



**The role of leadership style in influencing innovation and organisational performance:  
A mixed-methods study of the Abu Dhabi government sector (public sector)**

**A Thesis Submitted in Partial Fulfilment of the Requirement for the Degree of Doctor of  
Professional Studies**

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**by**

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## **Abstract**

The main purpose of the study is to contribute to the field of leadership and innovation by conceptualising the concept of innovation capacity and investigating the role of transformational and transactional leadership in supporting innovation and organisational performance using top-down and bottom-up approaches in Abu Dhabi's public sector. To accomplish this, a sequential mixed method approach was employed to collect and analyse data from 371 survey responses, followed by 15 semi structured interviews with the public sector employees (executives, directors, section heads, advisors and employees). The data gathered was analysed using SPSS and thematic analysis. The findings indicate that corporate innovation, transactional leadership style, and transformational leadership style can all significantly predict organisational performance after controlling for demographic factors (gender, position, years of experience and qualifications). Furthermore, the research demonstrates that innovation strongly mediates the association between transformational leadership style, transactional leadership style, and organisational performance. The study culminates in the creation of two models that outlines a conceptual implementation plan and the innovation-based leadership models. It proposes that Abu Dhabi public sector organisations, while applying blended leadership styles, can find the right practices of corporate innovation factor to enhance organisational performance.

**Key words:** transformational leadership style, transactional leadership style, blended leadership style, corporate innovation, innovation-based leadership, organisational performance, top-down, bottom-up.

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## **Dedication**

I dedicate this dissertation to my family, who have been so understanding and patient with the amount of time and effort I put into this project. I also want to dedicate this work to my peers and colleagues, who have been so generous in sharing their knowledge and experiences to help me fulfil this goal. Finally, I dedicate this dissertation to my country, the United Arab Emirates, and my city, Abu Dhabi, in the hope that the results will help bring more glory and honour to my beloved nation.

## **Acknowledgments**

I would start with ‘الْحَمْدُ لِلَّهِ’ Al-ḥamdu lil-lāh...

I would like to acknowledge the help of my peers and colleagues from my course, both from the lower and upper echelons. They have been very kind and generous in sharing their knowledge and experience related to my study. I would also like to acknowledge my supervisor for his patience and understanding and for guiding and leading me to develop a meaningful study.

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## List of Abbreviations

<b>Abbreviation</b>	<b>Explanation</b>
<b>EFQM</b>	The European Foundation for Quality Management
<b>OPEC</b>	Organisation of the Petroleum Exporting Countries
<b>ISO</b>	International Organisation for Standardization
<b>IMS</b>	Innovation Management System
<b>ROI</b>	Return On Investment
<b>360-Degree Appraisal</b>	Feedback from subordinates, colleagues, and supervisor

## Terminology of the Study

For the purposes of this study, the following definitions were applied:

**Leadership style:** A leader's method of providing direction, implementing plans and motivating people, with influencing skill with the followers.

**Transactional and Transformational leadership style:** this study considers leadership to encompass transactional and transformational leadership, serving as a tool to achieve the goals of public organisations in Abu Dhabi by enhancing their innovation and organisational performance.

**Top-down and Bottom-up approach:** the transactional and transformational styles represent the top-down approach, while the bottom-up approach refers to employees' ability to innovate and enhance organisational performance.

**Corporate innovation:** Creativity and out-of-the-box thinking in a corporate environment. To achieve this, many corporates set up spaces and offices to encourage and stimulate creativity among employees.

**Organisational performance:** Organisational performance is considered one of the most significant variables in management and organisational research. It is the extent to which organisations can effectively fulfil or accomplish their goals and objectives (Gavrea, Ilies and Stegorean, 2011).

**Balanced scorecard:** A management system aimed at translating an organisation's strategic goals into a set of organisational performance objectives.

**Innovation Management System:** Represents the intersection between the three concepts; leadership, innovation, and performance. This system would help an organisation determine its vision, strategy, policy, and goals for inventing, as well as how to get processes in place to get there.

**Process:** A series of actions or steps taken to achieve a particular end.



**Public sector:** The sector that is controlled by the government, composed of public services and public enterprises, covering healthcare, economy, education, energy, infra structure, tourism, environment, society support, and transportation.

**Mixed-methods approach.** According to Plano Clark (2017), the mixed-methods approach is a combination of two conventional research methods—quantitative and qualitative methods. The integration of the two approaches involves the use of numbers and textual data to analyse, discuss and present the overall findings of the study.

# **CHAPTER 1: INTRODUCTION AND RESEARCH BACKGROUND**

In the dynamic and ever-evolving landscape of Abu Dhabi, the government faces a constant challenge: to foster innovation and drive performance across its vast and diverse sectors. This necessitates a critical examination of the leadership styles that cultivate an environment conducive to breakthrough ideas and initiatives. Understanding the intricate interplay between leadership, innovation, and performance is key to unlocking the full potential of Abu Dhabi's government and achieving its ambitious goals. Hence, this thesis focuses on innovation and leadership in the emirate of Abu Dhabi as the capital of the UAE and as the main driver of the other emirates. It examines the innovation practices of the public sector and the role of leadership in achieving the desired target and reaching the goals stated in the National Vision 2021 and the Emirate's Vision 2030.

The first chapter is an introduction to the study, in which the purpose of the study is explained in detail. It also presents the rationale, aims, research questions and research hypotheses of the study. Finally, it provides an overview of the structure of the thesis.

## **1.1 Background and Context of the Study**

Governments around the world are undergoing significant pressure as a result of recent changes and advancements in the global economy (Kooiman, 1993). The International Institute for Management Development (IMD) report published in 2023 offers a broader understanding of the government performance ecosystem and could be a guide on the way they operate. This report also identifies government efficiency and management practices as relevant criteria for ranking governments (IMD, 2023). Governments must improve their organisational management processes, overall efficiency, and performance in order to keep up with the times and to rank high in the competitiveness index (Bucher, 2018). Achieving these would require fostering innovation as well as the achievement of economic growth.

The importance of innovation amidst greater public expectations and the pressure to achieve more with less money is becoming increasingly apparent globally leading to an increase in social innovations. These types of innovation, which may involve cost optimization and the

creation of new value through novel ideas, technologies, or processes, focus on producing new products and services that are of benefit to society (Lewis, 2016). As a result, innovation has become a central focus among companies, governments, leaders, managers, and employees in both public and private sectors and governments are increasingly being expected to facilitate innovation at all levels.

The role of government in fostering innovation and economic growth is well illustrated by the example of China, which emerged as the second-largest economic power globally, achieving a 6.12% increase in economic growth in 2020 (World Bank, 2021). This growth is largely attributed to proactive government policies that support technological innovation and entrepreneurship (Xie et al., 2018). Through strategic leadership and government initiatives, China has facilitated technological advancements, industry upgrades, and talent development.

The growth of China demonstrates the critical influence of leadership in driving innovation and economic performance. This example underscores the importance of leadership in guiding public sector innovation, a concept highly relevant to the Abu Dhabi government sector. As Abu Dhabi continues its efforts to enhance public sector performance and foster a culture of innovation, understanding how leadership styles influence these outcomes becomes essential. Just as China's leadership has played a pivotal role in driving national growth through innovation, so too can effective leadership in Abu Dhabi propel the government sector toward improved performance and service delivery.

The recognition of the importance and role of leadership in achieving success is not recent. This observation has been made in a significant number of environments regardless of economic, political, or social composition. Though the majority of leadership studies have been conducted in the context of private sector organisations, this prevalence further highlights the need for studies on the leadership style practised in the public sector (McCarthy, 2015).

In the private sector, there is a major focus on innovation to create competitive advantage and to maximise market share. This concept of 'innovate or die' has motivated private companies to evolve and improve their products and services (Gummer, 2001). With public sector agencies, however, the motivation for innovation is not to gain a competitive edge. For these agencies, innovation is about improving ideas and processes, eliminating waste, and utilizing budgets more effectively. The goal is not only to enhance their operations but also to encourage

the private sector to adopt a similar culture of innovation (Mulgan and Albury, 2003). Beyond promoting private sector adoption, governments are also incentivised to innovate to meet the needs of their citizens for enhanced services and efficiency.

Established in 2007, the Global Innovation Index was designed to measure the annual innovation performance of 130 countries and economies worldwide. The index utilizes both subjective and objective data sourced from reputable institutions, including the International Telecommunication Union, the World Bank, and the World Economic Forum (World Intellectual Property Organisation, 2021). Today, the Global Innovation Index is recognized as a critical tool and key performance indicator (KPI) for organisations to evaluate and refine their policies and practices in fostering corporate innovation and enhancing organisational performance. The relevance of the Global Innovation Index lies in its comprehensive evaluation of innovation practices across different contexts. By ranking countries based on factors such as institutional quality, human capital, and creative outputs, the Global Innovation Index provides a macro-level perspective on the conditions that promote or hinder innovation. In the Global Innovation Index, leadership is a significant factor within these conditions, as it directly impacts how organisations leverage these elements to drive innovation.

Innovation and leadership are intricately linked, forming a strong synergy that drives progress across industries and societies. Leaders who champion innovation foster environments where creativity flourishes and new ideas emerge. As argued by De Vries, Bekkers, and Tummers, (2016), effective leadership cultivates a culture of psychological safety, where individuals feel empowered to take risks and challenge the status quo, essential ingredients for innovation to thrive. This fosters collaboration and knowledge sharing, as highlighted by Chiesa and De Palma (2022) who emphasize the leader's role in connecting diverse perspectives and facilitating cross-functional teams, critical for tackling complex challenges and generating ground-breaking solutions. Moreover, visionary leadership sets the strategic direction and prioritizes investments in research and development, propelling organisations towards uncharted territory. Utterback (2023) points out that leaders who actively engage with emerging technologies and embrace disruptive change can navigate the dynamic landscape of innovation and secure a competitive edge. In essence, innovation flourishes with strong leadership, shaping a future where bold ideas transform the world.

High productivity, reduced cost, increased competitiveness, improved profitability, and enhanced partnerships are some advantages of adopting innovation practices (Jimmy, 2015). The identification of these benefits of innovation practices could be utilised to proffer responses to a core question that employees of public sector departments have, which is, ‘What is the best strategy for enhancing organisational performance?’ One approach to this is to adopt corporate innovation practices and then measure the changes in public sector organisational performance resulting from these innovations. Implementing changes within any organisation, however, generally requires acceptance and adoption of such changes at all levels to be successful. In consideration of this, one of the methods used in this research is the bottom-up approach to understanding how leadership style supports innovation capacity in Abu Dhabi’s government sector. This will provide insights into the dependency of the government sector’s innovative capacity on leadership style and offer recommendations for adopting more innovative ideas, capacities, and cultures.

The study also explores how the integration of corporate innovation with transactional and transformational leadership styles can predict organisational performance after controlling for demographic factors (e.g., gender, position, years of experience, and qualifications). The findings will contribute to understanding the overall impact of leadership styles on the processes and performance of the public sector in Abu Dhabi, UAE.

### **1.1.1 UAE Culture at a Glance**

The United Arab Emirates (UAE) was established in 1971 by its founder Sh. Zayed Bin Sultan Al Nahyan. At the time, the UAE was considered one of the least developed countries in the world before the discovery of oil and the union of the seven emirates (Shihab, 2001). Although the UAE did not undergo the same extent of modernisation as some other nations prior to the discovery of oil, it is important to acknowledge the pre-existing social frameworks, cultural traditions, and economic activities that were present as well as the transformations that occurred after the discovery (Al Fahim, 1995).

Since its establishment in 1971, the UAE has experienced a remarkable metamorphosis, with an economy and income level that is about the same as that of other industrialised countries (Shihab, 2001), a transformation that can be attributed to its strong leadership (Shadab, 2019). The economy of the country is largely dependent on oil (30% of the GDP) (OPEC, 2022), while

trade, logistics, tourism, real estate & construction, manufacturing, and financial services make up 70% of the GDP (World Bank, 2023). This oil reliance is unsustainable and has created the need for the diversification of income. The country is now transitioning from an economy reliant on natural resources to one propelled by information and innovation. The government also wants to diversify its economy through 'tourism, trade and manufacturing', which can happen by adopting new approaches (Hvidt, 2013). Consequently, the Abu Dhabi government launched its vision for 2030, with a target of positioning itself as one of the leading governments in innovation (UAE Government, 2022).

With the overhaul of its economic landscape in order to attract talent and resources, Abu Dhabi has emerged as a hub for the travel and tourism industry, investments and businesses. This has worked in favour of the nation, with the economy growing at a sustainable pace. In 2006, the Crown Prince of Abu Dhabi and Chairman of the Executive Council at that time, His Highness Sheikh Mohamed bin Zayed Al Nahyan, ordered the Abu Dhabi Council for Economic Development, the Department of Planning and the General Secretariat of the Executive Council Economy to design a long-term economic vision for the Emirate. Ten years down the line, this vision has already begun to be substantiated and realised, and all of this has contributed to the exceptional leadership style of the Emirates. The Emirati leadership style focuses on family values, relationships, loyalty and engagement. The Abu Dhabi government is liberal and openly respectful of the ways of living and the cultural differences among people. It has been recommended that this leadership style be thoroughly studied, defined, promoted and taught because of its high success rate (Ahmed and Al Amiri, 2022).

The United Arab Emirates (UAE) serves as an intriguing example of how cultural values may drive a nation towards innovation and exceptional achievement. A crucial element of UAE culture that promotes innovation is its strong focus on desire and advancement. The notion of "Barakah," which signifies blessings, is deeply ingrained in the national identity. The UAE's vision, as demonstrated by initiatives such as the UAE Vision 2021 and the National Innovation Strategy, emphasizes research, technological adoption, and knowledge-based development (UAE Government, 2023). In terms of the macroeconomic environment and the quality of infrastructure, the UAE implements knowledge economy principles and is transitioning into an innovation-driven phase by exploring the role of science, technology and innovation. This desire is present at both the human and organisational levels, resulting in a dynamic atmosphere that promotes the pursuit of excellence and exploring new frontiers.

The UAE government's cultural focus on efficiency and adaptability is demonstrated in its attitude to innovation in addition to the introduction of multiple programmes with the objective of optimising bureaucratic procedures, minimising administrative obstacles and advocating for a digital-centric strategy. In February 2024, the UAE government announced a new initiative called "Zero Government Bureaucracy Programme" to eliminate redundant government procedures and regulations, thereby streamlining the administrative process significantly. The ministries and government bodies have been assigned the responsibility of promptly executing the project, which entails eliminating at least 2,000 government measures, reducing the time needed for procedures, and optimising bureaucratic procedures by the end of 2024 (UAE Government, 2024). At the organisational level, UAE organisations also develop policies and systems to promote innovation. Examples include innovation labs and employee idea portals (Parahoo, Mumtaz, and Salem, 2017).

This agility in the government's style facilitates prompt decision-making and the speedy execution of creative solutions. The government's commitment to adaptability is seen in its willingness to explore and implement innovative processes, technology, and strategies, such as blockchain and artificial intelligence, to tackle intricate problems (Dubai Future Foundation, 2023). The UAE's receptiveness to new ideas and its proactive approach to adopting innovative processes and technologies, such as blockchain and AI, position it as a prominent global innovator. The country has actively embraced artificial intelligence (AI) in line with its overall dedication to promoting a culture of innovation. The UAE's National Strategy for Artificial Intelligence 2031 provides a detailed plan for the integration of AI and demonstrates the government's commitment to technological advancement and economic diversification (UAE Government, 2022). The UAE's adoption of AI is not solely a technological pursuit, but rather a manifestation of its deeply rooted culture of innovation, which is positioned to drive sustainable development and economic growth in the future.

Collaboration and partnerships are other cultural factors that drive high performance. The UAE has a diversified population consisting of more than 200 nationalities. This diversity promotes an atmosphere of open communication and cross-cultural cooperation. This is further strengthened by the government's endeavours, exemplified by the Dubai Future Labs, which assemble individuals with distinctive expertise from different industries to address worldwide difficulties (Dubai Future Foundation, 2023). The act of collaborating allows for the exchange

of knowledge, encourages the development of creative solutions, and leads to successful results characterised by exceptional performance. This results in a shared mentality that is dedicated to ongoing enhancement and the attainment of ambitious objectives.

Furthermore, the leadership style of the UAE has a substantial impact on promoting innovation in the government sector. The country has adopted a transformative leadership approach, where leaders exhibit a clear vision, inspire their people, and foster creativity (Al Youha, 2019). This method has demonstrated its efficacy in fostering innovation by empowering individuals to take calculated risks, question established norms, and venture into uncharted territories. The government's focus on investing in human capital through training and development programmes strengthens the skills and capacities of its workers, allowing them to effectively adjust to the swiftly evolving technology environment (UAE Government, 2022). The appointment of His Excellency Omar Al Olama as Minister of State for AI in 2017, along with initiatives such as The Government Accelerators, underscores the UAE leadership's commitment to fostering innovation and technological advancement (Abou Hana, 2017). This dedication to fostering talent guarantees a constant flow of inventive concepts and remedies, ultimately bolstering the nation's overall advancement.

The government also launched a national strategy for innovation, which aims to achieve 30 initiatives in seven sectors: renewable energy, transportation, education, healthcare, water resources, technology and space (UAE Government, 2023). The second track of the innovation strategy will develop government innovation by institutionalising innovative practices with the support of an integrated system of modern tools. The strategy requires all government entities to reduce spending by one per cent and dedicate the savings to research and innovation projects. National training and education programmes on innovation will also be launched (UAE Government, 2022). Consequently, the UAE government has shown development in innovation, achieving a good ranking (31<sup>st</sup>) in the Global Innovation Index in 2022 ( World Intellectual Property Organisation, 2022).

Despite these achievements, there is a need for continuous development of its public sector, focusing on innovation practices and ensuring efficiency and adaptability. Being a relatively young country, the UAE has a work population that consists mainly of expatriates who are usually in the UAE for short periods. The country also has high values for Hofstede's cultural variables such as uncertainty avoidance and collectivism, implying that employees tend to



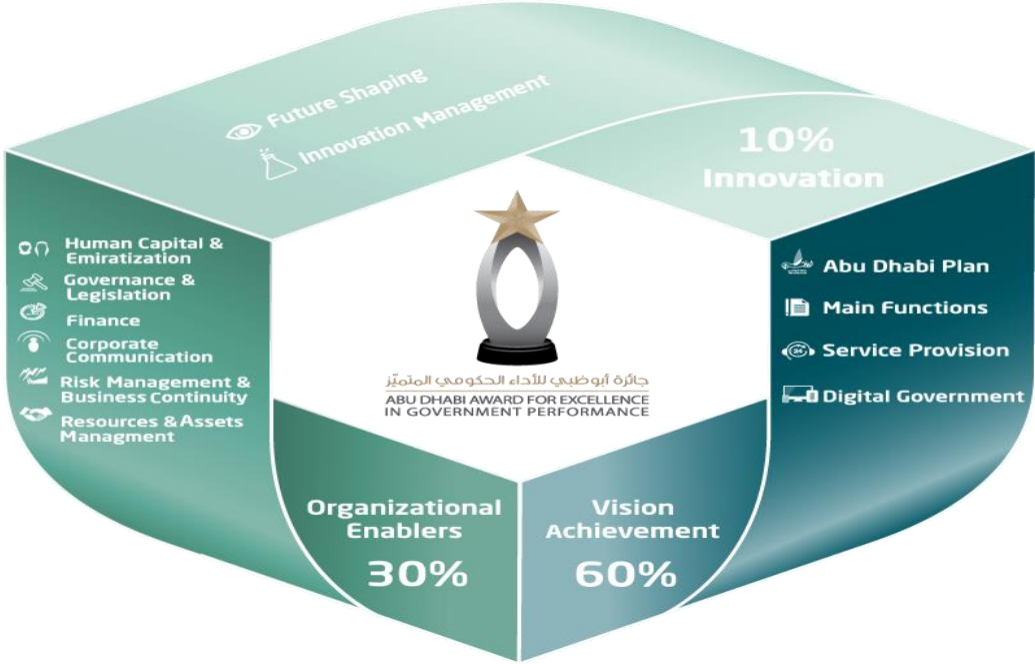
avoid risks associated with developing innovative ideas and that the country also possesses a strong collectivist culture (Parahoo, Mumtaz, and Salem, 2017). The authors also examined the correlation between leadership, organisational culture, and innovation in organisations in the UAE. They noted that the high uncertainty avoidance in UAE culture can make employees reluctant to take risks associated with innovation. The transient nature of the expatriate workforce also poses a problem as this implies that these leaders are unable to lead for extended periods and so are unable to have a long-lasting impact on the innovation process. They suggested that organisational leaders in the UAE should focus on cultivating an innovative culture that encourages employee involvement and empowerment to effectively foster innovation. In doing so, leaders can leverage the mediating role of culture to translate their leadership styles into concrete innovative outcomes (Parahoo, Mumtaz, and Salem, 2017). In their 2022 article titled “Innovation is the Way Forward: The Impact of Organisational Culture on Innovation in the UAE”, Islam and Ayupp also reported similar findings by examining the critical role of organisational culture in fostering innovation within the UAE context. The authors argue that a supportive and adaptive organisational culture is essential for driving innovation, which is increasingly vital for economic diversification and growth in the UAE. They found that a leadership style that encourages experimentation, collaborative work environments, and a tolerance for risk-taking are all positively associated with increased innovation within organisations (Islam & Ayupp, 2022).

As culture changes, so will the challenges, creating a significant demand for government creative services that require less spending. Though there have been significant achievements made, there are still areas of improvement and challenges that require solutions and careful follow-up (Ahmed and Abdalla Alfaki, 2013). Therefore, to meet the government’s target of being a leading government in innovation, there is a need to further explore the perceptions of leadership as well as its role in fostering innovation and improving performance in the public sector.

### **1.1.2 Abu Dhabi Excellence Model**

In 2017, the Abu Dhabi Centre of Excellence launched a new excellence model (4<sup>th</sup> generation), (Figure 1), which is locally designed after years of applying the EFQM excellence model (European model). The target is to create competition among public sector departments and to recognise and reward local departments with excellent approaches. Since public sectors serve the needs of the populace and do not operate in the market in a similar manner as private

organisations, competition amongst these organisations is not the same as that of the private sector.



**Figure 1.1.** The Abu Dhabi excellence model

The Abu Dhabi excellence model takes into consideration the requirements of the government of Abu Dhabi. The model’s definition of government excellence includes working towards sustainable improvement of government entities by developing and implementing creative and innovative programs, developing the principles and criteria of the Abu Dhabi Award for Excellence in government performance, highlighting areas for improvement and ensuring a culture of excellence by complying with its established principles and requirements and deploying the best practices (Abu Dhabi Executive, 2017).

The first pillar of the Abu Dhabi excellence model is Vision, Mission and Leadership. This pillar is a core foundation of the model as it highlights the importance of leadership in achieving Abu Dhabi’s strategic objectives. It also reflects the importance of setting clear strategies based on the Vision and Mission. The second pillar of the model is innovation contributing to 10% of the overall score. The aim here is to achieve continuous innovation practices through the provision of innovative services, policies, processes, and programs in creative ways. The focus is on the efforts of government entities to create a work culture and environment that supports creativity, innovation, and continuous improvement. The assessment is in two parts:

1. Capabilities of developing and implementing innovation management systems.
2. Assessment of developing and implementing innovation management systems – related results and achievements.

Placing innovation as a pillar within the Abu Dhabi excellence model signals a clear commitment to change from traditional models of economic growth and preparing the emirate towards a knowledge-based, sustainable future. However, this approach also presents some challenges, such as measurement since quantifying the impact of innovation can be difficult. Also, the readiness of government entities to build an innovative culture and eliminate bureaucratic bottlenecks may be absent or low. There is also the challenge of building talent and training government employees while conveying a clear vision of the need to innovate.

### **1.1.3 Innovation Management System**

Public sector organisations have focused on the idea-generation process so that their services and businesses can grow and last through tough competition changes in the industry. According to the International Standard for Innovation Management Systems (ISO 56002), an organisation's ability to generate new ideas is considered a key factor in its continued growth, economic viability, well-being and growth of society (ISO56002, 2019). Therefore, the ability of an organisation to be innovative includes being able to understand and respond to changes in its environment, look for new opportunities, and use the knowledge and creativity of internal and external individuals (ISO56002, 2019). In this context, an innovation management system helps an organisation determine its vision, strategy, policy and goals for inventing and guides on how to implement relevant processes.

According to the UAE National Innovation Strategy (2015), innovation is important for; the economy to grow, businesses to be more competitive, the creation of jobs, and improvements in the efficiency of organisations either government, private, or semi-private. According to a statement from the UAE Ministry of Cabinet Affairs (UAE Government, 2023), innovation is important because it improves the quality of life, diversifies the economy, improves the knowledge economy, makes the country more competitive, creates high-skilled jobs and encourages entrepreneurship.

Based on the requirement of the Abu Dhabi excellence model, many public sector departments in Abu Dhabi built an Idea Management System (IMS), with the aim of capturing any feasible creative ideas. IMS allow organisations' employees to submit ideas through the system (manually or online), and the ideas are categorised into different subjects. Building an idea management system is a positive approach since the innovation starts with a creative idea which is then submitted to a system for capturing, evaluating, and developing employees' ideas. Some entities, such as Ma'an (Abu Dhabi Authority of Social Contribution), and the Department of Economic Development offer incentives and recognition programs to encourage employee participation. This proactive approach aligns with global best practices in innovation management and fosters a culture of continuous improvement (Gupta and Nagvi, 2018). However, some systems lack clear evaluation criteria and transparent decision-making processes, leading to confusion and frustration among employees. Moreover, the focus on internal ideation can neglect valuable external perspectives from different customers, citizens and businesses (Bessant, Lampron and Nock, 2013). To address these issues, there is a need for clear evaluation frameworks, strong interdepartmental communication, adopting mechanisms for open innovation, and incentivising innovative employees. It was also expected that the IMS would be sufficient to create a corporate innovation culture. A low degree of interaction and knowledge exchange, multiple submissions, and submission of ideas with low maturity are some of the reported limitations of existing IMS (Bansemir & Neyer, 2009). An in-depth exploration of the barriers to the adoption of corporate innovation practices in Abu Dhabi public sector organisations will be discussed in subsequent chapters.

When ideas are submitted, they are evaluated using the "innovation funnel". This mechanism allows a continuous stream of innovative ideas and based on the viability of an idea, a prototype or plan could be built to apply those viable ideas (Pyykkönen and Salminen, 2023). An Innovation funnel has 3 main stages. The first stage is for opportunity assessment where the organisation examines market data to explore the opportunities. The second stage is for insights-based ideation where ideas are received from different employees and external Research & Development teams based on the opportunity identified in the first stage. The third stage is conceptualisation, where the viable ideas are mocked up as prototypes ready for testing. The innovation funnel offers the potential opportunity for Abu Dhabi government entities to mitigate some of the challenges of the IMS and achieve the best results out of the idea management system.

As leadership style has been identified as one of the factors affecting the innovativeness of organisations (Zheng and Zheng, 2014), this study examines leadership styles that enable public sector organisations to create an innovation management system. Particularly, it explores the impact and effectiveness of transformational and transactional leadership styles on innovation within public sector organisations in Abu Dhabi. This will provide organisational leaders with information and knowledge on how to make their workplaces more innovation-friendly and improve their understanding of the factors that influence their aim positively or negatively.

This study examines corporate innovation and leadership styles in Abu Dhabi public sector organisations, taking into account the background, definitions and characteristics of the theoretical frameworks. Though there have been studies that have used innovation theory to examine entrepreneurs and private sector fields, this study is important and relevant, as no previous studies have been conducted on innovation and leadership in the context of the Abu Dhabi public sector.

## **1.2 Rationale and Motivation for the Research**

Based on the Global Innovation Index, which is a detailed index that considers the microeconomic and macroeconomic foundations of a country's competitiveness (World Bank, 2021), the Abu Dhabi government is urged to improve how public departments work. This motivated the Abu Dhabi government to seek new methods and strategies to help maintain and improve the quality of its performance and the services it provides to the public. Based on the researcher's position as a corporate development director in charge of corporate innovation and excellence, the researcher chose the innovation and leadership frameworks because they led to positive organisational changes and success when used correctly by managers of organisations. Working for the Department of Economic Development in Abu Dhabi and possessing adequate exposure to competitiveness reports is equally advantageous in gathering data on how each public sector organisation can enhance its performance. In addition, the researcher's duties in the organisation, including being in charge of improving the idea management system in the Department of Economic Development, serve as additional motivation to read, search and experiment with different solutions to create innovation-based organisations, where employees can express their ideas freely within a clear process.

Therefore, this study examines how public sector organisations in Abu Dhabi run their operations while adapting the right approach to corporate innovation, along with the right leadership style. It also analyses which practices are effective and which ones are ineffective. It is intended that the findings derived from the participants in the study can be utilised in the development of new guidelines and practices that can give organisations a competitive advantage and lead to greater success in the future. While this study focuses on the government sector of Abu Dhabi, the findings can also be explored by the private sectors of Abu Dhabi and the government sectors of other emirates to effectively study their leadership style, help policymakers draw practical implications and redesign their structure in the way most suitable for the organisations and their employees.

### **1.2.1 Contextual rationale of this study**

This study attempts to explore the recommendations of Abdulqader and Al Marri (2018) on the need to investigate the relationship between transformational and transactional leadership in supporting innovation and organisational performance while considering the respondents' demographics. In addition, the executive council of Abu Dhabi seeks to enhance the performance of public departments. Though, a significant number of studies have focused on either innovation in the private sector or the transformational leadership style, this study aims to fill the gap in studies in innovation practice in the public sector and to explore both transformational and transactional leadership styles. Since there is insufficient information on corporate innovation within public sector organisations in Abu Dhabi, it is also important to understand the value of corporate innovation, how it can be applied, how to make it beneficial, and how to practice the right leadership style to gain the benefits of innovation. As there are 73 public departments in Abu Dhabi (UAE Government, 2022), applying one model that fits all is difficult. Therefore, future studies should examine each department and understand its culture.

### **1.2.2 Theoretical rationale of the study**

Empirical evidence remains scant on public sector innovation. Concerning the relationship between leadership style and innovation, this research examines existing studies and research findings on transformational leadership style and innovation. However, as noted by Bass (1990), 'most experimental research, unfortunately, has focused on transactional leadership,

whereas the real movers and shakers of the world are transformational'. This highlights the need for examining both leadership styles and how they affect organisational performance.

Furthermore, numerous studies have focused on innovation success cases. However, there has been less research on the conceptualisation and analysis of the environments and factors that support innovation. Therefore, this study intends to contribute to the existing literature by providing insights into the effect of transformational and transactional leadership styles on organisational performance and innovation capacity of public sector organisations. It also explores the enhancement of organisational performance by utilising both top-down and bottom-up approaches (Figure 2.5).

The core principles of corporate innovation and leadership style theories create an ideal organisation: one that can plan and build a strategy on how to enhance performance by utilising these theories. The relationship between leadership, innovation, and organisational performance continues to be a central focus in contemporary management research. In the rapidly changing business landscape of the early 2020s, it is becoming more important to comprehend the subtle effects of various leadership styles on promoting innovation and enhancing organisational performance. To the researcher's best knowledge, there is no existing study that has examined the mediating effect of corporate innovation on the relationship between leadership style and organisational performance in Abu Dhabi. Therefore, there is a demand for more studies on the relationship between leadership style, corporate innovation and organisational performance. For example, Sethibe and Steyn (2015) emphasised the need for more research on leadership, corporate innovation and organisational performance. They suggested that future research should examine the mediating effect of the nature of corporate innovation on the relationship between leadership style and organisational performance (Sethibe and Steyn, 2015). Thus, this study examines the constructs of transformational and transactional leadership styles and their associations with innovation and organisational performance.

### **1.2.3 Methodological rationale of this study**

Several studies on corporate innovation and leadership style have focused on the private sector and entrepreneurs and have usually utilised the quantitative approach in their methodology. A methodological meta-analysis of management and business research shows that 76% of

empirical research adopts a quantitative methodology, compared to only 10% that uses qualitative methods and 14% that uses mixed methods (Cameroon & Molina-Azorin, 2010). Conversely, the present study focuses on public sector organisations, using the mixed-methods approach for a more in-depth exploration of the subject (see Chapter 4 for more on the mixed-methods approach). The mixed-methods approach is best suited to this study because of the complexity of innovation, especially when it is applied in the public sector. This is linked to the author's interpretivism worldview of using a method that fits the nature of the research.

Hence, this study is intended to be useful in the field of public sector-corporate innovation and leadership style, by highlighting the value to be derived and offering two models that outline a conceptual implementation plan and the innovation-based leadership models, and suggesting the best leadership style for Abu Dhabi's public sector organisations.

### **1.3 Research Aims and Objectives**

A gap is generally observed in the leadership styles adopted in Abu Dhabi's government sectors. The public sector has been following the rules established in the past, and hardly any change or innovative practice has been observed. Also, the study of the functioning of the public sector all over the world, not just in Abu Dhabi, has long been overlooked (Koech & Namusonge, 2012). Accordingly, the importance of leadership practices has become increasingly observed. Though the citizens and policymakers of Abu Dhabi generally turn to greater economies, such as the United States and the United Kingdom, to learn about leadership, studies conducted on leadership styles in the UAE have suggested that the leadership pattern it follows is just as good and that the country must be given a chance to demonstrate a leadership style that is consistent with its own culture and national identity (Fernandes and Awamleh, 2004).

The government of Abu Dhabi has developed a long-term plan to change and diversify the economy of the emirate. This plan includes less reliance on the oil industry as a source of economic activity over time and more focus on a knowledge-based economy in the future. As detailed in this plan, for Abu Dhabi to have the ability to compete with other governments, it needs to encourage innovation practices within organisations and society. One aim is to transform Abu Dhabi's organisations into an innovation-based culture (UAE Government, 2022).



Due to the identified gaps and lag in the progress of Abu Dhabi's public sector to create innovation-based organisations, this study, therefore, focuses on four main factors:

1. The leadership style practiced by department heads as top-down approaches.
2. The effect of corporate innovation as a mediation between leadership style and organisational performance.
3. The demographic elements and the impact these have on corporate innovation and organisational performance.
4. Organisational performance and how to measure it as an output for proper leadership style and corporate innovation.

Since there is a need for more in-depth knowledge of corporate innovation and leadership styles in the Abu Dhabi public sector to maintain and improve the quality of government services and products. The core values of corporate innovation and all innovation management systems are considered to mediate between leadership style (transformational and transactional styles) and organisational performance to understand the real effect of corporate innovation on the overall performance of Abu Dhabi public sector organisations. In addition, this study examines how the participants and researchers perceived and considered the way public organisations operated. Finally, this study includes the ideas of employees about how corporate innovation can help public organisations achieve success and enhance efficiency. In the following section, public sector managers' and employees' first-hand views and experiences are used to answer the following research questions:

The main question this research aims to answer is, 'What is the role of leadership style in influencing innovation and organisational performance within the Abu Dhabi government sector?' In doing so, other supplementary questions that will be explored are:

1. To what extent does the leadership style (transformational or transactional) and corporate innovation predict organisational performance?
2. Does demography (employees' gender, years of experience, position and qualification) significantly influence the scores between organisational performance and corporate innovation?
3. Does corporate innovation mediate the relationships between transformational leadership style, transactional leadership style, and organisational performance?

4. How can the concept of top-down and bottom-up approaches create corporate innovation which is used to enhance organisational performance?

As indicated in the research questions, the study was designed to contribute to the body of existing knowledge on leadership styles while focusing on transformational leadership, transactional leadership, corporate innovation and organisational performance by developing a conceptual framework for the public sector.

The study will test the following hypotheses:

- H<sub>01</sub>: Transformational leadership style, transactional leadership style and corporate innovation do not significantly positively predict organisational performance after controlling for demographic variables (gender, qualification, position and years of experience).
- H<sub>1</sub>: Transformational leadership style, transactional leadership style and corporate innovation significantly positively predict organisational performance after controlling for demographic variables (gender, qualification, position and years of experience).
- H<sub>02</sub>: There is no significant difference between employees' gender, years of experience, position and qualification in organisational performance and corporate innovation.
- H<sub>2</sub>: There is a significant difference between employees' gender, years of experience, position and qualification in organisational performance and corporate innovation.
- H<sub>03</sub>: Corporate innovation does not mediate the relationships between transformational leadership style, transactional leadership style and organisational performance.
- H<sub>3</sub>: Corporate innovation partially mediates the relationships between transformational leadership style, transactional leadership style and organisational performance.

## **1.4 Research Significance**

It has been argued that individuals who work in the private sector are more innovative because they are driven by competition or that people who work in public organisations are less innovative because the nature of their work causes them to be risk-averse in taking chances

with public money or with their personal political esteem (Hartley, 2005). However, there is scant empirical evidence to support the rhetoric that people who work in the public sector are less innovative than those who work in the private sector (Rainey, 1999). In fact, it can be argued that public organisations have high innovation potential because of their greater willingness to share ideas, information and knowledge, as they do not have to worry about giving away a ‘competitive advantage’ (Hartley, 2005).

Hence, to improve corporate innovation in Abu Dhabi public sector organisations, there is a need to study these organisations and analyse their leadership and performance. Many factors affect public sector organisations, such as serving customers in different ways and developing an innovation culture based on employees’ creativity. Another important factor is the launch of the fourth-generation excellence model, with innovation chosen as one of the main pillars for assessing organisations and their creativity.

According to Jung, Chow and Wu (2003), leadership style is the leading factor responsible for organisational innovativeness. Other authors have also confirmed that leadership is one of the prominent factors responsible for enhancing the innovative capacity of organisations (Mumford and Gustafson, 1988; Amabile, 1998; Jung, 2001). Applying corporate innovation may help public sector organisations determine the factors affecting the performance of their operations. When the study was done, Abu Dhabi public sector organisations was the focus because a review of the literature showed there is sparse information on how public sector organisations use corporate innovation as leverage to enhance their performance through a suitable leadership style. As the public sector is important in the UAE, specific and proactive strategies must be used by government organisations to remain competitive and improve their performance in the next few years. The findings of this study can assist employees of the public sector and other organisations to change or improve their organisational processes based on the findings. The opinions and experiences of the study participants can contribute to understanding how corporate innovation and leadership style interact to enhance organisational performance and how the practice can be improved to ensure that organisations are efficient, productive and sustainable.

This study is unique, as it used both corporate innovation and leadership style. Therefore, this study fills a gap in the knowledge about innovation in the public sector and a suitable leadership

style. It also reflects collaboration between public sector employees and managers involved in examining and solving the study problems.

## **1.5 Structure of the thesis**

This study is divided into nine chapters. Chapter 1 provides an introduction to the research background and problem. It presents the purpose of the study, research questions and hypotheses. The rationale and motivation are explained, and the theoretical frameworks are discussed. The nature and significance of the study are briefly explained. Chapters 2 and 3 present a literature review on leadership styles (transformational and transactional), corporate innovation and organisational performance in the global and local contexts. Chapter 4 discusses the research methodology applied in the current study and justifies the use of the mixed-methods approach. Chapter 5 presents the data analysis procedures as well as the instrument design, sampling and distribution, along with methods analysis. Chapter 6 presents the quantitative data collection and analysis of the results. Statistical and visual representations were used to explain the quantitative findings. Chapter 7 presents the qualitative data collection and the analysis of the results. The verbatim responses of the participants in the interviews are presented. Chapter 8 discusses the results of the study based on the previous literature. The conceptual plan based on the findings is also presented. The study's assumptions, limitations and delimitations are explained and the research's practical implications as well as recommendations, are presented in this chapter. Finally, Chapter 9 concludes with reflections on the results of the study.

## **1.6 Conclusion**

This study explores the crucial interplay between leadership and innovation in Abu Dhabi's public sector organisations, showing how innovative leadership fuels performance and helps public entities adapt to modern demands. This is especially important in Abu Dhabi, where ambitious goals require leaders to embrace change and nurture innovation. While innovation is more prominent in the private sector, it is equally vital in the public sector where resources are limited and expectations high.

The study also highlights frameworks such as the Abu Dhabi Excellence Model and the National Strategy for Innovation, which provide structure and emphasize continuous improvement. It explores practical methods such as idea management systems and leadership styles, but also identifies challenges such as measuring impact and overcoming bureaucracy. As Abu Dhabi strives for innovation and governance excellence, the study presents a conceptual framework, recommending guidelines for practising corporate innovation in different entities. Ultimately, it contributes to academic discourse and offers actionable insights for policymakers navigating modern governance and fostering innovation.

# **CHAPTER 2: LEADERSHIP STYLE, INNOVATION, AND ORGANISATIONAL PERFORMANCE IN THE PUBLIC SECTOR**

## **2.1 Introduction**

This chapter explores leadership styles with respect to corporate innovation and their role in influencing organisational performance. This contributes to the purpose of this thesis, which is to conceptualise innovation capacity in the public sector by examining the role of transformational and transactional leadership in supporting innovation and organisational performance using top-down and bottom-up approaches in Abu Dhabi's public sector. In this study, the leadership styles represent the top-down approach, while the bottom-up approach refers to employees' ability to innovate and enhance organisational performance.

This chapter initially explores the theoretical concepts of leadership, the types of leadership and the effect of leadership on supporting organisational innovation and influencing organisational performance. It identifies the critical factors affecting innovation and organisational performance leading to the formation of the conceptual framework and the research questions, as set out in the chapter. The literature on the following is reviewed in this chapter: corporate innovation, organisational performance, the influence of transformational and transactional leadership styles on corporate innovation and organisational performance, and innovation as a mediator of the relationship between leadership style and organisational performance.

## **2.2 Concept of Leadership**

Leadership as a term has numerous definitions. According to Ricketts and Ricketts (2010a; 2010b), more than 350 definitions of leadership have emerged in the last 75 years and these definitions differ depending on the individual perspectives and situations of the author. As an academic area of inquiry, the study of leadership has been of interest to scholars from a wide variety of disciplines which include but is not limited to the humanities, social sciences, education, management and the military. Thaib (2015) defines leadership as a concept that involves influencing others to achieve organisational objectives. It is a shared process of

influence that requires the receptiveness of the followers while also depending on the leader's characteristics. Hence, it can be said that no leader can exist without followers. Leadership has also been defined as the art of persuading others to carry out a leader's requests because they desire to do so (Axelrod, 2006; Bertocci, 2009; Yukl, 2006). Bass (2008) classified leadership concepts into three groups: leader-centric leadership, leadership as an effect and leadership as an interaction. In one-directional leadership, which is leader-centric, the focus is only on the personality and traits of the leader. In the second category, a leader is viewed as a tool for achieving objectives; therefore, leadership is considered an effect. In the third category, a leader collaborates with employees or other members of the organisation. This fosters interactions between a leader and their followers. A leader should be active and influence their followers in terms of adapting, changing, moving and learning to lead and innovate (Alblooshi, Shamsuzzaman and Haridy, 2020; Buekens, 2013; Vargas, 2015).

Although different definitions and insights related to leadership have been advanced, a recurring theme is that leadership is about an individual's influencing skills and ability to inspire others to achieve great results. Leaders are required to motivate their group members to improve their performance and inspire them to achieve their desired goals. A fundamental criticism of this idea, however, is that it assumes that the leader pulls the followers in a particular direction and limits the followers' influence on the leader rather than integrating the entire process. For example, Cohen (2009), criticized this approach, arguing that the influence aspect is ambiguous, and leaves open the question of how leaders can persuade followers. Other scholars have challenged the traditional views of leadership which portray leadership as ownership by an individual due to their status or authority and instead, advocate for the all-encompassing nature of leadership across all institutions defying any initial attached role (Northouse, 2010). Consequently, he offered a definition of a leader as someone who consults with people at all levels, asks the correct questions and identifies the best individual for a task.

Other scholars view leadership as a process between a leader and their followers to achieve common goals. For example, Bertocci (2009), Cohen (2009), Northouse (2010), and Alomiri (2016), defined leadership as a process that extends beyond an individual's ability and characteristics. It involves procedure, context, influence, setting up of a group and possession of shared goals. It is essentially a collaborative process in which leaders and followers are required to work together (Burns, 1978; Jago, 1982; Hollander, 1992). Within a team, a leader is a person who delegates, influences and motivates others to act with a view to achieving

specific objectives. A leader is anyone who has followers and is able to realise the vision of the team. It was worth noting, however, that some expectations required of a leader have evolved with time.

According to Alswedan et al., (2003), there is a distinction between leaders and managers. Leaders focus on human relations, care about the future and provide vision and strategic orientation. They practice a role model style and spend more time with their followers, paying greater attention to their followers' welfare. In contrast, managers focus on immediate achievement and progress, criteria and problem-solving, perfect performance, upholding rules and regulations, and the use of authority. This difference was also submitted by Furnham et al., (2005), who found that the essential difference between leaders and managers is that while managers perform a rational, analytic and intellectual function, leaders are inspired by vision, values, confidence and determination. Therefore, a leader is not just anyone heading a group of people but is someone people look up to and the one who not only empowers the team to achieve the bare minimum but also makes them strive for more (Bass, 1999). Hence, it can be said that leadership is the ability to deal with change while focusing on long-term goals and the big picture. It is the ability to take risks in striving to achieve more.

