THE DETERMINANTS OF INNOVATIVE BEHAVIORS IN ORGANISATIONS

A Thesis submitted by

Saeed Matar AlQemzi

For the award of

Doctor of Philosophy

2020

ABSTRACT

Innovative behaviour in organisations is a key area of research to be competitive, organisations need to innovate, and this requires employees to be motivated, skilled and fostered in an organisational environment to realise such innovations. The innovation itself is primarily seen in the product domains, originating especially from private enterprises. The literature indicates that prior to the year 2000, such innovations were realised in the manufacturing industries, with the male gender dominating the innovation list. Studies that explored innovative behaviours, or innovative work behaviours as known otherwise, identified skill and management frameworks to assist organisations to meet the demands required to innovate in an organisational context. Despite the fact that the idea is generated by an individual in an organisational context, the realisation of such an idea is implemented by many related entities, and as there are pragmatic advantages for organisations to realise innovations to maintain their competitive market advantages, organisations focused on various elements such as skillsets, leadership, processes, talent and knowledge. Among these factors, talent and knowledge appear to be high levels of innovations and are treated differently as these are categorised as intrinsic motivations. On the other hand, skillset, human resource processes and motivational factors are managed by human resource departments, and hence organisations have found that innovative behaviours can be fostered through these extrinsic behaviours.

The overarching aim then became, 'what factors contribute to the innovative behaviours in the UAE public service?'. With this focus, the literature was reviewed. The literature reviewed indicated that recurring patterns of behaviour are a result of a combination of skills, knowledge and abilities, which help to evaluate employee performance and propose the ideal patterns that are required for remarkable performance. Senior leaders identified employee skills as a more valuable source of competitive advantage, and innovation is a central piece of new business models to realise products and services (Bilan, Hussain, Haseeb, & Kot, 2020). The importance of organisational climate for innovation alignment is also emphasized in the literature, highlighting the need for organisational capacity to innovate (Cropley & Cropley, 2017).

The literature also focused on identifying factors that may encourage and enable employees to demonstrate innovative behaviour at work and the various elements included individual characteristics, motivation and affect, as well as contextual antecedents such as organisational culture, job characteristics, leadership, and social relationships (Kondratenko

& Zaporozhets, 2018; Muhammad Anwar ul, 2017; Pilotti, Anderson, Hardy, Murphy, & Vincent, 2017).

In terms of gender, the literature is still emerging, specifically in the context of this study and it is unclear whether within the context of public service, gender is a key driver.

Based on the initial review of literature, this study set its overarching objective to explore how key organisational factors such as organisational culture, gender, skill sets, HRM reforms and motivational factors influence innovative behaviours in organisations and determine variables that contribute to such an influence.

With this objective in mind, this study posits the following two main research questions for further exploration. They are:

1. What set of factors influence innovative behaviours in organisations?

2. Do the factors influencing innovative behaviour differ between public and private organisations?

To achieve these two objectives and fill gaps in the literature, this research adopted a sequential exploratory strategy as a specific mixed-methods design. The first objective of the study was met by conducting qualitative multi-method approaches that are commonly used in empirical studies, namely focus group discussions. The second objective of the study was achieved by conducting survey questionnaires, which are universally used in practical quantitative research.

The study concluded that the skillsets of employees positively influenced innovative behaviours; Human Resource Processes positively influence innovative behaviours; and Motivational factors of individuals positively influence innovative behaviour in employees in the UAE public sector.

Theoretical and practical contributions of the study include key process-related factors influencing innovative behaviours in public service organisations, and the various inter-related entities playing a role in realising such an innovation. The practical contributions of this study reveal that innovation can be realised in a public service organisation, and within the context of the UAE. Despite the complexity of the innovation processes in the public service, with the support of senior management, it is possible to realise a transformational leadership model to recognise and foster individual talents leading to innovative ideas, and then taking this to a collective entity by sharing such ideas, thus realising an innovative culture in the public service.

CERTIFICATION OF THESIS

This thesis is entirely the work of Saeed Matar AlQemzi except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Principal Supervisor: Professor Raj Gururajan

Associate Supervisor: Associate Professor Eric Kong

Student and supervisors' signatures of endorsement are held at the University.

ACKNOWLEDGEMENTS

"In the name of Allah, the beneficent, the merciful"

I would like to initiate the acknowledgement with Allah (God) who has provided me with the strength and wisdom to finish my thesis.

My deepest gratitude and specific thanks go out to my family members for their constant prayers during my time in Australia since 2015. I would also like to thank the Ministry of Foreign Affairs of Arab Emirates for providing me with the opportunity to complete my PhD study with moral and financial support. I would like to extend my sincere gratitude to all those who have overwhelmed me with their knowledge, especially my principal supervisor, Professor Raj Gururajan and the USQ team for their direction throughout my academic journey. This study would not have been completed without their guidance and motivation for me to achieve the study's objectives in a timely manner especially during this COVID-19 pandemic tough situation. Because of their support and encouragement, I have completed this long PhD journey. I am perpetually grateful and offer them my deepest thanks and warmest appreciation.

