadership behaviors. These findings were found to be consistent with the findings recorded in previous research works (Hobbs & Aubry, 2010). Much leadership behaviors research argues that the effectiveness of consistent innovation performance would have not been obtained without creating a suitable set of and standard methodologies to enhance individual creativity. Hence, creating a climate for innovation by leadership behaviors approach or methodology is a critical factor in the early phases of innovation performance and individual creative development. Accordingly, leadership behaviors have become the platform for establishing a robust approach fitting the actual needs of the individual creativity organizations.

These findings generally suggest that if an organization wants to increase individual creativity, this could be achieved successfully by creating a climate culture for innovation through the leadership behaviors. Such a climate could be instrumental in enhancing the overall innovation performance. This result is considered as the most obvious and significant finding outcome from this study. Another important result was found to be an established strong direct relationship between achieving the objectives of the Telecommunication and ICT organization and the potential values that could be added by the leadership behaviors. Such a relationship leans too lightly on the importance of achieving such objectives purposely to enable upper management to realize the importance of existing leadership behaviors within their unit or function, as a value-added to the asset. A direct relationship between individual creativity i.e., providing advisory services to the upper leadership and participating in innovation performance, ensuring effective benefits to the organization and ensuring effective environmental scanning with the execution for innovation was found to be a crucial factor in the execution of successful innovation performance. This would assist in

achieving the organization's vision and mission. The results pointed to a positive relation between establishing leadership behaviors impact with organizational needs and objectives. This finding is a value-added to the organization and function of the leadership behaviors impact.

The structure of the leadership behaviors should be transformational to support the current organization structure and nature of the organization. This is because there is no one acceptable current outcome from the organization, but the organization is looking to increase innovation performance through leadership behaviors. Investigation of leadership behaviors impact within the course of this study has found that the proficient leadership behaviors roles of monitoring and controlling innovation performance will support individual creativity. Moreover, well-developed leadership behaviors within the organization could capture and add value to individual knowledge-related learning as a result.

6.1.1 Importance of the Leadership Behaviors Impact

As anticipated, the values of creating a climate culture for innovation has to be initiated through leadership behaviors which have come from driving individual creativity forward to support innovation performance for the organization. Since leadership behaviors act as a link between upper management and the employees' activities, the independence of leadership behaviors provides objectivity and prepares it to confront unfavorable conditions (Rajegopal et al., 2007).

Development and change of the leadership behaviors role of innovation performance provides the grounding for the effective performance of all other activities related to the organization. Establishing a standard methodology and approach is one of the core tasks performed by the leadership behaviors. Accordingly,

the developed standard methodology, if consistently applied, would be creating a reliable basis for a business environment of consistent innovation performance success. Leadership behaviors could provide relevant training programs for developing some sort of behaviors competency within the leadership-based organization. Hurt and Thomas (2009) reported that organisations may be “...more focused on immediate needs rather than organizational competency development”.

Leadership behaviors within the unit provide an interface or corridor between the upper management and the running operation. This situation does not extend to providing a link between the two activities. Generally, leadership behaviors are able to facilitate management decision-making processes through the reporting function it performs. Creating a climate culture for innovation as a mediating role goes further in providing individual creativity value to review processes, particularly in the starting phase. At the bottom, though, leadership behaviors must ensure that the leadership behaviors change and improve the Telecommunication and ICT organization. This is aligned with the innovation performance to support the organization.

6.1.2 Evolution of the Leadership Behaviors Impact and Contribution

Leadership in general is considered as a formal layer of control between management and employees within the basic organization (Pemsel & Wiewiora, 2013). The evolutionary pattern of the contribution of each leadership is largely based upon how each leadership behavior evolves over time. Generally, all types of leadership behaviors are evolving their respective importance and effectiveness over time. However, a directional relation was found between growing effectiveness with steady increases in the importance of the leadership behaviors delivered to the hosted organization; this, in turn, could increase its influence on individual creativity. This

research study has shown that leadership behaviors are relatively new influences on innovation performance (Hobbs et al., 2008). This conclusion adds to the knowledge of leadership behaviors by examining the impact of the leadership behaviors, their success, and their sustainability. Building efficient leadership behaviors within the unit is not necessarily a guarantee for gaining the sustainability of individual creativity by creating a climate innovation culture. Certain ingredients are needed to be put in place, and certain related activities are regularly being carried out for facilitating the value sustainability, as well as the sustainability of climate culture for innovation. Thus, the need for identifying new strategies and procedures to know which leadership behaviors are necessary to support innovation performance by creating climate culture for employees to support the successful execution of individual creativity.

6.1.3 Contribution to Existing Leadership Behaviors Knowledge

This chapter presents an overall concluding review of the topical theme which underpins this research study. Leadership behaviors as a research domain of interest could provide effective approaches to deal with a wide spectrum of individual creativity issues. Consequently, leadership-based organizations get the most benefits from the techniques developed from the research outcomes of the leadership and management studies. On the other hand, the evaluation of these findings shows evidence of existing linkages between both individual creativity and climate culture for innovation within organizations. Some leadership behaviors are not shown in existing leadership models, but only specific behaviors for leadership which could be based on their roles and functions. This study revealed that the impact of some leadership behaviors (as organizational enablers) are still poorly understood in leadership and management studies in general, and the UAE in particular for

Telecommunication and ICT organizations. To fill this gap in the leadership behaviors literature, this study developed a conceptual model aimed at blending the findings of previous studies with the potential most important factors that influence organizational objectives for innovation performance. The results obtained from the statistical analysis have yielded a model that depicts pathways linking innovation performance to leadership behaviors impact on employees, behaviors which would be anticipated to promote the achievement of the organization's innovation performance. These findings were validated by SEM analysis and one-way sample T-test of the pathways and relationships among the variables.

These findings could contribute to the existing literature in several ways:

1. □ Provide some insights into the coordinating pattern established between the leadership behaviors and climate culture for innovation involved in creating and executing the proposed culture within the framework of the organization within UAE Telecommunication and ICT businesses.
2. □ Support for previous research that shows the linkage between climate culture for innovation factors and exploring the potential roles and functions of leadership behaviors on an individual creativity impact.
3. □ Few studies have used the same approach of SEM analysis and one-way sample T-test as their methodological approach with a sample obtained from the UAE public sector and Telecommunication and ICT. There are also few similar global studies. The current study addresses this knowledge gap.
4. □ Critical study of the leadership behaviors impact that has not been considered within the organizational context.

This study attempts to find out more about the impact of leadership behaviors within the organisation in the support and execution of innovation performance of Telecommunication and ICT organizations in the UAE. It attempts to tackle the potential challenges that might arise to interrupt the core functions of the target organizations, and how the leadership behaviors may be effective in the long run. The study investigates whether a leadership behavior contributes significantly to developing an effective and supportive innovation performance to enhance the plan and execution of innovation performance in terms of the project success.

The purpose of this exploratory and causal-effect study is examining relationships between the seven factors of the leadership behaviors framework (X1-7) designated as independent variables, and the support of the organizational innovation performance (Y1) designated as a dependent variable (Hobbs & Aubry, 2007). The framework is based on the findings of the quantitative analysis of the collected data. These findings could highlight the factors that could keep the developed leadership behaviors model sustainable in practice. It concurs with previous studies that argue that the lack of effective leadership behavior within the organization may contribute to increasing the rate of individual creativity failure. By concentrating attention on various aspects of the leadership behaviors impact, and noting that it contains many aspects, this study offers a significant contribution through different dimensions. Among these are:

1. It is intended to contribute to the literature on leadership and management approach for identifying the actual problems facing the individual creativity support and execution of the organization's innovation performance and

selecting the appropriate behaviors in supporting the success of the planned execution of innovation performance.