As this study focuses on leadership in an organisational context and the public sector in the UAE, it is important to consider a definition from one of the most influential leaders in this country, Sheikh Mohammed Bin Rashid Al Maktoum, vice president and prime minister of the UAE and ruler of the emirate of Dubai. Sheikh Mohammed believes that the credibility of leadership can only be established through action, love and respect, not words and fear. He states, '*There is a world of difference between a leadership that is based on love and respect, and one that is based on fear*' (Al Mansoori, 2018). Hence, a leader is also distinguished by his actions and how he regards and treats his followers.

Public organisations experience challenges of rapid environmental change and uncertainty while playing a leading role in providing the best health, educational, transportation, communication and housing services for the community. To be successful, however, these organisations must respond quickly to rapid shifts in the business domain by encouraging and fostering their subordinates' performance. This requires a determined leader who enhances organisational innovativeness and increases organisational performance to remain competitive (Crossan and Apaydin, 2010; Lengnick-Hall, 1992; Roberts, 1998).



The concept of followership has also evolved beyond passive obedience to active participation in the leadership dynamic. Whether this participation should be willing is, however, a central debate. Proponents of willing followership highlight its benefits for leadership sustainability and legitimacy (Northouse, 2018). Leaders who inspire commitment see smoother execution and better outcomes (Avolio and Bass, 1999). This engagement stems from intrinsic motivation and belief in the shared vision, leading to creativity and higher performance (Kouzes and Posner, 2007).

However, situations such as emergency response or transformative leadership might necessitate compliance regardless of individual willingness (Uhl-Bien and Marion, 2009). Immature followers may also benefit from guidance, even if not fully embraced (Northouse, 2018). Ultimately, context and the relationship's nature determine the need for willing followership. Effective leaders cultivate it while recognizing situations where compliance is crucial. The key lies in creating a dynamic where followers feel respected, valued, and empowered while ensuring clarity, direction, and accountability when needed. As Kouzes and Posner (2007) emphasize, "Leadership is about relationships. It's about helping others to be successful." Only then can true collaboration and collective success be achieved.

While leadership is often lauded as a driver of progress and innovation, recent research reveals unforeseen downsides demanding attention. A major concern lies in the inherent power imbalance and the risk of micromanagement. Micromanagers often lead to the creation of disengaged employees, who, as noted by Thomas and Berg (2014), become disillusioned due to excessive control. This disengagement reduces their participation, negatively affecting both performance and job satisfaction (Burns, 2017). Although micromanagement may boost short-term productivity, White (2010) and Bedeian (2002) argue that, in the long run, it fosters anxiety and fear of constant criticism, ultimately diminishing employees' motivation to contribute to their tasks (Mathieu et al., 2014). According to Ryan and Cross's 2024 study, millennials also prefer management styles characterized by trust and open communication, contrasting with micromanagement. Overall, their research shows that nearly 90% of participants would be unhappy with a micromanaging leader (Ryan and Cross, 2024). Furthermore, this disparity can morph into manipulation and abuse, as seen in a 2021 meta-analysis linking destructive leadership with increased employee counterproductive behaviours (Schyns and Schilling, 2013).

Beyond unintended consequences, leadership models focused on ambitious goals can easily tip into excessive pressure and control. Research shows that high-stress work environments are linked to increased anxiety, depression, and employee turnover. For example, a study on healthcare workers during the COVID-19 pandemic found that anxiety and burnout significantly contributed to their intentions to leave their jobs, especially among doctors and nurses (Tabur et al., 2022). Similarly, office workers under high stress reported poorer mental health and higher turnover intentions, influenced by perceived stress (Thorsteinsson, Brown and Richards, 2014). A meta-analysis also confirmed strong correlations between burnout and both depression and anxiety, although these issues remain distinct (Koutsimani, Montgomery and Georganta, 2019). Additionally, rural child welfare workers faced higher turnover rates compared to their metropolitan counterparts, emphasizing the role of environmental factors (Fulcher & Smith, 2010). These studies underscore the intricate relationship between workplace stress, mental health, and turnover across different professions and settings. Additionally, overreliance on a single leader creates a fragile ecosystem, as highlighted by a 2019 McKinsey & Company report on the dangers of "heroic leadership" which hinders long-term growth and adaptability (Feser, Mayol and Srinivasan, 2015). Finally, rigid leadership can suppress dissent and lead to groupthink in organisations. Leaders who push for their favoured solutions tend to increase groupthink symptoms, limit discussions of facts, and speed up decision-making (Ahlfinger & Esser, 2001). Groupthink is, however, characterised by avoiding opposing information, sharing biased data, and self-censorship (Kamau & Harorimana, 2008). Steps that can be taken to mitigate the identified risks include cultivating ethical frameworks, fostering open communication, and embracing distributed leadership models. In addition, fostering employee involvement, welcoming constructive criticism, and rewarding innovative thinking can assist in counteracting these effects (Adams & Daniel, 2020). Hence, recognising the limitations of certain leadership styles assists in providing an expansive understanding of the role and influence of leadership to empower and drive progress, and enhance corporate innovation, which would lead to improved organisational performance.

The exploration of leadership definitions provides a comprehensive understanding of the concept, highlighting its multifaceted nature and the various dimensions through which it can be interpreted. As leadership is a concept that requires mastery of three skills: strategic thinking, innovative thinking and situational management, leaders willing to practice these skills must adopt different leadership styles depending on the circumstances. By examining how different

leadership styles manifest in practice, a better understanding of how each style can empower and drive progress, and enhance corporate innovation, which will, in turn, lead to improved organisational performance can be derived.

## **2.3 Evolution of leadership theories**

Leadership styles have been studied extensively in many sectors, including in the field of innovation. Reviewing the leadership literature shows significant changes in terms of the focus, from traditional approaches in the 1930s to new trends and approaches in the 2000s and from leadership traits to understanding the effect of situational factors. Figure 2.1 illustrates an overview of the leadership styles, models and characteristics developed in the last two centuries.

As leadership has become a fast-growing academic field, its knowledge ecosystem aimed to be multidisciplinary in nature drawing upon theories and applications from related fields such as psychology, sociology, philosophy, and management (Simon, 2013). Thus, leadership studies came to be filled with definitions, theories, styles, functions and competencies of diverse leaders. More importantly, such leadership theories revolve around traits, behaviours, power, vision and values, among others. Theorising leadership began in the 19th century bringing to the fore several theoretical lenses that could be examined from an academic perspective.

### **2.3.1 Trait Theory**

Initially, leadership was understood through the lens of the Trait Theory, which proposed that leaders are born with inherent qualities that distinguish them from non-leaders. The trait theory, which dominated the leadership landscape in the early 20th century, proposed that leaders are born with inherent characteristics that distinguish them from followers (Bass, 1985). Several works in the 19th and early 20th century such as the writings of Thomas Carlyle, Francis Galton and Cecil Rhodes helped shape the notions of trait (intelligence, assertiveness, and empathy) to be innate and predictive of leadership effectiveness (Northouse, 2010). However, Stogdill's 1948 work challenged the earlier view that leadership traits alone determined leadership effectiveness and introduced the idea that leadership is a more dynamic and complex process that involves both personal attributes and situational factors (Stogdill, 1948).

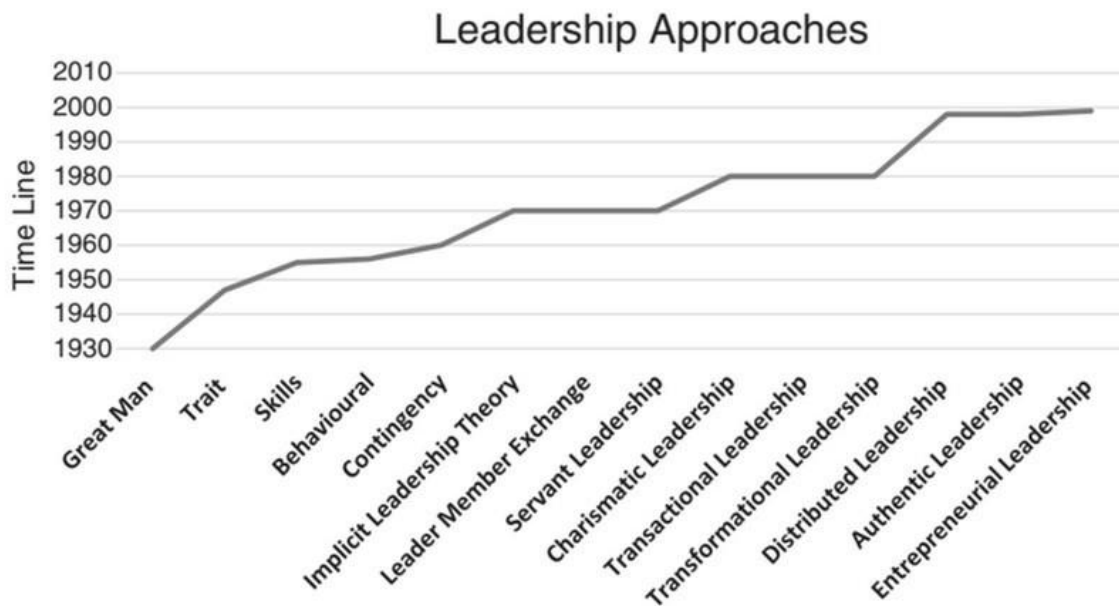


Figure 2.1. Timeline of leadership theories. Source: Adopted from Harrison (2017).

### 2.3.2 Behavioural Theory

As the limitations of Trait Theory became apparent, the focus moved towards Behavioural Theory, which argued that leadership could be learned and was not solely based on inherent traits. The behavioural theory, which emerged in the 1950s, shifted the focus from traits to behaviours, emphasizing the importance of leadership actions and styles (Hemphill, 1949). The theory identified key behaviours such as task orientation and people orientation, emphasizing that leadership is about how one behaves rather than who one is (Spillane, Halverson & Diamond, 2004). Studies by Lewin, Lippitt, and White (1939) on leadership styles—autocratic, democratic, and laissez-faire—highlighted the influence of leader behaviour on group dynamics and performance.

### 2.3.3 Contingency Theory

Contingency Theory emerged as a response to the oversimplifications of Trait and Behavioural Theories, suggesting that there is no one-size-fits-all approach to leadership. Contingency theory further expanded the leadership discourse by introducing the concept of situational

factors that influence leadership effectiveness (Fiedler, 1967). This theory presents effective leadership as being contingent upon various factors such as the leader's style, the followers' needs, and the specific situation. Fiedler's Contingency Model (1967) emphasized the importance of matching leadership style to situational demands, leading to a more nuanced understanding of leadership dynamics (Van Wormer, Besthorn & Keefe, 2007).

The evolution of leadership theories from Trait to Contingency reflects a growing recognition of the complexity of leadership. While earlier theories sought to identify universal characteristics or behaviours, Contingency Theory's emphasis on context underscores the importance of adaptability in leadership. However, it also raises challenges, as it suggests that there is no definitive guide to effective leadership, making it difficult to develop standardized leadership training programs.

#### **2.3.4 Contemporary Leadership Theories**

Contemporary leadership theories, including Servant Leadership, Authentic Leadership, and Adaptive Leadership, have gained prominence as organisations face increasingly complex and dynamic environments (Scouller, 2011). Servant Leadership emphasizes the leader's role in serving others, prioritizing the needs of employees and fostering a culture of trust and collaboration. This theory challenges traditional hierarchical models and aligns well with modern values of inclusivity and empowerment (Greenleaf, 1970). Authentic Leadership focuses on the importance of self-awareness, transparency, and ethical behaviour in leadership. Leaders who are authentic are believed to foster trust and loyalty among followers, leading to sustainable organisational success (Ilies, Morgeson, and Nahrgang, 2005) The emphasis on moral integrity and genuine relationships has made this theory particularly relevant in the wake of corporate scandals. Adaptive Leadership was introduced as a framework for leaders to navigate complex and rapidly changing environments. This theory highlights the importance of flexibility, learning, and innovation, and it underscores the leader's role in guiding organisations through uncertainty and change (Heifetz and Linsky, 2014).

While contemporary leadership theories offer valuable insights, they also present challenges in practical application. For instance, Servant Leadership's focus on humility and service can be difficult to reconcile with the need for decisive action in high-stakes situations. Similarly, Authentic Leadership's emphasis on transparency may be challenging in environments where strategic ambiguity is necessary. Adaptive Leadership, while highly relevant in today's fast-

paced world, requires leaders to constantly evolve, which can be both mentally and emotionally taxing.

In this study, leadership theories can be classified into two categories: one-dimensional and multi-dimensional theories (Table 2.1). One-dimensional theories initially put forward in the late 18<sup>th</sup> century are trait-based and focus on leader qualities and characteristics, such as autocratic, democratic, participative, authentic and servant leadership theories. By contrast, multi-dimensional theories are associated with behaviour and situational circumstances. These theories are recent and have evolved over time with changing business situations. They explore leaders' characteristics, environmental factors, and interactions between leaders and followers. Examples are contingency leadership (situational theory) and contemporary theories, which include transformational, transactional, laissez-faire, multicultural (global) and visionary leadership theories. Table 2.1 presents a classification and summary of the leadership theories as well as the originators of those theories.

In the 21<sup>st</sup> century, researchers began to focus more on management styles and transformational and transactional leadership theories, and the literature reveals a decrease in one-dimensional trait leadership theories (Blanchard, Zigarmi and Zigarmi, 1985; Lewin, Lippitt and White 1939; Gardner et al., 2010; Turner and Baker, 2018). This decline is due to the inadequacy of these theories in understanding the interaction and the relationship between leaders and followers (Xiaoxia and Jing, 2006). It is also due to the inconsistency of trait empirical studies, which is based on the belief that people are born with natural traits (Alnuaimi, 2013). In essence, they advance the idea that leaders are born not made. In addition, there is a need for more effective theories that monitor situations and the environment, develop goals and strategies, provide directions and feedback to followers, and receive suggestions from followers (Turner and Baker, 2018; Antonakis and House, 2014; Nanjundeswaraswamy and Swamy, 2014; Kim and Shim, 2003). For example, advances in technology, societal changes, and the inclusion of more women in the workplace have all influenced leadership styles, making transformational and transactional leadership styles more prevalent (Xiaoxia and Jing, 2006).

**Table 2.1** Classification of Leadership Theories

Leadership theory	One-dimensional Trait theories (leader’s characteristics)	Authors
<b>Trait leadership theories</b> Autocratic, democratic, participative, authentic and servant theories	Physiological and psychological characteristics; ethical behaviours such as patience, kindness and transparency; skills such as openly sharing information and accepting suggestions from followers	Blanchard, Zigarmi and Zigarmi (1985), Lewin (1939).
<b>Multi-dimensional</b> Behaviour and situational theories (leader’s characteristics + environmental factors)		
<b>Contingency leadership theories</b>  Situational theory	Understanding needs, situations, and concerns for organising and accomplishing tasks; flexible behaviour.	Blake and Mouton (1964), Fiedler (1978), Yukl and Fleet (1992), Hersey and Blanchard (1979, 1999).
<b>Contemporary leadership theories</b>  Transformational, transactional theories  Laissez-faire theory  Multicultural (global) theory  Visionary leadership theory	Norms, values, culture, structure, communication, rules, motivation, reward system, common goals, common strategies, interactions, top-down and bottom-up; followers’ characteristics such as positions, gender, qualifications, experiences and understanding of the perspective of followers  Individualism, competitiveness  Vision (idea), communication (words) and empowerment (action); challenging	Brun (1978), Bass and Avolio (1998), Steers, Sanchez-Runde and Nardon (2012).

## 2.4 Transformational versus Transactional Leadership Theories

Transformational leadership involves the development of individuals and their needs. As the name suggests, transformational leadership aims to transform the members of an organisation. According to Howell and Avolio (1993), transformational leaders direct their efforts to long-term goals, place value and emphasis on developing a vision and inspiring followers to pursue the vision, change or align systems to accommodate their vision rather than work within the existing systems and encourage followers to take greater responsibility for their own and others’ development. Transformational leadership uphold the best interests of their members and encourages them to achieve more. It involves an in-depth focus on employees’ intrinsic

motivation. According to Wesley and Yukl (in Wiersma, 1992, p. 103), ‘intrinsic motivation is the effort a person makes while at work to satisfy the demands for growth, such as competence, accomplishment and self-actualisation’. In this context, the leader must clearly explain the vision to transform the organisation and energise employees to achieve excellence (Yukl, 1998; Sethibe, Steyn and Sethibe, 2016). This kind of leadership has recorded high levels of satisfaction in organisations and higher levels of team spirit among members (Bass, 1999; Nanjundeswaraswamy and Swamy, 2014). Organisations following transformational leadership focus on the development of the members’ value systems and their growth. To illustrate, recent studies have reported that transformational leaders played a significant role during the COVID-19 crisis and assisted employees in working effectively and increasing organisational commitment (Lin et al., 2020; Almohtaseb et al., 2021).

Transformational leadership generates different ways of thinking and finds new opportunities in corporate challenges. Four dimensions of transformational leadership styles have been identified: individualised consideration, intellectual stimulation, inspirational motivation and idealised influence (Bass, 1990; Bass and Steidlmeier, 1999; Bass et al., 2003). Individualised consideration refers to a leader’s ability to build relationships with followers and understand their needs, skills, abilities and aspirations. In intellectual stimulation, a leader focuses on encouraging followers to stimulate and think creatively about ongoing problems. In inspirational motivation, a leader presents an inspiring vision of the future, provides guidance on how to attain this vision and raises the followers’ confidence in their abilities. In idealised influence, a leader fosters admiration, respect and dedication while highlighting the value of having a shared understanding of the organisation’s objectives (Bass, 1990).

The creativity of a workforce has a significant effect on how well an organisation performs (Chang and Webster, 2019; Ferreira, Coelho and Moutinho, 2020). According to Dingli (2008), to compete and survive in all sectors, organisations must foster creativity and innovation. Senge et al. (1994), also reported that transformational leadership has a positive relationship with innovation. This leadership style encourages innovative behaviour within organisations through intellectual stimulation. Hence, transformational leadership is essential for promoting innovation in organisations. Satya Nadella's leadership at Microsoft serves as a prime example of this concept, as he successfully guided the technology behemoth from a failing software firm to a dominant presence in the field of cloud computing and artificial intelligence. Nadella's leadership style additionally prioritizes empowerment and encourages risk-taking. He fostered



a culture that promotes employee experimentation and the questioning of established norms, especially in the face of potential failures (Prakash, Bisla and Rastogi, 2021). This is consistent with the notion of psychological safety, advocated by Edmondson and Lei (2014) when individuals have a sense of security to freely express views and undertake risks without apprehension of facing consequences. In addition, Nadella effectively conveyed a strategic plan for the future of Microsoft, with a specific emphasis on cloud computing and artificial intelligence. This served as a clear direction for personnel, ensuring that their individual actions were in line with the overall objectives of the firm (Kotter,2017).

Satya Nadella's leadership style presents a convincing argument for how leaders can effectively stimulate innovation. Nadella has revolutionized Microsoft's position in the technology market by adopting open innovation, empowering people, and effectively expressing a distinct vision. The strategy he presents provides useful insights for leaders in various areas who aim to cultivate creativity inside their own businesses.

In contrast, Howell and Avolio (1993) defined transactional leadership as the relationship between leader and follower based on a series of exchanges or bargains. With transactional leadership, followers are expected to meet specific goals or performance criteria. It involves rewarding employees as part of an exchange. Simply put, it is an exchange of work and rewards between managers and subordinates. It works with the principle of rule enforcement, contingent rewards and corrective actions. Leaders practising this form of leadership rely on rewards and punishment to drive individuals to achieve their goals and targets (Nanjundeswaraswamy and Swamy, 2014). For Golla and Johnson (2013), transactional leadership focuses on individual self-interest and motivating employees through rewards. Therefore, the transactional style has two main dimensions, namely contingent reward and active management by exception, in which the leader maintains the status quo and observes employee performance.

Transactional leadership involves setting clear goals, providing rewards based on performance, and actively monitoring progress, and it plays a vital role in Innovation Management Systems. There are three distinct behaviours that differentiate this particular style:

1. Transactional leaders implement clear performance objectives and connect them to concrete incentives (Bass, 1985). Within an Innovation Management System framework, this equates to acknowledging and motivating inventive conduct. Research indicates that establishing a

connection between financial or social incentives and particular accomplishments in innovation serves as a driving force for individual and collective productivity (Amabile, 1998; Tierney & Farmer, 2011). Providing incentives for the successful execution of new concepts or publicly recognizing creative contributions helps to cultivate an environment that promotes ongoing enhancement. Secondly, transactional leaders engage in active monitoring of progress towards predetermined objectives and take appropriate action when required (Yukl, 2006). Within an Innovation Management System, this entails monitoring the advancement of innovation projects and delivering prompt feedback and modifications. Efficient resource allocation, early identification of potential obstacles, and alignment of project direction with strategic goals are achieved by effective monitoring (Enkel Bogers & Chesbrough, 2020). Thirdly transactional leaders establish contingent relationships in which rewards and support are provided in accordance with individual achievement (Burns, 1978). It also involves allocating resources and offering assistance exclusively to teams or individuals who exhibit dedication and advancement towards innovation objectives. This strategy promotes responsibility and directs resources towards promising ideas that have a higher likelihood of achieving success (Garcia & Calantone, 2002).

Although transactional leadership provides a systematic method for overseeing innovation, it is crucial to recognize its constraints. The main emphasis is on immediate objectives and external incentives, possibly neglecting the internal factors that drive innovation and the development of long-term vision. It is also imperative for the leader to achieve a harmonious equilibrium of these behaviours to prevent the discouragement of teams encountering initial obstacles or pursuing unorthodox yet possibly beneficial discoveries. Hence, integrating transactional leadership with leadership styles that prioritize inspiration, empowerment, and intrinsic motivation, such as transformational leadership, can establish a comprehensive and enduring method for promoting innovation inside an Innovation Management System (Enkel Bogers & Chesbrough, 2020).

Burns (1978) argues that transactional and transformational leadership styles are two sides of one dimension. However, it has been suggested that these two leadership styles have different effects on organisational innovation and performance (Jung et al., 2003; Shallen and Gilson, 2004; Si and Wei, 2012; Schweitzer, 2014; Nguyen et al., 2021). Although there is considerable agreement on the importance of leaders in enhancing innovation and organisational success, little attention has been paid to investigating the effect of transformational and transactional

leadership on innovation and organisational performance in the UAE, specifically in Abu Dhabi (Abdulqader and Al Marri, 2018; De Jong and Den Hartog, 2007; Nusair, Ababneh and Bae, 2012). Therefore, in the present study, both styles were measured by their dimensions and their association with innovation to enhance organisational performance in Abu Dhabi's public sector.

## **2.5 Leadership in the Public Sector**

Leadership in the public sector faces unique challenges and opportunities compared to the private sector. These challenges include bureaucratic constraints, political pressures, and limited resources (Tizard, 2012). Public sector leaders navigate complex political landscapes, manage diverse stakeholder expectations, and operate within stringent regulatory frameworks. Research highlights the need for adaptive leadership in this context, emphasizing the importance of flexibility, collaboration, and innovation (Ingraham and Getha-Taylor, 2004). Leadership in this context often requires a strong commitment to public service values, including accountability, transparency, and equity.

Public sector leadership is often characterized by a tension between the need for bureaucratic efficiency and the demand for responsiveness to public needs. Hence, traditional bureaucratic leadership models, which emphasize hierarchy and control, may be at odds with the need for innovation and flexibility in addressing public challenges. Moreover, public sector leaders must balance competing interests, such as political pressures and public accountability, which can complicate decision-making processes. Despite these challenges, effective public sector leadership is crucial for driving innovation and improving organisational performance, particularly in an era of increasing public scrutiny and demand for transparency.

## **2.6 The Role of Leadership in Organisational Performance**

Leadership style significantly influences organisational performance, with transformational leadership being linked to improved outcomes (Bass, 1985). However, the relationship between leadership and performance is complex, and contextual factors such as organisational culture, resources, and environment must be considered. Leadership plays a critical role in shaping organisational performance, particularly through its influence on employee motivation, organisational culture, and strategic direction. Effective leadership can align organisational goals with employee aspirations, fostering a culture of high performance and continuous improvement (Andrews and Walker, 2019). Although strong leadership can drive performance

by setting clear goals, providing direction, and fostering a positive organisational culture, it can also have negative effects if it becomes overly authoritarian or disconnected from the realities of the workforce. Furthermore, the impact of leadership on performance is often mediated by other factors, such as organisational structure, resources, and external environmental conditions (Alshehhi, Jano, and Kudus, 2023). Therefore, while leadership is a critical determinant of organisational performance, it should be viewed as one part of a broader system of factors that contribute to overall success.

## **2.7 Corporate Innovation in the Public Sector**

The words creativity and innovation are often used interchangeably, and it is worth exploring if they mean the same thing. Innovation is the application of creativity. Baruah and Paulus (2019) asserted that innovation's core components are idea generation (creativity) and idea selection through careful evaluation and application of the innovative idea. The creative process is usually regarded as the beginning of innovation. In other words, if the creative idea is the input, then innovation is the output (Nguyen, Hooi and Avvari, 2021; Hammond et al., 2011; Hülshager et al., 2009). Hence, for the purpose of this research, creativity and innovation are considered different but strongly related terms.

Although there is no widely agreed-upon definition of public sector innovation, scholars and practitioners typically concur that it involves the creation and use of novel concepts, procedures, goods, or services that provide public benefits (Osborne and Brown, 2018). García-Morales, Lloréns-Montes, and Verdú-Jover (2008a) defined innovation as product development and management associations. Thota and Munir (2011) also defined the concept as new developments in services, products, ideas, behaviours and material artefacts. Similarly, Golla and Johnson (2013) linked innovation to products, defining innovation as the market introduction of new products with respect to quality, user-friendliness and new capabilities.

Conversely, Overstreet et al., (2013) described innovation as the tendency of an organisation to deviate from its core industry by shifting focus. Innovation is also described as 'an idea, practice, or object that is perceived as new by an individual or other unit of adoption' (Rogers, 2003). Therefore, in the organisational context, innovation is the 'management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of the new or improved product, process or equipment' (Trott, 2008). This can

be observed in different manifestations, including technological advancements, organisational reforms, policy innovations, and novel approaches to citizen engagement (Demir and Reddick, 2021). For example, the utilisation of blockchain technology to improve transparency in public procurement or the application of artificial intelligence to simplify administrative processes demonstrate the various uses of public sector innovation.

The concept of organisational innovativeness is broad because of its scope and multidimensional traits (Gancarzyk, 2012; He and Hirshleifer, 2022). According to Kenny and Reedy (2006), innovation at the organisational level is a continuous process of improvement usually embedded in culture. Within the public sector, innovation has become a crucial catalyst for social advancement, as it improves the provision of services, increases efficiency, and tackles complex challenges. Governments throughout have acknowledged the necessity of adopting new methods to address the changing requirements of their population and maintain competitiveness in a swiftly transforming environment. Hence, innovativeness remains a critical means of survival for organisations, as confirmed by Mone, McKinley and Barker (1998), Calantone, Cavusgil and Zhao (2002) and Iddris (2016). The notion of public sector innovation, however, is a subject of debate as it strives to uphold conventional public norms while embracing potentially disruptive new ideas (Walker, 2020).

Innovation is not only about having good ideas but also about these ideas being implemented. It begins with the main needs and challenges of the organisation and within public sector organisations, it can be especially complex. This is because, public sector organisations are politically driven organisations, with leaders who are elected periodically for a short period of time as representatives of the people. This forms one of the main barriers to public sector innovation. Other barriers include the short service time of politicians, the risk-averse culture and the difficulty in reaching an agreement in complex political organisations (Munro, 2015).

The factors driving innovation in the public sector are varied. They include market conditions, financial constraints, changes in population demographics, technological advancement and increasing expectations of citizens (OECD, 2015). Consequently, these drivers can sometimes be in conflict, as the pursuit of efficiency gains through technological innovation may contradict the requirements to guarantee fair and equal access to services for all citizens (Andrews, Boyne, and Walker, 2019). Moreover, understanding the interplay between political leadership, bureaucratic agencies, and citizen-led initiatives is crucial for designing and

implementing effective innovation strategies that can transform public services and enhance the quality of life for citizens (Trofing, Traintafillou and Kooiman, 2022).

According to the UAE National Innovation Strategy (2015), innovation is key to promoting economic growth, increasing competitiveness, providing new job opportunities and improving the work of organisations, whether they are government, private or semi-private organisations. The UAE Ministry of Cabinet Affairs states that innovation is important because it is the driver for quality of life, economic diversification, knowledge economy, improved competitiveness, creation of high-skill jobs and promotion of entrepreneurship. It requires space, inspiration, transformation and creativity. In a rapidly changing world, an organisation may become redundant if it is not innovative.

### **2.7.1 Innovation as an improvement tool**

Schumpeter (1942) introduced the concept of creative destruction which suggests that innovation drives economic progress by replacing old technologies and models with new models. Although this can sometimes cause disruptions, it is considered essential for economic growth. According to the author, this creative destruction is important for an organisation's long-term development and competitiveness (Schumpeter, 1942).

However, Innovation does not only occur when there are dramatic changes in technology, processes, products or services that transform the markets and industry. In addition to radical change, innovation can also occur as incremental changes or improvements to existing technologies, products, services and processes (Miller, Miller and Dismukes, 2005). Quality Management founders, such as Edwards Deming (plan–do–check–act–cycle), Joseph (Juran quality trilogy: quality planning, quality control and quality improvement), Philip Crosby (zero defects) and Masaaki Imai (Kaizen theory), developed their theories based on incremental improvement theory, which considers innovation as based on incremental improvement (Imai,1986; Juran, 1986). The incremental nature of innovation may convince public sector employees of how achievable an innovation is, thereby reducing resistance since employees are usually wary of radical changes. However, with incremental changes, employees can easily adopt a new concept. There are effects of selecting a particular type of innovation to adopt. Radical innovation can be risky, time-consuming, costly and highly knowledge-intensive. Conversely, incremental innovation can be developed in the employees' mindset and can be

part of the organisational culture (Cainelli, Evangelista and Savona, 2006). One of the key advantages of incremental innovation is its potential to mitigate resistance to change among employees. Unlike radical transformations, which can be disruptive and unsettling, incremental changes are more easily assimilated into existing workflows and routines. This fosters a sense of ownership and engagement among employees, as they become active participants in the innovation process, with a focus on the innovation output.

Innovation is considered an important tool for surviving and gaining a competitive advantage in the business context. It can be integrated with organisational structures, processes, policies, products and services (Gunday et al., 2011). As a result, some scholars consider innovation to be an important factor in boosting the performance of an organisation (Leitão et al., 2021; Oke, Walumbwa and Myers, 2012; Durán-Vázquez et al. 2012; Grant, 2012). Also, the purpose of innovation for some organisations is to work towards achieving large-scale sustainable goals, such as relevance, resiliency and growth. Since organisations adopt change through the creativity of their employees, there is a growing association between transformational leadership, employees' creativity and organisational performance (Gumusluoglu and Ilsev, 2009).

Traditionally, innovation in the public sector was directed towards how the public sector could support the private sector to innovate. However, since the late 1990s, governments have been exploring innovation for the public sector by creating innovation statements, developing innovation policies and constructing innovation units. This includes innovation in the form of new services as well as innovation in the form of improved efficiency. In addition, since the last global financial crisis in 2009, governments have faced intensified pressure to deliver novel solutions to their citizens in the face of severe financial constraints. Innovation—however defined—came to be viewed as a provider of solutions to address this pressure and public administrators were confronted with the need to address innovation.

It is believed that private sector employees, compared to the public sector, are more innovative because they are driven by competition. Public sector workers are considered less innovative because the nature of their work causes them to be risk-averse to opportunities involving public money. They are also considered to be averse to failure as this may tarnish their personal political esteem (Hartley, 2005). However, there is inconclusive evidence showing that people who work in the public sector are less innovative than those who work in the private sector

(Rainey, 1999). Moreover, it can be argued that public organisations have high innovation potential because those working in such organisations do not have to worry about giving away a ‘competitive advantage’. Therefore, they may show a greater willingness to share ideas, information and knowledge (Potts and Hartley, 2015).

### **2.7.2 Innovation as process and outcome**

When considering corporate innovation in the public sector, it is important to recognise the difference between innovation as a process and innovation as an outcome. Innovation, in the context of public sector organisations, refers to the systematic approaches, cooperative endeavours, and allocation of resources used to identify problems, develop original solutions, and implement them successfully. The relationship between innovation as a process and output is emphasised by well-known frameworks such as the Crossan Model (Crossan, 2010), ISO 56002 (ISO 56002, 2019), and OECD standards (OECD, 2015).

The concept of innovation as a process is in line with the Crossan Model, which highlights the cyclical aspect of innovation that includes idea generation, conversion, and diffusion. According to ISO 56002, this process requires a methodical approach that includes identifying possibilities, generating ideas, creating prototypes, and implementing them. Within the public sector, this refers to a systematic approach to tackling social challenges, involving stakeholders, and carefully distributing resources. The OECD reports that adopting a process-oriented approach promotes a culture of ongoing learning and adaptation, which is essential for public organisations navigating dynamic environments.

Innovation as an outcome, however, is the tangible manifestation of this process. According to ISO 56002, innovation is the creation or alteration of something that brings about or redistributes value. In the public sector, these outcomes manifest as enhanced services, policies, or infrastructure that enhance public value. The Crossan Model highlights the importance of diffusing these outcomes to ensure their widespread adoption and evaluating these outcomes to gauge their effectiveness and inform future innovation strategies.

Essentially, the Crossan Model, ISO 56002, and OECD recommendations provide different viewpoints, but together they emphasise the dualistic character of innovation. The process of innovation serves as the catalyst for generating innovative outcomes. Public organisations can



constantly produce and implement creative ideas that solve societal demands and enhance public value by adopting a systematic and cyclical process. This dual emphasis guarantees that innovation endeavours are not only hypothetical exercises but result in tangible improvements that benefit the organisation and citizens.

In the public sector, when an organisation focuses and creates innovative processes, employees are enabled and empowered to transform their work and achieve creative results. Hence, Tidd and Bessant (2013) considered innovation as a multi-stage process, in which all the elements allow employees to search, select, implement and capture innovative ideas (Figure 2.2).

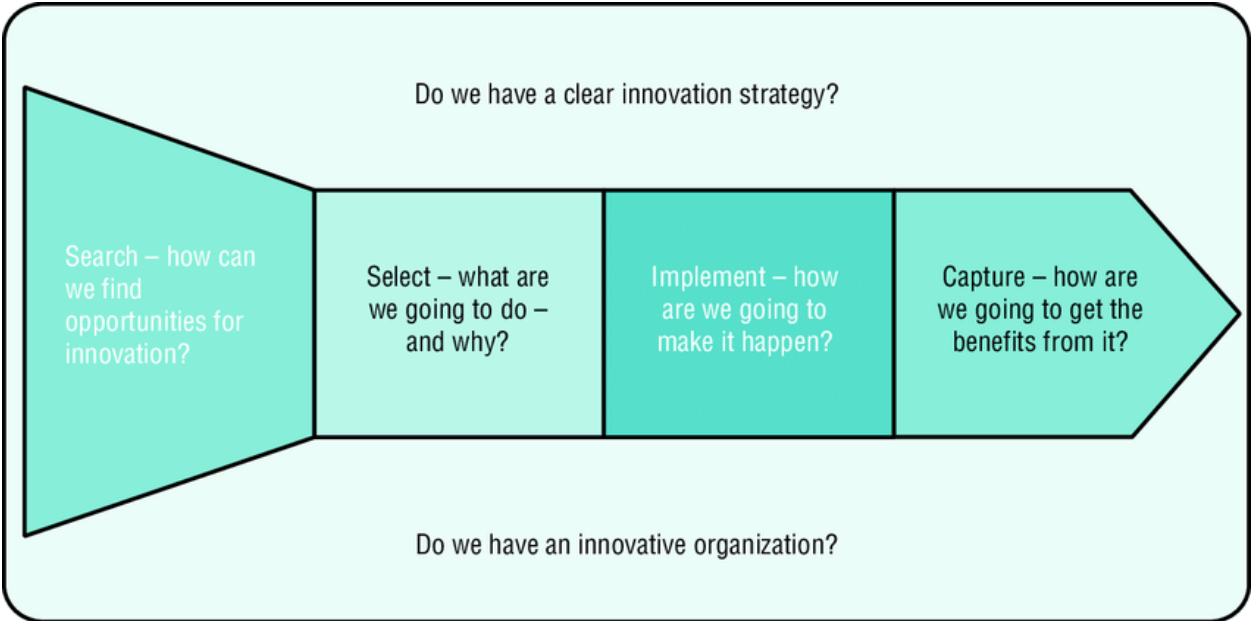


Figure 2.2. Innovation process Source: Tidd and Bessant (2013, p 47)

In the ‘search’ phase, leaders and managers are required to establish a clear vision and pathways to elicit ideas/opportunities from employees. In Abu Dhabi’s public sector, rather than relying on the traditional top-down ‘push’ approach, most government agencies have an internal automated system to pull creative ideas from different employees as a bottom-up approach. At the same time, they use their websites to pull ideas and suggestions from customers. To ‘select’ from the continuous flow of ideas or opportunities, organisations in the public sector must have a strategic plan to allow leaders or managers to choose from those ideas or opportunities that align with their strategy. In practice, many public agencies in Abu Dhabi have started to publicize organisational challenges, giving priority to solving these challenges in a creative way and in alignment with their strategies. In the ‘implementation’ phase, the idea/opportunity

is transformed into a real service, process, policy or product. Ideas with high impact and low budget and effort can be quickly and effectively implemented. Finally, to ‘capture’ the benefits for the organisation, the accumulated knowledge and skills acquired in the first three innovation phases (Figure 2.2) can be deployed to sustain the innovation (Tidd & Bessant, 2013).

### **2.7.3 Innovation culture**

Establishing an innovation culture inside public sector organisations necessitates employing diverse tactics that diverge from conventional, risk-averse settings. An essential element entails cultivating a culture of forgiveness that promotes experimentation and learning from errors. Moss et al. (2022) emphasize the pivotal significance of psychological safety, asserting that individuals who have a sense of security to engage in experimentation and express novel ideas without apprehension of retribution are more inclined to exhibit innovation. This can be accomplished by engaging in transparent communication, embracing failures as valuable learning experiences, and acknowledging and commemorating gradual advancements. Moreover, conventional incentive structures frequently give higher importance to conformity and strict adherence to established protocols, thus discouraging the pursuit of innovation. Christensen et al. (2020) suggest a transition towards "innovation-specific rewards" that recognise and motivate the undertaking of risks, experimentation, and effective execution of novel concepts. This may entail acknowledging people and teams by means of accolades, public recognition, or even prospects for professional growth.

Adopting technical developments such as AI tools can greatly improve innovation capacity. Artificial intelligence (AI) enabled data analytics can reveal concealed patterns and trends, providing valuable insights for enhancing service delivery and making informed policy decisions. According to Tasheva and Karpovich (2024), artificial intelligence (AI) has the potential to automate mundane work, thereby allowing employees to dedicate their time to more creative problem-solving and innovation. Nevertheless, meticulous incorporation and instruction are imperative to guarantee the conscientious and moral utilization of AI in the public domain.

Ultimately, promoting the exchange of knowledge among different departments and levels of hierarchy cultivates a collaborative atmosphere that is favourable to creativity. Tsai et al., (2015) emphasize the significance of establishing platforms and processes that enable

employees to easily exchange knowledge, best practices, and lessons learned. These can include internal knowledge libraries, mentorship programs, and cross-functional teams dedicated to specific innovative projects.

While much of the innovation literature is conceptual, some of the studies are normative and based on empirical research (De Vries, Bekkers, and Tummers, 2016; Miao et al., 2018). Some researchers have attempted to empirically study specific types of innovations and their diffusion. Other studies investigate the organisational capacity to stimulate innovations from local governments (Harvey, Kiessling, and Moeller, 2010; Schwarz, Eva, and Newman, 2020). However, empirical evidence remains scant concerning public sector innovation. A significant number of research studies have examined successful cases of innovation rather than conceptualised and analysed the environments that support innovation. Hence, this study aims to conceptualise innovation capacity in the public sector by investigating the role of leadership in supporting innovation and organisational performance using top-down and bottom-up approaches.

## **2.8 Innovation Management**

Innovation management refers to the systematic planning, organisation, direction, and control of innovation processes within an organisation (Helmond, 2021). The primary aim is to foster a culture where creativity and innovative solutions thrive, ultimately contributing to enhanced organisational performance (Helmond, 2021). Various approaches to managing innovation exist, each with unique strengths and weaknesses. Two of the most prominent approaches are the top-down and bottom-up strategies, each characterised by how decisions are made, and innovations are driven within an organisation.

The top-down approach to innovation management is hierarchical in nature. In this model, decisions regarding innovation are made by senior leadership or upper management and then disseminated throughout the organisation. These decisions typically come in the form of policies, strategies, or specific innovation directives that employees are expected to implement (Li, 2023). One of the main advantages of the top-down approach is that it allows for quick decision-making and is particularly effective for large-scale projects that require coordinated effort across multiple departments or sectors (Rothwell, 1994). This approach is also often used

in fully funded projects where resource allocation is centrally controlled, ensuring that innovation initiatives align with broader organisational goals and priorities (Gaynor, 2013a).

However, while top-down innovation can ensure alignment with the organisation's strategic objectives, it can also stifle creativity at lower levels. Employees may feel disengaged if they are merely executing predefined strategies without having the opportunity to contribute their own ideas. Despite these challenges, top-down innovation remains a dominant model in large, bureaucratic organisations, where control and coordination are critical for project success (Nonaka, 1994).

In contrast, the bottom-up approach to innovation management is more participative. Innovation in this approach is typically initiated by individual employees or teams who seek to improve processes or develop new solutions. This approach is highly effective for fostering a culture of creativity, as it encourages employees to take ownership of innovation and contribute ideas that can add value to the organisation (Li, 2023; Gaynor, 2013a; Gaynor, 2013). In environments that support this model, employees are given the autonomy to experiment, take risks, and innovate without waiting for formal directives from leadership.

Nevertheless, bottom-up innovation faces its own set of challenges. Gaynor (2013b) argues that one of the most significant barriers to this approach is the lack of a conducive environment in many organisations. For bottom-up innovation to succeed, organisations must actively support risk-taking and be willing to accept failures as part of the innovation process. However, few organisations are willing to embrace this level of uncertainty, which can result in bottom-up initiatives being overridden or transformed into top-down mandates over time (Gaynor, 2013b; Keupp, Palmié, & Gassmann, 2012).

Innovation rarely follows a purely top-down or bottom-up model. As Struijk and Aben (2023) suggest, these two approaches are often mutually reinforcing within organizations. For example, a bottom-up initiative that gains momentum may eventually receive formal support and resources from senior management, effectively transitioning it into a top-down model. Conversely, a top-down directive might inspire employees at lower levels to propose further enhancements or innovations, thereby triggering a bottom-up response. This interplay between the two approaches highlights the importance of flexibility in innovation management.

Leadership also plays a pivotal role in determining the success of either innovation management approach. Transformational leaders, for example, are particularly effective at promoting bottom-up innovation by empowering employees, encouraging risk-taking, and fostering an open culture where new ideas are welcomed (Bass et al., 2003). On the other hand, transactional leaders may be more aligned with top-down innovation, focusing on control, structure, and clear directives (Burns, 1987). Hence, adjusting and balancing leadership styles to accommodate both innovation management approaches is crucial.

## **2.9 Organisational Learning and Knowledge Management**

Organisational learning (OL) and knowledge management (KM) are interconnected concepts that are crucial in promoting corporate innovation in the public sector. Organisational learning as described by Argyris and Schon (1978), refers to the process by which organisations obtain, exchange, and apply information in order to adapt and enhance their performance. Knowledge Management (KM), in contrast, refers to the methodical procedures involved in creating, storing, sharing, and applying knowledge within an organisation (Nonaka and Takeuchi, 1995).

The relationship between OL, KM, and corporate innovation in the public sector can be comprehended through various theoretical lenses. Schumpeter's theory of innovation highlights the significance of "creative destruction", where new ideas and practices replace existing ones. Within this framework, OL and KM play a crucial role in promoting the creation and dissemination of new knowledge. This, in turn, empowers the public sector to effectively recognise and adopt creative approaches to address different challenges (Schumpeter, 1934). This connection is clarified by Crossan and Apaydin's multidimensional framework, which classifies innovation into four types: product, process, marketing, and organisational (Crossan and Apaydin, 2010). Both OL and KM support all these types of innovation by fostering a learning culture that encourages experimentation, collaboration, and the integration of diverse perspectives.