Many individuals and institutions have supported this research project towards its completion. Therefore, I would like to express my deepest gratitude to:

- The Human resources department in the Ministry of Foreign Affairs of Arab Emirates, for their constant support in all phases of my PhD.
- The Information Technology department in the Ministry of Foreign Affairs of Arab Emirates, for their support in facilitating my questionnaire distribution across the organization team members.
- The brainstorming group, focus group, individual interview, and survey questionnaire participants for their valuable contributions to this study.
- Police Attaché of the United Arab Emirates – Melbourne, Australia.
- Embassy of the United Arab Emirates Cultural Attaché - Canberra, Australia.
- Embassy of the United Arab Emirates Tashkent, Uzbekistan.
- Ms. Jahmunah Vicnesh for her trustworthy proofreading service.

DEDICATION

I dedicate this thesis to

... Almighty Allah for responding to all my prayers and making this complicated journey a success

….my country United Arab Emirates

… my beloved parents

…my beloved wife

… my beloved sons

…my beloved daughters

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

Chapter overview

This chapter introduces the topic of the thesis by providing an outline of the thesis. Initially a brief background to the study is provided followed by the key research questions asked. Then the structure of the thesis is explained.

Introduction to the research

Innovation is vital in the workplace because it gives organizations an edge to reach market potential faster. Thus, innovation is considered to be an essential ingredient in organizational performances. Employees of modern organizations, therefore, are expected to be innovative in the way they conduct their respective businesses, and organizations provide them with the necessary skills to be proactive, confident, and able to take calculated risks when required.

The way employees behave, defines the culture of an organization. When a company has an innovative culture, it exhibits the potential to grow easily and thrive in a competitive environment, despite the fact that the creative process is not always simple. While tried-and-tested methods may be reliable, trying out new things is worthwhile the experiment (Henderson, 2017, May 8).

In modern settings, an organization's sustainability depends on its ability to innovate. The 'innovate' can be either a process innovation, product innovation or simply demonstrating that employees behave in an innovative manner. The innovative behavioural aspects of employees are significant because this is directly influenced by leadership and ultimately results in organisational performance. While previous research on innovation had an economical and structural focus, for public sector organisations, the measure of performance includes both financial and non-financial determinants. The non-financial determinants of innovation often include elements such as the organisational culture, gender equality, skill sets possessed by employees, reforms made to the Human Resource Management in the organisation and the motivational aspects. Collectively, these elements are known as innovative behaviour in this research. This research posits that these innovative behaviours exhibit the freedom to innovate by individuals in the way they conduct their daily activities, and this individual freedom appears to positively influence organisational performances. Therefore, the innovative behaviours in organisations have become significant in order to 'unlock the potential' in organisations (Cropley & Cropley, 2017, p. 494).

In modern organisational settings, due to the increased level of uncertainty, traditional activities of planning, strategizing and forecasting are no longer serving businesses, and leadership tools are being used like storytelling, role modelling, and vision (Megheirkouni & Mejheirkouni, 2020). Due to external market pressures and variability, planning ahead is more difficult than ever. Organizations are now more focused on the future processes, products and services and these require an appropriate climate for innovation, influenced by leadership (Ziaei Nafchi & Mohelská, 2020). Thus, the new criteria for choosing innovative leaders often includes the ability to understand and anticipate changing customer needs, as these often lead to innovation in organisations. Leaders are expected to have the courage to take educated risks that will increase the chance of success. However, selecting and developing leaders who will promote an innovative work culture and performance is a new challenge for many organisations (França, Broman, Robèrt, Basile, & Trygg, 2017). Therefore, organisations that want to promote innovative behaviours need to develop a different competency model to accommodate various behaviours of employees, leading to a culture that fosters innovative behaviours as part of their business models.

Previous studies that reviewed innovation in organisations suggest that most of the innovations happened at the operational level, and this is represented by the employees of the bottom line (Moussa, McMurray, & Muenjohn, 2018; Saether, 2019). Thus, it makes sense to promote innovative behaviours among these employees so organisations can benefit. However, the determinants of such innovative behaviours are not that trivial and depend on a number of other factors that correspond both to the individual and organisational elements. Thus, understanding and realising an innovative behaviour in an organisation is a challenge for many organisations (Rarenko, 2020).

An initial review of the literature indicates that while prior studies have explored innovation competency, which is the first step in fostering an innovative culture in organisations, very limited information can be found as to how the competency in employees in an organisation enhances or inhibits innovative behaviours. Furthermore, a review of the literature shows an increased body of work on leadership and creativity over the past decade, however there is limited research on innovative behaviours, especially in the chosen context. Therefore, it is felt that further research is required to identify a more comprehensive set of constructs and associated variables to understand how these contribute to innovative behaviours in organisations. This is echoed by (Kim & Yoon, 2015) who stated that such a study would lead to the discovery of the level of innovative activity and the existence of an innovation climate.