2. □ This research may provide information to managers and leaders about what their peers are doing to facilitate innovation performance learning and the associated challenges they might face. This information may be helpful in efforts to improve management practices, particularly within the UAE Telecommunication and ICT sector organizations.

The results of this exploratory study indicate that leadership behaviors roles and functions could exert significant impacts on individual creativity. Leadership behaviors impact on (i) innovation performance, (ii) individual creativity, (iii) climate culture for innovation. The study results may be used to improve the leadership behaviors model that can be implemented within the selected Telecommunication and ICT organizations as part of continuing efforts to improve successful leadership behaviors. In other sectors in the UAE, these findings might be used to improve the leadership behaviors model that could be implemented by other leadership behaviors-based organizations with the same business environments in their efforts to reduce the failure rates of innovation performance regardless of the business domains. Leadership behaviors practitioners continually seek to apply acceptable standards and guidelines to establish and maintain effective leadership behaviors, while the academic community continually seeks theoretical bases that can be used to expand the body of knowledge related to leadership behaviors.

The findings from this study may help to reduce these gaps by offering practical perspectives that can be implemented in professional practice by executive managers in various management fields who want to use the leadership behaviors model to help

maximize success in managing their innovation performance and portfolios. Since the academic community is interested in both leadership, behaviors, and innovation performance, it will be able to use the study findings as a practical point of reference for further studies. By helping to reduce these gaps especially with the emphasis on the practical perspective this study may be of value to help improve the business practice within the project management discipline. This study targets those managerial and operational functions, and its findings suggest that research should continue to investigate other functions or roles not included in the listed functions identified in this study. These functions are excluded from the groups previously listed, not because they are not important, but because their presence is not related statistically or conceptually to this study (Hobbs & Aubry, 2007).

The study also provides empirical evidence for discussing the correlation and potential association between the leadership behaviors roles (as independent variables) and the execution of the innovation performance (as the dependent variable). These studies could provide further insights about leadership behaviors, management and climate culture for innovation, individual creativity, and innovation performance.

6.2 Implications for UAE Organizations in Telecommunication and ICT Sectors

Aside from theoretical contributions, this subject also provides practical contributions to UAE project businesses by way of incorporating the developed model, derived from rigorous verifiable assessment and establishment of inter-relationships. This could serve as a framework for the organizations to adopt appropriate applications of leadership behaviors in the workplace. The model offers a number of factors that could help organizations to improve their strategies to achieve their vision and mission and, ultimately, a stronger business performance.

This study reflects the key leadership behaviors in the implementation of innovation performance within Telecom and ICT establishments in the UAE. It attempts to tackle the potential challenges that might cause to interrupt the core functions of the target organizations. This focuses on how leadership behaviors may be effective in the long run, and the relationship of these behaviors to the values that can be added by the leadership behaviors. It is apparent from the findings of this study that there are some important implications for public sector organizations in the UAE to gain the utmost value from their leadership behaviors. Moreover, relationships between the leadership behaviors support for implementation within the Telecom and ICT sector organization could be measured and observed. It is important to note that this survey is the first to test these relationships through empirical data in the area of leadership behaviors management, since it was not handled in previous surveys.

6.3 Recommendations

The primary recommendations that emerge from the determinations of this exploratory and causal effect study are grounded in the significant impact and support for innovation performance of some leadership behaviors. Accordingly, organizations in the UAE private Telecommunication and ICT sectors are advised to improve their own innovation performance through applying the leadership behaviors support that may be appropriate to the nature and contents of their proposed performance. The proposed recommendations are anticipated to enhance the various activities in terms of effective implementation and successful execution. The investigation on the impact of the leadership behaviors determined the extent to which each behavior could contribute to individual creativity within the proposed model. The study also developed evaluative criteria for measuring the performance of leadership behaviors

in each department within hosting organizations. Kutsch et al. (2015) note, “The durability of leadership behavior within an entity is dependent on establishing and focusing on the purpose of it as an internal service organization; particularly, articulating knowledge in based organizations and industries”.

In accordance with the above-mentioned results, the based organizations in the UAE Private Telecommunication and ICT sector are recommended to:

1. □ Provide further training for leadership to know about the impact of their behaviors and how they can manage and control their own performance to meet the entire organizational objectives, not only the objectives of their department, to ensure an improvement in innovation performance and added value to the hosting organization.
2. □ Utilize training and development functions to improve leadership behaviors, since many research studies have highlighted the importance of leadership behaviors in providing support and creating a climate culture for innovation for achieving and supporting individual creativity.
3. □ Build efficient knowledge management systems (KMS) to be associated with the leadership behaviors in each department to streamline the required data between various running performances. In other words, to articulate knowledge management approaches into the various phases and processes regarding the execution and implementation of the proposed innovation performance.
4. □ Leadership behaviors could play a vital role in furnishing the relevant and usable information and data to sustain the planning and execution of innovation performance.

5. □ Prioritize the innovation performance in each department and keep it within their objectives according to definite criteria or by creating specific procedures for monitoring the different organization sectors to achieve these objectives.
6. □ Focus on the process that is used to evaluate the achieved business objectives against the organizational objectives/targets and take appropriate corrective action if there is a noticeable discrepancy between them.
7. □ Select leadership according to specific skills and qualifications that should be aligned with innovation performance and objectives to ensure added value to the organization by sharing their experience to others, as the leadership behaviors play a role in identifying the required competencies that can be added to the innovation performance.
8. □ Introduce training to inform leadership about their behaviors' impact on their staff through the required management and technical skills, which behaviors are required to add the appropriate level of value and enhance the performance of their organizations. This study proved that the leadership behaviors could assess and provide the required training courses in the leadership field for each individual to ensure their contribution to the organizations.
9. □ Employ an explicit career ladder promotion and obvious performance assessment procedure to measure and assess leadership behaviors for leadership and staff' performances and compare it with pre-determined goals and performance.
10. ▢ Assess leadership and staff's needs and requirements in order to achieve their innovation performance. According to these requirements, the needed support from leadership behaviors should be recorded.

11. Define roles and responsibilities between stakeholders, and the anticipated innovation performance that should be achieved by leadership behaviors following the studied relationship between clarity of leadership behaviors and the organizational innovation performance.
12. Connect the existing leadership behaviors across the UAE-based organizations within a one-stop network. This would be cost-effective for the exchange of information and lessons learned, as well as to avoid duplication of tasks, and increase overall visibility and awareness of the leadership behaviors in the based organizations.

6.4 Limitations

The findings from this research study were limited by the following factors:

- 1) The online survey is conducted only within the public-based organizations in some Emirates of the UAE. Although these are national entities, the results do not necessarily reflect leadership behaviors in other Emirates of the UAE.
- 2) Findings are restricted to the public sector organizations within the UAE business context and may not be extrapolated internationally.
- 3) The results were obtained by means of an online questionnaire-based survey. Responses may have been affected by the respondents' attitudes and biases towards the survey questions.

6.5 Future Studies

- a) Further investigation within one organization to know more about each function. Additional research is needed on which of these functions are suitable to the leadership behaviors business environment in the UAE.