Corporate innovation in public sector practices, such as open innovation and co-creation, rely heavily on effective OL and KM. Open innovation entails collaborating with all parties related to the organisation to access and utilise knowledge from diverse sources (Chesbrough, 2003). KM practices, such as knowledge repositories and communities of practice, facilitate the sharing and integration of information with internal expertise. Co-creation refers to the process

of involving everyone in the design and implementation of public services (Osborne and Gaebler, 1992). Open learning procedures facilitate the ability of public sector organisations to gain knowledge from these interactions, modify their services to more effectively address user requirements, and foster a sense of ownership among the idea's owners.

Ultimately, organisational learning and knowledge management play a crucial role in driving public sector innovation. They facilitate the processes of generating, sharing and applying knowledge, which is essential for developing and implementing innovative solutions to enhance the performance of the organisations in providing products or services. Corporate innovation can be enhanced by embracing OL and KM practices, and the capacity for corporate innovation can be a tool to improve services, processes, budget utilizations and create a better value for society.

Although the theoretical frameworks outlined above offer useful insights, a critical analysis reveals nuances and potential limitations that warrant further exploration. Firstly, the impact of OL and KM on corporate innovation depends on contextual factors such as organisational culture, leadership style, and resource availability. A study conducted by Kim and Lee (2011), discovered that the impact of KM on fostering innovation is influenced by the level of organisational openness and collaboration. Additionally, the specific style of innovation being focused on, such as service, process, strategy, or organisational innovation, may require different approaches to OL and KM (Kim and Lee, 2011).

Furthermore, the emphasis on knowledge creation and sharing overshadows other critical aspects of innovation, such as risk-taking, experimentation, and failure tolerance. A study by Bason (2010) highlights the importance of “design thinking “and prototyping in corporate innovation, which emphasise iterative learning and adaptation rather than linear knowledge transfer. Moreover, the significance of power dynamics and political issues in the public sector must not be disregarded. Torging et al. (2012) contend that corporate innovation in the public sector frequently requires managing conflicting interests and reaching compromises, which may not always support open and collaborative knowledge practices.

Measuring and evaluating organisational learning (OL), knowledge management (KM), and corporate innovation in the public sector continue to be difficult tasks. Although other metrics and indicators have been suggested, there is a lack of agreement on a standardised method,

which hinders the ability to compare and evaluate the effects of various interventions. The long-term effects of OL and KM on corporate innovation may also be difficult to isolate from other contributing factors, such as technological advancements or policy changes.

## **2.10 Organisational Performance**

Companies and establishments generally strive to enhance their performance. By accomplishing this, their revenue will increase, their reputation will improve, customer satisfaction will be enhanced, and employees will work with greater satisfaction in their organisations. For these reasons, organisations use multiple methods to measure their performance. Therefore, measuring the performance of an organisation is vital to understanding how the organisation performs, where the gaps are and how to enhance performance, satisfaction, and reputation.

According to Overstreet et al. (2013), organisational performance can be measured by operational and financial performance. Operational performance is when organisations serve customers effectively and efficiently, while financial performance includes profitability and monetary measures, such as return on investment or return on assets. According to Gentry and Shen (2010), the most effective way to measure organisational performance is to use a combination of financial and non-financial measures. Golla and Johnson (2013), calculated organisational performance as follows:

*Innovation output (% revenue related to innovation + the number of new or enhanced products) – Innovation commitment (% expenses of innovation and innovation strategy).*

In this study, the researcher adopted a quantitative measure to study the impact on organisational performance as a result of different leadership styles and corporation innovation. One of the tools used to measure organisational performance, which has entered widespread use during the last two decades, is the balanced scorecard. This was first developed by Robert Kaplan, an accounting professor at Harvard University, and David Norton, a consultant from the Boston area and reported by Johnson and Kaplan (1987) in their book *Relevance Loss*. Young (1998) defined the balanced scorecard as a tool for communicating corporate goals to frontline workers who are responsible for reaching them. The balanced scorecard balances traditional financial measures, such as net income and return on investment, with operational

measures, customer satisfaction, internal business processes and an organisation's ability to innovate and learn. The scorecard lists the goals and then measures and records whether the business is reaching them. The goals are broken down into measurable metrics developed from the data collected throughout the business.

Kaplan and Norton (1992) described the innovation of the balanced scorecard as follows:

The balanced scorecard retains traditional financial measures. However, financial measures tell the story of past events—an adequate story for industrial-age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate for guiding and evaluating the journey that information-age companies must make to create future value through investment in customers, suppliers, employees, processes, technology and innovation.

Hence, the balanced scorecard focuses its performance measurement on progress towards the organisation's goals in each of the four perspectives: learning and growth, business process, customer perspective and financial data. In designing the scorecards, managers begin with the organisation's goals and strategies for achieving these goals and then identify the most important measures of performance that can predict long-term success. Some of these measures are operational lead indicators, while others are financial lag indicators. Managers must consider the links between strategy and operations and the way these operations affect finances both now and in the future (Bamber, Brown, and Harrison, 2008).

Existing literature is replete with examples of the successful implementation of the balanced scorecard approach, especially in private organisations. In the public sector, organisations have recognised that financial metrics alone are inadequate for measuring and managing performance (Kaplan, 2001). Kaplan and Norton (1992, 1996) complemented the financial perspective with the other three perspectives: customer, internal process and learning & growth. In the non-profit sector, the financial perspective represents a constraint rather than an objective. While non-profits monitor spending and adhere to financial budgets, their success or failure is not measured by spending in relation to budgeted amounts. As Kaplan (2001) noted, a growing number of non-profit organisations have begun using the balanced scorecard mode. According to Kaplan, a typical non-profit has difficulty placing the financial perspective at the top of the balanced scorecard, and non-profits consider placing a mission objective at the top



of their scorecard because the mission represents their accountability to society. Kaplan (2001) also suggested that non-profits expand the definition of who the customer is.

Conversely, public sector scorecards (Moullin, 2013) are especially designed for the public and voluntary sectors, rather than being an adaptation from the private or other sectors. They have the following perspectives:

1. Strategic. This perspective refers to the key performance outcomes reflecting why the service exists and what it hopes to achieve.
2. Service. This perspective refers to how an organisation looks at service users and other key stakeholders.
3. Operational excellence. This perspective refers to the effectiveness of the process and the staff, and it includes such measures as staff satisfaction.
4. Financial. This perspective refers to how well an organisation manages its funds and keeps costs down.
5. Innovation and learning. This perspective addresses whether the organisation continues to improve, learns from other organisations and creates additional value for service users and other stakeholders.

Most organisations focus on a few financial measures, but this limits them in terms of how they can improve their overall performance, as normal processes do not indicate which important focal activity points ensure the achievement of the targeted result. The results of the balanced scorecard reports enable the organisation to direct managers and employees to the key issues that will enhance the performance level of the organisation (Kaplan and Norton, 2000).

Terry Leahy, while serving as CEO of Tesco, led a significant adoption of the Balanced Scorecard (BSC) framework. Leahy acknowledged the constraints of relying just on financial measures and therefore aimed to use a more comprehensive approach to evaluate and oversee Tesco's performance. This BSC framework (Financial, Customer, Internal Processes, and Learning & Growth) is in line with Leahy's vision of creating a customer-focused and innovative organisation (Kaplan and Norton, 2008). Tesco's approach, commonly known as the "Steering Wheel", adopted the BSC to include five essential areas: Customer, Community, Operations, People, and Finance (Tesco, 2008). This customized approach ensured that strategic objectives were transformed into practical steps that were implemented throughout the organisation, from senior executives to frontline staff. Leahy's focus on staff engagement

and empowerment built a culture where each person comprehended their responsibility in contributing to Tesco's overall success (Leahy, 2012). The BSC enabled the effective transmission of strategic priorities, aligned individual goals with organisational objectives, and established a framework for continuous learning and improvement.

Leahy's leadership greatly enhanced the effectiveness of the BSC in driving Tesco's strategic initiatives. This included expanding the product selections, developing customer loyalty programmes, and prioritising operational efficiency (Leahy, 2012). The implementation not only improved Tesco's financial success but also elevated customer happiness, employee morale, and overall organisational effectiveness. Leahy's experience at Tesco is a convincing example of how the Balanced Scorecard, when adopted and incorporated into the organisational culture, can significantly improve a company's performance and provide a lasting competitive advantage.

Similar to other management tools, the balanced scorecard has limitations that may lead to problems in practice. Marr and Adams (2004) argued that cause-and-effect relationships between outcome measures and driver measures for each of the four perspectives could be too complex to understand and that their interlinked relationship could lead to changes in several outcome measures stemming from a single driver measure. Wenisch (2004), also questioned whether the cause-and-effect relationship is in the right proportion, especially as it relates to non-financial measures. For the purpose of the current study, five perspectives (i.e. organisational key performance indicators [KPIs], processes, customer satisfaction, employee satisfaction and growth and learning) were used to measure the effect of transformational and transactional leadership styles on organisational performance in the Abu Dhabi public sector.

## **2.11 Conclusion**

This chapter has explored the theoretical foundations of leadership, its various styles, and its pivotal role in fostering innovation and driving organisational performance. The chapter delved into the complex dynamics between transformational and transactional leadership, highlighting their contrasting yet potentially complementary influences on innovation and performance. The examination of corporate innovation in the public sector revealed its unique challenges and opportunities, emphasizing the need to adopt tailored strategies that foster a culture of innovation and continuous improvement.

By dissecting the interconnected nature of organisational learning, knowledge management, and innovation, this chapter underscored the vital role of knowledge creation, sharing, and application in driving successful innovation endeavours within public organisations. In addition, the chapter underscored the critical distinction between innovation as a process and innovation as an outcome, showcasing how frameworks such as the Crossan Model, ISO 56002, and OECD recommendations guide public sector organisations in fostering a sustainable culture of innovation that delivers tangible results.

Finally, the chapter explored the multidimensional nature of organisational performance and adopted a holistic approach that encompasses financial and non-financial metrics. The balanced scorecard emerges as a powerful tool for measuring and managing performance in public sector organisations, offering a balanced perspective that aligns strategic objectives with operational activities and long-term success.

This review of the theoretical concepts and practical implications of leadership, innovation, and performance lays a solid foundation for the empirical investigation that follows in the subsequent chapters. By bridging the gap between theory and practice, this research aims to provide actionable insights for public sector leaders in Abu Dhabi and beyond, empowering them to cultivate an innovation-driven culture that delivers sustainable performance and public value.

## **CHAPTER 3: LEADERSHIP STYLE, INNOVATION, AND ORGANISATIONAL PERFORMANCE: AN EXPLORATION**

### **3.1 Introduction:**

In the dynamic business landscape of the 2020s, understanding the nuanced impact of leadership styles on innovation and organisational performance is paramount. Leadership, as a central driver of innovation, has been extensively studied and its influence on organisational innovativeness has been well-documented. Leaders play a pivotal role in motivating employees, aligning individual needs with organisational goals, and fostering an environment conducive to innovative thinking.

This chapter explores the effects of transformational and transactional leadership on these critical outcomes, drawing upon recent empirical research and collected data. It also explores a multi-dimensional framework for understanding organisational innovation, as proposed by Crossan and Apaydin (2010). Their model emphasizes leadership behaviours, organisational processes, and resource allocation as key drivers of innovation outcomes. In particular, several key elements from Crossan and Apaydin's framework are focused on: the top-down leadership approach, vision and strategy, organisational systems, learning and growth, and culture. Examining the interplay between effective innovation and performance not only enhances outcomes but also fuels future innovation cycles. The impact of leadership style and innovation and how these serve as a mediator on organisational performance is also explored.

The relationship between leadership style, innovation, and organisational performance is also explored within the specific context of Abu Dhabi's public sector while considering the unique cultural and organisational dynamics. Context-specific exploration of the determinants of innovation and how innovation outcomes are reflected in organisational performance is also conducted. Finally, the chapter shapes the hypothesis of the impact of demographic factors (gender, position, years of experience, qualifications) as a bottom-up approach to innovation.

### **3.2 Theoretical Foundations and Determinants of Innovation**

Innovation research draws on various theoretical perspectives, including Schumpeter's 1942 concept of creative destruction, which emphasizes the role of innovation in driving economic progress by disrupting existing markets and industries (Hagedoorn, 1996). Other frameworks are the Upper Echelon Theory, Resource-Based View, Dynamic Capabilities, and Process Theory. Innovation theory explores how new ideas, products, and processes emerge and become integrated into existing systems. Theoretical foundations of innovation provide a broad understanding of how innovation drives progress, yet they often overlook the practical challenges of implementing innovation within organisations. Schumpeter's theory, while influential, may not fully account for the complexities of innovation in the public sector, where the risk appetite is typically lower, and the focus is often on incremental rather than radical innovation.

Research has identified various determinants of innovation, including leadership, organisational culture, resources, and environmental factors (Colesca and Dobrin, 2009; Bass, 1985; Martins & Terblanche, 2003; Barney and Clark, 2007; Teece, 2007). Leadership plays a crucial role in fostering innovation, with transformational leadership being particularly effective (Bass, 1985). Organisational culture, including values, norms, and beliefs, also influences innovation (Martins & Terblanche, 2003). Resources, such as knowledge, skills, and technologies, are essential for innovation (Barney and Clark, 2007). Environmental factors, including competition, customer needs, and technological changes, also drive innovation (Teece, 2007).

The Upper Echelon Theory proposes that leadership influences innovation through their values, experiences, and personalities (Hambrick & Mason, 1984). It argues that organisational outcomes, including innovation, are strongly influenced by the characteristics of top executives. Leaders' backgrounds, experiences, and values shape their strategic choices, which in turn impact the organisation's innovation capacity. Resource-Based View emphasizes the importance of organisational resources, such as knowledge, skills, and technologies, in driving innovation (Barney and Clark, 2007). It argues that organisations' ability to innovate depends on their unique resources and capabilities, such as intellectual capital, technology, and human resources. Dynamic Capabilities focuses on the organisation's ability to adapt and evolve in response to changing environments (Teece, 2007). It extends the RBV by emphasizing the importance of an organisation's ability to adapt and reconfigure its resources in response to

changing environments. Process Theory underscores the significance of innovation processes, including idea generation, experimentation, and implementation (Van de Ven, 1992). It focuses on the steps and activities involved in innovation, highlighting the importance of structured processes in guiding the development and implementation of new ideas. This approach emphasizes the need for a systematic approach to innovation, ensuring that all aspects of the process are carefully managed to achieve desired outcomes.

While these theories provide valuable insights into the determinants of innovation, they also have limitations. The Upper Echelon Theory's focus on top executives may overlook the contributions of middle managers and frontline employees to the innovation process. RBV and Dynamic Capabilities highlights the importance of resources but may underestimate the challenges of acquiring and maintaining these resources in a rapidly changing environment. Process Theory offers a structured approach to innovation, but it may be too rigid for highly dynamic and uncertain contexts, where flexibility and adaptability are crucial. Nevertheless, innovation theory must adapt to contemporary challenges, such as digital transformation and sustainability, which require new approaches to managing and fostering innovation.

### **3.3 Effects of Transformational and Transactional Leadership Styles on Corporate Innovation and Organisational Performance**

Leadership style and innovation are related in terms of enhancing organisational performance. Leadership is a prominent factor responsible for enhancing the innovative capacity of organisations (Mumford and Gustafson, 1988; Amabile, 1998; Jung, 2001; Junga, Chow and Wu, 2003; Jyoti and Dev, 2015; Tidd and Bessant, 2020). The intent to innovate is an important area for enhancing performance and establishing a competitive advantage in firms (Rajapathirana and Hui, 2018; Allen and Dovey, 2016; Burdon and Dovey, 2015; Peltokorpi, Nonaka and Kodama, 2007). Innovation also serves as a means of survival through adaptability and change management.

The key dimensions of transformational leadership include idealized influence (acting as a role model), inspirational motivation (communicating a compelling vision), intellectual stimulation (encouraging creativity and critical thinking), and individualized consideration (attending to the needs of each follower) (Bass and Riggio, 2006). It has been suggested that transformational leaders cultivate a work atmosphere that promotes employee empowerment, recognition, and

active participation in sharing creative ideas. On the other hand, transactional leaders place a high emphasis on maintaining order, maximising efficiency, and strictly following established procedures (Burns, 1978). Although this method can be successful in preserving stability and guaranteeing the accomplishment of tasks, it may not be favourable for cultivating an environment that promotes innovation.

Other studies have demonstrated the pivotal role of leadership in fostering innovation and driving organisational performance. According to Makri and Scandure (2010), an influential and effective leader is one who can think creatively and invest human and social capital. For Jung, Chow and Wu (2003), leaders influence the innovation process by motivating followers and linking individual needs to the high aims of the organisation. Leaders create an encouraging environment in which employees can think out of the box without fear of being judged or losing their jobs. According to Mintzberg (2011), 'leadership is a necessary component of management'. The enthusiasm, opinion, leadership and vision of a Chief Executive Officer (CEO) are considered critical determinants of an organisation's success in innovating. For example, CEO leadership drives innovation by creating an environment with high-quality work relationships. An enthusiastic and visionary CEO (i.e. one that uses a transformational leadership style) creates an organisational culture that encourages open knowledge integration and learning, which are essential for innovation (Wisdom et al., 2014; Bucciarelli, 2015; Caridi-Zahavi, Carmeli and Arazy, 2016). Figure 3.1 presents a framework for organisational innovation and illustrates the effects of leadership styles on corporate innovation.

Transformational leadership, with its emphasis on inspiration, empowerment and intellectual stimulation, has been shown to be positively associated with enhanced innovation within organisations (Li, 2022). Transformational leaders foster an environment of psychological safety, which motivates employees to take risks, experiment with new ideas and challenge the status quo (Edmondson and Lei, 2014). Consequently, this leads to increased creativity, greater innovation output, and improved organisational performance. Transactional leadership, although not significantly associated with radical innovation, is essential for sustaining operational efficiency and attaining short-term performance objectives (Breevaart et al., 2021). Transactional leaders enable successful job completion and optimal resource utilisation by establishing clear expectations, offering structured feedback, and rewarding performance, which enhances overall organisational performance.

## Building Organizational Innovation Capability



Figure 3.1 Building organisational innovation capability. (Source: Collins, 2018)

Leaders in the public sector can create a supportive innovation climate for managers and frontline employees (bottom-up approach) by consulting staff, creating different rewards and offering informal recognition to innovators (Borins, 2002). They can eliminate the control-oriented culture in organisations and publicly champion bottom-up innovations that have been proven successful and have popular appeal. Borins (2002) found that more than 50% of ideas in an organisation come from managers and frontline employees. Creating positive change within an organisation is the main purpose of transformational leadership, and this makes transformational leadership the ideal style for corporate innovation (Jaskyte, 2004; Bass and Riggio, 2006; Pieterse et al., 2010).

Crossan and Apaydin (2010), provide an extensive framework for comprehending organisational innovation, based on a meticulous analysis of previous studies. Figure 3.2 is the central component of their approach, visually representing the complex connection between leadership, innovation, and organisational performance.



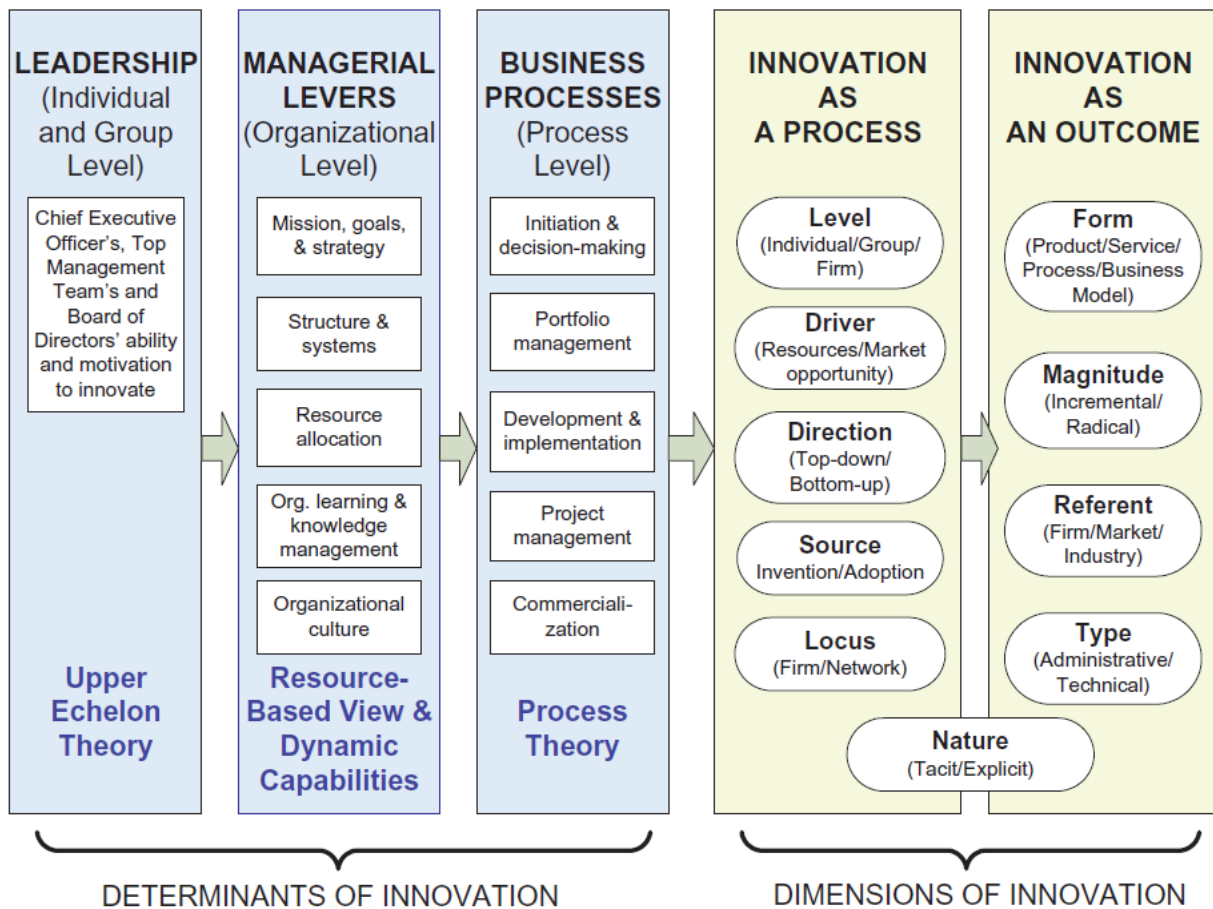


Figure 3.2. Multi-dimensional framework of organisational innovation – Source (Crossan & Apaydin, 2010)

Figure 3.2 illustrates innovation as a dynamic interaction between a method and a result. The process dimension involves various actions such as generating ideas, conducting experiments, and implementing them. These activities are driven by leadership behaviours such as having a clear vision, inspiring others, and advocating for new ideas. These leadership attributes cultivate a setting that is favourable to innovation, where creativity flourishes and risks are welcomed (Crossan and Apaydin, 2010).

This inventive procedure subsequently results in desirable outcomes - products, services, or behaviours that improve organisational performance. These results might appear in different forms, ranging from increased market share, increased profits, enhanced employee involvement, and positive impact on society. Figure 3.2 highlights the cyclical nature of this relationship: effective innovation not only enhances performance but also contributes to the process, producing additional inspiration and resources for future cycles of innovation.

The main insight derived from Crossan and Apaydin's (2010) paradigm is that leadership plays a crucial role in coordinating the intricate interplay between process and outcome. Competent leaders establish an environment conducive to the growth of innovation, guaranteeing that creative ideas are transformed into tangible progress that encourages the organisation towards success. Figure 3.2 functions as a guide for cultivating a culture of innovation in an organisation, emphasizing the crucial requirement for effective leadership to connect ideas with significant outcomes (Crossan and Apaydin, 2010).

According to Crossan & Apaydin's (2010) framework, the Upper Echelon Theory (UET) suggests that the qualities of an organisation's top management team (TMT) have a major impact on its strategic decisions and, as a result, its innovation results. The UET proposes that the demographic characteristics (such as age, education, experience, and background), personality traits, leadership style, and cognitive biases of TMT members influence how they perceive the environment and make strategic decisions. In the context of organisational innovation, UET refers to the notion that a top management team (TMT) consisting of individuals with varied backgrounds, experiences, leadership styles, and a willingness to take risks is more inclined to accept new and original ideas, promote experimentation, and foster an organisational culture conducive to innovation. On the other hand, a homogeneous TMT with limited experience and risk-averse tendencies might hinder innovation efforts.

The second pillar of Crossan & Apaydin's (2010) framework is the Resource-Based View (RBV), which highlights the significance of an organisation's internal resources and skills in attaining a long-lasting competitive advantage and fostering innovation. Resources could be financial assets, technological expertise and software, intellectual property, a strong brand reputation, or a skilled and motivated workforce. According to the model, the (RBV) emphasises that organisations with resources that are valuable, uncommon, difficult to imitate, and cannot be easily replaced are in a better position to innovate. RBV proposes that organisations utilise their distinct resource allocations to develop and implement innovative products, services, or processes that are difficult for competitors to replicate.

Regarding processes, the framework emphasises the importance of organisational processes and routines in facilitating or inhibiting innovation. The theory suggests that innovation is not a random event but rather a systematic approach involving various stages, including idea

generation, idea selection, resource allocation, development, and commercialization. Efficient procedures and regular practices allow organisations to optimise these phases, promote cooperation among employees, and reduce the risk of innovation failure. Conversely, rigid or bureaucratic processes can stifle creativity, hinder communication, and impede the implementation of novel ideas.

Although Crossan and Apaydin's (2010) framework provides a valuable model for comprehending the connection between leadership, innovation, and organisational performance, there are several aspects that warrant further examination. Firstly, the framework of leadership oversimplifies the concept by not adequately distinguishing between various leadership styles and their specific effects on different forms of innovation. Secondly, there is no due consideration of the role or impact of organisational context. The authors propose that the framework can be used universally, possibly disregarding the impact of organisational culture, size, and industry on the process of innovation. This is relevant because the focus of this study is the public sector, where performance is not driven by profit or market share.

Examining the impact of various leadership styles on innovation can provide more detailed insights and practical advice on leadership diversification. On this note, it is crucial to distinguish between private and public sector organisations. Each has a different nature, culture, purpose and approach to innovation. By recognizing these constraints and investigating potential areas for future research, the framework's worth can be augmented, yielding a more resilient and nuanced comprehension of the complex correlation between leadership, innovation, and organisational performance.

Hence, this study examines the following areas from Crossan and Apaydin's (2010) framework: top-down approach by the leadership, vision & strategy, systems, organisational learning and growth, and organisational culture. Data was collected to analyse the determinants of innovation as well as the innovation outcome which is reflected in organisational performance. Chapters 5 and 6 examine the mentioned determinants of innovation and the innovation outcome in detail.

Transformational leadership is an effective method for enhancing individual and group performance (Bass, 1985). It is based on motivation, inspiration and influence for followers to achieve their goals with high standards (Antonakis, Avolio and Sivasubramaniam, 2003; Elias-

Fatile, 2021). Motivated employees reinforce organisational performance, leading to enhanced financial gains (Giroux and McLarney, 2014). Transactional leaders tend to engage in exchanges with their employees so that, if they show high performance, they will be rewarded; if they show low performance, they will be punished or rewarded. Either transactional or transformational leadership style, or a blend of both, can highly influence creativity and innovation and is positively related to organisational performance. Although the transactional leadership style promotes organisational learning processes, innovation, high performance and competitiveness from a theoretical and empirical perspective (Vargas, 2015; Alrowwad, Abualoush, and Masa'deh, 2020). For Bass (1990), both styles complement each other.

Transactional leadership is a task-oriented style, whereas transformational leadership is a people-oriented style. For example, the managerial grid model developed by Blake and Mouton (1964) is one of the great theories for understanding human nature in terms of leading people and projects. By nature, humans are concerned with either people or tasks and results. The concept of the managerial grid involves a more detailed picture of the transformational and transactional styles and how both styles operate. The transformational style is people-centred, whereas the transactional style is task-centred. Therefore, managerial grid theory serves as additional evidence of why both the transformational and transactional leadership styles need to be tested, as leaders around the world position themselves according to these styles. By understanding their behavioural skills, leaders can push themselves into the missing parts of their management traits to create the required balance and achieve the ideal approach to team management.

This consideration leads to another argument regarding the importance of synergy between top-down and bottom-up approaches. Weintraub (2018) revealed that the synergy between the approaches relevant to the public sector is considered a factor in the sector's ability to be innovative. In the current study, the transactional and transformational styles represent the top-down approach, whereas the bottom-up approach refers to employees' ability to innovate and enhance organisational performance.

Each of the mentioned innovation and leadership theories and concepts has been empirically shown to have a positive effect on an organisation's innovation capacity and the innovation process described in Figures 3.1 and 3.2. However, the absence of any particular factor does not necessarily mean that an organisation will fail to achieve its innovation objectives.

Therefore, this study examines leadership styles and their association with innovation and organisational performance.

The results regarding the relationship between transformational and transactional leadership styles and innovation are inconsistent and recent studies have demonstrated that both styles have a significant positive effect on innovation (Purwanto et al., 2021). According to Sajems (2015), if the aim is to enhance corporate innovation, leaders should practice the transactional style; if the aim is to enhance organisational performance, leaders should practice the transformational style; and if the aim is to enhance organisational performance using innovation as an enabler, then leaders should practice both leadership styles. However, Sajems (2015) also reports that the transformational leadership style was the most frequently discussed, especially when associated with innovation.

Similarly, some studies have found a real effect of transactional or transformational leadership on organisational performance (Purwanto et al., 2019; Purwanto 2020; Purwanto, 2021). In addition, Al Zefeiti, (2017) reports that transformational leadership dimensions are positively related to employees' work performance. This indicates that transformational leadership components have emerged as contributing factors and play an important role in enhancing employees' work performance. Avolio, Bass and Berson (2000) also reported that the transformational leadership style usually generates higher performance than the transactional leadership style. Although this is applicable in the long term, research has found that transactional leadership has better results in the short term (Khan and Adnan, 2014; Dong, 2023).

### **3.4 Demographic Factors**

One of the main predictors of organisational innovation is the demographic characteristics of staff, such as gender, experience, qualifications and job position (Nusair, Ababneh and Bae, 2012; Abdulhalim and Ababneh, 2009; Fritz and Ibrahim, 2010; Al-Azimi, 2006; Mohyeldin and Suliman, 2001). In the Arab context, educated male respondents in the Jordanian private sector who had held their positions for more than 40 years tended to be more creative (Mohyeldin and Suliman, 2001). Similar findings were reported by Abdulhalim and Ababneh (2009), who found that female employees of public enterprises in Jordan who had greater levels of education engaged in innovative activity on a higher level than those who did not, while the

experience factor had no bearing on inventive behaviour. This is consistent with the study of Al-Shammari and Khalifa (2019), who found a significant relationship between innovative behaviours and employee gender and academic qualifications in Bahrain. In contrast, Iren and Tee (2018) found that gender and education did not greatly affect innovation, while experience and independence did. These results are similar to those reported by Al-Azimi (2006), who found that public sector workers in Saudi Arabia with less education, but more experience reported better levels of creativity than their less-experienced peers.

It is also reported that men and women may exhibit different approaches to innovation as a result of a combination of biological and social factors. Eagly and Carli (2018), suggest that women generally exhibit a higher inclination towards collaboration, are relationship-oriented, and utilise inclusive communication styles which may foster a more innovative climate. Men, on the other hand, tend to be more competitive and risk-taking. Women's participation in innovation processes can bring different perspectives and approaches, leading to more comprehensive and creative solutions. These differences could manifest in varying leadership styles and decision-making processes, potentially impacting the types of innovation pursued. Dezsó and Ross (2012) however, argue that individual differences within each gender surpass broad generalisations. According to Smith (2019), the occurrence of the "leaky pipeline" phenomenon, where women remain underrepresented within organisations, may limit their influence on innovation. While there is strong evidence supporting the positive impact of gender diversity on innovation, significant barriers remain that limit women's participation in innovation. These barriers include gender bias, unequal access to resources, and cultural norms that discourage women from pursuing careers in science, technology, engineering, and mathematics (STEM) fields. These biases can further hinder female innovators, limiting their opportunities and recognition.

There is evidence to support the idea that having a greater variety of genders in all positions improves creativity, and the ability to solve problems, and is positively associated with innovation outcomes (Chen and Evans, 2015; Sastre, 2015). Diverse teams coalesce a wider range of perspectives, experiences, and problem-solving approaches, which can enhance creativity and decision-making (Nielsen, 2017). Moreover, the presence of gender diversity can serve as an indication of a dedication to inclusivity, which in turn can attract and retain highly skilled individuals from diverse backgrounds. Consequently, this can lead to a more robust

talent pool and a greater capacity for innovation. This also emphasises the advantages of using different views to drive innovation.

In addition, it is reported that other employees' demographic factors influence their perception of the practice of transformational leadership of their direct supervisors (Ganem, 2009; Al-Azimi, 2006). Ganem (2009) reported that older workers had a lower perception of their supervisor's transformational style compared to younger staff. Al-Azimi (2006) showed that workers with a low level of education believed that their supervisors practised transformational leadership compared to the participants who had a high level of education. According to the latter's leadership perspective, leadership is a process rather than a quality or personality that a leader possesses. This implies that leadership is not linear and that it may be influenced, altered and developed by experiences. As both leaders and followers participate in the leadership process, they need each other (Hollander, 1992; Jago, 1982; Burns, 1978). It is, however, crucial to recognise that these statements are generalisations and there can be significant variations among individuals within each gender. Furthermore, the influence of gender or characteristics associated with innovation is probably affected by organisational culture, societal norms, and individual experiences. Hence, this study aims to contribute to this ongoing discourse by examining the association between corporate innovation and gender differences. It assumes that demographic variables affect perceptions of innovation and organisational performance.

Based on these arguments, the first and second hypotheses are presented as follows:

- H<sub>01</sub>: Transformational leadership style, transactional leadership style and corporate innovation do not significantly positively predict organisational performance after controlling for demographic variables (gender, qualification, position and years of experience).
- H<sub>1</sub>: Transformational leadership style, transactional leadership style and corporate innovation significantly positively predict organisational performance after controlling for demographic variables (gender, qualification, position and years of experience).
- H<sub>02</sub>: There is no significant difference between employees' gender, years of experience, position and qualification in organisational performance and corporate innovation.

- H2: There is a significant difference between employees' gender, years of experience, position and qualification in organisational performance and corporate innovation.

### **3.5 Technology and Innovation**

Technology is a key driver of innovation, providing new tools and platforms for developing and implementing innovative ideas. It can facilitate innovation, but its impact depends on organisational context and leadership. Advances in digital technology have revolutionized industries, enabling new business models, products, and services. Hence, technology can provide new opportunities for innovation, but it also requires investment in skills, training, and infrastructure.

A company with a robust culture of innovation, coupled with leadership that actively supports and promotes innovative thinking, is more likely to realize the full benefits of technology. This is consistent with the concept of dynamic capabilities, which posits that organisations must be able to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, Pisano, & Shuen, 1997). In such organisations, leadership plays a crucial role in fostering an environment that encourages experimentation, risk-taking, and collaboration (O'Reilly & Tushman, 2013). Leaders who are visionary and supportive can guide their teams in leveraging technology as a tool for innovation, rather than as an end in itself. In contrast, organisations with a more traditional or rigid approach may struggle to adapt to new technologies, as their leadership may not fully appreciate or support the changes required for technological innovation.

While technology can significantly enhance innovation, it also presents challenges, such as the risk of technological obsolescence, cybersecurity threats, and the need for continuous learning and adaptation. Therefore, organisations must be strategic in their adoption of new technologies, ensuring that they align with their overall innovation goals and capabilities. Additionally, the reliance on technology should not overshadow the importance of human creativity and collaboration in the innovation process.

### **3.6 Innovation as a Mediator of the Relationship Between Transformational Leadership Style, Transactional Leadership Style and Organisational Performance**



A review of the literature has revealed that the role of innovation as a mediator between transformational leadership style, transactional leadership style and organisational performance has received only limited attention (Feranita, Palomo, and Soto, 2021; Berraies and Bchini, 2019; Rehman, Bhatti and Chaudhry, 2019; Sethib and Steyn, 2015). This underlines the need for more research on the indirect effects of these leadership styles on organisational performance, with innovation as a mediator. According to Garcia-Morales, Matias-Reche and Hurtado-Torres (2008b), leadership style is the most influential factor in innovation and organisational performance because leaders have the authority to set the vision, strategic objectives and goals and to motivate innovative projects among subordinates. Many organisations fail to adopt the innovation concept because leadership does not take up the philosophies and executive ownership required to drive the culture and engagement that innovation demands. Based on the 2008 McKinsey study, more than 70% of senior executives believed that innovation is one of the top three drivers of their organisational performance, 94% of senior executives reported that people are the most important driver of innovation, and only 24% of employees believed that their organisations encouraged them to learn from failures (McKinsey Report, 2008). Therefore, one important point about the association between leadership style, innovation and organisational performance is that organisational learning and continuous development play a necessary role in this relationship (Sajems, 2015).

Wang and Howell (2010) argued that when leaders fulfil their roles as they are supposed to, employees are inspired to make their best efforts at work, and job satisfaction increases, leading to better organisational performance. In today's informational and high-tech society, the management of innovation is a key point that enables creativity, renewing, exploiting and applying work duties in different ways to create a competitive advantage for the organisation, which will then boost its performance (Barrett and Sexton, 2006; Nonaka and Takeuchi, 1995; Grant, 1996; Hurley and Hult, 1998). In a US study, Overstreet et al., (2013) examined the association between leadership style, innovation, and organisational performance. They found that leadership style is one of the most important factors in creating an innovation culture and that innovation is positively associated with organisational performance. Therefore, leadership style has direct and indirect positive relationships with organisational success, which is an indication of high performance.

Studying the three themes in isolation may give misleading results regarding the purpose of the study. For example, studying leadership style and innovation without including organisational

performance may result in leaders focusing on innovation for the sake of having a reputation for creating a culture of innovation without having the real benefit of innovation as a tool and vehicle to boost organisational performance (Sethibe and Steyn, 2016). According to (Yang, 2014), innovation is an essential requirement for companies to improve their performance and gain a sustainable competitive advantage. It is important for leadership to support building an innovation culture by encouraging and rewarding creativity. It can also accomplish this by allocating resources to enable corporate innovation. Empirical studies have, however, shown contradictory results. Some studies (Ashoor, 2021; Yang and Yang 2019; Al-Amri et al., 2018; Likar, Kopac and Fatur, 2014; Yang, 2014; Hassan et al., 2013) have shown a positive relationship between transformational leadership styles and innovation, whereas others (Sethibe, 2016; Martin, Baby and Banga 2012; Forsman and Temel, 2011; Kannebley, Sekkel and Araujo, 2010; Koellinger, 2008) showed no relationship.

In a study conducted at Ain University in UAE, on the effect of transformational leadership style on global competitive advantage through innovation and knowledge, AlOwais (2019) found that transformational leadership indirectly affects organisations' global competitive advantage through innovation and that it does not directly affect organisational performance. This leadership style is directly linked to corporate innovation, and there is a positive relationship between the transformational leadership style and corporate innovation. Transformational leadership goes beyond transactional leadership by providing a vision, a motivation, a role model example and intellectual stimulation (Bass, 1999). As a result of this kind of inspiration and influence, transformational leadership has the power to inspire people to exert more effort and be less resistant to change, which is vital to supporting corporate innovation (Howell and Avolio, 1993). A recent study shows that innovation plays a mediating role in organisational performance and that the utilisation of innovation management affects innovation performance (Arif and Akram, 2018). Their study concluded that innovation management has a positive effect on corporates' innovation results, with a significant effect on incremental innovation. The results affect radical innovation performance (Berraies and Bchini, 2019; Albors-Garrigos, Igartua and Peiro, 2018). Other studies that have shown a significant relationship between transformational leadership and desirable organisational outcomes include Lee et al., (2011), Sarros et al., (2008), Kavanagh and Ashkanasy (2006), Ilies, Judge and Wagner (2006), Howell and Avolio (1993), and Shamir, House and Arthur (1993). Figure 2.2 shows that leadership styles that positively affect organisational performance are more likely to bring new opportunities to the innovation process.

The ISO Standard (2019) listed the following potential benefits of implementing an innovation management system: increased ability to manage uncertainty; increased growth, revenues, profitability and competitiveness; reduced costs and waste; increased productivity and resource efficiency; improved sustainability and resilience; increased satisfaction of users, customers, citizens and other interested parties; sustained renewal of the portfolio of offerings; engaged and empowered people in the organisation; increased ability to attract partners, collaborators and funding; enhanced reputation and valuation of the organisation; and facilitated compliance with regulations and other relevant requirements. Thus, the current study focused on the relationship between the three variables—leadership, innovation and performance—by finding their association. This association is considered an innovation management system that represents the intersection between the three concepts. These arguments lead to the following hypotheses:

- H<sub>03</sub>: Corporate innovation does not mediate the relationships between transformational leadership style, transactional leadership style and organisational performance.
- H<sub>3</sub>: Corporate innovation partially mediates the relationships between transformational leadership style, transactional leadership style and organisational performance.

Since a significant number of studies have focused on leadership styles in the Western context, studies focusing on the Arab context are rare (Ashoor, 2021; House et al., 2004), and most studies on leadership and innovation are based on a quantitative perspective, it is crucial to understand how the concept of top-down and bottom-up processes can create corporate innovation and use it to enhance organisational performance from a qualitative perspective. Therefore, this study aims to gain in-depth information to conceptualise innovation capacity in the public sector. This supports organisational performance by investigating the effect of top-down and bottom-up approaches. Hence, a qualitative study was conducted to answer the following question: How can the concept of the top-down and bottom-up approach create corporate innovation and use it to enhance organisational performance?

### **3.7 Conclusion and Gaps in Previous Research**

This review highlights the role of developing leadership theories in enhancing innovation and increasing organisational performance. As Steve Jobs, former CEO of Apple®, stated,

“Innovation distinguishes between a leader and a follower”. When Apple came up with the Mac, IBM® had a research and development budget 100 times that of Apple®. This shows that the main factor is not the budget size but the people in the organisation, how a leader leads and how much the leader understands what is needed (Global Innovation Institute, 2015).

Despite Abu Dhabi’s rapid development rate and increasing economic prominence, insufficient research has been conducted on the effect of leadership on innovation and organisational performance in the Arab context, particularly in Abu Dhabi. Although recent literature includes efforts to empirically study specific types of innovations and their diffusion as well as studies that examine the organisational capacity to stimulate innovations within local governments (Harvey, Kiessling and Moeller, 2010), empirical evidence remains scant on public sector innovation. In addition, this review shows a conflicting view with articles and research findings that report a strong association between transformational leadership style and innovation. However, as noted by Bass (1990), “most experimental research, unfortunately, has focused on transactional leadership, whereas the real movers and shakers of the world are transformational”. This is another justification for examining both leadership styles and how they affect organisational performance.

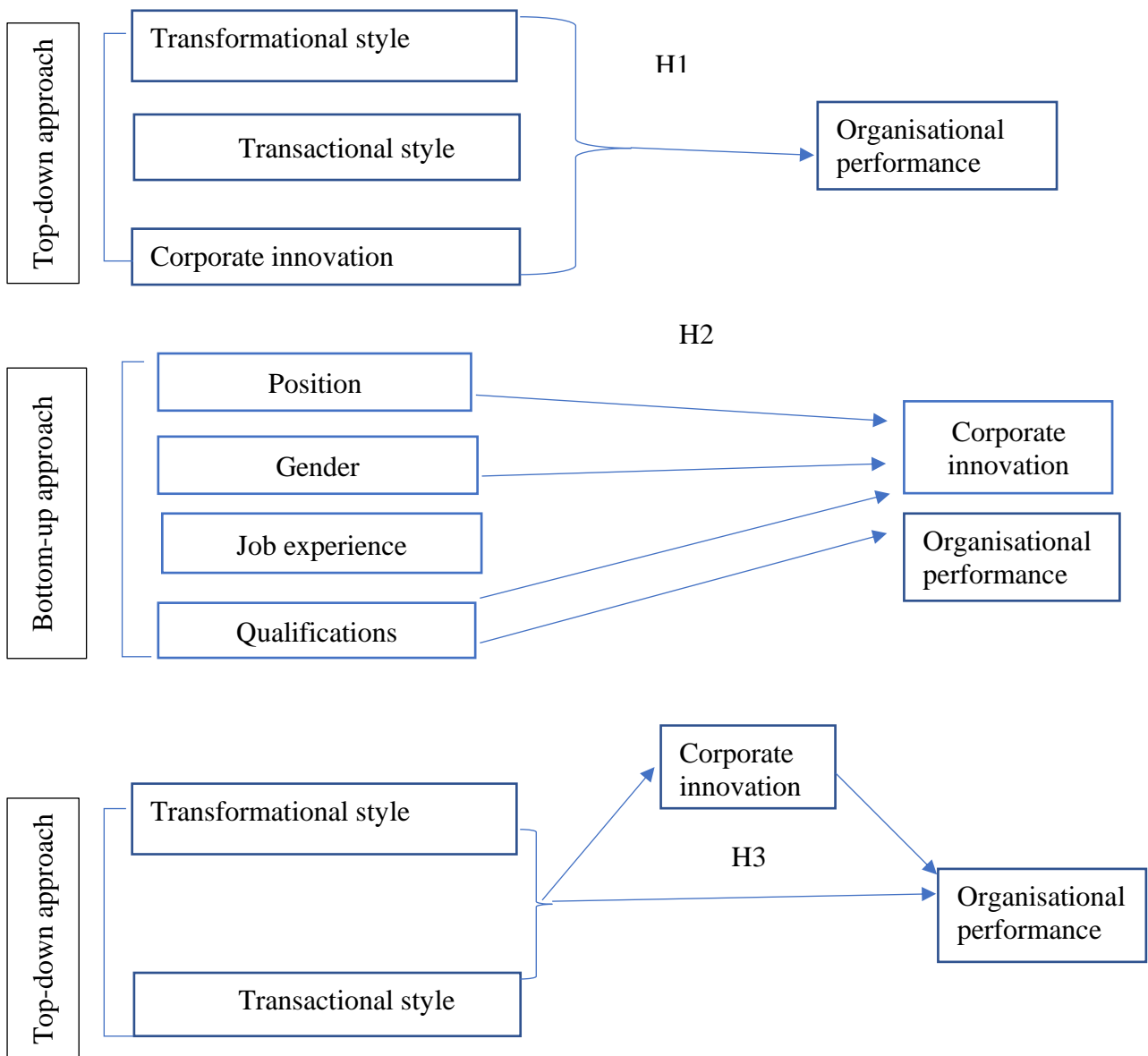
This study also responds to the call of Abdulqader and Al Marri (2018) on the need to investigate the relationship between transformational and transactional leadership in supporting innovation and organisational performance, with consideration of the top-down and bottom-up approaches and the differences that the respondents’ demographics might contribute to the results in Abu Dhabi’s public sector. Although a significant number of studies have examined successful cases of innovations rather than conceptualised and analysed the environments that support innovation, this study aims to contribute to the existing literature by providing insights into the effect of transformational and transactional leadership styles on organisational performance and innovation capacity in the public sector and enhancing organisational performance involving the top-down and bottom-up approaches. Specifically, this study aims to answer the following questions:

Main question: What is the role of leadership style in influencing innovation and organisational performance within the Abu Dhabi government sector?

1. To what extent do transformational leadership style, transactional leadership style and corporate innovation predict organisational performance?
2. Is there any difference in the group means of employees' gender, years of experience, position and qualification on the scores between organisational performance and corporate innovation?
3. Does corporate innovation mediate the relationships between transformational leadership style, transactional leadership style and organisational performance?
4. How can the concept of top-down and bottom-up approaches create corporate innovation and use it to enhance organisational performance?

The following theoretical framework (Figure 3.3) outlines the relationships between corporate innovation, transformational style, transactional style and organisational performance as a top-down approach in an organisation. It also includes the relationships between gender, position, experience, and qualifications as bottom-up approach to corporate innovation and organisational performance. The last part of the theoretical framework outlines the mediating role of corporate innovation between leadership styles and organisational performance.

This framework can be used by leaders to understand how their leadership style and behaviours can impact their organisation's performance. It can also be used to develop strategies for improving performance, such as by investing in leadership development programs or fostering a more innovative culture.



**Figure 3.3:** Theoretical framework on corporate innovation, leadership style, and organisational performance

## CHAPTER 4: METHODOLOGY

### 4.1 Introduction

This chapter explains and justifies the research design in detail. This chapter describes the mixed-methods methodology designed to answer the research questions and discusses the reason for choosing the research design and the suitability of the methods for this study.

To capture relevant data for the research, several procedures were followed. First, the criteria for establishing which studies to include were identified. The scope of this review is related to the following points:

- Content. This study is limited to leadership style, corporate innovation and organisational performance.
- Databases. Only well-known databases in the field are used, such as the following: Google Scholar as an international database, Primo as a database with ready access from Aberystwyth University, the library of the UAE University as the first-ranking electronic database in the Middle East, Ethos as a British library and the Mohamed Bin Rashid Centre for Government Innovation as an innovation hub in the public sector.
- Publication dates. These are restricted to the period from 1990 to 2022. A final review was conducted prior to the final thesis.
- The publication language is limited to studies written in English and Arabic, as this thesis was conducted in an Arab country.

Second, the main terms for the subject are identified, and they are based on the study aims, research questions and hypotheses (innovation in the public sector, leadership style, organisational performance, leadership and innovation in the public sector, leadership style + innovation + organisational performance). Third, search strings are used to collect all relevant materials by finding the identified words in headlines or anywhere in the text. Fourth, the results are generated, the articles are downloaded, and unrelated studies are excluded. Finally, the most relevant studies are used to clarify the key concepts and definitions of the study, the key factors related to the research concept are identified, the findings of previous studies in relation to the present study are presented, and the knowledge gaps are identified and analysed.

The hypotheses is usually derived by examining demographics, attitudes, behaviours, beliefs and trends. To achieve this, the researcher requires data that could be collected and analysed through different measures (Hair et al., 2007). This mixed-methods study examined innovation-based leadership and how it could enhance organisational performance using the Abu Dhabi local government as a case study. A sequentially collective mixed-methods design was used in this study. Quantitative and qualitative data were collected in sequence and analysed separately before the results were triangulated for interpretation. Quantitative data were collected through an electronic self-completion questionnaire (20 questions divided into three sections, each one addressing one hypothesis) to determine whether the different variables were important factors for Leadership + Innovation + Performance. Qualitative data were gathered through semi-structured interviews with key representatives from different local government entities (i.e. employees, advisors, section heads, directors and executive directors) to examine the variables in more depth. Both methods were used to determine a suitable leadership style that would boost corporate innovation in government entities and whether the adaptation of innovation culture would enhance organisational performance as measured by the balanced scorecard. Quantitative and qualitative methods were used to integrate the two forms of data and provide greater depth and meaning to the research questions, overcoming the limitations of using just one of the methods.

Saunders et al., (2015) conceptualised research as an onion (Figure 3.1) by showing different layers representing the different elements of research. At the core is data collection and analysis using techniques and procedures. The other layers justify various choices, with each layer from the outside shaping the decisions of the next layer, step by step, until the core is reached (Saunders et al., 2015). In this chapter, the different layers and the rationale of the methods used in the study are discussed.



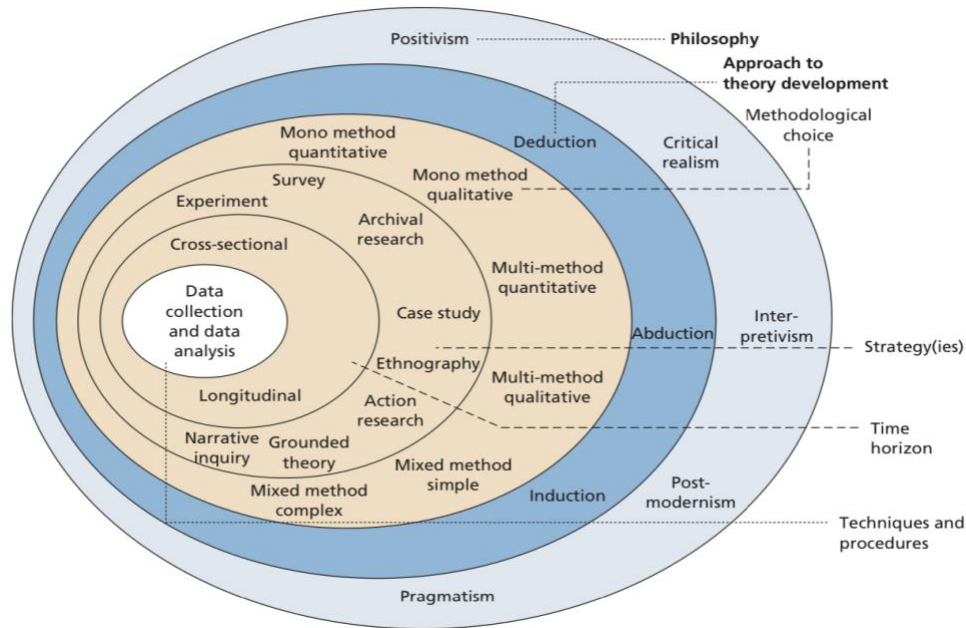


Figure 4.1 Research onion. Adapted from Saunders et al., (2015)

#### 4.2 Research Philosophy

The purpose of research is to develop knowledge (Saunders et al., 2015). In the process of developing knowledge, researchers are influenced during each stage of the process by values, beliefs and assumptions, which are the philosophy of research (Easterby-Smith, Thorpe and Lowe, 1994). Three terms are considered important here: *epistemology* is about the assumptions made about human knowledge, *ontology* is the realities in research, and *axiology* represents the human values affecting the research process. In business research, knowing the choice of philosophical commitment is important because it affects the researcher's actions and understanding of the study (Forman et al., 2006).

Based on the research onion, initial considerations are given to philosophical assumptions that can direct the research approach, affecting the methodological approach.

As this study used mixed methods to address the research questions, Creswell et al., (2011) introduced four main world views: post-positivism, constructivism, participatory and

pragmatism (Creswell et al., 2011). Table 4.1 shows these worldviews in relation to the elements of ontology, epistemology, axiology, methodology and rhetoric.

**Table 4.1:** Elements of worldviews and implications for practice. Adapted from Creswell et al., (2011)

<b>Worldview Element</b>	<b>Post-positivism</b>	<b>Constructivism</b>	<b>Participatory</b>	<b>Pragmatism</b>
Ontology (What is the nature of reality?)	Singular reality (e.g. researchers reject or fail to reject hypotheses)	Multiple realities (e.g. researchers provide quotes to illustrate different perspectives)	Political reality (e.g. findings are negotiated with participants)	Singular and multiple realities (e.g. researchers test hypotheses and provide multiple perspectives)
Epistemology (What is the relationship between the researcher and that being researched?)	Distance and impartiality (e.g. researchers objectively collect data using instruments)	Closeness (e.g. researchers visit participants at their sites to collect data)	Collaboration (e.g. researchers actively involve participants as collaborators)	Practicality (e.g. researchers collect data with “what works” to address research questions)
Axiology (What is the role of values?)	Unbiased (e.g. researchers use checks to eliminate bias)	Biased (e.g. researchers actively talk about their biases and interpretations)	Negotiated (e.g. researchers negotiate their biases with participants)	Multiple stances (e.g. researchers include both biased and unbiased perspectives)
Methodology (What is the process of the research?)	Deductive (e.g. researchers test a previous theory)	Inductive (e.g. researchers start with participants’ views and build “up” to patterns, theories and generalisations)	Participatory (e.g. researchers involve participants in all stages of the research and engage in cyclical reviews of results)	Combining (e.g. researchers collect both quantitative and qualitative data and mix them)
Rhetoric (What is the language of research?)	Formal style (e.g. researchers use agreed-on definitions of variables)	Informal style (e.g. researchers write in a literary, informal style)	Advocacy and change (e.g. researchers use language that helps bring about change and advocate for participants)	Formal or informal style (e.g. researchers may use both formal and informal styles of writing)

Based on the above table and the differences between worldviews, the author chose the pragmatist worldview. First, in terms of ontology, the author believed that this study is complex and that many factors and angles need to be considered. As shown in the literature review chapter, many internal and external factors need to be examined in relation to leadership styles

(transformational and transactional), corporate innovation (demographic, creativity and rewards) and organisational performance (according to the balance scorecard: strategy, services, budget, processes, learning and development). Based on multiple realities, a holistic research method needs to be considered.

Second, in terms of epistemology, as the author required a practical study, the methodological choice should be based on what best suits the nature of the study. In this study, the author tested theories and methods to apply the results in the government sector and to understand the relationship between leadership style and corporate innovation. A mixed-methods approach was chosen to use an explanatory and exploratory approach, integrate the results and apply practical solutions. According to Tashakkori and Creswell (2007), the study positions the usefulness of mixed methods in dealing with a number of research questions. The research questions of this study aim to bridge the gap in knowledge of the association between leadership style, innovation and organisational performance through both quantitative and qualitative methods (Rodgers, 2013).

Given the complex nature of this study, the use of mixed methods enabled the author to incorporate the value of multiple worldviews into one study. The research questions focused more on the methodology used to contribute to the body of knowledge in the leadership and innovation field. As the author stated in the literature review, using a single method has some limitations.

**Table 4.2** Effect of various philosophies on shaping this study

<b>Reasoning</b>	<b>Paradigm</b>	<b>Suitable Methodology</b>
The researcher sees value in quantitative methods, which represent most studies on this subject	Post-positivism	Quantitative
The need to explore the bigger picture and multiple meanings from social interaction	Constructivism	Qualitative
The ‘what works’ concept is considered based on the situation in which the research is being conducted	Pragmatism	Mixed-Methods

This study differs from others in that it focused on the association between leadership style, innovation and organisational performance. Moreover, the study takes the Abu Dhabi government as a case study, which is a unique location or region. With this in mind, the mixed-methods approach is considered the most suitable methodology for this study due to the large number of the study population (Abu Dhabi government employees). As obtaining sufficient data is crucial in this study, a mixed-methods design would serve this purpose.

In addition to the philosophical worldview, it is necessary to consider the author's background. This study was conducted after the launching of the UAE excellence model (fourth generation) and the government started assessing its entities on how they apply the corporate innovation concept. The author's interest in leadership knowledge since 2012 and his position as a corporate development director in the public sector gave him the idea and inspiration to study the association between leadership and innovation, as any success in deploying a certain culture begins with leadership adaptation. Based on the Abu Dhabi Excellence Model, government entities should develop and implement 'innovation management systems', including the use of clear criteria to prioritise opportunities for improvement and further development that require creative solutions, and select feasible ideas in a manner that ensures achieving the entity's strategy and the Abu Dhabi plan (e.g. providing new innovative services, conducting work creatively and introducing initiatives, policies and programmes that create added value to all stakeholders) (Abu Dhabi Executive, 2017). However, to the best of the author's knowledge, there is still no clear measurement of the reflection of organisational performance. Therefore, this study is important, as it reveals the association and how to correctly measure the outcomes of innovation when leadership adopts and deploys the culture.

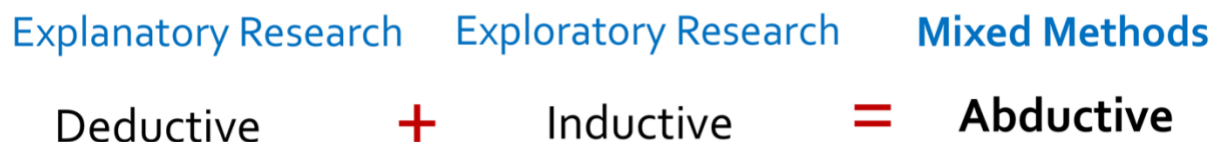
### **4.3 Research Approach**

As shown in Figure 3.1, the next inner layer of the research onion is related to the theory development approach. Saunders et al. (2015) identified three main research approaches: deduction, induction and abduction. Table 3.3 explains these approaches.

**Table 4.3** Comparison of research approaches. Adapted from Saunders et al., (2015)

	<b>Deduction</b>	<b>Induction</b>	<b>Abduction</b>
Logic	In a deductive inference, when the premises are true, the conclusion must also be true	In inductive inference, known premises are used to generate untested conclusions	In an abductive inference, known premises are used to generate testable conclusions
Generalisability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test them through subsequent data collection and so forth
Theory	Theory falsification or verification	Theory generation and building	Theory generation or modification, incorporating existing theory where appropriate to build a new theory or modify an existing theory

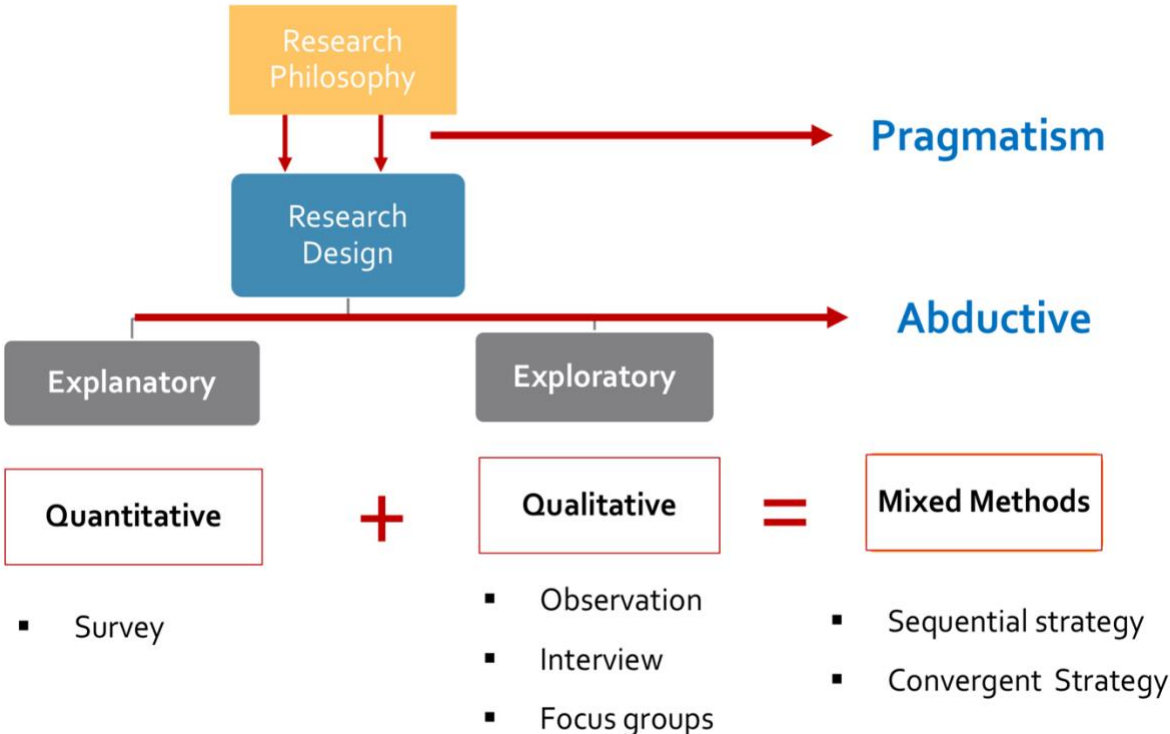
Deduction is an approach to test hypotheses, whether they are rejected or not. If the premise is true, then the conclusion should also be true. Conversely, induction has a reverse process. With induction, data are collected to explore a phenomenon and build a theory. The abductive approach combines deductive and inductive approaches. It highlights that a combination of deductive and inductive approaches is possible and can be beneficial based on the nature of the research (Saunders et al., 2015).



In this study, the author adopted an abductive approach to develop a conceptual framework (deductive) based on previous theories, which were tested by data collection (inductive). The

author began by examining existing theories on leadership styles and corporate innovation and then developing a conceptual framework (deductive). The next step was to collect data (survey & interviews) to test the conceptual framework (inductive). The abductive approach was used by testing the data to formulate theories and make assumptions.

The research paradigm influences the overall approach to the research. The research map illustrated in Figure 3.2 identifies the approaches followed in each step of a mixed-methods study.



**Figure 4.2:** Research map (Algarni, 2020)

**4.4 Research Design**

The third layer of the research onion indicates the choice of methodology (Figure 3.1). Creswell (2011) introduced three methodologies: qualitative, quantitative and mixed-method. Regarding management research, researchers have distinguished between quantitative and qualitative methods (e.g. Easterby-Smith et al., 1994; Hair et al., 2007). However, these two methods should not be seen as linear or dichotomous (Fetters, Curry and Creswell, 2013) but rather as separate ends on a continuum (Newman and Benz, 1998). Mixed methods, which comprise the

elements of quantitative and qualitative methods, are positioned in the middle of this continuum (Fetters, Curry and Creswell, 2013).

As stated earlier, a mixed methodology was chosen for this analysis. This represents empirical research that collects and analyses quantitative and qualitative data within the same study (Molina-Azorin, 2012). This study’s design meets the different situations in which Creswell et al., (2011) considered mixed methods an appropriate fit. Table 3.4 shows the rationale behind choosing the mixed-methods approach.

**Table 4.4:** Reasons for choosing a mixed-methods approach. Developed for this study based on Creswell et al., (2011)

<b>Creswell et al., (2011)</b>	<b>Present Study</b>
A need exists because one data source may be insufficient	Based on the sample size (Abu Dhabi government employees), the author considers quantitative data to be important but insufficient. Therefore, explanatory data must be gathered from the interviews to obtain more in-depth data to achieve the research purpose. Through a mixed-methods approach, the limitations of each method can be overcome.
A need exists to explain the initial results	The initial results are focused on the key variables. The qualitative phase explains these variables and provides context.
A need exists to generalise the exploratory findings	The study explores various variables from previous studies that affect corporate innovation. The lack of detailed studies on the association between leadership style, innovation and organisational performance in Abu Dhabi means that the findings of this study need to be carefully evaluated before the results can be generalised.
A need exists to best employ a theoretical stance	This study aims to understand the important issues in enhancing organisational performance as a result of innovation culture based on the conceptual framework presented earlier.

The table above highlights the ways that the mixed-methods approach meets this study’s needs. One data source alone is not adequate for clarifying corporate innovation and determining whether it mediates between leadership style and organisational performance. A second approach is known to add depth to the data obtained, ensuring that the most acceptable results can be achieved. The mixed-method approach, as a technique, is seen as a way of addressing the disadvantages of using the quantitative or qualitative methods alone (Johnson and Turner, 2003); therefore, each method can complement the other.

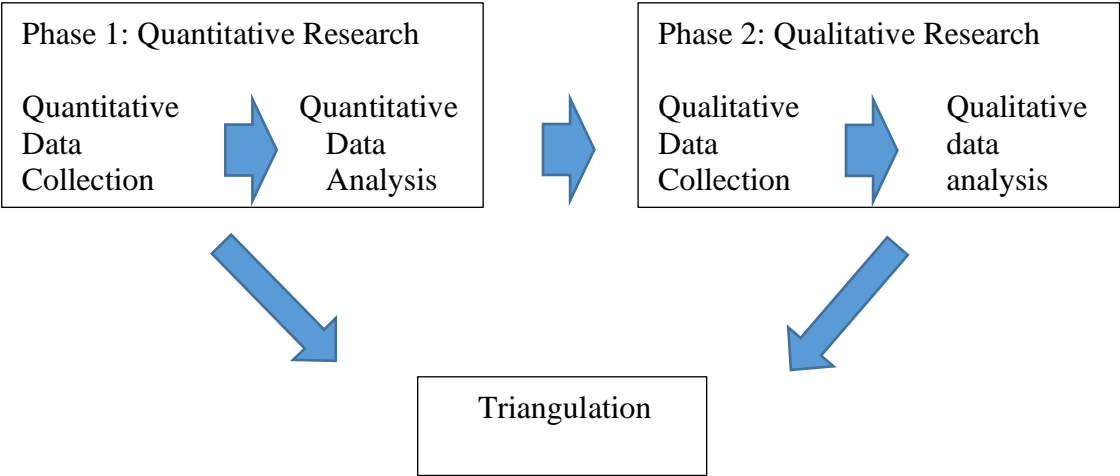
The mixed-methods approach provides researchers with more evidence than either type alone. It offers greater flexibility in the choice of methods for data analysis, making it a more practical

method, as researchers are not confined to methodologically following certain methods of analysis (Creswell et al., 2011). In addition, mixed methods allow for the collection of more in-depth data, enabling researchers to answer certain questions that one method alone cannot provide (Tashakkori and Teddie, 2003). In this study, by using both quantitative and qualitative research, the main variables can be observed and investigated in more detail, allowing for a more in-depth interpretation of the results and the exploration of new theories.

As observed, the majority of studies in the field of leadership and innovation have followed one method, mostly quantitative. Furthermore, a methodological meta-analysis of management and business research showed that 76% of empirical research adopts a quantitative methodology, compared to only 10% that uses qualitative methods and 14% using mixed methods (Azorín and Cameron, 2010).

**4.4.1 Mixed-methods methodology**

In light of the above considerations, the author chose a research design that is sequential in nature and in the way data are collected and analysed. Equal weighting was adopted for both phases, ensuring that the advantages of both phases of data collection and analysis could be obtained. The sequential aspect is important in allowing for a separate and thorough selection of each step. Figure 3.3 shows a diagram outlining the research design of the study.



**Figure 4.3:** Research design for the study



The sequential architecture outlined for this study begins with the first step, in which quantitative data are obtained and analysed, as shown in Figure 3.3. The results obtained from the first phase were analysed separately, and they helped form the semi-structured interview questions for the second phase of the qualitative analysis and obtain more details about the study subject. Moreover, they identified the segment where the author could obtain a clear picture of the study subject. This enabled the interviewees to understand the purpose of the study and elaborate more based on the results of the collected data from phase one (quantitative), as the researcher shared some information and facts on the study subject in preparation for the interviews. After analysing the qualitative data, the results from both phases were triangulated for mutual interpretation. Although it covers a longer timeframe than a parallel design, the sequential process is essential to ensure that the most accurate and reliable data from the process are obtained. This design is intended to follow a thorough process in each stage, with the aim of obtaining comprehensive data from the overall process and ensuring that each step is carried out correctly.

The rationale behind this design is to ensure that the research questions can be answered by collecting and analysing reliable data. The limited complexity of collecting data in separate phases allows the procedure to be carried out correctly for each phase, minimising the potential shortcomings and biases that may affect the quality of the collected data. In this study, the use of mixed methods is an opportunity to develop knowledge and skills in quantitative and qualitative techniques, which can serve as a basis for future research.

#### **4.4.2 Weighting, timing and mixing**

Decisions on the weighting, timing and mixing of elements of the design were required after establishing the research design (Creswell et al., 2011). As shown in Figure 3.3, each research phase is weighted in equal measure, with no priority given to one method over another. The quantitative and qualitative phases were independently conducted, with data collected and analysed independently before the findings were collectively drawn up and interpreted. Timing refers to the temporal relationship between each step of the analysis when the data are collected and the order in which the data are collected. As described above, the quantitative phase followed the qualitative process, allowing for a large number of Abu Dhabi government employees to participate in the survey, followed by interviews with employees, section heads,

advisors, directors and executive directors working in the Abu Dhabi public sector to obtain more in-depth information about the study subject. The sequential design enabled the independent conduct of each process, allowing the author to focus on each step. This increased the study’s timeframe but also increased the author’s chance of achieving the most accurate results possible. Figure 3.4 outlines the full timeline of the data collection and analysis processes for this study. The diagram emphasises that every item takes place in sequence.

**Table 4.5:** Research timeline for the data collection and analysis

<b>Breakdown Activities\Timeline</b>	<b>June–July 2020</b>	<b>Aug–Sep 2020</b>	<b>Oct–Nov 2020</b>	<b>Dec–Mar 2021</b>
<b>Quantitative Phase</b>				
Conduct questionnaire	→			
Analysis		→		
<b>Qualitative Phase</b>				
Conduct interviews			→	
Interpretation and analysis				→

Although the data collection and analysis occur in sequence, the methods can combine at a certain point, when the quantitative and qualitative phases are integrated. The point at which the mixing occurs is referred to as the point of the interface (Morse, 2009). In this study, mixing occurred in the interpretation phase in Chapter 7. Each process was separately tested and evaluated, and the mixing allowed conclusions to be drawn based on the implied mix of information.

**4.4.3 Triangulation**

Triangulation is the use of more than one method or data source in studying a social phenomenon to allow for the cross-checking of findings (Bryman, 2016). Triangulation is known to resolve the drawbacks of a single approach, as well as the prejudices, generalisations and challenges to a study’s validity (Al-Ababneh, 2020). Methodological data triangulation

involves the use of quantitative (questionnaire) and qualitative (semi-structured interviews) approaches, while interdisciplinary triangulation is used in the concepts of leadership style, corporate innovation and organisational performance. These layers of triangulation represent the foundation for a robust research model.

### **Sampling Frame**

Given the specific focus of this research, the target population was clearly defined—that is, all government employees of the Emirate of Abu Dhabi. The geographic scope of the study focused on Abu Dhabi, the capital of the UAE. According to the Abu Dhabi Statistical Centre (Abu Dhabi Statistics, 2021), the Abu Dhabi government has a total of 214,000 employees. Thus, the sample was obtained using the formula for determining the sample size for a research activity (Krejcie and Morgan, 1970), with a confidence rate of 95%. The study sample obtained was 371 respondents.

For the semi-structured interviews, 15 employees, section heads, advisors, directors and executives from the Abu Dhabi public sector were chosen for the qualitative data collection. According to Guest, Bunce and Johnson (2006), 12 interviewees are the recommended minimum sample size for most common qualitative research designs.

Given the choice of study methodology, particularly the use of an online self-completion questionnaire during the quantitative analysis process, the author developed clear criteria for the creation of the respondents' database: should be an employee of any entity from the Abu Dhabi public sector, should hold at least a bachelor's degree, should have held different positions and should have years of experience. A detailed outline of the sampling techniques used in each method of data collection is provided in Sections 4.1 (quantitative) and 4.2 (qualitative).

### **4.5 Conclusion**

This chapter discussed the research design and the justifications for using mixed methods. The sequential design of the mixed-methods approach was due to the author's pragmatic worldview, and it was considered best suited for obtaining the most accurate and reliable data to answer the research questions.

A detailed description of the research design outlining the weighting, timing and mixing of the methods and the different types of triangulation were also explained. After establishing the broader design of the study and the rationale behind this decision for each phase of the study, the next chapter discusses the instrument design.

## **CHAPTER 5: MIXED-METHODS DESIGN**

### **5.1 Introduction**

As previously shown in Table 3.1, the research methodology was based on the requirements to meet the research aims. The method was a plan devised and followed closely to obtain information on the chosen topic. It provides a detailed outline of the steps for collecting the required data, how the data was gathered, and the instruments used in the process. This chapter constitutes the study's research questions, sample population, sample space, instruments for data collection, procedure for data collection and procedure for data analysis.

The previous chapter presented the study's research design and the reasons for using a mixed-methods approach. The mixed-method approach was conducted in two sequential stages: a quantitative analysis through a self-completion questionnaire and a qualitative process through semi-structured interviews. This chapter describes each study process and the issues of rigour, sampling, and ethics.

### **5.2 Phase 1: Quantitative Research**

The objective of phase one was to investigate the effect of different factors on corporate innovation. An online self-completion questionnaire was administered to study corporate innovation associated with leadership styles and organisational performance in the Abu Dhabi public sector with the goal of evaluating the measurement of organisational performance based on adopting an innovation culture. The literature review produced a wide range of variables that could be examined in relation to corporate innovation. Thus, three independent variables and two dependent variables, which measured whether corporate innovation mediates and leads to better organisational performance, were used. A quantitative research process was deemed necessary to evaluate the importance of these variables for the study, as this approach uses numerical data analysis to clarify the relationships between the variables (Creswell et al., 2011). A self-completion questionnaire was considered the most suitable instrument for collecting quantitative data. This decision was mainly motivated by the study's practicalities. As the Abu Dhabi public sector has a large number of employees, conducting the study using this approach

was quicker, less expensive and more reasonable. In particular, using an online questionnaire allowed a large batch of questionnaires to be sent in a short time to the intended sample, reducing the amount of administrative work required in this phase. Even in collecting, classifying and analysing the data, data handling was found to be easier and more accurate using an electronic platform. Using the Lime Survey programme provided a convenient platform for the author to monitor the progress of this process, allowing for the monitoring and follow-up of responses, where appropriate. The ability to reduce bias by avoiding the ‘interviewer effect’ is also considered an advantage of the online self-completion questionnaire (Bryman, 2016).

The questionnaire method also has some disadvantages. Bryman (2016) pointed to the risk of missing data and a low response rate when using self-completed questionnaires. Answer levels are also important in research, as there is a chance of bias in the results unless it can be shown that the non-participants do not vary from the participants.

Phases one and two of the study aimed to gather data to answer the study questions. Quantitative data were obtained for the various variables corresponding to each research query. The qualitative step gathered more in-depth data on leadership style, innovation and organisational performance.

### **5.2.1 Instrument design of the quantitative study**

The survey questions were based on the problems and concerns discussed in previous research on leadership style, corporate innovation and organisational performance. New questions based on the gaps in the literature and the research hypotheses were formulated.

**Table 5.1** Survey questions derived from previous studies

Variable measurement	Sources from the literature	Number of items (questions)	Type of variable
Demographics	Nager, De Boer and Garcia (2016) Al-Shammari and Khalifa (2019) Al-Azimi (2006)	4 items	Independent
Transformational leadership style	García-Morales, Matías-Reche and Hurtado-Torres (2008b)	4 items	Independent
Transactional leadership style	Bucciarelli (2015) Caridi-Zahavi et al. (2016) Wisdom et al. (2014)	4 items	Independent
Innovation	Kenny and Reedy (2006)	6 items	Dependent
Organisational performance	Kaplan (2001) Barrett and Sexton (2006) Reid and Koljonen (1999)	6 items	Dependent
<b>Total</b>		<b>24 items</b>	

After forming the survey questions, the survey was designed using the Lime Survey software. Lime Survey is a highly reliable and adaptable survey software that provides substantial advantages for academic research and data collection. It provides extensive features, including diverse question types, branching logic, and customizable templates (LimeSurvey, 2023). The software's flexibility enables researchers to tailor surveys to specific research questions, ensuring accurate and relevant data collection. Lime Survey provides sophisticated data analysis capabilities, allowing users to export data to other statistical software applications (such as SPSS). This facilitates a thorough comprehension of the survey findings, in addition to the researcher's knowledge of utilising the program to perform various surveys for the public sector.

The survey was divided into five sections (see Appendix 1) as follows:

Section one: Introduction, reasons why the participants should participate and information to be collected for research purposes and will be completely confidential

Effective questionnaires contain a cover letter outlining the research goals, an explanation for why the subject was chosen for the test and specific guidelines on how to fill up the questionnaire (Hong and Easterby-Smith, 2002).

Section two: Demographic questions with multiple options (five items)

Using a Likert scale ranging from 1 (low) to 5 (high), 20 questions were designed and divided into three sections, with each section focusing on one hypothesis.

Section three: Corporate innovation and leadership style (eight items)

Section four: Corporate innovation and the bottom-up approach (six items)

Section five: Corporate innovation and organisational performance (six items)

The layout of the survey was designed to guide the participants through the sections easily and effortlessly. The survey could be accessed on various devices (desktop, tablet or mobile). The questions were presented on different pages for each section, with titles and a thank-you page at the end. To improve the potential response rate, an Arabic version of the survey was designed as an interpretation of the original English version, as more than 95% of the participants were Arabic speakers. Table 5.2 shows the measures for how to improve the response rate (Bryman, 2016).

**Table 5.2:** Measures taken to improve the response rate. Created for this study and adapted from Bryman (2016)

<b>Steps for improving the response rate (Bryman, 2016)</b>	<b>Measures taken in this study</b>
Write a good cover letter outlining the importance of the research and the reasons for inviting the participants.	A cover letter was written at the beginning of the survey and emailed to the participants.
Accompany the questionnaire with a means to return it, such as a self-addressed stamped envelope.	The survey was completely online, and the responses were saved.
Follow up with non-respondents by sending reminders.	Electronic messages were sent as reminders and follow-up.
Use shorter, salient questions. Avoid long questionnaires.	All questions were close-ended, Likert-scale questions and were previously tested through a pilot study.



Provide clear instructions and an attractive questionnaire layout.	Likert-scale questions were objectively presented in clear-cut tables. Instructions on how to respond to the survey were provided. The layout was tested in the pilot study.
Avoid bulky-looking questionnaires.	The structure of the questionnaire was minimised by using Likert-scale questions and setting out the questions on the pages corresponding to each subject. The length of the survey was tested during the pilot study.
Begin with questions more likely to be of interest to respondents.	Questions about the respondents' gender, years of experience, academic degree and positions were placed at the start of the survey, followed by their preferred leadership style.
Personalise cover letters.	The cover letter included details about the study, words of appreciation and a confidentiality explanation.
Include a few open questions as possible.	No open questions were included in the survey.
Provide monetary incentives.	To improve the response rate, the survey was offered at the end of a training or workshop conducted by the author. Some influencers were also approached in public entities in Abu Dhabi.

### 5.2.2 Rigour of the quantitative study

All elements of this analysis were checked for rigour. A rigorous study addresses issues of validity and reliability. Validity refers to a study's ability to measure its intent (Robson, 2002). A study should be able to evaluate what it is meant to evaluate. Construct validity is the ability to examine the assumptions of the association between ideas, while external validity is the ability to generalise the findings to a larger population (Wehner, Roemer and Ziegler, 2020).

This study ensured that all stages of the analysis achieved rigour. Careful measurements were taken to classify the variables for investigation following the literature review and to create a sample structure. The goal was to follow a strict procedure, from the design of the questionnaire to the analysis, in all parts of the study. In the pilot study, the reliability, validity and clarification of research issues, such as the relevance of issues, were also tested. The validity of faces and reliability were tested, and further validity and reliability testing were conducted as part of the main analysis.

The pilot study lasted for four months, from December 2018 to March 2019. In the first step of the pilot study, the author sought advice from his supervisor and four colleagues, who suggested revising the structure, terminology and composition of the questionnaire and testing the questions for suitability and accuracy. The questionnaire was translated into Arabic to enable

the participants to be engaged and answer easily and effortlessly while ensuring that the questions in Arabic mirrored the original questionnaire in English.

The number of participants for the pilot study was ( $N = 78$ ), the means of the variables were high (3.40–4.55 on a five-point Likert scale), and Cronbach's alpha was 0.771–0.903, indicating positive results of the questionnaire. Cronbach's alpha should range from 0 to 1, with results above 0.7 indicating reliability (DeVellis and Thorpe, 2021)

### **5.2.3 Sampling and distribution of the quantitative study**

The sample population of this study included all employees with different levels (employee, section head, director, executive and advisor), years of experience, qualifications and genders working in the Abu Dhabi public sector. The quantitative phase of the study, which provided a clearly defined sampling frame, aimed to invite all employees in the public sector, comprising the sampling frame, to complete the online questionnaire. All potential respondents were identified as appropriate respondents to the survey based on the literature review.

To make appropriate generalisations from the analysis, a larger sample size was assumed to provide more reliable results and to represent a lower likelihood of error in generalisations against the target population (Saunders et al., 2015).

The questionnaire distribution adopted the same protocol developed for the pilot study. The data collection cycle for this method lasted until mid-August 2020, providing time for personal invites and follow-up reminders to be sent to all sampling frame members. The author made some efforts to conduct different workshops for the public sector in leadership and innovation and invite the audiences to access the survey's link and complete the survey to achieve the maximum answer rate possible.

### **5.2.4 Methods of analysis of the quantitative study**

The findings of the survey were imported to a Microsoft Excel sheet from the Lime Survey website, where data were reviewed and sorted into correct categories and transformed into quantifiable numbers. Data were moved to the SPSS 25 statistical programme for review. First, the validity and reliability of the results were tested. An exploratory factor analysis was used

to check the validity of the construct, and Cronbach's alpha was used to evaluate each construct's reliability. Second, descriptive statistics were used in the analysis to identify the basic associations between the variables. A hierarchical regression analysis was carried out in two steps: 1) to examine to what extent demographic variables predict corporate innovation and organisational performance and 2) to what extent transformational leadership style, transactional leadership style and corporate innovation predict organisational performance. T-tests were run to compare males and females in terms of corporate innovation and organisational performance. Third, a one-way analysis of variance (ANOVA) was conducted to compare qualifications, years of experience and positions in corporate innovation and organisational performance. The mediating role of corporate innovation in the associations between transformational leadership, transactional leadership and organisational performance was tested using the SPSS version 3 PROCESS Macro Model 4. These methods were applied to search for statistically relevant factors affecting corporate innovation and organisational performance. Chapter 5 presents the complete analysis and findings.

### **5.3 Phase 2: Qualitative Research**

The second phase of the study assessed the association between the variables. Semi-structured interviews using top-down and bottom-up approaches were conducted to determine whether corporate innovation is associated with leadership style and demographics or whether it affects organisational performance. As the two research phases were performed separately, the second phase aimed to provide more context to the data collected to give precise answers to the research questions. The critical realism philosophy was used to consider the larger picture. Based on the author's pragmatist perspective, using this process to complement the first step fits the analysis, as it enabled the collection of adequate evidence to better understand corporate innovation and other variables (Yvonne Feilzer, 2010).

Owing to the complexity of this research, semi-structured interviews were considered the most suitable approach to supplement the questionnaire process and obtain in-depth results. Interviews are used to reach the respondents' perspectives of their cultures, allowing culturally rich approaches to produce accurate accounts of their environment (Denzin and Lincoln, 2008). These narratives are important for providing an overview of whether corporate innovation affects organisational performance in the public sector, especially as the literature review

provided a variety of topics for discussion. Jennings (2005) advocated the use of semi-structured interviews as a way of conducting exploratory analyses. This approach enables the interviewer to be versatile in guiding the discussion flow without needing to abide by a rigid framework, which may contribute to the repetition of some points and hinder interviewees from freely expressing their views (Jennings, 2005).

The semi-structured interview is the most appropriate analysis tool for this study, as interviewing is one of the most effective forms of learning about humans (Denzin and Lincoln, 2008). This study examines what corporate innovation may do for the public sector and the leadership style that suits the public sector. Interviews are preferable to focus groups because the participants' willingness to address problems with an investigator alone enables them to share their understanding and experience completely and more freely. In focus groups, each member may have limited opportunities to add to the debate and may not feel confident to freely exchange thoughts and observations with members of other related departments or entities, thereby undermining their privacy and biasing the results. The process span and focus groups have been found to be too time-consuming and operationally and technologically difficult. Another factor worth mentioning is the effect of the COVID-19 pandemic during the time of gathering qualitative data, as it made it impossible to hold focus group discussions. It should also be noted that, due to the COVID-19 pandemic, most of the participants preferred to conduct a virtual interview. Thus, Microsoft Teams and Zoom were used for the interviews. Following these criteria, the combination of questionnaires and interviews was considered suitable for gathering accurate data within an appropriate timeframe.

### **5.3.1 Semi-structured interview design**

Similar to the quantitative phase, the qualitative phase was planned using a methodical approach. To include more qualitative evidence on each topic, aside from that obtained from the quantitative process, the nature of this process was motivated by the research questions. First, the study subjects were identified in a specific sense of the study. The respondents in the first phase (survey) were classified through their answers in the questionnaire, distinguishing them between their positions (employee, advisor, section head, director or executive director). In the interviews, the author needed input from participants in all positions, genders, qualifications and years of experience.

Second, suitable interview questions that originated from the same structure as the quantitative questions were developed, with different sections representing the research variables. The questions for each variable were checked to ensure that the interview supplemented the data gathered from the questionnaire. An interview guide was developed containing the key questions posed for each variable and follow-up guidelines and questions on topics not discussed in the initial response of the respondents. The interview guides were produced in English and Arabic (See Appendix 2). In the first phase, a pilot analysis was carried out to assess the appropriateness, clarity and duration of the interview.

### 5.3.2 Rigour of the qualitative phase

A rigorous analysis method was required for the qualitative phase. As in all studies, concerns regarding reliability, validity and generalisation of the qualitative research results were posed. Robson (2002) asserted that the validity and reliability of qualitative data cannot be assessed in the same manner as quantitative knowledge, but Mason (2002) reported that qualitative researchers should be responsible for their analysis and pointed to the importance of strict high-quality work. According to Seale (2004, p. 6), ‘Much more active and labour-intensive approach towards genuinely self-critical research, so that something of originality and value is created’ (Seale, 2004). Patton (1990) highlighted the need to take a methodical approach when reporting qualitative data collection and review procedures to interpret the quality of findings. The reliability of qualitative analysis depends on three aspects: the use of robust data collection methods; the researchers’ credibility, which depends on training, expertise and status; and the methodological principles in the phenomenological framework (Patton, 1990).

**Table 5.3** Formulating a rigorous process of quality research. Developed for this study and adapted from Patton (1990).

<b>Credibility issue (Patton, 1990)</b>	<b>This study</b>
What techniques and methods were used to ensure the integrity, validity, and accuracy of the findings?	A systematic process was carried out to plan the qualitative analysis phase, with emphasis on the use of validated techniques in all aspects of this research phase: <ol style="list-style-type: none"> <li>5. Identifying the participants</li> <li>6. Writing the questions for the interview</li> <li>7. Signing a consent form</li> <li>8. Creating the interview guide</li> <li>9. Conducting a pilot study</li> <li>10. Conducting the complete study</li> <li>11. Presenting the data in text form</li> </ol>

	12. Data analysis (thematic) 13. Translating the quotes
What does the researcher bring to the study in terms of qualifications, experience and perspective?	14. The researcher is qualified (certified as a coach) to conduct research and has qualitative research skills. 15. In the pilot study, the researcher applied qualitative analysis.
What paradigm orientation and assumptions support the study?	The researcher followed the pragmatist paradigm (Chapter 3).