- b) □ Investigating effective leadership behaviors that are compatible with the innovation performance purpose and justification.
- c) □ Investigation on customization of the behaviors model developed in this study by incorporating more sources of innovative, such as controlling of financial issues, investment in irrelevant sectors (e.g., ICT sectors and Telecommunication).
- d) □ Investigation of the potential obstacles hindering the promotion of leadership behaviors within a broader context of based firms in the UAE private sector.

6.6 Reflections

The knowledge gained from the study in the DBA program has contributed much to this researcher's professional status and career prospects. This has been progressively built by blending one's own professional and work experience with the theoretical and research knowledge gained from the doctoral program. Some examples of these skills are in the fields of analytical methodology and exposure to different leadership behaviors. The findings of this study pave the way for the researcher to pursue development of his own capabilities through further research studies in the domain of leadership, management and organizational innovation performance.

Chapter 7: Applicability and Significance

7.1 Theoretical Implications

Transformational and transactional leadership have long been acknowledged as significant contributors to organizational innovation and culture, and have been discussed by other researchers such as (Sarros et al., 2008). The review of the literature discussed leadership behavior and climate of organizational innovation. This was investigated in a previous study as the role of transformational leadership in creating a climate for organizational innovation. Other studies have focused on the culture climate of organization innovation and the role of leadership, also with positive results. Howell and Avolio (1993) conducted an investigation into transactional leadership and climate of organizational innovation. All of these researchers gathered data by quantitative methods.

This led to enquire as to why there is no study which included the impact of both transformational and transactional leadership behavior on the climate of organizational innovation. Many questions were not addressed in previous studies. So, this will be the first study that investigated leadership behavior while including transactional leadership and cross-functional collaboration with the climate of organizational innovation. This study was also unique because it examined existing organizational culture and innovation in the UAE context, particularly in semi-government organizations and the UAE's Telecommunication and ICT industry.

Expressing a vision requires having a clear understanding of where the company or group is going, painting an interesting picture of the future of the group, and inspiring others with the leadership plan and motivation for the future. These leadership behaviors are far-reaching and ambitious, and they demand an enormous

amount of time and energy from leaders and employees. The conclusions and answers to the research questions will support an understanding that the activities of employees sharing ideas, creativity and inter-functional collaboration are associated with strong, supportive transformational and transactional leadership (Unsworth et al., 2005). A number of other researchers have confirmed that supportive leadership and organizational cultures have been associated with employee creativity (Burkhardt & Brass, 1990; Eisenberger et al., 1990). The results from this research were expected to be similar to Damanpour and Schneider's (2006) work, in which they studied 1,276 public companies in the United States and found that "top managers' approaches... definitely touch all aspects of innovation adoption".

7.2 Managerial Implications

Our research study demonstrates the direct relationship between employees who share their creative ideas for innovation, and transformational and transactional leadership behaviors, which is important for the sustainability of organizations. There is a relationship which develops between leaders and employees when they encourage in an environment of collaboration, support and motivation to innovate. Furthermore, a collaboration between teams in different parts of the organization to implement ideas through innovation is of great interest to management and organizations wanting to find ways to increase opportunities and profit. Leadership style plays an important role as leaders become facilitators of knowledge-sharing collaboration within and between teams and provide encouragement to them. Consequently, organizations may decide to emphasize developing a coherent alliance with behaviors demonstrated by the team.

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Appendix

1. Some information about UAE Survey

A major transformation of the ICT and Telecommunication industry in the country occurred in 1976 with the replacement of the three operating companies at the time with a single centralized multi-million dollar entity known as the Emirates Telecommunications Company. Etisalat for short, this semi-government entity in which the government owned a 60% stake and the remaining 40% was owned by local individual investors, was in charge of the development of the telecommunication infrastructure and industry in UAE and was at the time the sole Telecommunications service provider and industry regulator, with a government involvement on its board of directors. In keeping with the direction of globalization and open free markets, the government made the decision to lessen its strict regulatory grip on the telecommunications industry and end the monopolization of the market by Etisalat. This it did in 2005 with the creation of Du, the second Telecommunications service provider in UAE. This move allowed for competition in the ICT and Telecommunications sector, providing a nurturing environment for lower prices and quality-based services for customers and telecommunication service subscribers.

Despite these substantial changes, the service quality and customer satisfaction performance by both service providers in the industry has not kept up with the expectations and global standards set by their counterparts in emerging markets and developed nations. This was apparent in a survey conducted by Du in 2008 which reflected a poor customer perception of the quality of the services provided and the value delivered by telecommunications service providers in the country, despite the massive resources which both rivals have at their disposal. To keep up with increasing

global competitiveness and retain a relevant competitive position within the local, regional and global markets; local ICT and Telecommunications organizations must overhaul their organizational cultures to create an environment in which employees are encouraged and stimulated so that innovation and creativity thrive and drive along employee performance.

It is rather intuitive that organizations that subsequently adopt changes will not be recognized as innovators but rather as followers, and most of the innovation's advantages will go to the innovation leader. A scholarly effort by Tinnesand (1973) that included the review of 188 publications of relevant literary material has yielded the following observations in regard to the definition of innovation:

- 36% of publications identified innovation as the introduction of a new idea.
- 16% described innovation as a “new idea”.
- 14% of the publications defined innovation as the introduction of a new invention.
- another 14% of relevant publications described innovation as an introduction of an idea that differs from existing ideas.
- The description “disruptive idea” was observed at 0%.
- Describing innovation as “prevailing behavior” was observed at 11%.
- Describing innovation as an “invention” was observed 9% in relevant literary publications.

2. Survey

Investigating Leadership Behavior Spawning innovation performance in UAE's Telecom and ICT Industry

Dear Participant,

I am writing to you to request your participation in a brief survey. Any organization has to value their employees to gain their support for organization performance. This study will shape our understanding of leadership support their employees. Therefore, I would like to get more feedback about your experiences about this study. Your responses to this survey will help us to understand more about this topic.

“Investigating Leadership Behavior Producing innovation performance in UAE's Telecom and ICT Industry”.

This study is conducted as a part of DBA dissertation.

The survey is very brief and will only take about 15-10 minutes to complete. Please click the link below to go to the survey Web site (or copy and paste the link into your Internet browser) and then enter the personal code to begin the survey.

This survey is targeting Management.

Please use this link:

<https://goo.gl/forms/fdIMiCC6XkZ2DJyu1>

This survey is targeting staff.

please use this link:

<https://goo.gl/forms/DLj97SjL459UxZq02>

By extending and sharing this survey to your friends will be highly appreciated to gain more valuable feedback.

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personally identifiable information will be associated with your responses to any reports of these data.

Thank you in advance for your valuable contribution to this important study.

Q1 PART - I Demographic and general information

Q1. Your academic qualification is:

- Higher Diploma (1)
- Bachelor (2)
- Master (3)
- Doctorate (4)
- Other (5)

Q2. Gender

- Male (1)
- Female (2)

Q3. Your Age is:

- < 30 Years (1)
- 30-40 Years (2)
- 40-50 Years (3)
- > 51 (4)

Q4. Nationality

- Emirati (UAE) (1)
- Arab Non-UAE (2)
- Asia (3)
- Other (4)

Q 5. One of the following is best describing your current Company:

- Telecommunication (1)
 - a) Etisalat (1.1)
 - b) Du (1.2)
- ICT company (2)

Q6. One of the following is best describing your current Department:

- Administration/ Management Unit (1)
- Financial Unit (2)
- Sales Unit (3)
- Marketing Unit (4)
- Engineering Unit (5)
- CIT Unit (6)
- Other (Please specify) (7) _____

Q7. Your work with this organization is:

- Less than 5 years (1)
- 5-9 years (2)
- 10- 14Years (3)
- 15 years and more (4)

Q8. The total number of years of working experience is (include other experience organization) :

- Less than 5 years (1)
- 5-9 Years (2)
- 10- 14 Years (3)
- 15 years and more (4)

Q9. Your work experience in management is:

- Less than 5-years (1)
- 5-9years (2)
- 10 - 14Years (3)
- 15 years and more (4)
- Null (5)

Q10. Type of employment your contract is:

- Permanent staff (1)
- Temporary staff (2)
- Contract staff (3)
- Special contract (4)
- Other (5)

Q2 PART - II Leadership Evaluation

Department Section Staff only (not Management)

KEY: 1 = Once in a while 2 = Sometimes 3 = Fairly often 4 = Frequently, if not always

The following section question is for the department section staff to evaluate his/her leadership:

	4 = Frequently, if not always (1)	3 = Fairly often (2)	2 = Sometimes (3)	1 = Once in a while (4)
12. I feel good to be around my leadership. (1)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
13. I express with few simple words to my leadership what we could and should do (2)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
14. My leadership enable me to think about old problems in new ways (3)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
15. My leadership is willing to support staff to developing themselves (4)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
16. My leadership tell me what to do if they want to be rewarded for their work (5)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
17. My leadership is satisfied when staff meet agreed standards (6)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
18. My leadership content to let staff continue working in the same way as always without my supervision (7)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
19. I have complete faith in my leadership (8)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
20. My leadership provide pleasing images about what I do (9)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
21. My leadership provide me with new ways of looking at puzzling things (10)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>

	4 = Frequently, if not always (1)	3 = Fairly often (2)	2 = Sometimes (3)	1 = Once in a while (4)
22. My leadership is sharing their thought, think and what they want to do (11)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
23. My leadership provide recognition/rewards when staffs reach their goals (12)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
24. As long as things are working, My leadership do not try to change anything (13)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
25. Whatever leadership want to do is O.K. with me (14)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
26. I am proud to be associated with my leadership (15)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
27. My leadership helps me find meaning in work (16)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
28. My leadership ask question never questioned before to rethink for new ideas (17)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
29. My leadership gives personal attention to staff whose idea rejected (18)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
30. My leadership call attention to staff what they accomplish (19)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
31. My leadership tells me the standards they have to know to carry out their work. (20)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
32. My leadership ask no more of me than what is necessary (21)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>

Q3 PART - III Climate for innovation culture

This part is concerned with weighing the leadership support of creating climate culture for innovation performance in the organization.

(1 = strongly disagree, 2 = disagree, 3 = nor disagree nor agree, 4 =agree, 5 = strongly agree)

	1 = strongly disagree (1)	2 = disagree (2)	3 = neither disagree nor agree (3)	4 = agree (4)	5 = strongly agree (5)
33. Innovation proposals are welcome in the organization. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. My leadership actively seeks innovative ideas (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Innovation is perceived as too risky and is resisted (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. People are not punished for new ideas that do not work (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37. Leadership is supporting innovative ideas, experimentation and creative processes (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Source: Questionnaire: Impact of Organizational Learning and Innovations on Performance

Q4 PART - IV Individual creativity

The leadership support for staff to try things out in practice often enables a creative person to make a notable contribution. This part is concerned with weighing the leadership support of individual creativity for innovation performance in the organization.

A Likert scale is used to scale responses in which Strongly Agree = 5 points, Agree = 4 points, Neutral = 3 points, Disagree = 2 points and Strongly Disagree = 1 point.

	1 = strongly disagree (1)	2 = disagree (2)	3 = neither disagree nor agree (3)	4 = agree (4)	5 = strongly agree (5)
38. I believe that my personality traits (self-esteem) make me more creative in the workplace. (1)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
39. I am interested in my work and I find it rewarding in my work (2)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
40. My previous experience makes me more creative in the workplace (3)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
41. The opinion of work has a positive effect on my individual creativity and motivating me (4)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
42. My personal contacts enhance my level of creativity in the workplace (5)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
43. I feel proud and committed to working with my organization (6)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
44. Time pressure inhibits my individual creativity at work (7)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
45. The issue in the work, don't cause me to	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>

	1 = strongly disagree (1)	2 = disagree (2)	3 = neither disagree nor agree (3)	4 = agree (4)	5 = strongly agree (5)
lose focus on my work (8)					
46. I'm confident that I can develop creative ideas to solve problems (9)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
47. I usually ignore ideas because I don't have the resources to implement them (10)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
48. I do not ignore ideas because I have the channel to capture ideas (11)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
49. My Leadership is creating a climate for culture innovation support individual creativity (11)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
50. My Leadership is supporting individual for any creative idea (12)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>

Q5 Innovation performance

Please estimate to what extent the following statements related to various kinds of innovations apply to your organization.

PRODUCT AND SERVICE INNOVATIONS

Please circle one choice for each of the following statements

(1 = strongly disagree, 2 = disagree, 3 = nor disagree nor agree, 4 =agree, 5 = strongly agree)

Q5.1 Product and Service Innovations Measurement

	1 = strongly disagree (1)	2 = disagree (2)	3 = neither disagree nor agree (3)	4 = agree (4)	5 = strongly agree (5)
51. Our company is often first-to-market with new product and service introduction (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52. Our new products and services are perceived as very new by customers (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53. New products and services in our company often take us up against new competitors (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54. In comparison with competitors, our company has introduced more innovative products and services during the past 5 years (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55. We constantly emphasize the development of particular and patent products (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56. We manage to cope with market demands and develop new products quickly (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1 = strongly disagree (1)	2 = disagree (2)	3 = neither disagree nor agree (3)	4 = agree (4)	5 = strongly agree (5)
57. We continuously modify the design of our products and rapidly enter new emerging markets (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58. Our leadership accept to deliver special products flexibly according to customers' orders (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59. We continuously improve old products and raise the quality of new products (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5.2 Process Innovations Measurement

	1 = strongly disagree (1)	2 = disagree (2)	3 = neither disagree nor agree (3)	4 = agree (4)	5 = strongly agree (5)
60. Development of new channels for products and services offered by our staff is an on-going process (1)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
61. Our new products are align with customers' suggestions or complaints (2)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
62. In marketing innovations (entering new markets, new pricing methods, new distribution methods, etc.) our company is better than competitors (3)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>
63. We constantly emphasize and introduce managerial innovations (e.g. innovations, new employee reward/, new departments or project teams, etc. (4)	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>	<input type="radio"/> <input type="checkbox"/>

Source: Questionnaire: Impact of Organizational Learning and Innovations on Performance

Q6 64. If you have further comments or notes, please add your notes

Thank you for your participation.