The theory was extended to the participant identification process, the structuring of the interview guide (Patton, 1990) and the questions selected (Bryman, 2016) based on the discussions in Saunders et al. (2015).

Two pilot interviews were conducted. The findings showed that the interview was with the executives and focused only on the top-down approach, as evidenced by the answers to multiple questions being short and focusing on giving orders to employees. Thus, the interview guide was modified so that the segment began with a more accessible introductory question that would allow the respondents to provide responses and the necessary directions to extract specific information not supplied from their initial replies. The wording of the questions was updated to create a more reliable questioning process that could cover any new challenges.

The pilot study was part of the systematic methodology used in the qualitative analysis. This was a key step in the qualitative data processing to ensure good efficiency. This was evident in the audio recording of all interviews, which were then transcribed to provide an exact description of the interview data, thus maintaining the purpose and the substance of the interviews (Denzin and Lincoln, 2008). Continuity in the cross-reference interviews was also ensured. Triangulation is a useful method in achieving reliability and validity (e.g. Hair et al., 2007; Patton, 1990). As part of the mixed-methods analysis, triangulation was used in both research stages to provide accurate and valid results (Chapter 4).

### **5.3.3 Sampling and implementation of the qualitative study**

Whereas quantitative sampling approaches rely on random collection in larger samples, qualitative analysis focuses on smaller samples (Patton, 2002). Therefore, a rational sampling methodology that matches the research emphasis needs to be selected based on the research

questions in the sample and on available resources (Saunders et al. 2015). Sample size is important, as there is some uncertainty with respect to an acceptable sample size, especially in interviews. The number of semi-structured or in-depth interviews required is a minimum of 5–25 (Saunders et al., 2015).

Similar to the quantitative phase, the qualitative phase focused on the study variables (leadership style and demographics), the association between corporate innovation and organisational performance and some knowledge that could not be obtained using the quantitative approach. Thus, it was necessary to sample the qualitative stage in collecting appropriate data from employees with few years of experience and senior employees with many years of experience to obtain a thorough understanding of the issues related to leadership, innovation and organisational performance in the Abu Dhabi public sector. A maximum variance sampling technique was used to ensure that the interviewees responded to the study’s survey so that they would already have an idea about the nature of the research and that interviewees with good knowledge were combined with those who dealt with corporate innovation and organisational performance. This methodology was used to identify the essential topics observed in the data (Saunders et al., 2015).

A total of 15 employees from the public sector were invited to participate in the study. They were approached via email, with a cover letter outlining the aims of the research, a consent form and an information sheet (Appendix 4 and 5). Follow-up emails were sent to those who did not respond. This part of the analysis relied on the goodwill of the public sector employees who decided to voluntarily participate, as they had the freedom to refuse to take part in or withdraw from the study at any time.

**Table 5.4:** Positions of the interviewees and the abbreviations used for them in the text developed for the current study

<b>Participant</b>	<b>Position</b>	<b>Gender</b>
Participant 1	Advisor	Male
Participant 2	Advisor	Male
Participant 3	Director	Male
Participant 4	Section head	Female
Participant 5	Executive director	Male
Participant 6	Section head	Male

Participant 7	Employee	Male
Participant 8	Section head	Female
Participant 9	Executive director	Male
Participant 10	Employee	Female
Participant 11	Director	Female
Participant 12	Employee	Female
Participant 13	Advisor	Male
Participant 14	Director	Male
Participant 15	Section head	Female

The interviews took place between September and October 2020. Most of the interviews were conducted face-to-face in the participants' offices, while some were virtual (Microsoft Teams, Zoom), as some of the participants were worried about the social distancing required during the pandemic. The interviews lasted 25–40 minutes, on average.

#### **5.3.4 Analysis methods of the qualitative study**

The first step in processing interview data is transcribing the interviews. As the interviews were carried out in English and Arabic, this process involved translating the Arabic interviews into English. For the English interviews, verbatim transcriptions were conducted to ensure correctness. Otter software was used to transcribe the audio recordings of the interviews and to ensure the accuracy of the written words. During the interview, the author used a reflective diary to take notes of the interview. This offered supplementary details and clarifications of the interviews during transcription and documentation.

A thematic analysis was conducted on these interviews by adopting Braun and Clarke's (2006) six-step methodology. Thematic analysis is a systematic approach to defining, evaluating and documenting trends or themes in depth (Braun and Clarke, 2006). It was used for this step of the analysis because of its thoroughness and relative accuracy. Despite its relative ease of use, this approach has some drawbacks. The study should have sufficient depth and relevant topics should be defined, not just focusing on the interview questions (Braun and Clarke, 2006). Thus, this study used the coding phases of the six-step. Table 5.4 presents the process for the thematic analysis performed in this study. Chapter 6 interprets the interview results.



**Table 5.5** Thematic analysis process for this study. Developed for this study based on Braun and Clarke (2006).

Step	Braun and Clarke (2006)	This study
1	Familiarising with the data	Interview records and transcripts were reviewed to determine the patterns.
2	Generating the initial codes	The patterns determined in Step 1 were used to create a code list.
3	Searching for themes	The list of codes from Step 2 was refined to create themes.
4	Reviewing the themes	Transcripts were reread to ensure that the coded data correctly portrayed the perspectives of the participants.
5	Defining and naming the themes	To determine the final subjects, the transcripts and themes were reread.
6	Producing the report	The topics were gathered and written.

To be familiar with the results, all the interviews with all the employees from different levels were put together in one paper before the transcripts were read and reread. NVivo software was used to analyse the unstructured text of the interviews. In Microsoft Word, the coding process was performed using the comments function to code highlighted texts. Thematic maps were drawn manually following the creation and analysis of the topics.

Upon completing the interviews, all transcribed interviews were analysed using Braun and Clarke’s (2006) thematic analysis method. In the first stage, the interviews were read and reread to be familiar with the facts. The details or codes applicable to the 10 interview questions during the first phase derived from the main research questions were listed. In the second stage, the initial codes from the interviews were established and allocated based on the meanings of the data shared by the 15 participants. According to Bryman (2016), researchers develop their thoughts about the collected data. As coding in this stage was at the level of open or initial coding, the codes were likely to proliferate. The author labelled small portions of the text. In the third stage, the data and groups of codes were searched for themes. Specific themes that could help address the study’s research questions were searched continuously. The initial themes versus the original data or transcripts were also analysed to ensure that they represented the responses of the participants, not the personal ideas of the study. In the fifth stage, the themes and sub-themes (if there were any) were formally labelled based on the corresponding

meanings. Finally, a report was produced after the themes were finalized (Braun and Clarke, 2006).

The themes were classified per research question based on their order of priority or the number of times the participants discussed them. The main themes were the study's most important, earning the largest number of responses. The minor themes were the other significant themes that obtained fewer references than the main themes. To include detailed explanations and diagrams of the 'parent themes', or the major and minor themes, sub-themes were introduced to support the major and minor themes. This section shows the outcomes of each phase of Braun and Clarke's (2006) thematic analysis framework for all the interviewees. This method was used to ensure correct data analysis and the quality and reliability of the data. This study examined the themes derived from the interview data to clarify the definition of corporate innovation and to determine the type of leadership style that would suit the creation of innovation to enhance organisational performance in the Abu Dhabi public sector.

#### ***Step one: Familiarising with the data***

After transcribing the interview data verbatim, this first step of the six-step thematic analysis process enabled the author to become familiar with the data (Riessman, 1993, cited in Braun and Clarke, 2006). This step aimed to obtain an in-depth understanding of the interview data in preparation for the first phase of data coding. The interview data of the government employees were read through many times in full, and initial notes were taken before starting the second step. The research diary was also reread to enhance familiarity with the data.

#### ***Step two: Generating initial codes***

Having established a clear familiarisation of the interview data, the second step involves the generation of as many initial codes as possible by reading and looking for significant and interesting codes in the entire data set. A total of 934 open codes were produced (see Appendix 3 A).

#### ***Step three: Searching for themes***

The initial codes were identified and categorised, and the initial themes and sub-themes were generated. The data were reviewed and re-read to ensure that the topics corresponded with the

data. The themes under each research question were broken down into groups to minimise the number of initial codes. Thus, 10 themes and 13 sub- and minor themes were produced and organised using tables (see Appendix 3 B).

***Step four: Reviewing the themes***

The concepts discussed in Step 3 were revisited to ensure that they corresponded with the key objectives of the study. As the study aimed to obtain an in-depth understanding of the key issues affecting the real application of corporate innovation, the initial themes were maintained, and the sub- and minor themes were reorganised to ensure a clearer representation of the employees' challenges in innovation, leadership style and organisational performance. The themes were grouped into four main themes and 18 sub-themes. These themes relate to the drive of an organisation to develop corporate innovation, the appropriate leadership style, top-down and bottom-up approaches and demographic effects.

***Step five: Defining and naming the themes***

This step involves defining and naming the themes to encapsulate their essence. The nuances of the above thematic table were re-evaluated by reading through the interviews again and refining the homogeneous and heterogeneous relationships between the codes and themes. This ensured that the codes fit the right theme (Table 4.6).

***Step Six: Producing the report***

This step involves writing the report and analysing the themes by quoting the interviewees.

**Table 5.6:** Themes emerging from the interviews

<b>Theme</b>	<b>Description/ Sub-theme</b>	<b>Reported by</b>
<b>Theme 1: Perception of corporate innovation</b>	Sub-themes: creation of new ideas, developing business processes, solving challenges in organisations, understanding employees' mindset and encouraging work-life balance	Participants 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15
<b>Theme 2: The common leadership style adopted in the public sector</b>	Sub-themes: transactional leadership style, transformational leadership style, blended leadership style	
<b>Theme 3: Influences on corporate innovation</b>	Sub-themes: the most influential approach, the most influential leadership, forgiveness culture, Hawthorne effect, employees' capabilities and characteristics (gender, experience, qualifications, position)	
<b>Theme 4: Influences on enhancing organisational performance</b>	Sub-themes: corporate innovation as a mediator between leadership style (transformational and transactional) and organisational performance; effect of innovation on budget, services, operational excellence, learning & growth and strategic objective; reward system	

#### **5.4 Research Ethics**

Ethical issues may emerge at different levels of social and methodological science studies and are major challenges that may jeopardise the quality of research (Bryman, 2016). The University of Aberystwyth gave its ethical consent to this study after submitting an introduction to assessment and an application form on research ethics. This thesis conformed to the Scientific Ethics Policy of the Economic and Social Research Council (ESRC, 2022). The framework contains six key concepts: the research should be voluntary, free of harm to participants, have informed consent, be anonymous, trustworthy and be conflict-of-interest-

free. Table 5.7 presents the steps taken to ensure that the ESRC framework’s ethical considerations were properly followed.

**Table 5.7** Measures taken to meet ethical considerations. Designed for this study based on the ESRC Research Ethics Framework (ESRC, 2022).

<b>ESRC Research Ethics Framework (2022)</b>	<b>This study</b>
Research participants should take part voluntarily, with the participants’ rights respected and appropriately protected	Participants were invited to take part in this research. A follow-up process was conducted, and the voluntary nature of the engagement was indicated in all correspondences. The participants were free to discontinue at any time.
Research should be worthwhile and provide value that outweighs any risk or harm	Only adults (employees) from the public sector were invited to participate.
Research staff and participants should be given appropriate information about the purpose, methods and intended uses of the research, as well as their contribution to the study and potential risks	Informed consent from the participants was obtained to participate in the questionnaire and interviews.
The anonymity of the participants and the confidential nature of information and personal data should be respected	The correspondence, questionnaire and interviews confirmed the participants’ privacy and confidentiality.
Research should be designed, reviewed and undertaken to ensure recognised standards of integrity, quality and transparency are assured.	Quality assurance was explained in the research design throughout this chapter and Chapter 3.
The independence of the research should be clear, and any conflicts of interest or partiality should be explicit.	Analysis was carried out autonomously, and a rigorous study was ensured to prevent conflicts of interest.

Studies that negatively affect the participants are inadmissible (Bryman, 2016). This involves responses to the questionnaire or interviews and the author. Physical injury, damage to involvement, lack of self-esteem, tension and ‘induction of objects to commit wrongdoings’ (Diener and Crandall, 1978) are considered harms. In this study, rigorous steps were taken to prevent risk, such as ensuring that all participants were adults and that their respective public sector departments had liability. Prior to participating, all the participants were informed about the study criteria and ensured that all information gathered would be anonymous. This was applied in the two stages of the study. Researchers are obligated to ensure that participants are not influenced by the above-mentioned ethical concerns. Data processing and interpretation can be expected and vice versa (Denscombe, 2017).

Mixed-methods studies require more caution to ensure that all ethical questions are found and resolved in all phases of the study. Thus, this study ensured that any legal problems would be completely resolved through rigorous procedures.

Owing to the use of an online questionnaire and e-mail as a correspondence tool in the two stages of the study, the quantitative stage noted some ethical concerns regarding the internet. The number of studies on the ethical concerns associated with this form of data collection through the internet is growing (Gray, 2012). As the internet is considered only an incubator, online legal problems become less demanding than other online channels. An online survey programme (Lime Survey) was used to conduct the survey to ensure that only the respondents could view their responses. The data obtained from the questionnaires were processed in a centralised location open only to the survey manager—in this case, the author. This is the only location where the survey manager was eligible to access the data, decreasing future losses, privacy invasion and disappointment incurred by the administration of the questionnaire in a risky environment. Prior to their participation, the respondents were informed about the purpose of the questionnaire, that they could opt out of the study at any time, and that their informed consent was required.

## **5.5 Conclusion**

This chapter summarises the instrument design for the different phases of the study in conjunction with the mixed methodology design in Chapter 3, stressing the numerous measures and inputs in the quantitative and qualitative phases. The steps implemented to collect accurate and relevant results were discussed by focusing on the robust methods used in the design, sampling and analysis at all points of the research. Furthermore, applicable scientific and ethical considerations in relation to the analysis are presented. The following chapters focus on the main analysis of the study.

## **CHAPTER 6: QUANTITATIVE RESULTS**

### **6.1 Introduction**

This chapter describes the findings of the quantitative phase of the mixed-methods approach, after having recorded the analysis design for this review in the previous two chapters. The results were obtained from an online questionnaire sent through email and social networks to public sector employees from different entities and positions. The demographic results of the respondents were taken into consideration to test the association between corporate innovation and organisational performance. Before the descriptive statistics of each construct were recorded, the validity and reliability of the questionnaire were investigated, and an exploratory factor analysis was performed. Hierarchical regression analysis was carried out in two steps: to examine to what extent the demographic variables predict corporate innovation and organisational performance and to what extent transformational leadership style, transactional leadership style and corporate innovation predict organisational performance. T-tests were run to compare female and male employees in terms of corporate innovation and organisational performance. An ANOVA was performed to compare the qualifications, years of experience and position in corporate innovation and organisational performance. The SPSS version 3 PROCESS Macro Model 4 was used to test the mediating role of corporate innovation in the associations between transformational leadership, transactional leadership and organisational performance.

### **6.2 Frequency statistics**

The participants comprised 371 employees (48.25% female). With regard to educational level, the majority of the participants held a bachelor's degree (60.11%), followed by a master's degree (33.69%) and a Ph.D. degree (6.20%). Regarding years of experience, most of the participants were 16 years and above (38.54%), followed by 11–15 years (22.91%), 1–5 years (21.56%) and 6–10 years (16.98%). The most reported position was employee (52.83%), whereas the least reported position was advisor (7.55%). The participants predominantly spoke Arabic (93.80%). The results are presented in Table 1.

**Table 6.1.** Frequency statistics for each demographic variable

Variable	Level	Frequency	Percentage
<i>Gender</i>	Female	179	48.25
	Male	192	51.75
<i>Qualification</i>	Bachelor's	223	60.11
	Master's	125	33.69
	Ph.D.	23	6.20
<i>Years of experience</i>	1–5	80	21.56
	6–10	63	16.98
	11–15	85	22.91
	16 years and above	143	38.54
<i>Position</i>	Employee	196	52.83
	Advisor	28	7.55
	Section head	78	21.02
	Director	49	13.21
	Executive director	20	5.39
<i>Language</i>	Arabic	348	93.80
	English	23	6.20

### 6.3 Item Analysis and Reliability

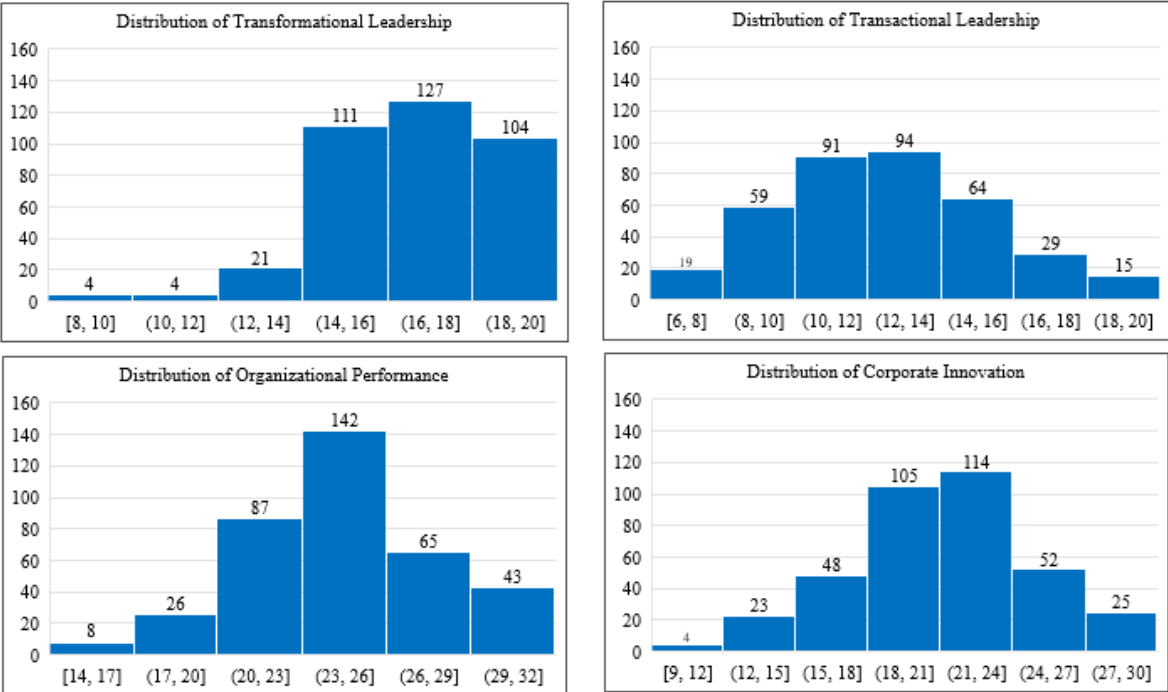
The following tests were reported: mean, standard deviation, test of normality (skewness and kurtosis), and Cronbach's alpha. The results are reported in Table 2. As shown in Table 2, the participants generally scored above the mid-point in each item: transformational leadership style was 4.06–4.51; transactional leadership style was 2.90–3.94; corporate innovation was 3.16–4.12; and organisational performance was 3.78–4.30. These results suggest that except for items 1 and 4 on transactional leadership style, the participants highly agreed with the statements related to the different leadership styles.

### 6.4 Distribution of Data

Data distribution is important in statistical analysis (Field, 2013). It refers to the degree to which the value of a variable is distributed, as some statistical hypothesis tests require



normally distributed data. Depending on the distribution of the data, a parametric test can be performed if the data follow a normal distribution or a non-parametric test if the data do not follow a normal distribution (Field, 2013). Various tests were used to determine whether the data were normally distributed. The common tests of normality are Kolmogorov–Smirnov, Shapiro–Wilk test, skewness and kurtosis. The distribution of the data can also be determined with graphical representation, such as histograms, normal Q-Q plots, detrended normal Q-Q plots and box plots (Field, 2013). Histograms are most commonly used to visually present the distribution of the data. Skewness and kurtosis statistics are used to assess whether each item on the scale is normally distributed. Skewness and kurtosis hypothesise that if scores fall within range of +/-1 and +/-2, it can be considered a ‘very good’ and ‘acceptable’ symmetry of a normal univariate distribution, respectively, while skewness > 2 and kurtosis > 7 represent a concern about symmetry for a normal univariate distribution (Curran, West and Finch, 1996; West, Finch and Curran, 1995). Skewness (range = -0.05–1.50) and kurtosis (range = 0.09–3.61) indicate that the items fall within the criteria specified as approximately normally distributed. The histograms were used to further support the distribution of the data. As shown in Figure 6.1, the data for the four main variables were approximately normally distributed.



**Figure 6.1.** Distribution of data for the study variables

Cronbach’s alpha was used to show the internal consistency reliability. The analysis was carried out for each scale separately. According to Nunnally (1967), a Cronbach’s alpha coefficient >

0.60 is an acceptable level of internal consistency reliability. As shown in Table 4, the internal consistency reliability estimate of the study sample was acceptable, that is, good for transactional leadership style ( $\alpha = .62$ ), corporate innovation ( $\alpha = .77$ ) and corporate innovation performance ( $\alpha = .84$ ). However, the internal consistency reliability estimate for transformational leadership was just below the acceptable level ( $\alpha = .54$ ). Low reliability is expected, depending on the number of items on a scale, especially when there are a few items on the scale (Nunnally, 1967; Yildirim, Barmanpek and Farag, 2018; Yildirim and Belen, 2018). As shown in Table 2, the reliability analysis suggested that the Cronbach's alpha could be improved to  $\alpha = .058$  if item 1 on the transformational leadership style was deleted. As Cronbach's alpha is sensitive to the number of items on a scale, the item was not deleted because of the notion that a scale should include at least four items to reliably yield convergent solutions (Kline, 2005).

**Table 6.2.** Descriptive statistics, distribution and reliability estimates for each item

Item	Mean	SD	Skewness	Kurtosis	Cronbach's Alpha if item was deleted
Transformational 1	4.06	0.93	-1.14	1.10	0.58
Transformational 2	4.51	0.65	-1.50	3.61	0.40
Transformational 3	4.44	0.69	-1.32	2.16	0.39
Transformational 4	4.16	0.78	-0.99	1.49	0.52
Transactional 1	2.94	1.16	0.15	-0.97	0.52
Transactional 2	3.94	0.82	-0.59	0.16	0.61
Transactional 3	3.18	1.10	-0.10	-0.81	0.53
Transactional 4	2.90	1.18	0.12	-0.97	0.52
Corporate innovation 1	3.90	0.89	-0.86	0.45	0.74
Corporate innovation 2	3.24	1.08	-0.05	-0.88	0.70
Corporate innovation 3	4.03	0.81	-1.04	1.72	0.78
Corporate innovation 4	3.68	0.95	-0.63	0.09	0.75
Corporate innovation 5	3.16	1.05	-0.19	-0.69	0.70
Corporate innovation 6	3.54	0.95	-0.30	-0.28	0.72
Organisational performance 1	4.12	0.74	-1.00	1.97	0.81
Organisational performance 2	4.13	0.75	-0.85	1.16	0.81
Organisational performance 3	4.14	0.70	-0.78	1.51	0.82

Organisational performance 4	4.16	0.67	-0.74	1.61	0.81
Organisational performance 5	3.78	0.90	-0.32	-0.45	0.84
Organisational performance 6	4.30	0.62	-0.44	0.09	0.82

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## 6.5 Exploratory Factor Analysis (EFA)

EFA was performed using maximum likelihood analysis to show the underlying factor structure on each scale used in the study. The factor loadings, eigenvalues and variances are presented in Table 3. For transformational leadership style, Bartlett's test of sphericity showed that the correlation matrix was satisfactory in performing EFA,  $\chi^2 = 140.74$ ,  $df = 6$ ,  $p < .001$ . The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy (KMO = .66) showed that the data were adequate for factor analysis, as it exceeded the suggested criterion of .60 ('good') (Tabachnick and Fidell, 2001). The EFA findings indicated a one-factor solution with eigenvalues  $> 1$  (1.78) and accounted for 45% of the variance for the transformational leadership style.

For transactional leadership style, Bartlett's test of sphericity and KMO showed that the data were suitable for the factor analysis ( $\chi^2 = 158.46$ ,  $df = 6$ ,  $p < .001$ ; KMO = .67). For this scale, the findings from the EFA also showed a one-factor solution with eigenvalues  $> 1$  (1.86) and accounted for 47% of the variance for transactional leadership style.

For corporate innovation, Bartlett's test of sphericity and KMO revealed that the data were appropriate for the factor analysis ( $\chi^2 = 522.16$ ,  $df = 15$ ,  $p < .001$ ; KMO = .80). The analysis yielded a one-factor solution with eigenvalues  $> 1$  (2.79) and explained 47% of the variance for corporate innovation.

For organisational performance, Bartlett's test of sphericity and KMO revealed that the data were appropriate for the factor analysis ( $\chi^2 = 840.65$ ,  $df = 15$ ,  $p < .001$ ; KMO = .86). The results indicated a one-factor structure with eigenvalues  $> 1$  (3.44) and explained 57% of the variance for organisational performance.

**Table 6.3.** Factor loadings, eigenvalues and variance for each scale used in this study

Item	EFA factor loading	Eigenvalue	% of variance
Transformational 1	0.32		
Transformational 2	0.64		
Transformational 3	0.67	1.78	44.55
Transformational 4	0.41		
Transactional 1	0.60		
Transactional 2	0.39		
Transactional 3	0.56	1.86	45.53
Transactional 4	0.59		
Corporate innovation 1	0.52		
Corporate innovation 2	0.73		
Corporate innovation 3	0.33		
Corporate innovation 4	0.53	2.79	46.53
Corporate innovation 5	0.78		
Corporate innovation 6	0.66		
Organisational performance 1	0.75		
Organisational performance 2	0.77		
Organisational performance 3	0.68		
Organisational performance 4	0.75	3.44	57.25
Organisational performance 5	0.59		
Organisational performance 6	0.64		

## 6.6 Confirmatory Factor Analysis (CFA)

After exploring the factor structure of the scales used in this study, CFA was conducted to affirm the measurement model for each scale. The CFA results for each scale were evaluated using the most commonly used data–model fit statistics and their cut-off values: CFI and TLI scores  $.90 \leq$  = acceptable fit; RMSEA and SRMR values  $\leq .10$  = acceptable fit (Hooper, Coughlan and Mullen, 2008; Hu and Bentler, 1999). The analysis was carried out separately for each scale.

### *Transformational leadership*

The findings of the CFA analysis produced excellent data–model fit statistics for transformational leadership:  $\chi^2 = 1.727$ ,  $df = 2$ ,  $p = .422$ , CFI = 1.00, TLI = 1.00, RMSEA = .000 and SRMR = .0176. The standardised factor loadings were between .32 and .67, as shown in Figure 6.2.

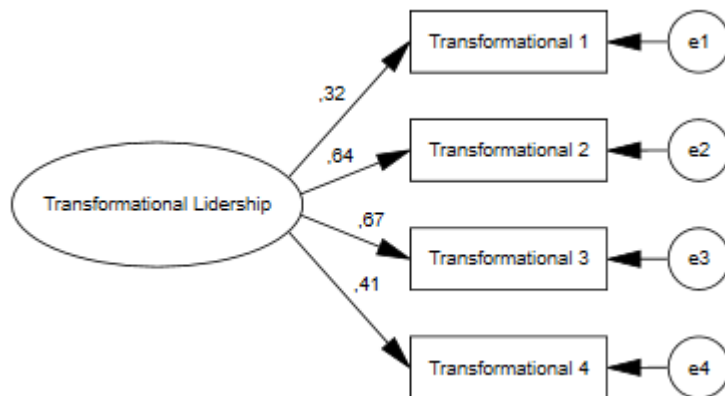


Figure 6.2 Standardised factor loadings for transformational leadership

### *Transactional leadership*

The CFA analysis results showed good data–model fit statistics for transactional leadership:  $\chi^2 = 8.013$ ,  $df = 2$ ,  $p = .018$ , CFI = .961, TLI = .962, RMSEA = .090 and SRMR = .0326. The standardised factor loadings were between .39 and .60, as presented in Figure 6.3.

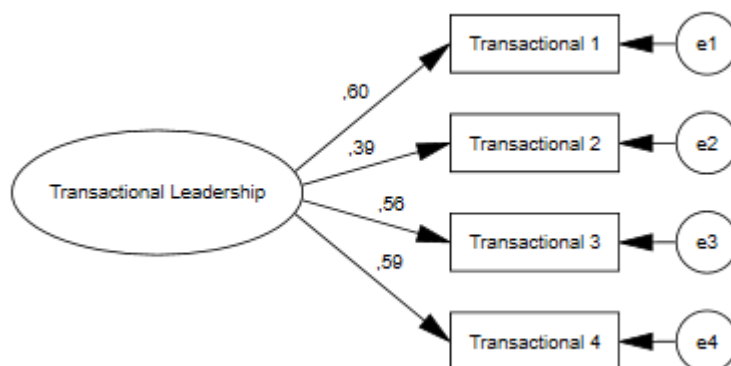


Figure 6.3 Standardised factor loadings for transactional leadership

### *Corporate innovation*

The CFA analysis results for the factor structure of corporate innovation showed good data–model fit statistics:  $\chi^2 = 33.411$ ,  $df = 9$ ,  $p = .000$ , CFI = .952, TLI = .920, RMSEA = .086 and

SRMR = .0422. The standardised factor loadings were between .33 and .78, as illustrated in Figure 4.

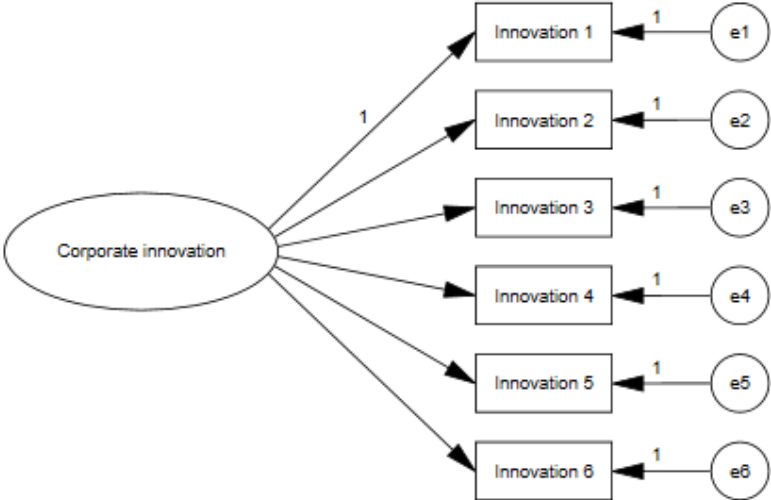


Figure 6.4 Standardised factor loadings for corporate innovation

*Organisational performance*

The CFA analysis results showed good data–model fit statistics for the organisational performance scale:  $\chi^2 = 48.271$ ,  $df = 9$ ,  $p = .000$ , CFI = .921, TLI = .953, RMSEA = .086 and SRMR = .0399. The standardised factor loadings were between .59 and .77, as shown in Figure 5.

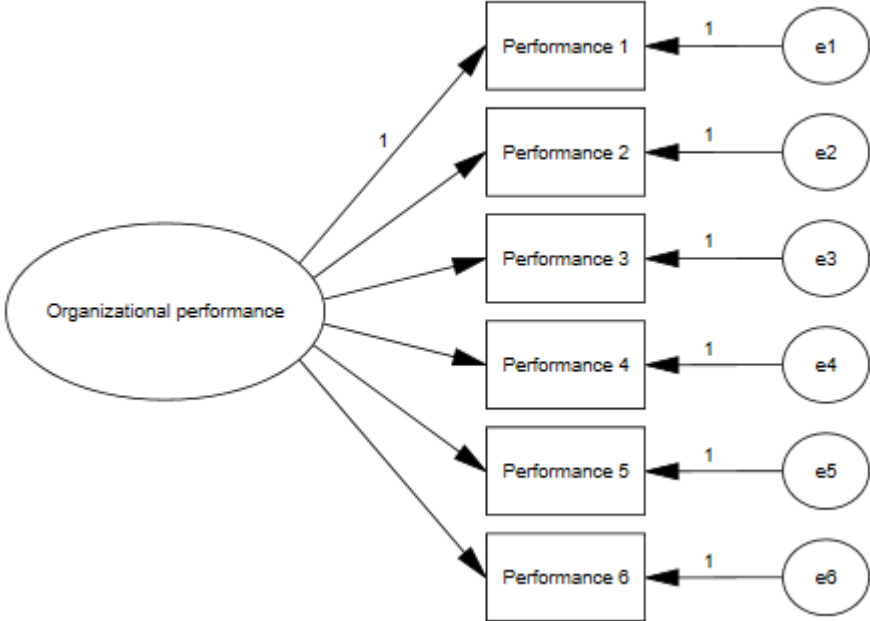


Figure 6.5 Standardised factor loadings for organisational performance

## 6.7 Correlation and Descriptive Analysis

Pearson's correlation was conducted between the study variables. Table 4 presents descriptive statistics, tests of normality, reliability and correlation analyses. The results showed that participants reported high levels of transformational leadership style, transactional leadership style, corporate innovation and organisational performance. No issue related to the distribution of data was observed, as the skewness and kurtosis statistics fell within the acceptable level. Transformational leadership was significantly and positively related to transactional leadership, corporate innovation and organisational performance. Transactional leadership was significantly and positively related to corporate innovation, and organisational performance and corporate innovation were related to organisational performance

**Table 6.4.** Descriptive statistics, reliability and correlation analyses

Variable	Descriptive statistics						Reliability $\alpha$	Correlation							
	Min	Max	Mean	SD	Skewness	Kurtosis		1.	2.	3.	4.	5.	6.	7.	8.
1. Gender	—	—	—	—	—	—	—	—	.09	.30**	.41**	-.05	-.01	.03	-.03
2. Qualification	—	—	—	—	—	—	—	—	—	.16**	.30**	.06	-.11*	-.18**	.00
3. Years of experience	—	—	—	—	—	—	—	—	—	—	.42**	-.06	.00	.03	-.01
4. Position	—	—	—	—	—	—	—	—	—	—	—	-.03	-.14**	-.02	-.04
5. Transformational	8.00	20.00	17.17	2.00	-0.88	1.79	.54	—	—	—	—	—	.201**	.31**	.45**
6. Transactional	6.00	20.00	12.96	2.94	0.26	-0.27	.62	—	—	—	—	—	—	.43**	.29**
7. Corporate innovation	9.00	30.00	21.55	3.92	-0.12	0.08	.77	—	—	—	—	—	—	—	.38**
8. Organisational performance	14.00	30.00	24.64	3.30	-0.22	0.04	.84	—	—	—	—	—	—	—	—

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

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

### 6.7.1 Transformational and transactional leadership style on predicting organisational performance after controlling for demographic variables

A hierarchical regression analysis was conducted to examine the extent to which demographic variables (e.g. gender, qualification, year of experience and position) predicted organisational performance. A two-step regression analysis was created. In step 1, gender, qualification, years of experience and position were included as independent variables and covariates. In step 2, the transformational leadership style, transactional leadership style, and corporate innovation were added as independent variables as well. Organisational performance was considered a dependent variable. In the regression analysis, the contribution of the variables was assessed using  $R$  and  $R^2$ .  $R$  refers to the coefficient of correlation in the regression analysis while  $R^2$  indicates the proportion of the variance for a dependent variable that is explained by an independent variable in a study (Field, 2013). The results of the regression analysis are presented in Table 5. In step 1, none of the variables significantly contributed to the model ( $R = .05$ ,  $R^2 = .00$ ). Inclusion of the main variables in step 2 explained a significant amount of variance ( $R = .53$ ,  $R^2 = .28$ ,  $\Delta R^2 = .28$ ). Transformational leadership style ( $\beta = 0.35$ ,  $p < 0.01$ ), transactional leadership style ( $\beta = 0.12$ ,  $p < 0.05$ ) and corporate innovation ( $\beta = 0.23$ ,  $p < 0.01$ ) were all significant predictors of organisational performance. Among the three main predictors, transformational leadership style was the stronger predictor, followed by corporate innovation and transactional leadership style.

**Table 6.5** Hierarchical regression analysis predicting organisational performance

Variable	B	SE	$\beta$	t	Sig.	$R$	$R^2$	$\Delta R^2$	$F$
<i>Step 1</i>	—	—	—	—	—	0.05	0.00	—	$F(4,370)=.22, p=.93$
Gender	-0.12	0.38	-0.02	-0.32	0.75				
Qualification	0.07	0.30	0.01	0.24	0.81				
Years of experience	0.03	0.16	0.01	0.16	0.87				
Position	-0.11	0.16	-0.04	-0.69	0.49				
<i>Step 2</i>	—	—	—	—	—	0.53	0.28	0.28	$F(7,370)=20.16, p<0.01$
Transformational	0.59	0.08	0.35	7.44	0.00				
Transactional	0.13	0.06	0.12	2.35	0.02				
Corporate innovation	0.19	0.04	0.23	4.31	0.00				



### 6.7.2 Comparison of gender, qualification, year of experiences and position in corporate innovation

An independent samples t-test was conducted to compare the corporate innovation scores of females and males. The results are presented in Table 6. No statistically significant difference was found between females ( $M = 21.43$ ) and males ( $M = 21.67$ ) in the corporate innovation scores.

**Table 6.6.** Gender comparison in corporate innovation

Variable	Gender	N	Mean	SD	t	df	<i>p</i>
Corporate innovation	Female	179	21.43	3.60	-0.61	369	0.54
	Male	192	21.67	4.20			

Three separate ANOVAs were carried out to compare qualification, years of experience and position in the corporate innovations scores. The analysis did not violate the assumptions of the ANOVA. The results of Levene's test of equality of error variances showed equal variances for all conditions ( $F = .42, p = .66$  for qualification;  $F = .23, p = .88$  for years of experience;  $F = .56, p = .70$  for position). Thus, there was no need to adjust the degrees of freedom. Table 7 shows the ANOVA results, indicating a statistically significant difference between the groups' means of qualification [ $F(2, 370) = 8.17, p < .001$ ]. The post hoc multiple comparison test showed that employees with a bachelor's degree ( $M = 22.21$ ) scored significantly higher than those with a master's degree ( $M = 20.51$ ). No statistically significant differences were found between the means of years of experience and position in corporate innovation.

**Table 6.7** Comparison of qualifications, years of experience and position in corporate innovation

Variable	Level	Mean	SD	N	F	<i>p</i>
Qualification	Bachelor's	22.21	3.76	223	8.17	0.00
	Master's	20.51	3.85	125		
	Ph.D.	20.87	4.61	23		
Years of experience	1–5 years	21.49	3.72	80	0.41	0.75
	6–10 years	21.10	4.18	63		
	11–15 years	21.75	3.69	85		
	16 years and above	21.67	4.06	143		
	Employee	21.80	3.86	196		
Position	Advisor	20.32	4.02	28	1.13	0.35
	Section head	21.31	4.33	78		
	Director	21.39	3.46	49		
	Executive	22.20	3.68	20		
	director					

### 6.7.3 Comparison of gender, qualification, years of experiences and position in organisational performance

An independent samples t-test was conducted to compare female and male employees' organisational performance. As reported in Table 8, no statistically significant difference was found between female ( $M = 24.75$ ) and male ( $M = 24.54$ ) employees in their organisational performance scores, which was an expected result based on what was discussed in literature review chapter. Chapter 7 discusses the findings.

**Table 6.8.** Gender comparison in organisational performance

Variable	Gender	N	Mean	SD	t	df	<i>p</i>
Organisational performance	Female	179	24.75	3.18	0.62	369	0.54
	Male	192	24.54	3.42			

Three separate one-way ANOVAs were performed to compare qualification, years of experience and position in organisational performance. The assumptions of the ANOVA were not violated. The results of Levene's test of equality of error variances indicated equal variances for all conditions ( $F = 1.66, p = .19$  for qualification;  $F = .50, p = .68$  for years of experience;  $F = .53, p = .72$  for position). Thus, there was no need to adjust the degrees of freedom. Table 9 presents the ANOVA results. As shown in the table, no significant differences were found between employees' qualifications, years of experience and position on organisational performance.

**Table 6.9** Comparison of qualification, years of experience and position in organisational performance

Variable	Level	Mean	SD	N	F	<i>p</i>
Qualification	Bachelor's	24.71	3.25	223	0.74	0.48
	Master's	24.42	3.31	125		
	Ph.D.	25.26	3.85	23		
Year of experience	1–5 years	24.74	2.97	80	0.03	0.99
	6–10 years	24.63	3.61	63		
	11–15 years	24.60	3.37	85		
	16 years and above	24.62	3.33	143		
	Employee	24.82	3.25	196		
Position	Advisor	24.54	3.79	28	0.44	0.78
	Section head	24.24	3.41	78		
	Director	24.69	3.10	49		
	Executive	24.50	3.35	20.00		
	director					

#### 6.7.4 Mediation analysis

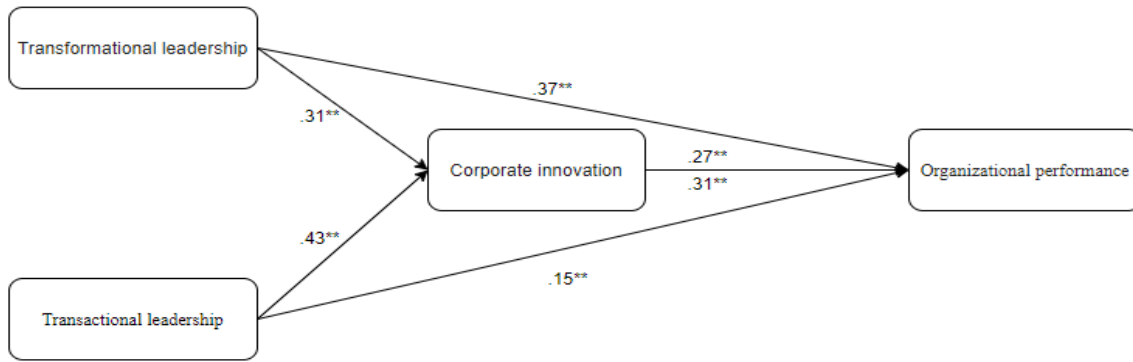
A mediation model tested the mediating role of corporate innovation in the associations between transformational leadership, transactional leadership and organisational performance using the SPSS version 3.4 PROCESS Macro Model 4 (Hayes, 2018). The mediation findings were assessed by using standardised regression estimate ( $\beta$ ) scores and squared multiple correlations ( $R^2$ ), with the following conventional effect sizes: .01–.059 = small, .06–.139 =

moderate and  $\geq .14$  = large (Cohen, 1988). The bootstrapping method with 10,000 resamples was used to calculate the 95% confidence interval (CI) to investigate the significance of the indirect effects (Hayes, 2018; Preacher and Hayes, 2008). The bootstrapping technique is more effective than other traditional approaches, specifically in studies with a relatively smaller sample size (Hayes, 2009; Preacher and Hayes, 2008). Thus, a bias-corrected bootstrapping procedure was conducted to test the proposed mediation model.

After examining the preliminary analyses, the proposed mediation analysis was conducted to investigate the direct and indirect associations among the study variables. The results of the mediation analysis are presented in Tables 10 and 11 and Figure 6. The findings showed that transformational leadership ( $\beta = .31, p < .001$ ) had a significant direct effect on corporate innovation, explaining 10% of the variance in corporate innovation. Transformational leadership ( $\beta = .37, p < .001$ ) also had a significant direct effect on organisational performance and significantly predicted organisational performance through corporate innovation ( $\beta = .27, p < .001$ ). Transformational leadership and corporate innovation accounted for 27% of the variance in organisational performance. These findings suggest that corporate innovation has a mediation effect on the association between transformational leadership and organisational performance.

Transactional leadership ( $\beta = .43, p < .001$ ) had a significant direct effect on corporate innovation, accounting for 19% of the variance in corporate innovation. Transactional leadership ( $\beta = .15, p < .001$ ) also had a significant direct effect on organisational performance and significantly predicted organisational performance through corporate innovation ( $\beta = .31, p < .001$ ). In the model, transactional leadership and corporate innovation together explained 16% of the variance in organisational performance, suggesting that the relationship between transactional leadership and organisational performance can be explained by the mediating role of corporate innovation.

The indirect effects of transformational leadership and transactional leadership on organisational performance through corporate innovation were significant, indicating that corporate innovation partially mediates the associations between the variables. The unstandardised total, direct effect, indirect effect and 95% bias-corrected CI predicting organisational performance are presented in Table 11.