Construct	Sub-construct	Item code	Items	Author	
Transformational	Idealized Influence	A.1	"I feel good being around my staff."	Bass (1985)	
		A.2	"I have complete faith in my staff."		
		A.3	"I am proud to be associated with my staff".		
	Inspirational Motivation	B.1	"I can express with a few simple words what we could and should do to my staff"		
		B.2	"My staff provide pleasing images about what I do"		
		B.3	"My staff helps me find meaning in work"		
	Intellectual stimulation	C.1	"Staff enable me to think about old problems in new ways ."		
		C.2	"My staff provide me with new ways of looking at puzzling things ."		
		C.3	"My staff get me to rethink ideas that they had never questioned before"		
	Individualized Consideration	D.1	"My staff help me develop themselves"		
		D.2	"The staff let me know how they think, and what they are doing"		
		D.3	"I give my staff personal attention."		
	Transactional leadership	Contingent Reward	E.1		"My staff tell me how they wish to be rewarded for their work"
			E.2		"I provide recognition/rewards when staff reach their goals"
			E.3		"My staff call attention to their performance to gain attention."
Management by Exception active		F.1	"My staff is satisfied when they meet agreed-upon standards"		
		F.2	"As long as things are working, I do not try to change anything"		
		F.3	"My staff tell me the standards they have to know to carry out their work"		
Management by Exception passive		G.1	"My staff is content to let them continue working in the same way as always without my supervision"		
		G.2	"Whatever staff want to do is O.K. with me"		
		G.3	"My staff ask no more of me than what is absolutely essential"		

Construct	Sub-construct	Item code	Items	Author
Climate for innovation culture		J.1	“Innovation proposals are welcome in the organization.”	https://www.adp.fdv.uni-lj.si/podatki/orgu/inovjk08-vp.pdf
		J.2	“My leadership actively seeks innovative ideas”	
		J.3	“Innovation is perceived as too risky and is resisted”	
		J.4	“People are not penalized for new ideas that do not work.”	
		J.5	“Leadership is supporting innovative ideas, experimentation and creative processes.”	
Individual Creativity	Self-assessment	K.1	I am able to achieve most of my personal goals at work	www.icreate-project.eu
		K.2	I am not afraid when facing challenges at work	
		K.3	I feel confident that I can perform creatively on many different tasks at work	
		K.4	I demonstrate originality at my work	
		K.5	I like taking risks at work	
		K.6	My colleagues think of me as a creative employee	
		K.7	Creativity at work is important to me	
		K.8	I am not easily influenced by others	
		K.9	I am an experience person (I have the ability to see how to take advantage of a certain situation)	
		K.10	I am versatile person and I can easily come up with innovative solutions no matter the work field	
Innovation performance	Product and service	Q.1	“In new product and service introduction, our company is often first-to-market”	https://www.adp.fdv.uni-lj.si/podatki/orgu/inovjk08-vp.pdf
		Q.2	“Our new products and services are often perceived as very novel by customers”	
		Q.3	“New products and services in our company often take us up against new competitors”	
		Q.4	“In comparison with competitors, our company has introduced more innovative products and services during past 5 years	
		Q.5	We constantly emphasize development of particular and patent products	

Construct	Sub-construct	Item code	Items	Author
		Q.6	We manage to cope with market demands and develop new products quickly	
		Q.7	We continuously modify design of our products and rapidly enter new emerging markets	
		Q.8	Our firm leadership accept to deliver special products flexibly according to customers' orders	
		Q.9	We continuously improve old products and raise quality of new products	
	Process	R.1	Development of new channels for products and services offered by our corporation is an on-going process"	
		R.2	"We deal with customers' suggestions or complaints urgently and with utmost care"	
		R.3	"In marketing innovations (entering new markets, new pricing methods, new distribution methods, etc.) our company is better than competitors."	
		R.4	"We constantly emphasize and introduce managerial innovations (e.g. computer-based administrative innovations, new employee reward, new departments or project teams, etc.)."	

3. List of target Telecom/ICT companies

SN	Vendors	Location
1	Sultan Special Systems	Abu Dhabi
2	Falcon Eye	Abu Dhabi
3	CommScope	Dubai
4	CCS	Dubai
5	Johnson Controls	Dubai
6	SmartVision	Abu Dhabi-Dubai-across UAE
7	JBK	Abu Dhabi-Dubai-across UAE
8	SmartWorld	Dubai
9	Intelligent Telecom System ITS	Abu Dhabi-Dubai-across UAE
10	GBM	Abu Dhabi-Dubai-GCC
11	ITQAN	Abu Dhabi-Dubai
12	Nets International	Dubai
13	NEC	Abu Dhabi-Dubai-across UAE
14	Cisco	Dubai
15	SecureTech	Abu Dhabi
16	Qualcomm	Dubai
17	Emirates Link Group	Abu Dhabi
18	Alpha Data	Abu Dhabi-Dubai
19	Dimension Data	Abu Dhabi-Dubai
20	Dutco	Dubai
21	TELEVES	Dubai

SN	Vendors	Location
22	Jumbo	Abu Dhabi-Dubai-across UAE
23	CADD Emirates	Dubai
24	Technologia	Dubai-India
25	Tamdeed	Abu Dhabi-Dubai-Ajman
26	Huawei	Abu Dhabi-Dubai
27	ZTE	Dubai
28	Westcon	Dubai
29	Atlas	Abu Dhabi-Dubai
30	Emircom	Abu Dhabi-Dubai-Riyadh
31	Aecom	Dubai
32	Al Rustamani group	Dubai-across UAE
33	Du	Abu Dhabi-Dubai-across UAE
34	Ateco	Abu Dhabi-Dubai
35	Etisalat	Abu Dhabi-Dubai-across UAE

Cronbach alpha pilot test for innovation performance criteria

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1	41.83	206.515	.918	.	.981
Q2	41.75	208.386	.946	.	.981
Q3	42.17	203.788	.750	.	.985
Q4	41.92	199.356	.897	.	.982
Q5	42.00	202.182	.868	.	.982
Q6	42.00	197.273	.958	.	.980
Q7	41.92	201.720	.935	.	.981
Q8	41.92	208.083	.861	.	.982
Q9	42.08	199.902	.941	.	.981
Q10	42.00	202.909	.801	.	.983
Q11	41.75	198.205	.937	.	.981
Q12	41.83	195.061	.970	.	.980
Q13	41.83	197.424	.953	.	.980

Pilot test validity for the leadership behaviors

Commonalities		
	Initial	Extraction
Q1	1.000	.805
Q2	1.000	.855
Q3	1.000	.910
Q4	1.000	.570
Q5	1.000	.802
Q6	1.000	.900
Q7	1.000	.962
Q8	1.000	.946
Q9	1.000	.951
Q10	1.000	.872
Q11	1.000	.880
Q12	1.000	.808
Q13	1.000	.757
Q14	1.000	.914
Q15	1.000	.919
Q16	1.000	.836
Q17	1.000	.832
Q18	1.000	.913
Q19	1.000	.912
Q20	1.000	.947
Q21	1.000	.916