**Figure 6.6:** Structural model depicting the associations between the variables of the study

**Table 6.10** Unstandardised coefficients for the proposed mediation model

Antecedent	Consequent							
	<i>M</i> (Corporate innovation)				<i>Y</i> (Organisational performance)			
	Coeff.	<i>SE</i>	<i>t</i>	<i>p</i>	Coeff.	<i>SE</i>	<i>t</i>	<i>p</i>
<i>X<sub>I</sub></i> (Transformational leadership)	0.61	0.10	6.24	<.001	0.61	0.08	7.86	<.001
<i>M</i> (Corporate innovation)	—	—	—	—	0.22	0.04	5.64	<.001
Constant	11.16	1.68	6.65	<.001	66.86	1.35	6.93	<.001
	<i>R</i> <sup>2</sup> = .10				<i>R</i> <sup>2</sup> = .27			
	<i>F</i> = 38.49; <i>p</i> < .001				<i>F</i> = 66,86; <i>p</i> < .001			
<i>X<sub>I</sub></i> (Transactional leadership)	0.58	0.06	9.25	<.001	0.17	0.06	2.82	<.005
<i>M</i> (Corporate innovation)	—	—	—	—	0.26	0.04	5.92	<.001
Constant	14.06	0.83	16.92	<.001	16.76	0.95	17.64	<.001
	<i>R</i> <sup>2</sup> = .19				<i>R</i> <sup>2</sup> = .16			
	<i>F</i> = 85,58; <i>p</i> < .001				<i>F</i> = 35,48; <i>p</i> < .001			

*Note.* *SE* = standard error. Coeff = unstandardised coefficient. *X* = independent variable; *M* = mediator variable; *Y* = outcomes or dependent variable

**Table 6.11** Unstandardised total, direct effect, indirect effect and 95% bias-corrected confidence interval predicting organisational performance

Path	Organisational performance (Y)			
	Effect	SE	BootLLCI	BootULCI
<b>Transformational leadership (X)</b>				
Total effect	0.75	0.08	0.59	0.90
Direct effect	0.61	0.08	0.46	0.76
Indirect effect though corporate innovation	0.14	0.04	0.07	0.22
<b>Transactional leadership (X)</b>				
Total effect	0.32	0.06	0.21	0.43
Direct effect	0.17	0.06	0.05	0.29
Indirect effect though corporate innovation	0.15	0.03	0.09	0.22

*Note:* Number of bootstrap samples for the percentile bootstrap confidence intervals: 10.000

## 6.8 Conclusion

This chapter presented the results of the quantitative phase of the study. The questionnaire used in the study comprised only 20 questions with five options (Likert scale). Many experiments have demonstrated the important effects on the response rate of questionnaire length in mail surveys (Bogen, 1996). Meta-analyses have revealed that longer questionnaires have lower response rates (Heberlein and Baumgartner, 1978; Yammarino, Skinner and Childers, 1991). Vogel, Reuber and Vogel (2020) presented three benefits of short surveys. First, a shorter measuring scale for public research addresses the realistic need for testing, making it possible for academics to test the definitions. Second, adapting the scale to a modern administrative background provides a theoretical perspective on the public research phenomenon. Third, the effects reach beyond analysis and philosophy, as public relations professionals often profit from a shorter (and hence more effective) scale.

The following chapter describes the findings of the interview phase. Therefore, Chapter 7 presents the results of both phases of the analysis to clarify the relationships among the study variable.

# CHAPTER 7: QUALITATIVE RESULTS

## 7.1 Introduction

This chapter presents the findings of the qualitative analysis. Data were obtained from a series of interviews with employees from the Abu Dhabi public sector held between September and October 2020. The interviewees for the second phase of the mixed-methods approach were identified based on their participation in the survey, involvement in corporate innovation, positions held to represent corporate innovation using two approaches (top-down and bottom-up), mixed genders and different years of experience from different public sector departments. A total of 15 interviews were analysed. A thematic analysis was conducted in conjunction with Braun and Clarke's (2006) six-stage methodology for this process. This chapter explains the main themes and sub-themes derived from the interviews.

Fifteen sub-themes were generated from the analysis. Of these, four overarching themes were identified as follows:

### **Theme 1: Perception of corporate innovation**

- A- Creation of new ideas
- B- Developing business processes
- C- Solving challenges in organisations
- D- Understanding employees' mindsets and encouraging work-life balance

### **Theme 2: The common leadership style adopted in the public sector**

- A- Transactional leadership style
- B- Transformational leadership style
- C- Blended leadership style

### **Theme 3: Influences on corporate innovation**

- A- The most influential approach
- B- The most influential leadership
- C- Forgiveness culture
- D- Hawthorne effect

**E-** Employees' capabilities and characteristics (gender, experience, qualification and position)

**Theme 4: Influences on enhancing organisational performance**

**A-** Corporate innovation as a mediator between leadership style (transformational and transactional) and organisational performance

**B-** The effect of innovation on budget, services, operational excellence, learning & growth and strategic objective

**C-** Reward system

**7.2 Theme 1: Perception of corporate innovation in the Abu Dhabi public sector**

The first major theme is the perception of corporate innovation and its real application in the Abu Dhabi public sector. For the participants, many sub-themes were involved. Among these, four seemed to be noteworthy as they were identified many times in how the participants' considered the application of corporate innovation in the public sector.

Table 7.1 presents the perception of corporate innovation in the Abu Dhabi public sector. Corporate innovation is linked to creative ideas. Creativity is the beginning process and an input for innovation (ISO 56002, 2019). It is linked to developing business processes, solving challenges in organisations based on the defined gaps, understanding employees' mindsets and encouraging work–life balance. Therefore, it can be considered part of the entire organisational system (culture). The sub-themes are analysed as follows:



**Table 7.1** Perception of corporate innovation in the Abu Dhabi public sector

<b>Sub-theme</b>	<b>Frequency</b>	<b>Percentage</b>
Creating new ideas	12	48%
Developing business processes	9	36 %
Understanding employees' mindset and encouraging work-life balance	5	20%
Solving challenges in organisations	2	8%

### **7.2.1 Creating new ideas**

In the Abu Dhabi public sector, 48% of the participants stated that corporate innovation involved creating new ideas. They explained the mechanism of collecting these ideas, either from employees or customers, and how they would be applied and add value to the organisation. Some participants perceived corporate innovation in both sub-themes. These similar answers were received from different participants with different positions (employee, section head, director, advisor and executive director).

For example, Participant 1 defined innovation as follows: *'For me, it refers to ideas that can improve our business model or business process in a positive way'*.

According to Participant 3, *'It is about finding new ways, new creative ways of doing even the same thing'*.

For Participant 4, *'Innovation at the corporate level is delivering a process, a design or an idea in an innovative way within the corporate context'*.

Other participants shared a similar concept: an innovative idea is based on services and products.

Participant 5: *'It is the effort, mindset and innovative ideas of employees, suppliers and users of a specific function gathered in a centralised mechanism and then deployed either internally or externally'*.

Participant 6: *"Corporate innovation is taking these ideas, maintaining them, encouraging them, monitoring them directly in the right department and turning them into products or systems that can add value"*.

Participant 8: *'Innovation is the continuous development of ideas'*.

Participant 10: *'Innovation is the application of creative ideas so people can come up with new products or services'*.

Participant 12: *'Innovation is about transforming new ideas into a product or service'*.

Participant 15: *'The application of ideas from different channels and measuring efficiency within a certain period of time'*.

### **7.2.2 Developing business processes**

Innovation is defined as a continuous way of developing business processes. Among the participants, 36% linked the success of corporate innovation to built-in systems and processes within the organisation. Participant 1 linked innovation to continuous development to improve business processes: *'For me, this refers to ideas that can improve our business model or business process in a positive way'*.

Participants 4, 6, 11, 13 and 15 connected corporate innovation processes with customers, which are the main beneficiaries of the outcome of the application.

Participant 4: *'Innovation on the corporate level is delivering a process, a design or an idea in an innovative way within the corporate context'*.

Participant 6: *'Corporate innovation is a process in any government entity of transferring ideas, whether from people, customers or external resources, to services, products or systems that add value to the corporation'.*

The participants also identified innovation as follows:

Participant 11: *'It is based on a system in which this system is cascaded down to everyone through processes. In the government sector, there is a gap in applying the processes related to innovation'.*

Participant 13: *'Corporate innovation should be the main element in a corporate process'.*

Participant 15: *'Corporate innovation is about the processes, policies and systems that we create to perform better for the customers'.*

### **7.2.3 Understanding employees' mindsets and encouraging work–life balance**

Among the participants, 20% believed that innovation is based on understanding employees' mindsets, creating a culture and incentives. Some considered it to be changing the mindset and recognising the difference between people. According to Participant 3, *'It is about a change in mindset, a change in culture, so people should stop thinking about the government as a bureaucracy. When you have the right incentives and motivation for employees to continually change, and when you link it to their evaluation, to their promotions, to their financial income, as rewards and incentives, then the innovation happens'.*

Some participants stated that innovation calls for public organisations that encourage improvement and change through a reward system (tangible and intangible) and create a new culture in the public sector. In this way, the barriers in employees' minds will be eliminated so that they can adopt the innovation style.

Participant 9: *'It is more based on building an innovation culture in the public sector, knowing that we are emotional about nature, and to eliminate the different levels between people... Innovation is based on a corporate environment where there is acceptance of creative ideas'.*

Participant 4: *'And I would say that having the concept of innovation in the government is like a cultural thing. That we are looking for innovation in any small or big process in the work environment will be the best way. So you have to embed it as a culture, something that you think of every day'*.

#### **7.2.4 Solving challenges in organisations**

Some participants defined the existing innovation concept in the Abu Dhabi public sector as being based on solving challenges. Among the participants, 8% showed an association between corporate innovation and organisational challenges. According to Participant 7, corporate innovation is about solving different challenges in organisations, and if the purpose is not met, then there will be no point in creating an innovation function in organisations. *'Innovation is usually based on corporate challenges, so the organisation has to create that link. Otherwise, there would be no point in corporate innovation'*.

Participant 14 also held a similar view: *'Innovation has to solve the challenges of the organisation'*.

#### **7.2.5 Summary of Theme 1**

The first theme concerns perception and how each participant sees and understands the perception of corporate innovation in the Abu Dhabi public sector. Most of the participants agreed that corporate innovation is based on creative ideas as an input for a corporate innovation system. They also considered the importance of idea registration by individuals to reserve their rights and for the organisation to obtain the benefits of those ideas.

Many participants linked corporate innovation to improving organisational processes. They asserted the importance of developing innovation through daily work processes, which would lead to an embedded innovation culture and innovative mindset among employees. The purpose of corporate innovation is to solve organisational gaps and challenges. Therefore, organisations must share organisational challenges with everyone working in the organisation.

### 7.3 Theme 2: The Common Leadership Styles in the Abu Dhabi Public Sector

The second major theme is the dominant leadership style in the Abu Dhabi public sector and the reasons for determining leadership style. One of the objectives of the study is to investigate the participants' perception about which between transactional style and transformational style is the more common leadership style, why they think one style is more dominant than the other and which style is the most common in the Abu Dhabi public sector (Table 6.4).

**Table 7.2: Common leadership styles in the public sector**

Sub-theme	Reason	Frequency	Percentage
Transactional leadership style	Emirate needs, organisational culture, rapid changes, crises	7	46%
Transformational leadership style	Millennial generation, transformational era, motivational culture	4	26%
Blended leadership style	Transformational strategy, stakeholders' expectations	4	26 %

#### 7.3.1 Transactional leadership style

Among the participants, 46% considered the transactional style to be more effective based on what Abu Dhabi public sector needed to have during those years. Participant 1 expressed the kind of leadership style for the public sector that the emirate needs. *'Transactional leadership is the most prominent in the Abu Dhabi government. KPIs drive behaviours. Deadlines drive behaviours. Most senior organisational leaders do not feel that they have enough time to spend on developing people, as they have to deliver results on time. The policy and regulatory backbone of organisations makes it difficult to move quickly, to adapt*

*or to be agile. Transformational needs to be faster and cross functional teams rather than silo departments.*

Participant 2 shared the same sentiment. *'Abu Dhabi focuses more about the end results rather than individual employees or about individual KPIs. In my opinion, we focus more on the transactional style, so we have more transactional leadership'*.

Participants 3 and 6 explained their thoughts from a different angle. The reasons for the dominance of the transactional style are organisational culture, rapid changes in department heads (every three years) and crises, such as the COVID-19 pandemic. The department head is forced to adopt a transactional style because he will not be in the position for long, as department heads are changed every three years. According to Participant 3, each newly appointed department head always starts from scratch and mistrusts the existing teams. *'Because of the shortened time or the shortened duration for the department head, he's forced to be transactional or to adopt the transactional style rather than the transformational style'*.

According to Participant 6, *'Number one, maybe it is rooted in our culture. Second, I think it is related to the criticality of the work. Like, if you're in a position and you have so many obligations. You have so many requirements or direct instructions from the government or a higher executive entity. I think the shortest, quickest and most effective way for that is the transactional style to get the job done. Now it takes time. Sometimes, the situation is not applicable, like when you receive an order or if we have a project deadline within six months, the department head will be accountable if you do not deliver certain items or results. In this context, transactional leadership is followed. This is one part. The other part, I think, is due to what they have experienced in the past. But there is amazing progress now compared to what we have seen in the past. For example, maybe, 10 years ago, there was no threat, no interest or little interest in leadership development'*.

Moreover, Participant 5 linked transactional leadership to rapid changes, such as the COVID-19 pandemic. The work pace in the public sector is so fast that it will be sustained even after the pandemic. *'I think the current status with COVID-19 is here to last. It is not something that we will let go of, even after the virus has gone. It is a culture that will last. So, what I see is now is fast action that needs to happen in government initiatives and*

*government projects. They have no time to develop people or transform them. It's just you have to achieve by adopting transactional style'.*

### **7.3.2 Transformational leadership style**

Among the participants, 26% considered the transformational and mixed leadership styles to be dominant based on the transformation happening in the Abu Dhabi public sector in the last 3–5 years. Participant 4 explained the transformation that her governmental entity was going through, similar to that happening in other public sector entities. Participant 4 believes that the new generation (millennials) works under the command of the transformational style and that the new generation will not accept the transactional style (old school). For this reason, the Abu Dhabi public sector adopts a transformational style, as the government depends on the youth to build and achieve its government strategies. For Participants 9 and 10, the transactional style is old school and does not fit in the transformational era in which we live. Participant 13 linked the motivational culture adopted by the Abu Dhabi public sector to the leadership style that fits this direction.

Participant 13 : *'Let's look at the employees. There's a new generation in place and then there's the older generation that has been working for more than 20 years. Actually, the older generation do well with transactional leadership, which is already set for them. Whereas transformational leadership, I think they find it challenging. But the younger generation is up to that style' ... .., : 'In the Abu Dhabi public sector, there is a direction to adopt the motivational culture. Therefore, I believe there is a more transformational leadership style'.*

Participant 4: *'That's a very good question. If you had asked me this question five years ago, I would have answered without a doubt that transactional leadership is the most common. However, what I have noticed in the past five years is that there has been a change. A change in leadership style is happening. At least from a healthcare perspective, I can say that it has been transformational, especially in the last three years. This is definitely due to their leadership and agenda. It has impacted a lot on the staff and employees at all levels. This is something that I've experienced when talking about my entity. Now, when you talk about the government of Abu Dhabi, I've seen this cascade down to the different entities recently. So, there is change when they're looking for that transformational leader. In a nutshell, the*

*government of Abu Dhabi is going towards transformational leadership. This change has been observed in the last, say, three years. It is getting accepted by the new generation of employees more than the older generation’.*

Participant 9: *‘Transactional style is old school. Nowadays, in the Abu Dhabi public sector, you see a transformational style. This is based on the impact you see on the government style of work’.*

Participant 10: *‘The government has started to focus on public sector employees in terms of development and enhancing their skills and abilities to play different roles. For this reason, you see the transformational style. Transactional style is an old style, which doesn’t fit here in the Abu Dhabi public sector’.*

### **7.3.3 Blended leadership style**

The blended leadership style is a combination of transactional style and transformational style. Among the participants, 26% believed that both styles exist in the Abu Dhabi public sector. According to Participants 11, 12 and 14, based on the emirate’s transformational strategy and with the different expectations from different stakeholders, both styles are adopted to achieve success for the emirate. Participant 15 explained that both styles exist in each governmental entity: transformational style by the managers and transactional style by the department head.

Participant 11: *‘I can see both styles in the Abu Dhabi public sector, even in each entity. I see both styles adopted by different management positions. It has to be this way as it serves different purposes based on their definition’.*

Participant 12: *‘Both styles exist, as Abu Dhabi is adopting a transformational strategy. Therefore, it needs to have both styles to manage different expectations’.*

Participant 14: *‘I can see both styles in the public sector. I cannot see one style dominating another. To achieve more, you need both styles’.*



Participant 15: *'Based on my experience in the Abu Dhabi public sector, there is a mixed style. You may see the transformational style more with the managers and transactional style more with the department heads'.*

Overall, the participants' answers were based on their viewpoint and experience working for the Abu Dhabi public sector. The participants believed that the transactional leadership style exists more in the Abu Dhabi public sector due to the Emirate's needs, organisational culture, rapid changes and crises.

#### **7.3.4: Summary of Theme 2**

Before analysing and answering the question of which leadership style is more influential and positively associated with corporate innovation and organisational performance, the participants gave a clear picture of the existing conditions of leadership in the Abu Dhabi public sector. Almost half of the participants saw the domination of the transactional style due to the rapid changes and quick results needed by the executive authority. The other half of the participants considered either the transformational leadership style or the blended style (transformational + transactional). The dominance of the transformational style in the Abu Dhabi public sector was due to the transformational journey that had begun in the last five years in the Abu Dhabi public sector. Conversely, other participants considered the maturity of the department heads in adopting both styles (transformational + transactional) to achieve better results in a fast-changing world.

#### **7.4: Theme 3: Influences on corporate innovation**

The third major theme is the factors affecting corporate innovation effectiveness, which include the most influential approaches and leadership styles, forgiveness culture, the Hawthorne effect, leading team and synergy positions, and employees' capabilities and characteristics (gender, qualification and experience).

##### **7.4.1: The most influential approach for creating corporate innovation**

The participants highlighted three approaches for creating real corporate innovation: top-down, bottom-up and balanced approach (Table 6.2).

**Table 7.3:** The most influential approach to creating corporate innovation

Sub-theme	Frequency	Percentage
Top-down approach	10	58%
Balanced approach	4	23%
Bottom-up approach	3	17%

### **1. Top-down approach**

As shown in Table 6.2, 58% of the participants (e.g. Participants 1, 4, 5, 7, 9, 10, 11, 12, 14 and 15) considered top-down as the most influential approach for creating corporate innovation. Therefore, the leadership has more responsibility in playing a role model and influencing everyone in the organisation to develop their creative ideas. It is important to note that the responses were gathered from participants holding various positions within their organisations, including advisors, employees, section heads, directors, and executive directors.

Participant 1: *'If the top enabled the organisation, the pendulum would swing to how the employees would respond'.*

Participant 4: *'I would say top-down. If I see my leaders and the managers at higher management implementing innovation and thinking in an innovative way, then this will influence us in that we would like to follow them because we look up to them'.*

Participant 5: *'If the leaders adopt the most common top-down approach, that I would say that they would have more followers because it's the symbol of the corporation'.*

Participant 7: *'It has to be top-down. Even if we have brilliant employees, they will not move or give their ideas without a real adaptation and direction from the leadership'.*

Participant 9: *'It is the top-down approach. Our organisations will not be able to achieve corporate innovation and integrate it into the strategy and vision unless the leadership believes in the value of applying it. In my opinion, it's 70% top-down and 30% bottom-up'.*

Participant 14: *'Top-down is the right approach. The leadership has different tools to enable employees to create good ideas aside from the motivational part (tangible and intangible) to activate the employees' role in corporate innovation'.*

Participant 15: *'Based on our benchmark and practices, corporate innovation will not succeed without it being deployed from the top of the organisation to achieve the vision, mission and objectives'.*

## **2. Balanced approach**

Among the respondents, 23% considered both top-down and bottom-up approaches to be the most influential in developing corporate innovation. Organisations are clearly capable of balancing between top-down and bottom-up approaches. For Participant 2, the top-down approach creates faster results, while the bottom-up approach creates sustainable results in corporate innovation. *'If I use the bottom-up approach, I think I will be able to achieve more sustainable results than when using top-down. But if I use the top-down approach, maybe I'll be able to obtain faster results in innovation, so both are important'.*

## **3. Bottom-up approach**

Among the participants, 17% considered the bottom-up approach to be the most influential in creating corporate innovation. Participants 3, 6 and 13 recognised the gaps and weaknesses from the bottom level.

Participant 13: *'Innovation starts from the lower level as employees are aware of the specific gaps and weaknesses when looking for opportunities.'*

Participant 3: *'I would split it. I would say 20% top-down and 80% bottom-up. When you need to start, you need the environment, the commitment for innovation and the people feeling safe, rewarded and appreciated for their innovation. The 20% is about leadership. The top-down is the commitment. But the actual innovation itself, the process, it has to be from the bottom-up because that's where you get the people to do their own thing'.*

Overall, the participants considered that corporate innovation is based on an ecosystem between top-down and bottom-up, and that it is a joint effort between the leadership and the employees. The leadership style adopts the direction, and the employees give their best ideas to improve and enhance their jobs, as they are the subject matter experts in the technicality of their jobs. The sub-themes showed different viewpoints on the role of leadership and the way that organisations could create a balance between the top-down and bottom-up approaches. Therefore, the minor themes showed the change adaptation in organisations and the term ‘voice of employees’.

#### **7.4.2 The most influential leadership style in building corporate innovation in the Abu Dhabi public sector**

Leadership style plays a significant role in creating corporate innovation. Among the participants, 87% considered the transformational leadership style the most influential in building an innovation culture. Only 12% believed in the need to have a mixed style (blended) based on the synergy between the two styles.

**Table 7.4:** The most influential leadership style in creating corporate innovation

<b>Sub-theme</b>	<b>Frequency</b>	<b>Percentage</b>
Transformational leadership style	14	87%
Blended style	2	12 %

Participants 2, 3, 4, 5, 7, 8, 10, 11, 14 and 15 considered the transformational leadership style to focus on individual needs, care about employees’ progress and provide employees with trust, confidence and space to do their own thing, thus enhancing corporate innovation.

Participant 2: *‘I’m sure that the transformational style is more influential in building an innovation culture in the Abu Dhabi governmental sector. If you focus on individual employees, then you assess their capabilities, strengths and weaknesses. You work on their weaknesses on an individual basis, which means that you pay attention to each employee. It’s like you are providing him or her with a customised solution, which I’m sure that will have much better results than giving, like, group solutions’.*

Participant 3 gave two examples from Apple and Steve Jobs—the way he used to manage his employees and the results of Apple’s high shares worldwide. *‘I find that transformational is the most influential. The way I understand it, you have to provide a vision, trust and autonomy to the people. These are the prerequisites for any real innovation. But you don’t micromanage them. You really want the best for them, so you just provide a general vision, and you leave it to them because they know their work. I remember Steve Jobs saying, “We don’t hire smart people to tell them what to do. We hire them so they can tell us what to do. In the last few decades, most people have become knowledge workers. It’s not physical work in a more or less factory. It’s that it’s predictable what steps you take. To get the best out of the minds of people, then you need to trust them and to give them the freedom to innovate, to think on their own and just give them a direction, not a step-by-step plan”’.*

Participant 4: *‘Transformational leadership is about developing the person, inspiring the person, motivating. With this kind of style, you’re actually opening channels and doors for individuals to discover their own capacity, and within your own capacity comes innovation. So I would say transformational style’.*

Participant 5: *‘Innovation requires people. It’s not a process, it’s not a machine, it’s not a kit that you deploy or an idea that you deploy and then suddenly you become innovative. This really requires developing people’s mindsets, ambitions and knowledge. It requires acceptance of failures or mistakes. So transformational leadership is much more appreciated in building knowledge through an innovation environment and development’.*

Participant 7: *‘Transformational style provides trust and confidence to the people so that they can give their creative ideas, unlike the transactional style in which people work for the sake of showing off and rewards’.*

Participant 8: *‘Transformational style is the most influential, especially in the public sector, where employees feel stable and work for up to 20 years. Therefore, a transformational leader can create an impact slowly until he builds a culture of innovation’.*

Participant 10: *“Transformational style is when a leader trains employees, supports them, explains to them and allows them to work with some space. As a result, employees will be keen to develop their work and deliver their creative ideas for the success of the organisation”.*

Participant 11: *‘The style that creates trust, confidence and motivation and that allows employees to do certain tasks based on their skills is the transformational style. Innovation needs to be built in a mutual trust environment, not a fear environment’.*

For Participants 9 and 12, the transformational style is the most influential because it focuses on the outcomes and the achievement of long-term plans in the Abu Dhabi public sector.

Participant 9: *‘In corporate innovation, you need to see the outcomes and the effects. The transformational leadership style can achieve that, unlike the transactional style that creates outputs only’.*

Participant 12: *‘Leadership is about influencing and motivating people. Therefore, I consider the transformational style to be able to build corporate innovation, even if it takes a long time to reap the rewards. Employees need a leader who can be patient with them and give them more chances’.*

Participants 13, 14 and 15 linked the transformational style to the motivation and encouragement factors and highlighted the need for this kind of leadership style to bring the best out of people.

Participant 13: *‘Motivation develops the sense of innovation, and a transformational leader cares about the individuals’ needs and motivations’.*

Participant 14: *‘Innovation is based on ideas, and people cannot deliver creative ideas if they feel threatened and could be punished. Therefore, the transformational style is the most influential in developing an innovation culture’.*

Participant 15: *'Transformational style is when the leader takes good care of the employees. They can deliver their best performance when they feel that they are important and when there is someone (superior) taking care of them'.*

Two participants (12%) highlighted the need for a mixed style (transformational and transactional) to develop corporate innovation. According to Participant 1, it is obvious that the transformational style is the most influential, but people need to be more serious and faster and to deliver. This is where the transactional style comes in. *'It would be easy to say transformational, but the issue is that innovation will never be taken seriously enough as it is considered non-outcome based or non-result based. Simply put, it takes too long to foster. The only way to influence is to use a blended leadership style, which can deliver results and balance the organic development time'.*

Participant 6 believed in the ability of the transformational style to influence corporate innovation but asserted the need for the transactional style. *'I think both because... Let me give you a glimpse of what we do in innovation. You know what kind of vision—one part you need. You need cooperation from management. You want to develop innovation and culture. Any organisation accepts failure. It's okay to make mistakes. It's okay to fail because we learn from it. What are the risks in the approach to accepting different ideas? There are many people you can reach. So, that's work in a transformational leadership or in an open position or an open culture. But in other parts, you also need transactional leadership because at the end of the day, you need to deliver the KPIs, achieved objectives and strategic goals. This cannot be done without transactional leadership, accountability or responsibility'.*

### **7.4.3 Forgiveness culture**

Another factor affecting corporate innovation effectiveness is forgiveness culture, which refers to accepting employees' failures and mistakes to develop corporate innovation. Participants 5 and 6 agreed on the importance of leadership to allow people to make mistakes so that they could learn from them and feel confident in improving the organisation with their ideas. Therefore, a transformational leader is someone who is patient with employees and who creates a knowledge-based organisation.

Participant 5: *'It requires acceptance of failures or mistakes. So transformational leadership is more appreciated in building knowledge through an innovation environment and development'*.

Participant 6: *'It's okay to make mistakes. It's okay to fail because we learn from it. What are the risks'?*

#### **7.4.4 Hawthorne effect**

One participant referred to the Hawthorne effect as a dominant factor in building corporate innovation. In the context of innovation, the Hawthorne effect occurs when employees change their behaviour as a result of being monitored and supervised. For example, when workers are aware that their management is actively monitoring them, they may work harder and more diligently. According to Participant 15, in accordance with the Hawthorne effect, employees enhance their performance when they feel monitored and supervised, as they do not want to feel neglected. *'It is the theory that says when employees feel that somebody is watching and monitoring them, they will improve their performance and do their best to enhance their skills to look good in front of their superior'*.

#### **7.4.5 Employees' capabilities and characteristics (gender, experience, qualification and position)**

##### **1- The gender effect**

According to the literature review, employees' capabilities and characteristics are factors that may affect the perception of innovation. Regarding the effect of gender difference (male/female) on innovation, the majority of the interviewees (62%) found no association between gender and the perception and application of innovation. Conversely, 37% found a positive association in complementing both genders and that women are more innovative in organisations. One participant commented on the role of males in creating remarkable inventions around the world.

**Table 7.5** Gender effect in creating corporate innovation



<b>Sub-theme</b>	<b>Frequency</b>	<b>Percentage</b>
No association between gender and innovation	10	62%
Association between gender and innovation	6	37%

Participants 1, 3, 4, 5, 6, 7, 8, 9, 11 and 13 considered that the perception and application of innovation are based on personal need, knowledge level and mindset.

Participant 1: *'For me, personally, none'*.

Participant 3: *'We are in a society that, for a long, long time, has been male-dominated. But ironically, this is changing so fast, especially in the UAE. The improvements that women are making are amazing in the last 20, 30 and 40 years. This balance is being addressed and in a rapid way'*.

Participant 4: *'I don't think that there is much difference, or there is a tendency of innovation in females more than in males. I think it is equally seen in both genders'*.

Participant 5: *'I don't think there is a link between gender and innovation. I do think that there is a link between need and innovation. Innovation is not something that is dictated by gender, as it dictated by the internal urge of a person to know something or solve something to create something that he or she needs'*.

Participant 6: *'I haven't seen any difference. Both genders, male and female, are so passionate. They are a valuable addition to the innovation system. They are so passionate about making changes in other values. They are so interested. They think outside the box and look at things from different angles and situations'*.

Participant 7: *'They are both equal and complement each other. Females like to record their ideas and present them nicely, whereas males are more practical with their ideas'*.

Participant 8: *'I don't think there is an association between males or females in applying corporate innovation'*.

Participant 9: *'There is no association, and sometimes it depends on the environment where men or women can give more'*.

Participant 11: *'These is no association between gender and innovation. However, worldwide, males make greater contributions to humanity'*.

Participant 13: *'It doesn't make any difference. The thing that makes the most difference is the knowledge of the person'*.

For Participants 2, 10, 12, 14 and 15, there is an association between gender and innovation. Participants 2, 10 and 14 considered females to have a wide imagination and to be enthusiastic in delivering their creative ideas, whereas males are rigid in the way they think. Participants 12 and 15 believed in synergy between genders. If males are good at macro and applying ideas, females are good at micro (details) and planning and registering their ideas. Therefore, both genders complement each other in creating corporate innovation in the Abu Dhabi public sector.

Participant 2: *'Females, because of the way they think, and they have a wide imagination. I can say that male thinking is more rigid than female thinking'*.

Participant 10: *'Females are more interested in innovation, especially when it comes to ideation. Males are good at applying the ideas'*.

Participant 14: *'Females are more enthusiastic about giving their creative ideas in our public sector''*

Participant 12: *'Males and females complement each other. Males are good in a practical way, whereas females are good at planning and analysis. So, there is an association between complementing each other and achieving innovation'*.

Participant 15: *'One complements the other. It's mainly based on personality, and with the differences, the process can be completed'*.

## **2- The experience effect**

The thematic analysis identified the experience effect as a sub-theme. Table 6.6 shows that the majority of the participants (57%) found no association between employees’ years of experience and innovation. The remaining participants (42%) considered employees’ years of experience to have a direct effect on innovation.

**Table 7.6** The experience effect in creating corporate innovation

<b>Sub-theme</b>	<b>Frequency</b>	<b>Percentage</b>
No association between experience and innovation	8	57%
Association between experience and innovation	6	42%

The participants considered years of experience to hinder the creation of innovative ideas. Although employees with more experience are able to connect different ideas and understand how organisations work, some of them may have resistance and tunnel vision, as they are used to doing things in a certain way (Participants 1, 3, 4 and 5). In addition, innovation depends on personality, needs and mindset (Participants 6, 8, 10 and 11).

Participant 1: *‘As we grow in experience, we may have more ideas about a simple thing that could change everything, or we may gain experience and just be accepting of the way things are and unwilling to change it’.*

Participant 3: *‘In one way, it can give you a deep understanding of the work processes, like knowledge that you cannot even explain, because you've done so much. You've seen so many things that you can spot an opportunity instantly. However, there’s also a danger to this. You can have tunnel vision because you're so used to the environment you're in. Those with fresh eyes coming into the same situation may be able to see the obvious.’*

Participant 4: *‘It depends on the way a person actually thinks and the way that he or she is encouraged to think. So, if you have a manager or a leader who asks a person to suggest new ways of doing things, and he or she wants to see that happen faster, or the person to be more*

*productive, or to have high-quality results, then even that experienced person will need to think in an innovative way’.*

Participant 5: *‘Sometimes the person conducting the training can just ask a question about why a thing is done in a certain way. It's easier to do it this way. So, it's just a comment from a person who's here for a short time. He talks to someone who's been running the same process for 10 years. He revamps the way things are done. But sometimes it's still the mature employee with many years of experience who can read about a new technology or methodology of doing things, come to work in the morning and then reshape the entire process. So, I think there is no association’.*

Participant 6: *‘I think it doesn't matter. They have no association because I have seen many young people who have zero experience at work but are innovators. They invent and create ideas. They come up with amazing products and launch their own start-up companies’.*

Participant 8: *‘I don't think there is an association because it's all about the way of thinking and the way you improve yourself’.*

Participant 10: *‘It's all about the employees' personalities. Nothing to do with the experience’.*

Participant 11: *‘There is no link, and it's based on the personality of the employee and the corporate environment’.*

Among the participants, 42% found an association between employees' years of experience and corporate innovation. Participants 2, 7, 9, 12, 13, 14 and 15 considered that many years of experience could give depth in understanding corporate challenges and the kind of ideas that can improve. Moreover, lessons learned from different situations can enhance employees' ability to deliver better creative ideas. Participant 15 asserted that more experience could bring more knowledge to understanding corporate processes and the existing gaps. Surprisingly, Participants 2 and 7 considered that employees with less experience and fresh eyes and minds could look at challenges differently. This kind of employee thinks outside the box and has the excitement and enthusiasm to think and deliver creative ideas. In other words, the relationship between employees' years of experience and their perception of innovation is a reverse relation.

Participant 2: *'Less years of experience, having a better capability for innovation. Especially with the junior people who are joining as fresh graduate people, who are joining the entities. If we manage to give them, like, within the first six months of their working experience, some tools of innovation, I believe that they will have better results'.*

Participant 7: *'Less experience means more ideas, because giving creative ideas linked with the excitement and fresh mind''*

Participant 9: *'Years of experience is an important factor for suggesting and applying innovative ideas. More experience means more depth and better ability to link between different elements'.*

Participant 12: *'Years of experience plays a good role in applying the innovation, especially if an employee focuses on a certain area and creates diversity of his experience'.*

Participant 13: *'Totally agree with this because the experience comes from the lessons learned and built up by filling the gaps during the work history. So, I think experience is very important in innovation'.*

Participant 14: *'More experienced employees are better with ideas and in understanding corporate innovation. But somehow, the less experienced ones may be more excited to share their ideas'.*

Participant 15: *'Experience can give a person better knowledge and understanding of corporate processes and the existing gaps'.*

### **3- The qualification effect**

The thematic analysis identified the qualification effect as a sub-theme. As shown in Table 6.7, the participants are divided into two groups. One group (56%) found no association between qualifications and corporate innovation in the Abu Dhabi public sector. The other group (43%) considered that there was an association between employees' qualifications and the perception of innovation.

**Table 7.7:** The qualification effect in creating corporate innovation

<b>Sub-theme</b>	<b>Frequency</b>	<b>Percentage</b>
No association between qualification and innovation	9	56%
Association between qualification and innovation	7	43%

Participants 1, 2, 3, 4, 5, 6, 9, 10 and 14 stated that innovation is not related to qualifications; rather, it is related to a person's mindset. For Participant 5, there is an association if there is a technical requirement or research approach, but generally they are not related.

Participant 1: *'I do not believe they are linked. Some people just have a creative mind while others don't'.*

Participant 2: *'In my opinion, there is no link or association between innovation and qualifications'.*

Participant 3: *'Innovation is about the way of seeing things differently, a way of improving things. So anyone, even people without a degree, can be very innovative'.*

Participant 4: *'I don't think that qualifications and innovation are associated. The more qualifications employees have, the more innovative they are—I don't think it works like this, but it can contribute. So, it depends on the person himself, the situation, the environment, the encouragement and, mostly, the need for innovation'.*

Participant 5: *'Unless you're entering a technical domain where you're doing a thesis about a specific posed question, which requires research and development, but in general, innovation is open to everybody. It's not related to a certain qualification'.*

Participant 6: *'No link between them. I believe innovation has different elements that may influence its application but not qualifications'.*

Participant 9: *'Qualifications will not give you more ideas, so there is no relation'*.

Participant 10: *'No relation. Innovation is linked to employees' personalities'*.

Participant 14: *'I don't see qualifications as an influencing factor for corporate innovation'*.

Among the participants, 40% (Participants 7, 8, 11, 12, 13 and 15) found an association between employees' qualifications and the way they contributed their creative ideas to enhance their organisational performance. For Participants 7, 8, 13 and 15, more or higher qualifications can lead to better knowledge and understanding of corporate challenges. As a result, employees with higher qualifications know better how and where to innovate. Conversely, Participant 11 supposed that the relationship could be positive and, in some cases, reversed. In some situations, fewer qualifications mean a fresher mind to think of better ideas.

Participant 7: *'When employees grow with their qualifications, they have a better understanding of how to improve and innovate'*.

Participant 8: *'Qualifications enhance our way of thinking, so they have a positive relationship with innovation. There is one condition though: employees should use their knowledge to improve'*.

Participant 11: *'Employees with fewer qualifications may have more ideas, but employees with higher qualifications may be more effective with their ideas'.*"

Participant 12: *'Qualifications may contribute to innovation upon the condition that employees should practice their qualifications'*.

Participant 13: *'Qualifications do contribute. Qualified people can quickly come up with ideas because they know the subject matter as experts. Therefore, qualifications do play a role'*.

Participant 15: *'Qualifications give employees better knowledge and thus contribute better ideas to improve the organisation'*.

#### 4. The position effect

Employees' position is a key factor affecting corporate innovation. Based on their experience in dealing with ideas from all levels of employees in the Abu Dhabi public sector, more participants found an association between position and innovation compared to those who did not.

Among the participants, 66% found an association between employees' positions and innovation, while 33% did not. Those who found an association considered the role of synergy in applying innovation and being creative on different levels (executive director, director, section head, advisor and employee). For example, Participant 1 viewed it as synergistic if the managers (or leaders) could delegate outcomes. For Participant 4, it is a healthy practice of employees from different levels in the organisation. Participant 14 believed in the integration of each position. Therefore, the senior level has a better vision or perception of innovation, whereas the junior level is better at applying creative ideas.

**Table 7.8** The positions effect in creating corporate innovation

Sub-theme	Frequency	Percentage
Association between employees' positions and innovation	10	66 %
No association between employees' positions and innovation	5	33 %

Participant 1: *'I believe in reality. Employee position is a factor in the perception of innovation. Many employees may not be encouraged to develop their own ideas because of their line managers, but leaders should delegate outcomes'*.



Participant 4: *'I think the integration between positions is healthy. It's good to have and to listen to individuals from different levels and see how innovation can arise in the different ways.'*

Participant 10: *'Employees with different positions can integrate well in understanding and applying corporate innovation.'*

Participant 11: *'There is an integration between different positions to implement corporate innovation. Each position has an important role in innovation.'*

Participant 13: *'It's not about the position. It's about the integration of employees from different levels.'*

Participant 14: *'Senior-level employees have a better perception of innovation, whereas junior-level employees apply innovation better.'*

Participants 6 and 15 explained the contribution of higher positions, which implies better knowledge and understanding of corporate gaps and challenges.

Participant 6: *'In a higher position, I think you will be more aware of how innovation can contribute to an organisation's success. Those at a lower level also contribute to and understand the importance of innovation. But the higher their position, the more that employees consider innovation as a winning cup because it adds value, improves services and contributes to the level of employee satisfaction. It has a direct effect on the organisation, profit, costs, etc.'*

Participant 15: *'A higher position means more experience and more knowledge in closing the corporate gaps. Conversely, a lower position may repeat some ideas.'*

Participants 2 and 7 considered newcomers to an organisation. Junior-level employees know more about work technicalities than their senior counterparts. However, junior-level employees face some constraints. Participant 2 discussed these constraints and how junior-level employees could be free from them.

Participant 7: *'There is a reverse relation between corporate innovation and employees' positions. The juniors know the technicalities, so they have more creative ideas on how to*

*improve their work. Conversely, the seniors are on the macro level, so it is hard for them to see the details.'*

Participant 2: *'Junior employees have better capability in innovation because they are not hampered by constraints in the entities they work for.'*

Among the participants, 33% found no association between employees' positions and innovation and argued that everyone in the organisation could innovate and play a role. Regardless of whether it is a top-down or bottom-up approach, every individual working in the organisation has a duty to contribute to the implementation of corporate innovation, as indicated by their input. What is important is the innovators' mindset and personality. Participant 3 asserted that there is no difference, even between a CEO and an ordinary office worker.

Participant 3: *'I think innovation can come from anyone, really, because again, it's a way of thinking and seeing things differently. A CEO or an office worker both have the same mental ability. They can innovate when they have the opportunity.'*

Participant 5: *'I do not think it is relevant. Seniority is not relevant. What is relevant in innovation is the number of boundaries a person has. The more boundaries you have in your head, the less you will succeed in innovating. So, the person who is innovative is always a risk taker.'*

Participant 8: *'All employees with different years of experience can innovate and come up with creative ideas, so it's based on the personality of the employee.'*

Participant 9: *'There is no association. It's all about the mindset. Sometimes juniors can come up with brilliant ideas, and sometimes it's the manager or the leader.'*

Participant 12: *'I do not believe that different positions can affect innovation. Anybody can contribute.'*

#### 7.4.6 Summary of theme 3

The third major theme is the participants' views of the factors affecting corporate innovation effectiveness. The first factor is the most influential approach and leadership style. Most of the participants considered the top-down approach in building the desired culture in any organisation. The bottom-up approach appeared three times as the most influential approach, as the participants considered employees' knowledge and ability to provide creative ideas important. However, the significance here is the balanced approach between top-down and bottom-up, as some participants did not want to attribute innovation effectiveness to the leadership only or to the employees only. Everyone in the organisation should be involved.

Leadership style was found to play a significant role in creating corporate innovation. Most of the participants (87%) chose transformational leadership as the most influential in creating an innovation culture. Only two participants (12%) chose the mixed (blended) style due to the synergy between both styles. A significant finding is the adoption of both styles (transformation + transaction), as doing so could result in effective corporate innovation.

The third theme also presents the other demographic factors affecting corporate innovation effectiveness, such as employees' capabilities and characteristics (gender, qualification, experience and position).

Gender differences (male/female) have no association with corporate innovation, as found by 62% of the participants. However, 37% considered the association and synergy between males and females in completing the cycle of corporate innovation. Females are good at the micro level and planning ideas, whereas males are good at the macro level and applying the creative ideas. Three participants considered that females have a wider imagination and are more enthusiastic than males in delivering their creative ideas.

Years of experience is another factor. The majority of the participants (57%) found no association between employees' years of experience and innovation. Others (42%) considered that this factor could affect corporate innovation and that it depends on the mindset of a person. Sometimes more experience could lead to a better linking of ideas and the creation of a new one, or sometimes it could create resistance to change.

In terms of qualifications, 56% of the participants found no association between qualifications and corporate innovation, as it is related to a person's mindset. The remaining participants

(43%) considered employees’ qualifications and perceptions of innovation to be related. Five of the participants assumed that more or higher qualifications could lead to better knowledge and the contribution of more creative ideas. Only one participant viewed it as a reverse relationship.

In terms of position, the employees considered it a key factor affecting corporate innovation. The majority of the participants (66%) found the synergy between high and low positions in organisations to be important in achieving corporate innovation. Two of the participants supposed that newcomers to the organisation were keen to provide creative ideas and fresh eyes. Another two participants found that employees with higher positions had a better ability to understand the gaps and challenges and steer corporate innovation in that direction.

6.5 Theme 4: Influences on enhancing organisational performance

All the participants (100%) agreed on the role of corporate innovation in enhancing organisational performance and highlighted the effect of corporate innovation on the budget, services, operational excellence, learning & growth and strategic objective of the Abu Dhabi public sector.

**Table 7.9:** Influences on enhancing organisational performance

<b>Sub-theme</b>	<b>Frequency</b>	<b>Percentage</b>
Innovation mediates between leadership style (transformational and transactional) and organisational performance	15	100%
Effect of innovation on budget, services, operational excellence, learning & growth and strategic objective	15	100%

### **7.5.1 Corporate innovation mediates between leadership style (transformational and transactional) and organisational performance**

Most of the participants considered corporate innovation as a tool for continuous improvement, thus enhancing performance.

Participant 1: *'It could be, but only if we actually take steps to improve. Every day, we spend all our time making decisions or acting on them. We don't get the time to reflect and connect. It's in the reflection/connection that we can take a step back from our processes and challenge what we are doing and how we do it.'*

Participant 2: *'It is a good way to enhance organisational performance, whether it will lead to better results, better employee satisfaction or a better society. I believe that if employees are equipped with innovation tools, even if they cannot achieve good results within their company or a governmental entity, they can do so in their society or in their families. Therefore, I'm sure that it will lead to better results. It may not happen in the short term, as it may happen in the medium or long term.'*

Participant 3: *'If you find that things are not working, people will be more receptive to change and do new things that work. Human evolution is always about continuous improvement. The reason we have a healthier and easier life is due to innovation and improvement throughout history'.*

Participant 4: *'In the corporate context, every entity knows its target and performance, its goals, its challenges and where it wants to be. So, when corporate innovation has all of these together, and the organisations set it up, bring whoever they want to be involved and work it out together, they will definitely enhance it and close the gaps using those little things.'*

Participant 5: *'If we're talking about the services that our government entity provides on a corporate level, then yes. But it needs an agenda, an approach and a leadership.'*

Participant 6: *'We use the AI part of our corporate innovation strategy to implement technology and innovation in our organisation. We used AI, so what was the result of our organisational*

*performance? The answer is that we created a good and effective system and increased our customer satisfaction level.'*

Participant 7: *'If we link it to the corporate challenges, first, the organisation must check its KPIs and then open different channels for creative ideas to achieve the KPIs and close the gaps.'*

Participant 9: *'If you add some innovation to any part of the operation, then there will be a huge difference. These days, most successful organisations adopt innovation and have a sector for it. There is no good performance without innovation. Innovation is a sign of a high-performance organisation.'*

Participant 10: *'These days, if you don't open some channels for ideation in your organisation, then you won't be able to enhance or improve your services, products or processes. Without innovation, performance will have no value.'*

Participant 11: *'It does, big time. There is one condition, though. Innovation has to be linked to the corporate objectives, vision and mission to improve organisational performance.'*

Participant 12: *"Corporate innovation is a good way to enhance performance if it's built on solid ground and if there are channels for people's ideas. The organisation has to develop their employees' ability to think and deliver ideas and to apply them.'*

Participant 13: *'These two things, I believe, complement each other. They will make you different from others.'*

Participant 15: *'Yes, it does. Corporate innovation will enhance organisational performance if we connect it with employees' individual performance. When employees achieve their goals, the organisation achieves high performance.'*

For Participants 8 and 14, an indication of high performance resulting from corporate innovation is if an organisation is able to reduce cost, time and effort by the end of the year.

Participant 8: *'100%. Innovation is a tool for smart operations. Innovation is a good way to reduce time, cost and resources and to make the organisation more efficient. Innovation should be a part of corporate strategy to connect with performance. The best way to show enhancement due to innovation is through services.'*

Participant 14: *'Innovation is a continuous development to reduce time, cost and effort, leading to high performance. You can create a yearly measurement for savings, time reduced during the year and effort spent.'*

Participant 15 supposed that corporate innovation should be linked to individual performance to serve organisational performance.

Participant 15 suggested the first minor theme of breaking down performance measures into the individual level of employees. If employees achieve high performance by the end of the year, the organisation will reap the benefits of their high performance as the individual goals have already been met.

Participant 15: *'Corporate innovation will enhance organisational performance when we link it to the individual performance of employees. A reward system should be created to encourage everyone to be creative. When employees achieve their high goals, the organisation also achieves high performance.'*

### **7.5.2 The effect of innovation on budget, services, operational excellence, learning & growth and strategic objective**

According to Kaplan's (2001) theory of measuring the performance of non-profit organisations, efficiency of performance can be measured in five areas: budget, services, operational excellence, learning & growth and strategic objectives. The interviewees were given five choices based on Kaplan's theory (2001) on how to measure the performance of non-profit organisations. The purpose was to clarify the main effect of corporate innovation and how it can be clearly manifested when organisational performance is measured. Kaplan believes that could provide insight on where organisations must build their corporate innovation to achieve the highest performance.

**Table 7.10:** The effect of innovation on budget, services, operational excellence, learning & growth and strategic objective

Sub-theme	Frequency	Percentage
Strategic objectives	7	46%
Learning and growth	3	20%
Services	3	20%
Operational excellence	2	13%

The interviews showed various replies from the participant in ranking the five areas of Kaplan’s (2001) theory when corporate innovation is applied to enhance organisational performance in the Abu Dhabi public sector. Almost half of the participants (46%) considered strategic objectives as the main priority and element for measuring organisational performance when applying corporate innovation, followed by learning & growth (20%), services (20%) and operational excellence (13%). No answer supported budget utilisation as a main driver or focus.

### 1- Strategic objectives

The first subtheme discussed why the participants believed in strategic objectives as the main element when we measure organisational performance based on applying corporate innovation. Participants 3, 8 and 15 assumed strategic objectives as the main driver of organisations. If this is met, everything else will be met, including the other four elements. Participant 5 linked strategic objectives to the vision and mission of the organisation, thus making them the most important element in attaining high performance. Conversely, Participants 6 and 7 connected strategic objectives to the focus of the government. Participant 13 considered organisational culture and environment, which would not be attained until organisations achieved their strategic objectives.

Participant 3: *‘I will start with the strategic objectives because you really need to know where you're headed. Because if you're in the wrong direction, serving the wrong people and providing them with wrong services or whatever, it doesn't matter how efficient you are to them. Just like driving a car and you want to go to a place, you really have to take the right road’.*



Participant 5: *'Strategic objectives help everyone visualise the reason for the innovation approach taken by the entity. It's always the strategic objectives that should drive us. We should have higher aspirations. The budget or other elements are not the highest priority. Strategic objectives are the priority.'*

Participant 6: *'I would say strategic objectives. This is the main target of government entities when innovating to make government organisations innovative. They want to innovate new things, such as AI. This one is for the coming, say, three or four years into the future. So it's important to put that as the main agenda.'*

Participant 7: *'The government's focus is to achieve the strategic objectives. So if corporate innovation can help organisations achieve their strategic objectives, then the other four elements from the balance scorecard will also be achieved.'*

Participant 8: *'Strategic objectives are the main guidance of organisations. When management checks organisational performance, they usually check the strategic objectives first and whether they are met.'*

Participant 13: *'Strategic objectives are the highest because they are the beliefs of each part of the organisation, from top management to lower management. So it will be a culture in which an innovation environment is everywhere.'*

Participant 15: *'Strategic objectives are cascaded down to everything else, including the other four elements. Therefore, if the strategic objectives are achieved, everything else will be achieved.'*

## **2- Learning and growth**

The second subtheme discussed why the participants believed in learning and growth as the main element when we measure organisational performance based on applying corporate innovation. Participants 4, 9 and 12 considered learning and growth for individuals in organisations to be the main engine to activate the other elements. Therefore, innovation must reflect learning and growth. Participants 4 and 9 offered international examples (Google, Walmart and McDonald's) to support their point about learning and growth.

Participant 4: *'There is so much potential in learning and growth, and if you focus on the growth of each individual in an innovative way, then that's where you're going to get the most productivity and everything. I understand that this is happening in international organisations and big organisations. I think Google is where they focus on the learning career and growth of individuals because they know that they will get the best outcome. And this is what happened. Superpowers have knowledge, and they learn and use it'*.

Participant 9: *'Learning and growth can definitely fix the other elements. Walmart and McDonald's had some issues with selling their products. Because of the customer feedback, they learned and achieved growth'*.

Participant 12: *'Everything starts with learning and growth. If it is achieved, then the other elements will be achieved too'*.

### **3- Services**

The third sub-theme discussed why the participants believed in services as the main element when we measure organisational performance based on applying corporate innovation. Participant 2 noted that the output and results of any entity are to deliver services. Therefore, innovation must deliver corporate services to enhance organisational performance. Participants 10 and 11 considered services to be the focus and direction of the Abu Dhabi public sector. Therefore, if organisations are able to deliver creative services, then their organisational performance must be high.

Participant 2: *'I'm sure that in any entity, when you want to innovate, the first thing that you should focus on is the output, which is services. So, in my opinion, for any innovation campaign or any innovation initiatives, the people or employees should be guided to focus on the end result of that entity, which is services. Enhancing those services ranks first, and this will lead directly to the other five elements'*.

Participant 10: *'Usually, any improvement in organisations is reflected in their services. Nowadays, the government focuses on services, and they want to show creativity and innovation when delivering services'*.

Participant 11: *'According to the mandates of government entities, each entity has to serve customers. Therefore, if corporate innovation can help create innovative services, then organisational performance will increase'*.

#### **4- Operational excellence**

Operational excellence is the main element for measuring the effect of corporate innovation. Participant 1 considered operational excellence to be the backbone of organisations. If it is enhanced, the other elements will follow. Participant 15 stated that operational excellence is continuous development. Therefore, if continuous development is achieved, the other organisational elements will also be achieved.

Participant 1: *'If we focus on operational excellence, we can achieve cost and efficiency savings without spending money. These efficiency savings are naturally passed on to our customers through the services we provide (faster, more efficient, better quality, etc.). Driving operational excellence programmes significantly enhances employee learning and growth'*.

Participant 14: *'Operational excellence means continuous improvement, especially in the public sector. If operational excellence is enhanced, then it will create growth'*.

#### **7.5.3 Reward system**

The thematic analysis identified a reward system as an element that can influence organisational performance. Participants 5 and 15 believed that rewards could encourage everyone to innovate and enhance organisational performance.

Participant 5: *'It needs, most importantly rewards, and when I say reward, it's not only monetary reward. It's appreciation. It's credit to the team or the individuals who enhanced the process'*.

Participant 15: *'Then to create a rewarding system to encourage everyone to be creative. If the organisation is just task-oriented, then it will not change and improve to be a better performer'*.

#### 7.5.4 Summary of theme 4

This final theme has two sub-themes: corporate innovation as a mediator between leadership style (transformational and transactional) and organisational performance and the effect of innovation on budget, services, operational excellence, learning & growth and strategic objectives, which are based on Kaplan's theory on measuring the performance of public sector organisations.

The participants noted that corporate innovation is a tool for continuous improvement, and as a result, it can enhance performance. If an organisation can reduce money, time and effort by the end of the year, then this is an indication of high performance resulting from corporate innovation. One of the participants mentioned the necessity of cascading organisational performance down to individual performance. If individuals can give high performance, then the organisation can also give high performance.

Almost half of the participants (46%) considered strategic objectives to be the main priority and element to measure organisational performance based on corporate innovation, thus showing the importance of organisational strategic objectives as the main indication of high performance. This is followed by learning and growth (20%) and services (20%), which are considered the main focus of measurement and represent the internal factor and the external factor, respectively. Operational excellence (13%) was also considered a measure of performance. No answer supported budget utilisation as the main driver or focus, as the participants did not directly link corporate innovation to money or budget.

### **7.6 Summary and Conclusion**

This chapter presents the findings from the qualitative data. From the thematic analysis of the interviews, 4 major themes with 15 sub-themes were derived to address the four research questions of the study. The findings will be contextualised in the following chapter.

The interviewees were all keen to share their knowledge and experience to convey what they believed was the best for the Abu Dhabi public sector. Their answers are discussed along with the survey outcomes from Chapter 5.

### **Theme 1: Perception of corporate innovation**

#### **A- Creation of new ideas**

Among the participants, 48% stated that corporate innovation calls for creating new ideas that did not exist before through explaining the mechanism of collecting these ideas, either from employees or customers, and the way to apply it and add value to the organisation.

#### **B- Developing business processes**

Among the participants, 36% linked the success of corporate innovation to developing systems and processes.

#### **C- Solving challenges in organisations**

Among the participants, 8% found an association between corporate innovation and organisational challenges and gaps.

#### **D- Understanding employees' mindsets and encouraging work–life balance**

Among the participants, 20% considered that innovation is based on understanding employees' mindsets, creating a culture and incentives.

### **Theme 2: The common leadership style adopted in the public sector**

#### **A- Transactional leadership style**

Among the participants, 46% deemed the transactional style the most dominant style based on the needs of the Abu Dhabi public sector in the past.

#### **B- Transformational leadership style**

Among the participants, 26% believed that the transformational leadership style is being adopted based on the transformation happening in the Abu Dhabi public sector in the last 3–5 years.

#### **C- Blended leadership style**

Among the participants, 26% considered both styles to exist.

### **Theme 3: Influences on corporate innovation**

#### **A- The most influential approach**

The participants highlighted three approaches to developing real corporate innovation. Among the approaches, the top-down approach (58%) was considered the most influential approach to developing corporate innovation, followed by the

bottom-up approach (17%) and both the top-down and bottom-up approaches (23%).

**B- The most influential leadership**

The most influential leadership style for creating an innovation culture was the transformational leadership style (87%), followed by the mixed (blended) style (12%), based on the synergy between both styles.

**C- Forgiveness culture**

Two participants agreed on the importance of leadership to allow people to make mistakes so that they could learn from them and feel confident in improving the organisation with their ideas.

**D- Hawthorne effect**

One participant referred to the Hawthorne effect as a dominant factor in developing corporate innovation.

**E- Employees' capabilities and characteristics (gender, experience, qualification and position)**

Gender: The participants (37%) found a positive association between the two gender roles and that women are more innovative than men in organisations.

Years of experience: The participants (42%) considered employees' years of experience to directly affect innovation.

Qualifications: The participants (43%) considered an association between employees' qualifications and their perception of innovation.

Position: The majority of the participants (66%) observed an association between employees' position and innovation.

**Theme 4: Influences on enhancing organisational performance**

**A- Corporate innovation as a mediator between leadership style (transformational and transactional) and organisational performance**

All participants viewed corporate innovation as a tool for continuous improvement, thus enhancing performance.

**B- The effect of innovation on budget, services, operational excellence, learning & growth and strategic objective**

Strategic objectives: About 46% of the participants presumed that strategic objectives are the main guidance of any organisation. If this is met, then everything else will also be met.

Learning and growth: About 20% of the participants held that the learning and growth of individuals in organisations is the main engine for activating the other elements.

Services: About 20% of the participants assumed that the output and results of any entity are to deliver services.

Operational excellence: About 13% of the participants considered operational excellence the backbone of organisations. If it is enhanced, then so will the other elements.

**C- Reward system**

Two participants mentioned that a reward system could influence organisational performance.

# CHAPTER 8: DISCUSSION

## 8.1 Introduction

This chapter contextualises the findings of the study. A mixed-methods study was carried out to explore and conceptualise innovation capacity in the public sector by investigating the role of transformational and transactional leadership in supporting innovation and organisational performance using top-down and bottom-up approaches in the Abu Dhabi public sector. The differences in the respondents' demographics (gender, position, experience and qualifications), which could affect the results, were considered.

It is important to reiterate that the transactional and transformational styles represent the top-down approach, while the bottom-up approach refers to employees' ability to innovate and enhance organisational performance. The responses to an online survey questionnaire of 371 Abu Dhabi government employees from five different positions were gathered. Semi-structured interviews with another 15 participants were conducted to provide a better understanding of the association between the different variables in this study and to complete the survey results as a triangulation to develop a comprehensive understanding of the three research elements: leadership style, corporate innovation and organisational performance. In this chapter, the findings are discussed based on analyses of the two sources of data. The analysis results compared to those in the literature reported in Chapters 2 and 3 are also presented. In addition, this chapter provides a conceptual implementation plan and an innovation-based leadership model based on the findings. These can be applied by the Abu Dhabi public sector to improve organisational performance.

This chapter is organised into three sections. Section 8.1 introduces the chapter. Section 8.2 summarises and discusses the research findings. Section 8.3 introduces new models for high organisational performance and corporate innovation.



## **8.2 Summary of the results**

This section discusses the key findings of the research questions. These findings were obtained from the quantitative and qualitative analyses, as reported in Chapters 6 and 7.

### **8.2.1 To what extent do transformational leadership style, transactional leadership style and corporate innovation predict organisational performance?**

The results show that organisational performance can be positively predicted by transformational leadership style, transactional leadership style and corporate innovation. Therefore, the null hypothesis is rejected, and the first alternative hypothesis is accepted. Transformational leadership style, transactional leadership style and corporate innovation significantly positively predict organisational performance after controlling for the demographic variables (gender, qualification, position and years of experience). Among the three main predictors, the strongest predictor was transformational leadership style, followed by corporate innovation, and then transactional leadership style. This result was also confirmed by the qualitative findings. The participants believed that organisations following the transformational leadership style address the development of employees' value and growth by focusing on their individual needs and progress, giving their employees trust and confidence, allowing them the autonomy to execute tasks according to their methods, and accepting failures and mistakes.

This result is consistent with the reports of Ashoor (2021, Yang and Yang (2019), Likar, Kopac and Fatur (2014), Yang (2014), Nanjundeswaraswamy and Swamy (2014), and Hassan et al., (2015)). These authors found the effect of transformational leadership style on creativity and innovation to be significant. They also explained the vital role of transformational leadership in helping employees excel in supporting organisations to perform better, and in creating a world-class government. Followers feel admiration, loyalty, trust and respect towards their transformational leader. A transformational leader can affect followers by changing their values and self-esteem and linking their self-interest to the mission of their organisation (Kark, Shamir and Chen, 2003). As a result, followers behave in a more self-expressive manner and show a stronger inclination to support collective goals. Summarily, corporate innovation begins with the ability and motivation of employees to bring out their creative ideas while having no fear of mistakes, believing in the support of their

transformational leader, who leads them away from self-interest towards self-actualisation (Chen and Bliese, 2002).

Furthermore, the quantitative study found that transactional leadership style is another positive predictor of organisational performance, consistent with previous findings (Darmanto and Supriyadi, 2022; Kabiru and Bula, 2020; Khan, 2017; Avolio, Walumbwa and Weber, 2009). A possible explanation for this result was given by Bass (1985, 1990) and Yukl (2006), who identified three types of behaviours distinguishing transactional leadership style: contingent reward (rewards for satisfactory performance), active management by exception (monitoring and behaviour correction) and passive management by exception (intervention when standards are not met) (Reuvers et al., 2008). According to ISO 56002 (Innovation Management System), the three types of behaviours of the transactional leadership style are crucial to developing corporate innovation and enhancing performance (ISO 56002, 2019), which were explained in chapter two (Literature Review).

Surprisingly, this result is contrary to those of the qualitative findings, which showed that none of the participants considered the transactional leadership style to be significantly positively associated with performance unless it became a blended style that is, transactional + transformational style. This may be due to the transactional style emphasising leader-follower interactions rather than other aspects. Moreover, the transactional leadership style is less likely to consider future situational or environmental changes in an organisation (Avolio, Walumbwa and Weber, 2009). In addition, the participants reported that the continuous changes, the rotation of agency heads (average of every three years) and the pursuit of immediate outcomes, for example, could negatively affect employee perception and performance. Therefore, collective results from both quantitative and qualitative data indicate that transactional and transformational leadership styles have a positive association with organisational performance. However, these results suggest that the blended style creates better results in enhancing organisational performance through corporate innovation.

The blended leadership style combines the behaviours of transformational and transactional styles, enabling fast changes, quick wins and the achievement of rapid and sustained results. This finding aligns with prior research that has demonstrated the significant impact of transformational leadership on creativity, innovation, and organisational performance, whereas transactional leadership, from a theoretical and empirical perspective, promotes organisational

learning process, innovation, high performance and competitiveness (Alrowwad, Abualoush and Masa'deh, 2020; Vargas, 2015; Sajems, 2015; Bass et al., 2003). According to Sajems (2015), if the aim is to enhance organisational performance using innovation as an enabler, then leaders must practice both transactional and transformational leadership styles. Bass et al., (2003) also asserted that transformational leadership generates higher performance than transactional leadership for long-term goals and objectives, whereas transactional leadership has better results for short-term goals. This indicates that leaders should adopt different leadership styles to adequately tackle emerging organisational challenges, supporting the qualitative finding that practising a blended style enhances organisational performance.

### **8.2.2 Is there a difference in the group means of employees' gender, years of experience, position and qualification between organisational performance and corporate innovation?**

The results show that there is a difference in the respondents' group means due to employees' positions and qualifications. Therefore, the null hypothesis is rejected, and the second alternative hypothesis is accepted: Qualifications and position were the main demographic factors associated with corporate innovation, consistent with previous findings across cultures, which found a significant relationship between innovative behaviours and employees' academic qualifications (Al-Shammari and Khalifa, 2019; Abdulhalim and Ababneh, 2009; Al-Azimi, 2006; Mohyeldin and Suliman, 2001). Surprisingly, the findings show that employees who held a bachelor's degree scored significantly higher than those who held a master's degree, with a positive relationship with corporate innovation. This may be due to the sociocultural context of the sample. It is possible that individuals who have completed a bachelor's degree, due to their extensive knowledge and capacity to adapt, are more capable of managing the ever-changing and multidisciplinary aspects of innovation. Alternatively, the organisation's innovation demands may not be compatible with the specific master's degrees provided, or the organisation's culture may not promote the use of specialist expertise.

In terms of position, the participants reported that different positions lead to healthy practices between different levels in organisations. For example, senior-level employees have a better vision or perception of innovation, whereas junior-level employees are better at applying creative ideas. It was found that gender and experience have no significant effect on either corporate innovation or organisational performance. This finding is consistent with the results

of Iren and Tee (2018) who found that gender does not greatly influence innovation. However, Al-Shammari and Khalifa (2019), Mohyeldin and Suliman (2001), and Al-Azimi (2006) reported a contrasting result with gender affecting innovation. It is possible that the methodology or sample used in the current study did not sufficiently capture the subtle ways in which gender and experience affect innovation and performance. On the other hand, the impact of these characteristics may have also been influenced by the different organisational culture or industry. Such a result may also be due to the sample distribution of the respondents.

Thus, when interpreting this finding, which is not consistent with the literature, it should be noted that the inconsistent findings on demographic factors could be affected by other factors, such as the role of other factors in the community and work environment. This is an interesting topic for future research to explore in more depth.

### **8.2.3 Does corporate innovation mediate the relationships between transformational leadership style, transactional leadership style and organisational performance?**

The results indicate that innovation significantly mediates the relationship between transformational leadership style, transactional leadership style and organisational performance. Therefore, the null hypothesis is rejected, and the third alternative hypothesis is accepted. Though there is limited research on the indirect effects of transformational and transactional leadership on public sector performance, with corporate innovation as a mediator, particularly in the Arab context (Feranita et al., 2020; Berraies and Bchini, 2019; Rehman, Bhatti and Chaudhry, 2019; Sethib and Steyn, 2015), transformational leadership was found to have a direct positive and significant effect on the Abu Dhabi public sector's innovation and organisational performance and an indirect positive effect on organisational performance. This finding is in accordance with previous studies (Feranita et al., 2020; Rehman, Bhatti and Chaudhry, 2019; Md Saad and Mazzarol, 2010; Sajems, 2015; Bass and Riggio, 2006).

In addition, the path analysis results revealed that transactional leadership has a direct effect on the Abu Dhabi public sector's innovation and organisational performance and an indirect positive effect on organisational performance. This result is consistent with the reported evidence emphasising the importance of transactional leadership in fostering more innovative behaviours (Rehman, Bhatti and Chaudhry, 2019). However, Feranita et al., (2020) found that

transactional leadership did not significantly affect the performance of small and medium-sized enterprises SMEs. This can be explained by the measures used in the manufacturing sector. Recent studies have also shown that both leadership styles have a significant positive effect on innovation (Novitasari et al., 2020; Purwanto et al., 2021). This is also confirmed by the qualitative study, indicating that the participants considered corporate innovation to be linked to individual performance, which can increase organisational performance, as corporate innovation is viewed as a tool for continuous improvement, thus enhancing organisational performance. Rewards can also encourage employees to innovate and enhance organisational performance. In organisational KPIs, five areas can be used to measure the efficiency of performance (i.e. budget, services, operational excellence, learning & growth and strategic objectives) and the role of corporate innovation in enhancing the KPIs as a mediator between leadership style and organisational performance.

According to Porter (1990), innovation is the major way through which companies can improve their performance and gain a sustainable competitive advantage. This is possible where leadership supports the creation of an innovation culture by encouraging and rewarding creativity and resources are allocated to enable corporate innovation. According to Porter (1990), the variables of leadership, innovation and performance are always linked, and corporate innovation is difficult to separate from organisational performance, as corporate innovation is the tool, and organisational performance is the result. Therefore, the two concepts are connected. Therefore, in terms of innovation, transformational and transactional leadership styles have a direct and indirect positive and significant effect on enhancing organisational performance.

### **8.3 Roadmap to High Organisational Performance and Corporate Innovation**

The collective findings of the quantitative and qualitative analyses, which explored the relationships between transactional and transformational leadership styles, corporate innovation and organisational performance, helped answer the research questions of how the top-down and bottom-up approaches develop corporate innovation and utilise it to enhance organisational performance.

These findings culminated in the development of the two models to be discussed in this section. The first model is a conceptual implementation plan that can be applied by organisations in the

public sector to achieve high organisational performance. The second model comprises three leadership styles and corporate innovation, which lead to enhanced organisational performance. The application of a blended leadership style (transactional + transformational) represents the correct practice of the corporate innovation factor to create high organisational performance.

### **8.3.1 Development of a Conceptual Implementation Plan**

A conceptual framework as defined by Miles and Huberman (1994) is, “the current version of the researcher’s map of the territory being investigated”. The conceptual plan links the abstract concepts to the empirical data. It contains the main elements of this study that affect organisational performance and the path to implement and sustain high performance as a framework that can assist key policymakers, top management, executive council and leaders of the Abu Dhabi public sector to improve their overall efficiency and effectiveness as a public sector. Figure 8.1 is a visual representation of the conceptual implementation plan. As shown in the figure, the conceptual plan comprises four steps, beginning with an initial assessment of the public sector organisation. With the research completed, a comprehensive conceptual implementation plan was developed. Starting with an assessment of the public organisation, the conceptual plan is divided into four phases as interrelated steps.

#### **Phase 1: Assess**

Management must look at their existing leadership style as a top-down effect in their organisations and examine their employees’ involvement as a bottom-up effect and an interdependent relationship between them. The organisation’s top executives must examine the four key aspects of the plan: their current methods of managing their organisation’s leadership style (top-down), employee involvement (bottom-up), level of corporate innovation (using different tools to measure the maturity level of corporate innovation) and overall organisational performance. The four steps of the assessment should be sequential and based on findings and practice. Any change occurring in the organisation and any desired outcomes should be initiated by the leadership. The employees should accept, adopt and use corporate innovation as leverage. In this phase, organisational performance is assessed, and organisational gaps are identified.

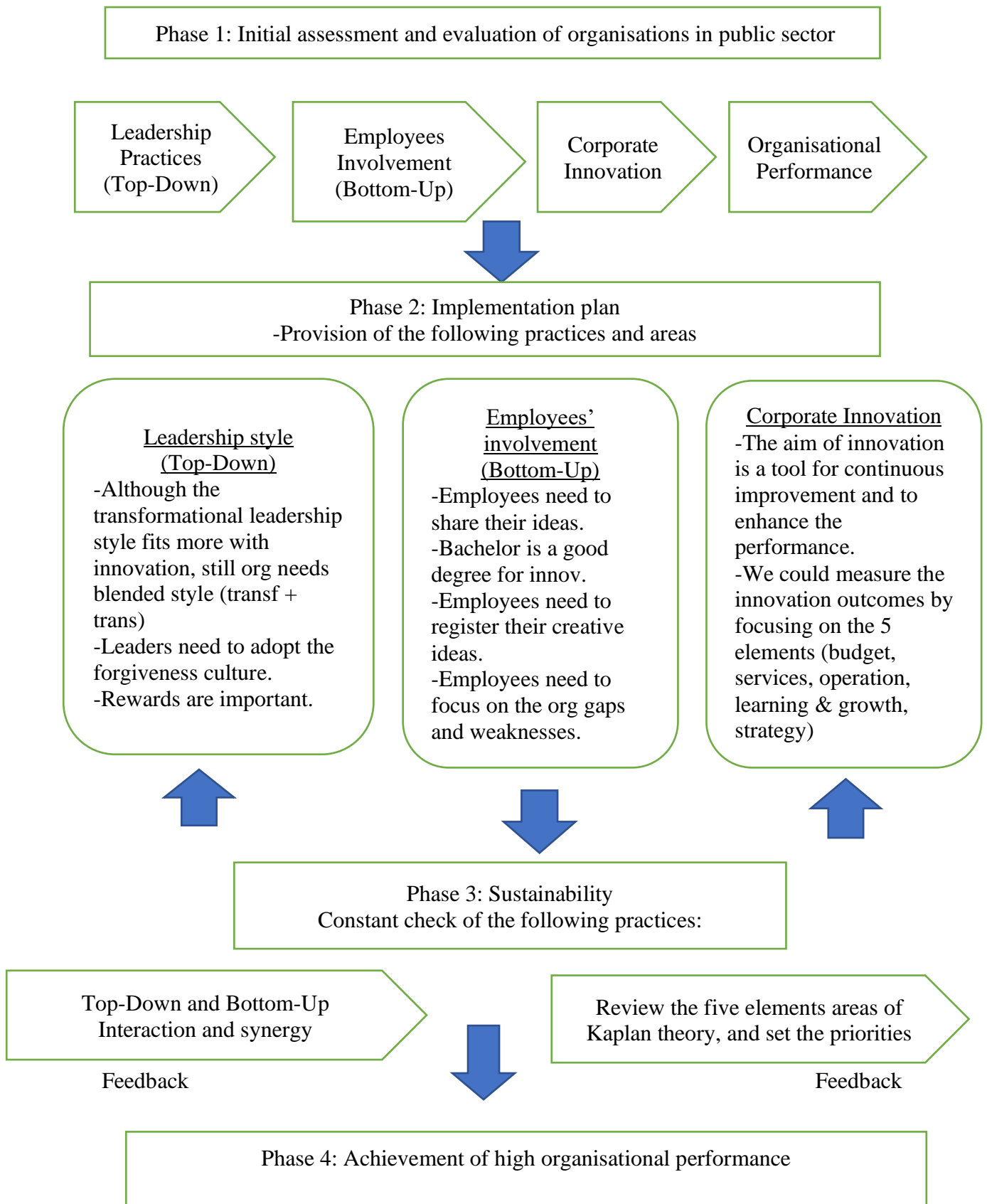


Figure 8.1 Conceptual implementation plan to achieve high organisational performance.

## **Phase 2: Implement**

In the implementation phase, the organisation must accurately assess the practices of its management and support its leadership development and practices. It must ensure the involvement and engagement of employees as they understand the technicality of their roles. Adopting incremental changes (development), especially in the public sector, can help the organisation to publicise this practice and later easily measure it as one of the KPIs. The organisation must keep in mind the close relationship between management and employees. Adequate resources for employees, training and development initiatives for employees, and employee motivation are examples of how support can be demonstrated. Another important factor is the cooperation of employees and the sharing of thoughts and ideas. The plan calls for open and active communication between the leaders and employees and the transmission of goals and responsibilities. Employees' mindsets should be reshaped by management to encourage them to accept and embrace change. Finally, management must pay attention to organisational change. An organisation must be willing to make changes to its overall work processes to ensure the continuous development of its services and products. This is because corporate innovation is a part of all practices in the organisation. Considering the numerous changes to the workplace that will probably occur during the transition, the culture must also promote accountability and transparency.

## **Phase 3: Sustain**

The third and final phases begin as soon as the first two are completed. Including a third stage ensures that the intended changes and outcomes will be long-lasting. Therefore, leadership and employees must work together seamlessly. Another essential practice for long-term sustainability and growth is the alignment of objectives through active and constant communication. The organisation must ensure continuous feedback to improve the other two phases (assess and plan) based on practice and observation. It is expected that the organisation's performance will improve once the three phases have been completed successfully.



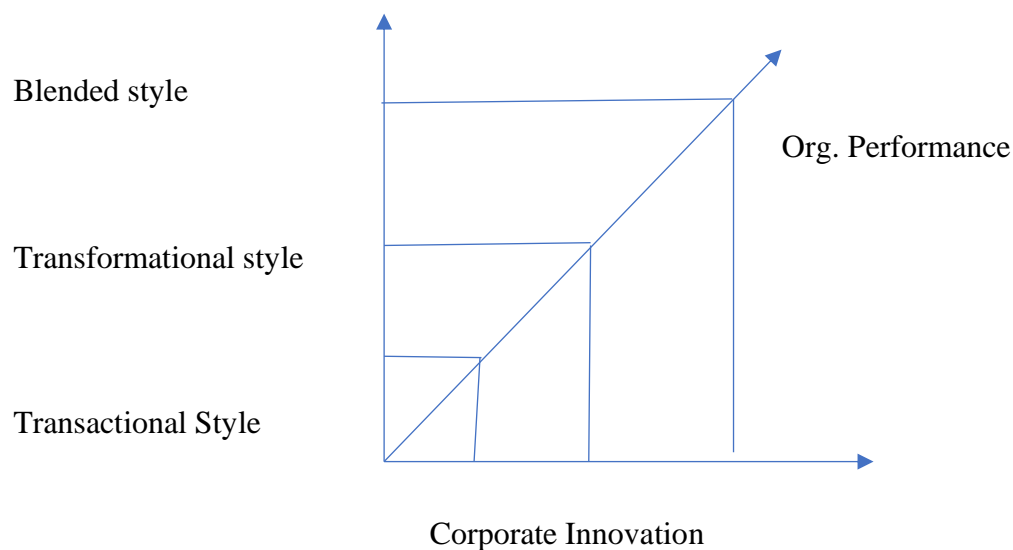


Figure 8.2: Innovation-based leadership model

### 8.3.2 Innovation-based Leadership Model

Based on the findings, a model has been developed as an updated version of the initial model from Chapter 2 (Figure 3. 2) to explain the relationship between the variables of the study.

As shown in the model (Figure 8.2), both leadership styles affect organisational performance at different levels. If the goal is to enhance organisational performance through innovation, leaders must go beyond simply applying a single leadership style. The findings of this study suggest that an effective approach involves integrating both transactional and transformational leadership styles, depending on the specific organisational context and challenges.

Transactional leadership, which focuses on structured processes, clear rewards, and accountability, provides the foundation for operational efficiency and consistent performance. However, this style alone may not be sufficient to drive the creativity and adaptability needed in today's fast-changing environment. On the other hand, transformational leadership inspires and motivates employees to go beyond their basic job requirements by fostering a shared vision, encouraging innovation, and promoting a culture of continuous improvement. This style is particularly important in fostering a sense of purpose, innovation, and collective effort within the organisation. Transformational leaders empower employees to challenge the status quo, explore new ideas, and take calculated risks—essential components for driving innovation.

However, neither transactional nor transformational leadership in isolation will be sufficient to maximize organisational performance in Abu Dhabi's public sector organisations. Instead, leaders must recognize the situational demands and blend these styles to create a dynamic leadership approach that is suitable for both short-term and long-term needs. This approach allows leaders to maintain stability and order while simultaneously encouraging creativity and adaptability (Sethibe and Steyn, 2016).

The study also highlights that innovation should not merely be viewed as a set of isolated practices but as a continuous, organization-wide commitment that is supported by leadership. Leaders who effectively blend transactional and transformational styles are better positioned to embed innovation into the organisational culture, processes, and strategies. This integration ensures that innovation is not only driven from the top but also the bottom, becoming a part of the organisational culture which empowers all levels of the organisation to contribute to performance improvements.

#### **8.4 Summary and Conclusion**

This chapter explored the interpretations and meanings of the previous chapters and the quantitative and qualitative analyses of the collected data. This chapter also presented two models as the major contributions of the study. The first model is a conceptual implementation plan that Abu Dhabi public sector organisations can follow and implement. The second model is on innovation-based leadership, which comprises three leadership styles and corporate innovation and leads to the growth of organisational performance. Adopting blended leadership, which comprises the transformational and transactional leadership styles, represents the right practices of the corporate innovation factor to create high organisational performance.

This study aimed to conceptualise innovation capacity in the public sector by investigating the role of transformational and transactional leadership in supporting innovation and organisational performance using top-down and bottom-up approaches in the Abu Dhabi public sector. The study found that organisational performance could be positively predicted by transformational leadership style, transactional leadership style and corporate innovation.

Qualifications and positions were the only demographic factors associated with corporate innovation. Furthermore, innovation significantly mediated the relationships between

transformational leadership style, transactional leadership style and organisational performance. The results of the quantitative and qualitative components suggest that the study's mixed-methods approach is helpful in achieving accurate and explained results. However, it should be noted that some essential variables and practices must be followed appropriately and accordingly before higher organisational performance can be realised.

In conclusion, the blended leadership model presented in this study offers a comprehensive framework for leaders aiming to enhance organisational performance through innovation. By adopting both transactional and transformational leadership styles, and integrating corporate innovation practices as a mediating factor, organisations can create a resilient and high-performing environment that is well-equipped to meet the challenges of today's dynamic business landscape. This approach not only addresses current organisational needs but also lays the foundation for sustained success and competitive advantage in the future.

## Chapter 9: Reflections and Research Conclusions

### 9.1 Introduction

This chapter presents the implications of the current findings on research and practice and concludes the study. A mixed-methods approach was adopted to explore the role of transformational and transactional leadership in supporting innovation and organisational performance using top-down and bottom-up approaches in Abu Dhabi's public sector. It presents the potential impact of the findings in the academic field and on government practices. The research questions were answered by confirming the hypotheses and identifying significant themes. This concluding chapter presents the significant contributions of the study, the implications for research and practice, the limitations, the recommendations for future practice and research, and a brief conclusion.

The study was able to answer the following hypotheses:

- H<sub>1</sub>: Transformational leadership style, transactional leadership style and corporate innovation significantly positively predict organisational performance after controlling for demographic variables (gender, qualification, position and years of experience). Hence, the first alternative hypothesis is true. Among the three main predictors, the strongest predictor was transformational leadership style, followed by corporate innovation and transactional leadership style.
- H<sub>2</sub>: There is a significant difference between employees' gender, years of experience, position and qualification in organisational performance and corporate innovation. The second hypothesis is true, except for gender and experience which have no significant impact on either corporate innovation or organisational performance.
- H<sub>3</sub>: Corporate innovation partially mediates the relationships between transformational leadership style, transactional leadership style and organisational performance. The third hypothesis is true. Transformational leadership was found to have a higher positive and significant effect on innovation and organisational performance.

## 9.2 Contribution of the Study

The findings make a significant practical contribution to the fields of leadership, corporate innovation, and organisational performance. This study examines the relationship between different leadership styles and the level of employee involvement in promoting innovation within the Abu Dhabi government. The research intends to develop insights that apply to both public sector organisations and the larger UAE and Arabian Gulf area by focusing on this specific context. It was crucial to involve Abu Dhabi government employees as participants, as their direct experiences and perspectives provided better insights into the distinct problems and opportunities related to promoting innovation in this context. The results of this study have the capacity to aid in the creation of evidence-driven approaches to improve leadership efficacy, employee involvement, and overall organisational performance in the Abu Dhabi government and other similar contexts.

Another contribution of the study is the design of a conceptual implementation plan with four distinct phases. These phases were established based on the real experiences and opinions of leaders, managers and employees from relevant organisations in the Abu Dhabi public sector, greatly enhancing the operability of the content and suggestions. In phase one, public sector organisations must first conduct a self-assessment to evaluate the existence of four critical factors: leadership practices (top-down), employees' involvement (bottom-up), application of corporate innovation and actual organisational performance. Phase two is when the recommended implementation strategy is put into action. For a successful change in processes and building the desired environment, there are three key areas that must be incorporated into the implementation strategy: blended leadership style, accepting employees' failures and mistakes as a way of evolving and believing in rewards as a way of incentivising employees. In phase two, the workforce should be engaged in robust built processes for publishing the organisational gaps and challenges so that employees can easily register their ideas. In the third phase, a practical corporate innovation must be implemented as a tool for continuous improvement with continuous measurement by focusing on five elements: budget, services, operation, learning & growth and strategy. These elements are important to achieving a successful high-performance organisation. Hence, the implementation must be reviewed, and the goals should be aligned to reach the sustainability phase. Abu Dhabi's public sector organisations can achieve high organisational performance by adopting these techniques and

mindset. Public sectors in different emirates of the UAE, or in regions with similar environments and objectives like Abu Dhabi, who require a model or framework to enhance their government outcome and gain an edge, may also benefit from the research findings.

The other contribution of this study is the innovation-based leadership model, which comprises three leadership styles, corporate innovation, and the growth of organisational performance. Applying the blended leadership style (transactional + transformational) represents the right practices of corporate innovation to create high organisational performance. Managers and leaders can clarify this by graphing the incremental positive relationship between the blended style of leadership and organisational performance.

In the last few decades, public sector organisations have been under intense pressure to do more with fewer resources. Fiscal crises, demographic shifts, economic changes and social inequalities are compelling governments to seek innovative solutions to longstanding issues (Ricard et al., 2017). The research outcomes suggest that effective leadership styles—particularly those that balance transformational and transactional approaches—are crucial for enhancing innovation and organisational performance. When aligned with the insights provided by the Global Innovation Index, these findings underscore the importance of leadership in shaping innovation strategies that contribute to a country's overall performance in the global innovation landscape. Consequently, understanding and applying the right leadership styles can help organisations align more closely with the Global Innovation Index's criteria, thereby improving their innovation outputs and competitiveness on a global scale.

The study focused on top-down (leadership style) and bottom-up (employees' demographics) approaches in applying corporate innovation to enhance organisational performance in the Abu Dhabi public sector. Furthermore, the majority of the data were acquired through the participants' work in the Abu Dhabi public sector in different organisations. The findings were solely utilised to corroborate the organisational practices, culture and principles described by the survey and interview participants. The assessments of the various data sources were conducted with the support of dependable software packages, which contributed to the data's overall dependability. Finally, the findings are expected to aid in the development of new insights by combining a proper leadership style and proper innovation practices to successfully improve the performance of public sector organisations and the sustainability of various approaches.

To transform a local government into a global competitor, a different leadership style that can understand the past, read the present and anticipate the future is needed to provide the organisation with appropriate tools and create a competitive advantage. However, before public sector organisations can achieve overall high performance, each employee must understand his or her task within the process, and the organisational goals and vision. For the first model of a conceptual implementation plan to be understood and used to its full potential, employees must be able to grasp the smaller components that make it up. When top-down and bottom-up approaches were combined, the study's most important contribution was developed: a conceptual implementation plan

### **9.3 Limitations of the Study**

This study also has some limitations. These limitations involve the research sample, scope of the study, time constraints, location and certain circumstances that occurred during the study, such as the COVID-19 pandemic. Some limitations were also due to the methods, instruments and techniques used in collecting the data. The difficulty in accessing some previous studies on the topic was also a limitation.

The research assumptions are also linked to the study's limitations. The responses of the participants may be skewed or limited due to their fear of being identified by the organisation's leaders, particularly if they decide to speak out against the organisation's practices and policies. The author addressed this problem by properly explaining the study's main objective and the participants' rights as volunteer participants. The participants' confidentiality was preserved throughout the study, codes were assigned to protect their identities, and responses were shared and discussed. Before collecting any data from the participants, their informed consent was obtained to formally ensure that their rights were protected. The participants' trust was gained by following these stages and collecting only relevant data. The sample size did not represent all employees in the Abu Dhabi public sector, nor did it express the overall opinion.

The study was also limited by the COVID-19 pandemic and the fact that the author could not meet all the interviewees in person. Thus, some interviews were conducted through online platforms, such as Teams and Zoom. Not being able to meet the interviewees in person affected the manner of interacting and obtaining accurate expressions and body language.

## **9.4 Implications for Academic Research and Real Practice**

The implementation of a mixed-methods approach yielded the following recommendations for the Abu Dhabi public sector, relevant stakeholders, and future researchers engaged with this topic.

For the public sector in Abu Dhabi, the focused and proactive methods identified in the study can be utilised by organisations to sustain their competitiveness and advance their performance. The results of the study are also valuable to other public sectors in the UAE and in the region, as well as to other stakeholders, for use in modifying and cultivating their organisational processes based on the three research elements: leadership style, corporate innovation and organisational performance. Using a blended leadership style (transformational style + transactional style) and the real activation of corporate innovation, organisations can measure their performance based on five areas (strategic objectives, budget utilisation, operational excellence, services, and learning & growth) to monitor and improve their organisational performance in the long run.

To enhance organisational performance, a combination of effective leadership style, enabling environment for employee involvement, and application of corporate innovation as a tool can be utilised. With the achievement of improved performance, organisations may sustain these results by allowing for continuous feedback on areas of improvement in order to achieve and maintain the organisation's strategic objectives. This kind of work environment is an important component of achieving high organisational performance as corporate innovation practices and the blended leadership style approach were found to be strongly linked to these aspects early on. Nevertheless, it is important to note that public sectors all around the world may have varying requirements and circumstances. Therefore, organisations from other locations should study their environment and their government's strategic objectives to understand their priorities.