Kolmogorov-Smirnov results: Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Idealized Influence total	0.167	139	0	0.869	139	0
inspirational Motivation total	0.141	139	0	0.898	139	0
intellectual Stimulation total	0.144	139	0	0.903	139	0
individualized consideration total	0.139	139	0	0.905	139	0
contingent reward total	0.135	139	0	0.911	139	0
management by exception total	0.118	139	0	0.925	139	0
Management by Exception passive total	0.143	139	0	0.916	139	0
Climate for innovation culture 1	0.25	139	0	0.854	139	0
Climate for innovation culture 2	0.202	139	0	0.885	139	0
Climate for innovation culture 3	0.183	139	0	0.904	139	0
Climate for innovation culture 4	0.232	139	0	0.856	139	0
Climate for innovation culture 5	0.274	139	0	0.856	139	0
Individual creativity 1	0.233	139	0	0.839	139	0
Individual creativity 2	0.233	139	0	0.85	139	0
Individual creativity 3	0.249	139	0	0.845	139	0
Individual creativity 4	0.252	139	0	0.868	139	0
Individual creativity 5	0.265	139	0	0.833	139	0
Individual creativity 6	0.232	139	0	0.877	139	0
Individual creativity 7	0.222	139	0	0.878	139	0
Individual creativity 8	0.215	139	0	0.869	139	0
Individual creativity 9	0.216	139	0	0.878	139	0
Individual creativity 10	0.217	139	0	0.886	139	0
Individual creativity 11	0.242	139	0	0.865	139	0
Individual creativity 12	0.263	139	0	0.861	139	0
Individual creativity 13	0.228	139	0	0.874	139	0
Product and Services Innovations 1	0.218	139	0	0.891	139	0

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Product and Services Innovations 2	0.24	139	0	0.878	139	0
Product and Services Innovations 3	0.259	139	0	0.876	139	0
Product and Services Innovations 4	0.22	139	0	0.878	139	0
Product and Services Innovations 5	0.244	139	0	0.882	139	0
Product and Services Innovations 6	0.271	139	0	0.852	139	0
Product and Services Innovations 7	0.26	139	0	0.863	139	0
Product and Services Innovations 8	0.245	139	0	0.856	139	0
Product and Services Innovations 9	0.265	139	0	0.858	139	0
Innovation process 1	0.224	139	0	0.896	139	0
Innovation process 2	0.238	139	0	0.878	139	0
Innovation process 3	0.239	139	0	0.877	139	0
Innovation process 4	0.244	139	0	0.87	139	0
a. Lilliefors Significance Correction						

Item-total statistics: Cronbach alpha test for leadership behaviors

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Idealized Influence 1	40.04	162.158	0.785	.	0.965
Inspirational Motivation 1	40.26	163.353	0.755	.	0.965
Intellectual Stimulation 1	40.27	161.983	0.778	.	0.965
Individualized consideration 1	40.21	160.761	0.828	.	0.965
Contingent reward 1	40.29	163.369	0.679	.	0.966
Management-by-exception 1	40.09	161.906	0.767	.	0.965
Management-by-Exception- passive leadership 1	40.35	163.853	0.699	.	0.966
Management-by-Exception- passive leadership 2	40.22	159.46	0.842	.	0.964
Inspirational motivation 2	40.15	160.535	0.857	.	0.964
Intellectual stimulation 2	40.35	161.041	0.846	.	0.964
Individualized consideration 2	40.1	162.236	0.756	.	0.965
Contingent reward 2	40.35	162.621	0.711	.	0.966
Management-by-exception 2	40.46	166.12	0.558	.	0.967
Management-by-Exception passive leadership 2	40.31	161.896	0.727	.	0.966
Idealized Influence 3	40.17	161.173	0.816	.	0.965
Inspirational Motivation 3	40.31	161.607	0.812	.	0.965
Intellectual Stimulation 3	40.4	163.212	0.779	.	0.965
Individualized consideration 3	40.5	163.991	0.699	.	0.966
Contingent reward 3	40.25	163.552	0.771	.	0.965
Management-by-exception 3	40.38	163.426	0.754	.	0.965
Management-by-Exception passive leadership 3	39.99	159.659	0.641	.	0.967

Principal Component Analysis Extraction Results

Total Variance Explained							
#	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
1	29.964	57.624	57.624	29.964	57.624	57.624	24.518
2	3.78	7.27	64.893	3.78	7.27	64.893	22.047
3	1.877	3.61	68.503	1.877	3.61	68.503	1.779
4	1.424	2.739	71.242	1.424	2.739	71.242	22.753
5	1.255	2.414	73.657	1.255	2.414	73.657	9.589
6	0.957	1.841	75.498				
7	0.849	1.632	77.13				
8	0.807	1.552	78.682				
9	0.73	1.404	80.085				
10	0.668	1.286	81.371				
11	0.634	1.219	82.589				
12	0.582	1.119	83.708				
13	0.569	1.094	84.802				
14	0.5	0.962	85.765				
15	0.468	0.9	86.665				
16	0.458	0.881	87.545				
17	0.424	0.816	88.362				
18	0.393	0.756	89.118				
19	0.352	0.676	89.794				
20	0.346	0.665	90.459				
21	0.34	0.655	91.113				
22	0.318	0.612	91.725				
23	0.309	0.595	92.32				
24	0.29	0.558	92.878				
25	0.276	0.531	93.41				
26	0.249	0.479	93.889				
27	0.235	0.452	94.341				

Total Variance Explained							
#	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
28	0.232	0.446	94.787				
29	0.217	0.416	95.203				
30	0.199	0.384	95.587				
31	0.186	0.358	95.945				
32	0.179	0.345	96.29				
33	0.17	0.327	96.616				
34	0.166	0.319	96.935				
35	0.151	0.291	97.226				
36	0.149	0.286	97.513				
37	0.129	0.249	97.761				
38	0.126	0.242	98.003				
39	0.123	0.237	98.24				
40	0.114	0.219	98.459				
41	0.105	0.202	98.66				
42	0.096	0.184	98.844				
43	0.094	0.181	99.026				
44	0.083	0.16	99.186				
45	0.073	0.14	99.326				
46	0.069	0.132	99.458				
47	0.057	0.109	99.567				
48	0.054	0.104	99.671				
49	0.052	0.1	99.771				
50	0.043	0.082	99.853				
51	0.041	0.078	99.931				
52	0.036	0.069	100				
Extraction Method: Principal Component Analysis.							
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Partial display normality test results for all items

Descriptive Statistics								
	N	Mean		Std. Deviation	Skewness		Kurtosis	
Idealized 1	139	2.23	.067	.792	-.436	.206	-1.276	.408
Inspirational 1	139	2.01	.065	.761	-.024	.206	-1.264	.408
Intellectual 1	139	2.00	.068	.808	.000	.206	-1.465	.408
Individualized 1	139	2.06	.069	.818	-.121	.206	-1.497	.408
Contingent 1	139	1.98	.071	.838	.041	.206	-1.578	.408
Exception 1	139	2.19	.070	.822	-.360	.206	-1.428	.408
Passive 1	139	1.92	.067	.790	.142	.206	-1.380	.408
Idealized 2	139	2.06	.073	.866	-.112	.206	-1.665	.408
Inspirational 2	139	2.12	.068	.803	-.226	.206	-1.412	.408
Intellectual 2	139	1.92	.067	.790	.142	.206	-1.380	.408
Individualized 2	139	2.17	.069	.816	-.329	.206	-1.423	.408
Contingent 2	139	1.92	.072	.843	.152	.206	-1.581	.408
Exception 2	139	1.81	.070	.822	.360	.206	-1.428	.408
Passive 2	139	1.96	.073	.863	.070	.206	-1.661	.408
Idealized 3	139	2.10	.069	.810	-.187	.206	-1.452	.408
Inspirational 3	139	1.96	.067	.793	.064	.206	-1.404	.408
Intellectual 3	139	1.88	.063	.747	.203	.206	-1.174	.408
Individualized 3	139	1.77	.066	.783	.431	.206	-1.243	.408
Contingent 3	139	2.02	.063	.737	-.034	.206	-1.143	.408
Exception 3	139	1.89	.064	.758	.183	.206	-1.234	.408
Passive 3	139	2.28	.093	1.097	.324	.206	-1.203	.408
Climate 1	139	3.79	.096	1.126	-.691	.206	-.472	.408
Climate 2	139	3.26	.117	1.374	-.275	.206	-1.181	.408
Climate 3	139	3.22	.108	1.269	-.256	.206	-.934	.408
Climate 4	139	3.51	.114	1.348	-.636	.206	-.742	.408
Climate 5	139	3.54	.108	1.276	-.674	.206	-.643	.408
Creativity 1	139	3.86	.093	1.091	-.606	.206	-.795	.408

Descriptive Statistics								
	N	Mean		Std. Deviation	Skewness		Kurtosis	
Creativity 2	139	3.61	.113	1.338	-.638	.206	-.813	.408
Creativity 3	139	3.79	.097	1.145	-.903	.206	.198	.408
Creativity 4	139	3.67	.099	1.163	-.698	.206	-.341	.408
Creativity 5	139	3.74	.107	1.259	-.869	.206	-.272	.408
Creativity 6	139	3.52	.107	1.259	-.572	.206	-.682	.408
Creativity 7	139	3.48	.106	1.247	-.595	.206	-.543	.408
Creativity 8	139	3.63	.106	1.247	-.622	.206	-.593	.408
Creativity 9	139	3.38	.115	1.353	-.367	.206	-1.121	.408
Creativity 10	139	3.29	.112	1.315	-.412	.206	-.935	.408
Creativity 11	139	3.70	.100	1.177	-.661	.206	-.496	.408
Creativity 12	139	3.68	.100	1.175	-.677	.206	-.497	.408
Creativity 13	139	3.53	.108	1.270	-.595	.206	-.652	.408
Product 1	139	3.58	.094	1.103	-.375	.206	-.743	.408
Product 2	139	3.50	.104	1.224	-.610	.206	-.528	.408
Product 3	139	3.55	.100	1.181	-.600	.206	-.552	.408
Product 4	139	3.51	.107	1.259	-.577	.206	-.622	.408
Product 5	139	3.56	.099	1.168	-.551	.206	-.582	.408
Product 6	139	3.53	.106	1.253	-.759	.206	-.386	.408
Product 7	139	3.57	.107	1.257	-.645	.206	-.648	.408
Product 8	139	3.57	.108	1.269	-.739	.206	-.400	.408
Product 9	139	3.63	.098	1.156	-.816	.206	.007	.408
Process 1	139	3.53	.090	1.065	-.359	.206	-.619	.408
Process 2	139	3.50	.098	1.151	-.657	.206	-.198	.408
Process 3	139	3.58	.097	1.148	-.673	.206	-.201	.408
Process 4	139	3.50	.101	1.194	-.695	.206	-.266	.408
Valid N (Listwise)	139							

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
1	30.151	57.983	57.983	29.743	57.199	57.199
2	3.751	7.214	65.197			
3	1.841	3.541	68.737			
4	1.396	2.684	71.422			
5	1.255	2.414	73.836			
6	.937	1.803	75.638			
7	.842	1.620	77.258			
8	.790	1.519	78.777			
9	.712	1.369	80.146			
10	.654	1.258	81.405			
11	.625	1.201	82.606			
12	.578	1.111	83.716			
13	.557	1.070	84.787			
14	.526	1.012	85.799			
15	.462	.888	86.687			
16	.448	.861	87.548			
17	.417	.803	88.351			
18	.384	.739	89.090			
19	.349	.671	89.761			
20	.342	.657	90.418			
21	.336	.646	91.064			
22	.315	.606	91.669			
23	.307	.591	92.260			
24	.286	.549	92.809			
25	.271	.520	93.330			
26	.244	.469	93.799			
27	.239	.459	94.259			
28	.228	.439	94.698			
29	.223	.430	95.128			

Total Variance Explained						
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %
30	.208	.401	95.528			
31	.191	.368	95.896			
32	.177	.340	96.236			
33	.172	.331	96.568			
34	.164	.315	96.883			
35	.152	.293	97.176			
36	.146	.281	97.457			
37	.138	.265	97.722			
38	.127	.245	97.966			
39	.122	.234	98.200			
40	.114	.220	98.420			
41	.106	.203	98.624			
42	.096	.185	98.809			
43	.094	.180	98.989			
44	.087	.167	99.156			
45	.077	.148	99.304			
46	.070	.134	99.438			
47	.061	.117	99.555			
48	.058	.111	99.666			
49	.053	.102	99.768			
50	.044	.085	99.852			
51	.041	.080	99.932			
52	.035	.068	100.000			

Extraction Method: Principal Axis Factoring.

Communalities

	Initial	Extraction
Idealized 1	1.000	.719
Inspirational 1	1.000	.647
Intellectual 1	1.000	.751
Individualized 1	1.000	.753
Contingent 1	1.000	.616
Exception 1	1.000	.774
Passive 1	1.000	.545
Idealized 2	1.000	.800
Inspirational 2	1.000	.781
Intellectual 2	1.000	.767
Individualized 2	1.000	.643
Contingent 2	1.000	.700
Exception 2	1.000	.674
Passive 2	1.000	.730
Idealized 3	1.000	.745
Inspirational 3	1.000	.715
Intellectual 3	1.000	.778
Individualized 3	1.000	.715
Contingent 3	1.000	.671
Exception 3	1.000	.697
Passive 3	1.000	.847
Climate 1	1.000	.764
Climate 2	1.000	.687
Climate 3	1.000	.537
Climate 4	1.000	.718
Climate 5	1.000	.767
Creativity 1	1.000	.754
Creativity 2	1.000	.722
Creativity 3	1.000	.705

	Initial	Extraction
Creativity 4	1.000	.805
Creativity 5	1.000	.807
Creativity 6	1.000	.723
Creativity 7	1.000	.603
Creativity 8	1.000	.796
Creativity 9	1.000	.664
Creativity 10	1.000	.733
Creativity 11	1.000	.729
Creativity 12	1.000	.785
Creativity 13	1.000	.715
Product 1	1.000	.760
Product 2	1.000	.786
Product 3	1.000	.699
Product 4	1.000	.803
Product 5	1.000	.792
Product 6	1.000	.816
Product 7	1.000	.829
Product 8	1.000	.801
Product 9	1.000	.798
Process 1	1.000	.719
Process 2	1.000	.782
Process 3	1.000	.813
Process 4	1.000	.825

Principal Component Analysis extraction results

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
1	29.964	57.624	57.624	29.964	57.624	57.624	24.518
2	3.780	7.270	64.893	3.780	7.270	64.893	22.047
3	1.877	3.610	68.503	1.877	3.610	68.503	1.779
4	1.424	2.739	71.242	1.424	2.739	71.242	22.753
5	1.255	2.414	73.657	1.255	2.414	73.657	9.589
6	.957	1.841	75.498				
7	.849	1.632	77.130				
8	.807	1.552	78.682				
9	.730	1.404	80.085				
10	.668	1.286	81.371				
11	.634	1.219	82.589				
12	.582	1.119	83.708				
13	.569	1.094	84.802				
14	.500	.962	85.765				
15	.468	.900	86.665				
16	.458	.881	87.545				
17	.424	.816	88.362				
18	.393	.756	89.118				