While it might be impossible to achieve an ideal and perfect leadership style, leaders should strive to adopt a flexible approach that integrates elements from various leadership styles to effectively drive corporate innovation and enhance organisational performance in the public sector. By recognising the unique challenges and opportunities inherent in individual public sector organisations, leaders can tailor their strategies to foster a culture of innovation that aligns with institutional goals and public service missions. This adaptability not only encourages creative problem-solving but also ensures that leadership practices are responsive



to the dynamic needs of the organisation and its stakeholders, ultimately contributing to improved performance outcomes. Leadership can also be trained to master the art of effective leadership. This is not just to encourage innovation but also to equip and provide leaders with a deep understanding of how to implement and manage change within the unique constraints and responsibilities of public sector organisations. Such training programs should focus on developing leaders' abilities to navigate complex bureaucratic structures, leverage resources effectively, and inspire their teams to pursue innovative solutions to public challenges.

For employees of Abu Dhabi's public sector organisations, the enhancement of organisational performance would require adaptability and responsiveness to leadership in order to meet set targets. This is essential not only for achieving specific organisational goals but also for ensuring that public sector services remain efficient and responsive to the needs of the community. They would also have to actively participate and contribute to or propose innovative ideas and solutions, as fostering a culture of innovation is critical for addressing the unique challenges of public service delivery and improving overall service outcomes. Additionally, employees would need to be collaborative and willing to undergo continuous learning and development, as these qualities are vital for staying current with evolving best practices and technologies that can drive organisational effectiveness. The provision of technical training skills to employees could also foster greater loyalty and dedication among employees by empowering them with the tools and knowledge needed to excel in their roles, thereby increasing job satisfaction and reducing turnover rates. Furthermore, this investment in employee development demonstrates the organisation's commitment to their professional growth, which can further motivate employees to contribute meaningfully to the organisation's success.

The existing incentives scheme for public sector employees could be improved which would enhance the desire for creativity and innovation among employees from different levels. The public sector organisations could also adopt useful and effective practices from private sector organisations. A re-engineering of all organisational processes could be conducted to adopt the corporate innovation concept in all processes within the organisation. The agility of organisational processes is important, as innovation has no linear steps. As corporate innovation is based on organisational gaps, public sector organisations would require information drives and updates to notify all employees of policy changes and implementations and the organisation's desired goals. According to the results of the study, the participants consistently emphasised the necessity of a common strategy of the organisation and clear

communication from the leadership. With the leadership and employees in constant communication, the problems and processes requiring innovative solutions can be easily collaborated on.

Equally important are the considerations of human factors, such as motivation, incentives, capabilities, skills, enthusiasm, and the mindset of different employees. Employees are willing to propose and contribute to creative ideas and innovation when the organisation's objectives are clear and known to them. The findings, therefore, suggest that achieving operational excellence and fostering an environment with learning and growth requires detailed strategy objectives with distinct phases of execution and time to conduct them appropriately. Recurrent feedback and assessment are crucial in focusing on and developing the ecosystem, as shown in the study's conceptual model.

Furthermore, public sector organisations should consider performing anonymous evaluations that can be delivered to their staff regularly to obtain their positive and negative perceptions of their leaders. Using the findings of the evaluation, organisations can better understand the perspectives and observations of their employees and develop strategies to increase their well-being and practical knowledge of innovation through better leadership. In the long run, organisations' corporate innovation and performance may increase as a result of listening to and responding to employees' concerns. For example, the Abu Dhabi public sector could create a policy of applying a 360-degree appraisal (feedback from subordinates, colleagues, and supervisors) of the department heads.

Public sector organisations should review their existing leadership style and practices, as well as their commitment, towards enhancing the ability of their employees to innovate and create clear organisational objectives based on corporate innovation. Although the survey and interviews praised good leadership, the findings showed that public sector organisations should re-examine their leadership methods to see how they could be enhanced and maximised to quickly meet their performance targets.

Academically, this study can be replicated within a different context, specifically in semi-government organisations and the private sector. Future researchers can seek to undertake a similar study on Abu Dhabi, however, this would be within the context of semi-government and private-sector organisations. The results of such research will show if the results of this research are similarly observable in other types of organisations or if the results differ significantly. Future studies can also explore the impact of other leadership styles on

organisational effectiveness and performance. Nowadays, the Emirate of Abu Dhabi needs leaders who comprehend the complexities of today's fast-changing global environment to succeed in today's organisations. Data from the participants' interviews could be confirmed or disproven by future studies, and it can offer a more complete picture of the work climate or atmosphere in Abu Dhabi's public sector organisations.

The maturity level of corporate innovation is another potential research area for future study. At the initial stage of corporate innovation processes, public sector organisations usually assess their maturity level based on several factors such as alignment with the strategy, support from the leadership, budgeting, and the availability of the tools supporting the aims of corporate innovation. Nevertheless, this part is unclear to Abu Dhabi's public sector organisations, and there is no real assessment to build on. Some other factors that could be further studied in connection with corporate innovation include knowledge management and entrepreneurship. Knowledge management is essential for leveraging intellectual assets and fostering continuous innovation, while entrepreneurship, particularly intrapreneurship, can stimulate creative problem-solving and organisational agility. Studying these factors could provide valuable insights into strategies that enhance innovation and contribute to sustained organisational performance, especially in dynamic business environments. Future studies could also give more focus and expand on the multi-dimensional framework of organisational innovation.

## **9.5 Concluding Remarks**

In conclusion, the study was able to answer the research questions and uncover the practices in Abu Dhabi's public sector organisations that are critical to the achievement of the organisations' overall goals and the required performance level. The findings confirm the need for adopting a blended leadership style (transformational + transactional) by department heads mediated by practical corporate innovation systems to achieve the best possible organisational performance for public sector organisations.

The findings also confirmed the importance of leadership style (top-down) and employee participation and involvement (bottom-up) in corporate innovation. It also shows that the application of corporate innovation could lead to a suitable organisational environment for achieving organisational performance goals. It is recommended that the Abu Dhabi public sector re-evaluates its existing procedures and processes and examine how they can enhance leadership practices, employees' creativity and the organisational climate, thereby supporting

the innovation principles. The study also showed that not all demographic factors (gender, years of experience, position and qualifications) are positively associated with corporate innovation. Being qualified and having certain positions were the only factors that increased the likelihood of contributing to corporate innovation in the public sector.

To meet the current competitive demands of government practices, the incorporation of these aspects into operations can enhance Abu Dhabi's public sector organisations' ability to deal with current and future issues. Public sector organisations can refer to the conceptual implementation plan (Chapter 8) to identify necessary tools and resources that can be useful. Leaders can also refer to the innovation-based leadership model (Chapter 8) to compare their leadership style with the required and suitable leadership style to enhance their organisational performance. Organisations are encouraged to critically evaluate their existing leadership practices and implement training programs that foster a blended leadership style among department heads. Simultaneously, fostering a culture of employee involvement through open communication channels, idea-sharing platforms, and recognition of employee contributions is also crucial. By strategically aligning these elements with a robust corporate innovation system, public sector organisations can effectively navigate the complexities of contemporary governance, optimise performance, and better serve the community.

The insights derived from this research extend beyond the immediate context of Abu Dhabi's public sector, offering valuable lessons for governments worldwide that are striving to enhance their organisational performance through innovation and leadership. By understanding the critical role of leadership styles—particularly the blend of transformational and transactional approaches—alongside the integration of corporate innovation systems, policymakers and public sector leaders can foster environments that are conducive to long-term growth and adaptability. Moreover, the importance of engaging employees in innovation processes, fostering creativity, and ensuring a supportive organisational climate, highlights universal principles that may be explored by other governmental contexts. As public sector organisations across the globe face increasingly complex challenges, the adoption of these leadership and innovation strategies could be essential to meet not only local but also global governance objectives. In essence, this thesis emphasises the broader application of leadership and innovation as key pillars in transforming the public sector into more progressive organisations.

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# APPENDICES

## Appendix 1: Survey Schedule

### Survey Questions

#### Leadership and Innovation in Public Sector of Abu Dhabi

Dear Participants:

I am currently pursuing my Professional Doctorate (DProf) degree at Aberystwyth University, UK.

My research focuses on Leadership and Innovation in public sector of Abu Dhabi. The purpose of my research is to better understand the variables that affect the implementation/adaptation of innovation for a purpose of enhancing the organisational performance in Abu Dhabi public sector, and what are the leadership styles that would help to build that culture. I believe that the outcome of this study will help organisations to focus more on variables that need attention in order to enhance the performance by adopting the innovation culture.

This survey has 20 questions, and completion will take approximately 5 minutes only.

Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. There is no wrong or right answer, it is very important for us to know your own opinion.

For any reason, if you want to exit the survey, you can withdraw from it at any point.

All of your answers are confidential, and data from this survey will be collected only for the purpose of this study. Your information will not be shared with any other party and will be used only for the purpose of this study.

If you have questions at any time about the survey, you may contact me by email at the address specified below.

Thank you very much for your time and support. Please begin the survey by clicking on the next button below.

There are 20 questions in this survey.

#### Personal information

Gender

Female  Male

Years of Experience

Choose one of the following answers

1 - 5

6 - 10

11 - 15

16 and above

### Qualification

Choose one of the following answers

Bachelor

Master

PhD

### Position

Choose one of the following answers

Employee,

Specialist,

Section Head,

Director,

Executive Director

### Leadership styles

1 - Leadership style based on motivation (intrinsic) will help the employees to innovate.

2- Leadership style based on following the systems and rules enforcement will help the employees to innovate.

3 - Leadership style based on employees development and growth will help the employees to innovate.

4- Leadership style based on quick results will help the employees to innovate.

5 - Leadership style based on coaching and encouragement will help the employees to innovate.

6 - Leadership style based reward & punishment will help the employees to innovate.

7 - Leadership style based on the vision will help the employees to innovate.

8 - Leadership style based on the micro management will help the employees to innovate.

## Bottom-Up approach in applying the innovation

- 1 – I understand the definition of corporate innovation.
- 2 - Employees in my workplace are provided with enough time and resources to try out new ideas
- 3 - Even with lack of reward or incentive programs, still I manage to give my creative idea to improve my work place.
- 4 - I receive a support from my manager when I suggest new creative ideas.
- 5 - There is a well-established process for evaluating my ideas.
- 6 - The corporate innovation standard in Abu Dhabi Award of Excellence in Government Performance is clear enough to understand the value of innovation for my organisation

## Innovation and Organisational Performance

- 1 - Corporate innovation is a key to enhance our customers satisfaction.
- 2 - Corporate innovation is a key to enhance the employee's satisfaction.
- 3 - Corporate Innovation is important to enhance our organisational KPIs
- 4 - Corporate innovation is the proper approach to improve the processes.
- 5 - Corporate innovation is the best solution for budget utilization.
- 6 - Corporate innovation is a tool for organisational learning and growth.

## Survey Questions in Arabic

القيادة والابتكار في القطاع العام (الحكومي) في إمارة أبوظبي

المشاركون الأعضاء:

( في جامعة أبريستويث ، المملكة المتحدة.DProf أتابع حالياً شهادة الدكتوراه المهنية )  
يركز بحثي على القيادة والابتكار في القطاع العام (الحكومي) في إمارة أبوظبي. الغرض من بحثي هو فهم أفضل للمتغيرات التي تؤثر على تنفيذ / تكييف ثقافة الابتكار في القطاع العام في أبوظبي، وما هي أساليب القيادة التي من شأنها المساعدة في بناء تلك الثقافة. أعتقد أن نتائج هذه الدراسة ستساعد المنظمات على التركيز في المتغيرات التي تحتاج إلى الاهتمام من أجل تعزيز الأداء المؤسسي من خلال اعتماد ثقافة الابتكار.

يحتوي هذا الاستطلاع على 20 سؤالاً، وسيستغرق إكمالها 5 دقائق تقريباً. مشاركتكم في هذه الدراسة هو طوعيه تماماً. لا توجد مخاطر متوقعة مرتبطة بهذا المشروع. لا توجد إجابة خاطئة أو صحيحة، من المهم جداً بالنسبة لنا أن نعرف رأيك الخاص. لأي سبب، إذا كنت تريد الخروج من الاستبيان، يمكنك الانسحاب منه في أي وقت. جميع إجاباتك سرية، وسيتم جمع البيانات من هذا المسح لغرض هذه الدراسة فقط و لن تتم مشاركة معلوماتك مع أي طرف آخر. إذا كانت لديك أسئلة في أي وقت حول الاستطلاع، فيمكنك الاتصال بي عن طريق البريد الإلكتروني على العنوان المحدد أدناه. شكراً جزيلاً على وقتك ودعمك. من دون مساعدتكم ودعمكم تكون الصورة حول الموضوع ناقصة. يرجى البدء في الاستبيان بالنقر على الزر التالي أدناه.

احمد البركاني

[aaa12@aber.ac.uk](mailto:aaa12@aber.ac.uk)

يوجد عدد 20 من الأسئلة في هذا الاستبيان.

البيانات الشخصية

الجنس

أنثى  ذكر

المستوى التعليمي

أختر احدى الاجابات التالية:

بكالوريوس

ماجستير

دكتوراه

الخبره العملية في المؤسسة بالسنوات

أختر احدى الاجابات التالية:

من 1 - 5 سنوات

من 6 الى 10 سنوات

من 11 الى 15 سنة

اكثر من 16 سنة

دورك الحالي بالمؤسسة

أختر احدى الاجابات التالية:

موظف



رئيس قسم (فريق)



مدير ادارة



مستشار (أخصائي)



أداره تنفيذيه

### الابتكار المؤسسي ونمط القيادة

1 - نمط القيادة على أساس التحفيز المعنوي (الغير مادي) سوف يساعد الموظفين على الابتكار.

نمط القيادة القائم على اتباع الأنظمة وفرض القوانين سوف يساعد الموظفين على الابتكار2—

- نمط القيادة القائم على تطوير وتنمية الموظفين سوف يساعد الموظفين على الابتكار.3

- نمط القيادة القائم على النتائج السريعة سوف يساعد الموظفين على الابتكار4

- نمط القيادة القائم على توجيه وتشجيع الموظفين سوف يساعد الموظفين على الابتكار5

- نمط القيادة القائم على الثواب والعقاب سوف يساعد الموظفين على الابتكار6

7 - سيساعد أسلوب القيادة القائم على الرؤية والنظرة الشمولية الموظفين على الابتكار  
( الموظفين على الابتكار8Micro - سيساعد أسلوب القيادة القائم على الإدارة التفصيلية )

### الابتكار المؤسسي ودور الموظفين

1 - مصطلح الابتكار المؤسسي واضح ومفهوم بالنسبة لي

يتم تزويد الموظفين في مكان العمل بما يكفي من الوقت والموارد لتجربة أفكار جديدة2-

حتى مع قلة/عدم وجود برامج المكافآت والحوافز، ما زلت أرغب في تقديم فكري الإبداعية لتحسين مكان عملي.3—  
أتلقي دعمًا من مديري عندما أقترح أفكارًا ابداعية جديدة4-

هناك عملية مؤسسية واضحة لتقييم أفكار الموظفين5-

معياري الابتكار المؤسسي في جائزة أبوظبي للأداء الحكومي المتميز واضح بما فيه الكفاية لفهم قيمة الابتكار المؤسسي6-

### الابتكار والأداء المؤسسي

1- الابتكار المؤسسي هو المفتاح لتعزيز رضا عملائنا.

2- الابتكار المؤسسي هو المفتاح لتعزيز رضا الموظفين

3 في المؤسسة (KPIs) - الابتكار المؤسسي مهم لتعزيز مؤشرات الأداء الرئيسية

4 الابتكار المؤسسي هو النهج الصحيح لتحسين العمليات المؤسسية-

5 الابتكار المؤسسي هو الحل المثالي لصرف الميزانيات -

6 - الابتكار المؤسسي هو وسيلة للتطوير والنمو المؤسسي

## Qualitative Interview Questions

1. How to define the corporate innovation?
  2. Corporate innovation has two approaches, top-down approach and bottom-up approach, which one has more influence in building Innovation culture? How?
  3. Transformational leadership style and transactional leadership style, which one is more exist in Abu Dhabi government? Why?
    - Transformational leadership: focuses on the development of the individuals as well as their needs)
    - Transactional leadership: the followers are expected to meet the specific goals or performance criteria)
  4. Which style is more influential on building Innovation culture? Explain?
  5. To what extent the association between gender and perception of Innovation? How?
  6. To what extent the association between the employee position and the perception of Innovation? How?
  7. To what extent the association between the employee years of experience and the perception of innovation? How?
  8. To what extent the association between the employee's qualification (Bachelor, Master, PhD) and the perception of Innovation? How?
  9. If we apply the corporate Innovation, will that be a good way to enhance our organisational performance? How?
  10. Kaplan (2001) explained in balance scored cards theory that the non-profit organisation's have 5 areas where we can measure the performance:
    - Budget
    - Services
    - Operational Excellence
    - Learning & Growth
    - Strategic Objectives
- How would you rank the above five areas in term of gathering innovation contribution? Why?

## Appendix 3 A: Initial Open Codes

From the analysis of the first interview, a total of 111 codes were generated. The following table shows a breakdown of the codes under each research question. (Participant 1)

Research Questions	Codes	Number of codes
1. How do you define corporate innovation?	Ideas, business model, business processes, positive way	4
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Both at the same time, commitment, innovation, agile, trial and error, iterative idea creation, lessons learned, change, success, think tank, traditional performance, improvements, enabled, pendulum swings	14
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Transactional is prominent, KPIs drive behaviours, deadlines drive behaviours, developing people, deliver results, constraining model, job description, strict and clear cut, compliance, mandates, policy and regulatory backbones, adopt, agile, multiple levels, transformational needs to be faster, cross-functional, silo departments, collaborative discussions, flip charts, ideas flowing	20
4. Which style is more influential in building an innovation culture? Please explain.	Innovation, serious enough, non-outcome based, non-result based, blended leadership style, deliver results, balance of organic development time	7
5. What is the extent of the association between gender and the perception of innovation? Please explain.	More male entrepreneurs, successful, innovative technology	3
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Not encouraged, develop own ideas, delegate tasks, deadlines, leaders delegate outcomes, achieving outcomes. Steve Jobs hires creative people	8
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Grow in experience, simple idea, gain experience, inexperienced, ask silly questions, experienced people, innocent questions	7
8. What is the extent of the association between the employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Creative minds, art, technology, left side of the brain, right side is more creative, should not expect logic, left side dominated	7
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Drive executions, separate a team, innovative ideas, expected to implement, consultants, baseline, benchmarks, recommendations, those who execute must be involved throughout, pros	22

	and cons, own the execution, drive innovation, improvement teams, learning wheel, decisions or doing, reflect and connect, processes, challenge, those who execute on a daily basis, challenged with implementation, continuous improvement teams, problem solving skills	
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contribution? Why?	Process improvement and efficiency, innovative ideas, zero budget, efficiency savings without spending any money, customers, faster, efficient, better quality, operational excellence, new ways, smarter ways, inspire.	12
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Blended leadership, implicit, KPIs, efficiency, balance of leadership, formal vs. informal, both leadership styles.	7

From the analysis of the second interview, a total 158 codes were generated. The following table shows a breakdown of the codes under each research question. (Participant 3)

Research Questions	Codes	Number of Codes
1. How do you define corporate innovation?	Doing things better, improvement, daily occurrence, innovation, management, style of doing things, continuous improvement, findings new ways, creative ways, can save money, make life easier, organisational structure, change in mindset, change in culture, bureaucracy, static structure, agility, incentives, motivation, continually changing, evaluation, promotions, rewards, goals and objectives, continuous improvement, own way, cannot force people to innovate, ecosystem, right environment, freedom, rules of force, encouragement, better way, new way	33
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	20% top-down, 80% bottom-up, environment, commitment, feeling safe, rewarded, appreciated, process, daily things, rules, tasks, Steve Jobs, vision, leadership, geniuses, culture, leadership, sending	22

	signals, change, appreciation and promotion, knowledge and experience, leadership might not know what works and what does not	
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Transactional more common, bureaucracies, difficult to change, organisational continuity, personalities, span of 10 years, change every three years, each new team starts from scratch, mistrusts the system, inherited, ideas are not personality related, profit of the project, resistance, people complain, short duration for the agency head so he is forced to be transactional	15
4. Which style is more influential in building an innovation culture? Please explain.	Transformational, vision, trust, micromanagement, they know their work, 'you don't hire smart people to tell them what to do, we hire them so they can tell us what to do', knowledge workers, not predictable, the best out of people's minds, freedom, tough, trusting creativity, out of the box, surprise even themselves, confidence	15
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No association in gender, society has been male domination a long time ago, now the balance, innovation and knowledge work are connected to higher education, not to physical strength, 70%–80% of university students are females, sooner or later females will have a bigger role, unemployment, work opportunities, it's the norm	10
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Hard to tell, innovation from anyone, a way of thinking, same mental faculty, new ideas, encouragement, the best of everybody, the higher you get, the more freedom to influence, responsibilities can shoot down any idea, the higher you get, the more chances	11
7. What is the extent of the association between years of	Years of experience is a tricky one, could go either way, deep understanding, processes, you	19

experience and the perception of innovation? Please explain.	have seen so many things that you can spot an opportunity, tunnel vision, used to that, habit, you don't step back, fresh eyes, personality of the person, improvement, benefit from experience, the more they know, the more they innovate, the less experience the better because they are fresh, the more they do things, the more they get stuck to it, resistance to change, experience will be a plus	
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Skills, competence, innovation is about seeing things differently, improving things, anyone can be very innovative, using the mind, iPhone, incremental changes, not always disruptive, revolution	10
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Receptive to change, human evolution, continuous improvement, healthier life, culture	5
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Why?	Strategic objectives, direction, services, ultimate goal, non-profit organisation, efficiency, end user, learning and growth, continuous feedback, budget, constraints, doing new things, incremental, broader definition of innovation	14
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Surprise yourself, obsession with perfecting, Kodak, open to innovation	4

From the analysis of the third interview, a total of 121 codes were generated. The following table shows a breakdown of the codes under each research question. (Participant 4)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Corporate level, process, design, idea, innovative way, corporate context, culture, small or big process, work environment, embed it as a culture, we are thinking of everyday, many ways to implement, more flexibility with private, competitors, sunk	21

	in the red ocean, new ideas, much slower in the government sector, restrictions, umbrella, strategy, less space to think, outside the box	
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Both (top-down and bottom-up), top-down bigger influence, we look up to our leader, creative ideas, encouraging, freedom for bottom, unique ideas, listening to the bottom, 60% top-down, 40% bottom-up	10
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Transactional five years ago, transformational now, agenda, affected the employees, now there is change, transformation is happening, readiness for transformation, leadership not ready yet, new and older generations of employees, transformational is accepted by the new generation	10
4. Which style is more influential in building an innovation culture? Please explain.	Transformational is more influential, developing, inspiring, motivation, opening channels, opening doors, discover, within your own capacity comes innovation	8
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Females in government, female thing because they are more, not much difference, tendency for innovation, female more than male, innovation centres, females more into the process, faster way, men more towards the idea and getting the whole new thing, women like to manage things, completing each other, one target, strategic goal	14
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	As you grow, look at things in a different perspective, wider perspective, see innovation in a different level, they know all its consequences, new employees who have something outside the box, innovation is a cultural thing, in all levels, healthy differences	9
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Years of experience do play a role, years of experience are a collateral of position, experience so much so you will know so much, different ways,	12



	resist change, even if it's more beneficial, more innovative, trap of bias, happening faster, more productive, high quality, stimulate your thinking	
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Master's in healthcare opened my eyes, wider angle, different angles work with different teams, new ideas, expanded, a lot of research that goes with Ph.D., open your mind, support innovation, contribute, depends on the person himself, the situation, environment, encouragement, outside the box, threatened, competitors	15
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Encouraging innovation, innovative thinking, domino, best minds work together, corporate concept, goals, challenges, closing the gaps	7
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Learning and growth, services, operational excellence, budget, strategic objectives, Google, superpower comes with knowledge and learning	7
11. How do you see the role of corporate innovation as a mediator between leadership style and organisational performance?	Good leadership, target set, belonging, leadership, motivating, inspiring and giving accountability, corporate innovation is the link, to have optimal performance you need both styles of leaderships.	8

From the analysis of the fourth interview, a total of 84 codes were generated. The following table shows a breakdown of the codes under each research question. (Haitham)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Coaching employees, better way, enjoy, happy, top-down, leadership beliefs, successful implementation, faster, luxury	9
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down, building an innovation culture, society, innovation tools, bottom-up to achieve sustainable results, top-down to achieve faster results, both are important, 70% top-down, 30% bottom-up	9

3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Please explain.	Transactional is adopted more in AD, goals, performance, end results, KPIs, achieving, no time for building talents, focus	8
4. Which style is more influential in building an innovation culture? Please explain.	Transformation is key to influence, assessing capabilities, strength, weaknesses, each employee separately, customised solutions, group solutions, individual needs, super employee, focus	10
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Imagination, capability, restricted, female is better, male thinking is rigid	5
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Juniors have better capability to innovate, constraints, fresh, occupied, government bureaucracy, focus, reverse relation	7
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Less number of years, fresh graduate, tools of innovation, better results, proper training	5
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Higher rank, more information, knowledge, brilliant idea, innovation tools, iPhone	6
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Better results, employee satisfaction, society results, employees are equipped, innovation tools, short term, medium or long term	7
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Services, budget, strategic objective, operational excellence, learning and growth, planning, longer time, entity output, innovation campaign, focus on end results, reduced cost, increase my revenues, achieving profit, extra funds, generate more services	16
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	A new society starts with leadership, top-down	2

From the analysis of the fifth interview, a total of 115 codes were generated. The following table shows a breakdown of the codes under each research question. (Salem)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Mindset, centralised mechanism, deployed, expertise, maturity, service, process, function, experience, customer, product, financially driven, market, enhancing services, bond government sector with private sector, commercialise innovative ideas, policies, regulations	19
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Impact assessment, change culture, leader adopting change, comply, both are healthy, equal influence	6
3. Between the transformational leadership style and transactional leadership style, which one is more adopted in the Abu Dhabi government? Please explain.	Create initiatives, transformation adopted more in semi-government and private, profit and loss oriented, clear-fast-swift effect, culture will last, no time to develop people, long-term preparation, measurable targets, government with transactional leadership	10
4. Which style is more influential in building an innovation culture? Please explain.	Kit, requires building mindset, ambition, knowledge, government should not lead innovation, private sector must lead, government should facilitate, create policies, support innovation, mandate	10
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No link, needs and innovation, dictated by the internal urge, solve something	4
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	No link, number of boundaries, risk taker, appreciate failing, trial and error, you do not need to understand innovation to be innovative, internal feeling, college dropouts, person edge, hobby, enjoyment, challenge themselves, by nature, character, behaviour, new growth, thinking style, science, technology, engineering, mathematics, illiterate and literate people who develop innovation	21

7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Revamp, mature, reshaping, no link	4
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	No link, doing thesis, research, development, innovation is open to everybody, commercialised, someone who opened the eyes of people, solar energy	9
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	It needs an agent, it needs an approach, it needs leadership, reward, appreciation, process, visibility and clarity, what's in it for them, personal asset, corporate asset, encouraged, innovative solutions, free, incentivise	13
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Strategic objective is number one, budget is last, prove, if something is innovative yet costly, social implications, enhanced process, limited budget, classical ways, marketing activities, visualise, always strategic objectives, drive us, linked to a higher aspiration	12
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Government to encourage innovation in the ecosystem, support, innovation requirements, small acts, more robust, agile	7

From the analysis of the sixth interview, a total of 77 codes were generated. The following table shows a breakdown of the codes under each research question. (Sultan DMA)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Process, transfer ideas, customers, transfer data to a service-product-system, maintaining, encouraging, monitoring	7
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Close innovation (top-down), open innovation (bottom-up), society to contribute, number of ideas, improvement, recommendation, limited, powerful, critical, impact, benchmarking, bottom-up is most important, 70% bottom-up, 30% top-down	13

3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	60% transactional, 40% transformational, rooted from the culture, criticality of work, no interest in leadership development 10 years ago, great shift	6
4. Which style is more influential in building an innovation culture? Please explain.	Vision, cooperation, culture, accepting failure, okay to make mistakes, risk acceptance, deliver KPI, achieved objectives, strategic goals, accountability, responsibility, monitoring, 20% transactional, 80% transformational	14
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No difference, passionate, make changes, thinking out of the box	4
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	More aware, success, importance of innovation, appreciate innovation, winning cup, improves services, employees' satisfaction, reducing costs	8
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	No relationship, zero experience, start-up companies	3
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Reading books	1
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Need to optimise services, effective, accurate, without human interface	4
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Budget is high, core business, corporate structure, incentives, innovative employee, educate people, learning and growth are the lowest, tools, collaborate, be productive, new things, innovative mindset, experiment, improve	14
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Different components, innovation portfolio, holistic approach	3

From the analysis of the seventh interview, a total of 51 codes were generated. The following table shows a breakdown of the codes under each research question. (Fatima DED)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Processes, polices, services, idea execution, efficiency measure	5
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down, benchmark, studies, environment, top support, society, innovation vision, 90% top-down, 10% bottom-up, idea sources, open channels	11
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Mixed approach	1
4. Which style is more influential in building an innovation culture? Please explain.	Transformational, employees are centralised, development, performance, Hawthorne effect, monitoring, individual care	7
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No link, individual, integration, personality, thinking style	5
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Develop the environment, experience, innovative idea	3
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Impact, knowing the ins and outs, basic ideas	3
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Impact, knowledge	2
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Employee performance, innovative employee, encouragement, task oriented, innovation is a booster, goals	6
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Strategic objectives, services are the outcome, budget is linked to learning and growth, new ideas, communication, training, subcategories, plan, growth in innovation	9

11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	_____	
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From the analysis of the eighth interview, a total of 67 codes were generated. The following table shows a breakdown of the codes under each research question. (Khalid Alhosani DED)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Continuous development, based on challenges, apply criteria, ISO	4
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down, interest, encouragement, desire, influential, results, incentives, recognition, awareness, impact of ideas	10
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Both styles, transactional, blended leadership styles, empowerment, incentivised, motivation, desire, awareness, impact, tangible incentive, punishment	11
4. Which style is more influential in building an innovation culture? Please explain.	Transformational style	1
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Females are encouraged, perception, male macro, female micro	4
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Contribution from juniors, understanding from seniors, higher means better understanding, lower means better contribution	4
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	More experience, more knowledge about challenges, better motive with less experience	2
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	No link, innovation based on desire	2
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Innovation is a tool for continuous improvement, make a short-cut for policies and processes, less time, less effort, less cost, measure at the end of	9

	the year, effect on people, survey, criteria	
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Processes, continuous development, short-cut, customer satisfaction, growth, cost, number of employees, reutilise resources, impact, budget reduction, real profit, services, satisfaction	13
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Awareness with top-down, priority, impact, transformational, no punishment, ideas, reward	7

From the analysis of the ninth interview, a total of 48 codes were generated. The following table shows a breakdown of the codes under each research question. (Abid)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Phenomenon, play a role, initiatives	3
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Depends on resources, bottom-up is preferable, small things, better awareness, opportunity, 60% bottom-up, 40% top-down	6
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Motivation, sense of innovation, skills built, transformational	4
4. Which style is more influential in building an innovation culture? Please explain.	Transformational	1
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Knowledge, creativity, mindset, physical, opportunity, equal chances	6
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Plays a role, empowerment, authorisation, delegation	4
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Lessons learned, filling the gaps, cases faced, Thomas Edison, different subjects	5
8. What is the extent of the association between employees' qualifications	Qualified employees come up with ideas faster, subject matter expert	2



(bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.		
9. Is corporate innovation a good way to enhance our organisational performance? If yes, how?	Objective of innovation, differentiation, procedures, structure, org style, projects, vertical vs. horizontal communication, independent, scope of work, innovation output will differentiate	10
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Strategic objectives are the highest, budget is the lowest, ideas have no cost, subjective, strategic everywhere, environment, feedback on services	7
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	_____	

From the analysis of the 10<sup>th</sup> interview, a total of 55 codes were generated. The following table shows a breakdown of the codes under each research question. (Almansouri)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Creation of new ideas, value added, break down corporate innovation, employees are the source, impact, criteria, problem solving, routine, ignorance, leadership characteristics, experience, charisma, idea generation, limiting beliefs, corporate resources	15
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down, creativity, support, fearless, voice of employees, 80% top-down, 20% bottom-up	6
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Blended, more motivation, stages.	3
4. Which style is more influential in building an innovation culture? Why?	Transformation is influential, no results with transactional, influence on motivation,	8

	routine, lazy, demotivation, transforming people, achievement	
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Males are macro, females are better with analysis, females are better in innovation, females are detail oriented	4
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Experience, no link to position, hands on	3
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Experience can distinguish people	1
8. What is the extent of the association between the employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	If you apply then a certificate has an impact, practices	2
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Well built on a solid basis, lessons from failures, ideas with values, processes, policies	5
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Learning and growth are the highest, budget is the lowest, employee mindset, human capital, IT, technology based	6
11. How do you see the role of corporate innovation as a mediator between leadership style and organisational performance?	Academic certificates are not valuable without experience, corporate success with real innovation	2

From the analysis of the 11<sup>th</sup> interview, a total of 71 codes were generated. The following table shows a breakdown of the codes under each research question. (Alshamsi)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	System, cascade from top, all about processes, application, measurement, enhance and develop, review, no documentations, linked to strategy, linked to values, vision and mission	11
2. Corporate innovation has two approaches: top-down and	Top-down, direction, needs, processes, systems,	19

bottom-up. Which one has more influence in building an innovation culture? Why?	environment, services, role model, innovation culture, employees' meetings, 80% top-down, 20% bottom-up, employees' opinions, recognition, managing innovation, priorities, problems based, frontliners, social media, leaders know the direction	
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Recently transactional, almost blended, based on our objectives, time based, fearless, prepare the leaders, 30% transformational, 70% transactional	7
4. Which style is more influential in building innovation culture? Why?	Transformational influences innovation, trust, employees' competencies	2
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No link, based on personality, trust, males added internationally	4
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Behaviour, suggestion environment, everybody is responsible, chain, blended	5
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Out of the box, living the problem, small steps, persuasion, impact, more effective, build ideas	7
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	More ideas with a bachelor's degree, more effectiveness with a Ph.D.	2
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Serving the objectives, vision and mission, bond with objectives, services, satisfaction, strategy, impact	7
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Services are the highest, learning and growth lead to better strategic objectives, budget is the lowest, purpose of the entity exists	4
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Effectiveness, systematic, strategic objectives	3

From the analysis of the 12<sup>th</sup> interview, a total of 44 codes were generated. The following table shows a breakdown of the codes under each research question. (Alwahdi)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Sustainability, improvement, value	3
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down support, achieving, top-down 70%, bottom-up 30%, leadership motivation, process development, ideas mainly from employees	6
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Transformational is adopted more, government direction, competencies, values, employees' development	5
4. Which style is more influential in building an innovation culture? Please explain.	Transformational, employee support, easy objectives, training, knowledge gained, continuous improvement	6
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Females are better in understanding and creation, males are better in application	2
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Lower position offers great ideas, processes, high position looks at innovation at a macro level	3
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	No link, low experience offers great ideas, employee mindset	3
8. What is the extent of the association between the employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Certificates are important, from inside, within	3
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Services and products, innovation add value to all	2
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Why?	Learning and growth are the lowest, services are the highest, innovation is clear with services, services are a universal focus, no motive to reduce the budget	5

11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	No training needed, other practices, benchmark, lack of information on the employees, enhance employees' knowledge, strength and weaknesses	6
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From the analysis of the 13<sup>th</sup> interview, a total of 52 codes were generated. The following table shows a breakdown of the codes under each research question. (Khalifa Alressi)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Work environment, leadership beliefs, attractive environment, creative ideas, employee support, easy to build in the government sector, emotional link, no boundaries, no investment	9
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down is the key, leadership beliefs, top-down 70%, bottom-up 30%	4
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Transformational is common, transactional is old school, impact, trend	4
4. Which style is more influential in building an innovation culture? Please explain.	Transformational	1
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No link, depends on the environment	2
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	No link, juniors can offer brilliant ideas, we shouldn't link innovation to any demographic factors, 16% increase in employees' satisfaction from a junior employee suggestion	4
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Experience is important, more leads to better understanding, better connections with different subjects	3
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.)	No connection	1

and the perception of innovation? Please explain.		
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Purpose of innovation is to enhance corporate performance, organisational jump, integration, platforms, successful corporates always have an innovation function, smooth shapes, innovation is the key, cost reduction, makes life easier, small ideas, high impact	11
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Learning and growth are the highest, operational excellence is the lowest, services are very important, our mandates focus on services, customers' satisfaction, over-expectation, if I improve my operation, the result is equal to services, customers' feedback, improvement based on customers' feedback, five measures related to innovation	10
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Top-down is always number one, empowerment, leadership vision	3

From the analysis of the 14<sup>th</sup> interview, a total of 67 codes were generated. The following table shows a breakdown of the codes under each research question. (Nisreen)

Interview Questions	Codes	Number of codes
1. How do you define corporate innovation?	Corporate innovation is always refreshed with ideas and services, agility, operation, strategy, integration, sustainability, culture, non-profit	8
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Based on corporate objectives, challenges, innovative leadership, based on vision, 50%–50%, innovation is a working style, customer's needs	7
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Transactional is adopted more, people being tested, unstable corporate.	3

4. Which style is more influential in building an innovation culture? Please explain.	Transformational, values based, dynamic, employee's relationships, admire the leader direction, knowledge, culture	8
5. What is the extent of the association between gender and the perception of innovation? Please explain.	No connection	1
6. What is the extent of the association between employees' position and the perception of innovation? Please explain.	All positions can innovate, less responsibility, space in time and mind, what do we need to innovate, high position knows how to analyse, more from less responsibilities, passion, rear leaders, develop ability with managers	9
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Improvement, development, routine, self-development, responsibility, no connection	6
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Study is the base, thinking without study, study without thinking, we need both, skills, conditional link, innovation is apart from the study	6
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	100%, innovation is a tool, out of the box, smart way, shortcut, better time, cost and effort, better utilisation of resources, strategy link, vision, better services	8
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	Strategic objective is the highest, followed by budget, services are the lowest, strategy is the language, strategy can decide the other factors, services are the outcome of all other factors, high quality	7
11. How do you see the role of corporate innovation as a mediator between leadership styles and organisational performance?	Innovation is not about creating teams, belief in innovation, innovation strategy, integrate innovation with other work criteria	4

From the analysis of the 15<sup>th</sup> interview, a total of 56 codes were generated. The following table shows a breakdown of the codes under each research question. (Yaser)

Interview Questions	Codes	Number of Codes
1. How do you define corporate innovation?	Challenges, ideas, customers' ideas, incentive based,	10

	recognition, promotion, appraisal, impact, root causes, corporate nature	
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	Top-down, sponsorship, no revenue in the government sector, 20% top-down, 80% bottom-up, self-motivation, measure corporate performance, economic impact	9
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	Based on the nature of employees, follow-up, transactional is more common, unstable, continuous changes, miscommunication, transactional is old style but still valid	7
4. Which style is more influential in building an innovation culture? Why?	Transformational, extra mile, trust, miscommunication, doesn't serve the purpose	4
5. What is the extent of the association between gender and the perception of innovation? Please explain.	Females are better, design, males are practical, females shape ideas better, females 70%	5
6. What is the extent of the association between employee position and the perception of innovation? Please explain.	Junior position knows better about technicality, juniors have more ideas, reverse relation	3
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	Maximum 15 years' experience, more with less passion, juniors have more enthusiasm	3
8. What is the extent of the association between employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	Higher certificate with higher innovation	1
9. Is applying corporate innovation a good way to enhance our organisational performance? If yes, how?	Linked to challenges, analyse the performance, cycle, perfection, KPIs, ideation channels, application from different persons, belief, great ideas with failed applications	7
10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	All part of the strategic objectives, budget is the least, reduced effort and time, core objectives	4
11. How do you see the role of corporate innovation as a	Top-down is the most important factor for innovation, all	3



mediator between leadership style and organisational performance?	excellence models starts with leadership, leadership creates the corporate system	
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Appendix 3 B: Second Process of Minimising the Initial Open Codes

Interview Questions	Number of Major Themes	Number of Sub-Themes	Number of Minor Themes	Total Number of Themes
1. How do you define corporate innovation?	1	3	2	6
2. Corporate innovation has two approaches: top-down and bottom-up. Which one has more influence in building an innovation culture? Why?	1	3	2	6
3. Between the transformational leadership style and transactional leadership style, which one is adopted more in the Abu Dhabi government? Why?	1	3	2	6
4. Which style is more influential in building innovation culture? Why?	1	3	2	6
5. What is the extent of the association between gender and the perception of innovation? Please explain.	1	2	2	5
6. What is the extent of the association between employees' position and the perception of innovation? Please explain.	1	2	2	5
7. What is the extent of the association between years of experience and the perception of innovation? Please explain.	1	2	1	4
8. What is the extent of the association between the employees' qualifications (bachelor's, master's, Ph.D.) and the perception of innovation? Please explain.	1	2	1	4
9. Is applying corporate innovation as a mediator between leadership style and organisational performance a good way to enhance our organisational performance? If yes, how?	1	1	1	3

10. How would you rank the five areas of organisational performance according to Kaplan (2001) (budget, services, operational excellence, learning and growth, strategic objectives) in terms of gathering innovation contributions? Please explain.	1	3	1	7
Total	10	24	16	50

Appendix 4: Consent Form



**CONSENT FORM**

**Role of leadership styles in enhancing organisation’s innovative capacity – A view of Abu Dhabi Government Sectors**

If you are happy to participate please complete and sign the consent form below

	Please Initial Box
1. I confirm that I have read the attached information sheet on the above project and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.	
2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to any service.	
3. I give my consent to be contacted about the study (by the researcher) if need arise.	
4. I give my permission for the information I have given to be anonymised and used in the PhD thesis and also in later academic conferences and publications with preservation of anonymity.	

I agree to take part in the above project

Name of participant

Date

Signature

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One copy of this form will be kept by the participant ; a second copy will be kept by the researcher.

**Data Protection Act:** Aberystwyth University is a data collector and is registered with the Office of the Data Protection Commissioner as required to do under the Data Protection Act 1998. The information you provide will be used for research purposes and will be processed in accordance with the University’s registration and current data protection legislation. Data will be confidential to the researcher(s) and will not be disclosed to any unauthorised third parties without further agreement by the participant. Reports based on the data will be in anonymised form.



## **Role of leadership styles in enhancing organisation's innovative capacity – A view of Abu Dhabi Government Sector**

### **Participant Information Sheet**

*You are being invited to take part in a research study contributing to a DProf thesis. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.*

### **Who will conduct the research?**

*Ahmed Alburkani , DProf candidate at Business College, Aberystwyth University, United Kingdom*

### **Title of the Research**

*Role of leadership styles in enhancing organisation's innovative capacity – A view of Abu Dhabi Government Sectors*

### **What is the aim of the research?**

- 1- Review the concept of innovation in public sector and its applications to enhance the performance.*
- 2- Identify the success characteristics or leadership to drive innovation in public sector with related to the most common leadership styles in Abu Dhabi (transformation & transaction)*

### **What would I be asked to do if I took part?**

*If you agree to participate in this study, you will be asked to engage in the following activities:*

*First, you will be asked about your role and responsibility that related with innovation and leadership.*

*Secondly, you will be asked some general questions about corporate innovation, performance and leadership styles.*

*There are no physical or psychological risks involved when taking part of this study.*

### **What happens to the data collected?**

*Any information you give will be available only to the researchers involved in this study – two main supervisors and the DProf student. It will be used for a DProf thesis and for publications such as conferences, presentations, journals, and papers that arise from it. The data will all be completely anonymous and presented in on a confidential basis.*

### **How is confidentiality maintained?**

*All data will be stored on an external encrypted hard drive and any individual will be identified by code/pseudonym alone. Any audio recordings will be destroyed at the completion of the analysis.*

**What happens if I do not want to take part or if I change my mind?**

*Taking part in this study is completely voluntary. It is up to you to decide whether or not to take part. If you volunteer to be part of this study, you may withdraw at any point in time, without giving a reason and without detriment to yourself. You may also refuse to answer a particular question and continue to be in the study. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. If you decide to withdraw from the process, all physical documents, such as consent form, and any recordings will be shredded and securely destroyed or deleted.*

**What is the duration of the research?**

*We expect each of the interviews to last about 20 – 30 minutes.*

**Where will the interview be conducted?**

*The interview will be conducted in your organisation or the place that you prefer.*

**Will the outcomes of the research be published?**

*The outcome of the interview will contribute to the DProf dissertation and potentially in academic conferences, presentations, and publications with complete preservation of anonymity.*

**Contact for further information**

*Should you have any further questions regarding this study, please feel free to contact the researcher or his academic supervisor (contact details are provided below).*

*Mr. Ahmed Alburkani (DProf Candidate)*

*Email: aaa12@aber.ac.uk . Institute Business, , Aberystwyth University.*

*Prof. Hugh Preston*

*Email: hjp@aber.ac.uk*