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
19	.352	.676	89.794				
20	.346	.665	90.459				
21	.340	.655	91.113				
22	.318	.612	91.725				
23	.309	.595	92.320				
24	.290	.558	92.878				
25	.276	.531	93.410				
26	.249	.479	93.889				
27	.235	.452	94.341				
28	.232	.446	94.787				
29	.217	.416	95.203				
30	.199	.384	95.587				
31	.186	.358	95.945				
32	.179	.345	96.290				
33	.170	.327	96.616				
34	.166	.319	96.935				
35	.151	.291	97.226				
36	.149	.286	97.513				
37	.129	.249	97.761				

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	Variance %	Cumulative %	Total	Variance %	Cumulative %	Total
38	.126	.242	98.003				
39	.123	.237	98.240				
40	.114	.219	98.459				
41	.105	.202	98.660				
42	.096	.184	98.844				
43	.094	.181	99.026				
44	.083	.160	99.186				
45	.073	.140	99.326				
46	.069	.132	99.458				
47	.057	.109	99.567				
48	.054	.104	99.671				
49	.052	.100	99.771				
50	.043	.082	99.853				
51	.041	.078	99.931				
52	.036	.069	100.000				

Extraction Method: Principal Component Analysis.

- a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Communalities

	Initial	Extraction
Idealized 1	1.000	.719
Inspirational 1	1.000	.647
Intellectual 1	1.000	.751
Individualized 1	1.000	.753
Contingent 1	1.000	.616
Exception 1	1.000	.774
Passive 1	1.000	.545
Idealized 2	1.000	.800
Inspirational 2	1.000	.781
Intellectual 2	1.000	.767
Individualized 2	1.000	.643
Contingent 2	1.000	.700
Exception 2	1.000	.674
Passive 2	1.000	.730
Idealized 3	1.000	.745
Inspirational 3	1.000	.715
Intellectual 3	1.000	.778
Individualized 3	1.000	.715
Contingent 3	1.000	.671
Exception 3	1.000	.697
Passive 3	1.000	.847
Climate 1	1.000	.764
Climate 2	1.000	.687
Climate 3	1.000	.537
Climate 4	1.000	.718
Climate 5	1.000	.767
Creativity 1	1.000	.754
Creativity 2	1.000	.722
Creativity 3	1.000	.705
Creativity 4	1.000	.805

	Initial	Extraction
Creativity 5	1.000	.807
Creativity 6	1.000	.723
Creativity 7	1.000	.603
Creativity 8	1.000	.796
Creativity 9	1.000	.664
Creativity 10	1.000	.733
Creativity 11	1.000	.729
Creativity 12	1.000	.785
Creativity 13	1.000	.715
Product 1	1.000	.760
Product 2	1.000	.786
Product 3	1.000	.699
Product 4	1.000	.803
Product 5	1.000	.792
Product 6	1.000	.816
Product 7	1.000	.829
Product 8	1.000	.801
Product 9	1.000	.798
Process 1	1.000	.719
Process 2	1.000	.782
Process 3	1.000	.813
Process 4	1.000	.825

Assessment of normality

Descriptive Statistics								
	N	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Idealized 1	139	2.23	.067	.792	-.436	.206	-1.27	.408
Inspirational 1	139	2.01	.065	.761	-.024	.206	-1.26	.408
Intellectual 1	139	2.00	.068	.808	.000	.206	-1.46	.408
Individualized 1	139	2.06	.069	.818	-.121	.206	-1.49	.408
Contingent 1	139	1.98	.071	.838	.041	.206	-1.57	.408
Exception 1	139	2.19	.070	.822	-.360	.206	-1.42	.408
Passive 1	139	1.92	.067	.790	.142	.206	-1.38	.408
Idealized 2	139	2.06	.073	.866	-.112	.206	-1.66	.408
Inspirational 2	139	2.12	.068	.803	-.226	.206	-1.41	.408
Intellectual 2	139	1.92	.067	.790	.142	.206	-1.38	.408
Individualized 2	139	2.17	.069	.816	-.329	.206	-1.42	.408
Contingent 2	139	1.92	.072	.843	.152	.206	-1.58	.408
Exception 2	139	1.81	.070	.822	.360	.206	-1.42	.408
Passive 2	139	1.96	.073	.863	.070	.206	-1.66	.408
Idealized 3	139	2.10	.069	.810	-.187	.206	-1.45	.408
Inspirational 3	139	1.96	.067	.793	.064	.206	-1.40	.408
Intellectual 3	139	1.88	.063	.747	.203	.206	-1.17	.408
Individualized 3	139	1.77	.066	.783	.431	.206	-1.24	.408
Contingent 3	139	2.02	.063	.737	-.034	.206	-1.14	.408
Exception 3	139	1.89	.064	.758	.183	.206	-1.23	.408
Passive 3	139	2.28	.093	1.097	.324	.206	-1.20	.408
Climate 1	139	3.79	.096	1.126	-.691	.206	-.472	.408
Climate 2	139	3.26	.117	1.374	-.275	.206	-1.18	.408
Climate 3	139	3.22	.108	1.269	-.256	.206	-.934	.408
Climate 4	139	3.51	.114	1.348	-.636	.206	-.742	.408
Climate 5	139	3.54	.108	1.276	-.674	.206	-.643	.408
Creativity 1	139	3.86	.093	1.091	-.606	.206	-.795	.408
Creativity 2	139	3.61	.113	1.338	-.638	.206	-.813	.408
Creativity 3	139	3.79	.097	1.145	-.903	.206	.198	.408
Creativity 4	139	3.67	.099	1.163	-.698	.206	-.341	.408
Creativity 5	139	3.74	.107	1.259	-.869	.206	-.272	.408
Creativity 6	139	3.52	.107	1.259	-.572	.206	-.682	.408
Creativity 7	139	3.48	.106	1.247	-.595	.206	-.543	.408
Creativity 8	139	3.63	.106	1.247	-.622	.206	-.593	.408
Creativity 9	139	3.38	.115	1.353	-.367	.206	-1.12	.408
Creativity 10	139	3.29	.112	1.315	-.412	.206	-.935	.408

Descriptive Statistics								
	N	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Creativity 11	139	3.70	.100	1.177	-.661	.206	-.496	.408
Creativity 12	139	3.68	.100	1.175	-.677	.206	-.497	.408
Creativity 13	139	3.53	.108	1.270	-.595	.206	-.652	.408
Product 1	139	3.58	.094	1.103	-.375	.206	-.743	.408
Product 2	139	3.50	.104	1.224	-.610	.206	-.528	.408
Product 3	139	3.55	.100	1.181	-.600	.206	-.552	.408
Product 4	139	3.51	.107	1.259	-.577	.206	-.622	.408
Product 5	139	3.56	.099	1.168	-.551	.206	-.582	.408
Product 6	139	3.53	.106	1.253	-.759	.206	-.386	.408
Product 7	139	3.57	.107	1.257	-.645	.206	-.648	.408
Product 8	139	3.57	.108	1.269	-.739	.206	-.400	.408
Product 9	139	3.63	.098	1.156	-.816	.206	.007	.408
Process 1	139	3.53	.090	1.065	-.359	.206	-.619	.408
Process 2	139	3.50	.098	1.151	-.657	.206	-.198	.408
Process 3	139	3.58	.097	1.148	-.673	.206	-.201	.408
Process 4	139	3.50	.101	1.194	-.695	.206	-.266	.408
Valid N (Listwise)	139							