Nowadays, with an increased level of uncertainty, planning, strategizing and forecasting is no longer serving businesses and planning ahead is more difficult than ever. Businesses are now focused on the next process and new products/services and leaders are now in need of innovation leadership, which will allow them to create a climate for innovation as innovative behaviour has become the source of distinct competitive advantage (Horth & Buchner, 2014). Companies that want to promote innovation, design and creativity need to develop a different competency model and bring about a change in cultural values to embrace change and continuous learning as part of their business model (França et al., 2017).

The reviewed literature shows an increased body of work on leadership and creativity over the past decade, however there is limited empirical research on leadership practices that promote a climate for creativity [as a surrogate of innovation] and some limitations have been identified that could be addressed in this research to provide more accurate data.

The previous research presents a conservative view of competencies across a variety of industries that do not consider culture, gender, and other demographical data as a limiting factor. Thus, the overarching objective of this study is to explore how key organizational factors such as organizational culture, gender, skill sets, HRM reforms and motivational factors influence innovative behaviours in organisations and determine variables that contribute to such an influence. These factors are further discussed in depth in Chapter 2 – Literature review. This chapter is concluded with the main research questions raised in this study along with an initial conceptual model to guide the study.

The next chapter, Chapter 3 provides a detailed discussion on the research methodology, which answers the research questions. For the methodology, the researcher has employed a qualitative-quantitative hybrid approach. The qualitative component is to comprehensively understand the domain related factors and the quantitative component is to arrive at a pseudo generalisation.

In Chapter 4, the qualitative data collection and data analyses techniques are explained. In this research, Leximancer, a text analyses application was used and the outcomes derived from the qualitative transcript are explained through this tool. This chapter culminated in providing further focus to the study as the study is novel in the chosen domain, namely, UAE public service.

The next chapter, Chapter 5 refined the initial conceptual model as a result of domain specific knowledge gained through the focus group discussions. A key omission was the 'Gender' construct as the focus group discussions revealed that this is not visible in the UAE public

service. This required a refinement to the conceptual model. Furthermore, the researcher developed an instrument by fusing the literature review and qualitative data to arrive at his survey questionnaire.

Chapter 6 was on Quantitative data collection and analyses. The various techniques available to collect data were discussed and the analyses was conducted using a Structural Equation Modelling application called the ADANCO. The researcher provided statistical evidence to assert the hypotheses in this chapter.

Chapter 7 provided a discussion on the findings by drawing evidences from prior literature as well as identifying new knowledge found through this study.

Finally, in Chapter 8, the study was concluded.

CHAPTER 2: LITERATURE REVIEW

Innovation is vital in the workplace because it gives organisations an edge to reach market potential faster. In turn, the quicker penetration leads to bigger opportunities. Thus, innovation is considered to be an essential ingredient in organisational performance. Employees of modern organisations, therefore, are expected to be innovative in the way they conduct their respective businesses, and organisations provide them with the necessary skills to be proactive, confident, and able to take calculated risks when required.

The way employees behave defines the culture of an organization. When an organisation has an innovative culture, it exhibits the potential to grow easily, although the creative process is not always simple. While tried-and-tested methods may be reliable, trying out new things is worthwhile the experiment (Henderson, 2017, May 8).

In modern settings, an organization's sustainability depends on its ability to innovate. The 'innovate' can either be a process innovation, product innovation or simply demonstrating that employees behave in an innovative manner. The innovative behavioural aspects of employees are significant because this is directly influenced by leadership and ultimately results in organisational performance. While the previous research on innovation had an economical and structural focus, for public sector organisations, the measure of performance includes both financial and non-financial determinants. The non-financial determinants often include elements such as the organisational culture, gender equality, skill sets possessed by employees, reforms made to the Human Resource Management in the organisation and the motivational aspects. Collectively, these elements exhibit the freedom for innovation by individuals in the way they conduct their daily activities, and this individual freedom appears to positively influence organisational performance. Therefore, the innovative behaviours in organisations have become significant to 'unlock the potential' in organisations (Cropley & Cropley, 2017).

In modern organisational settings, due to the increased level of uncertainty, traditional activities of planning, strategizing and forecasting are no longer serving businesses and leadership tools like storytelling, role modelling and vision are used instead (Denning, 2011, July 23). Due to external market pressures and variability, planning ahead is more difficult than ever. Organisations are now more focused on the future processes, products and services and these require an appropriate climate for innovation, influenced by leadership (Horth, 2014). Thus, the new metrics for choosing innovative leaders often includes the ability to understand and anticipate changing customer needs, development of employees

to meet these needs and cultivating a culture in the organisation to meet these needs, as these often lead to innovation in organisations. Leaders are expected to have the courage to take informed and educated risks that will increase the chance of success. However, selecting and developing leaders who will promote an innovative work culture and performance, is a new challenge for many organisations (França et al., 2017). Therefore, organisations that want to promote innovative behaviours need to develop a different competency model to accommodate various behaviours of employees, leading to a culture that fosters innovative behaviours as part of their business models.

Previous studies such as (Clinton & Whisnant, 2014) that reviewed innovation in organisations suggest that most of the innovations happened at the operational level, and this is represented by the employees of the bottom line. Thus, it makes sense to promote innovative behaviour among these employees so organisations can benefit. However, the determinants of such innovative behaviour are not that trivial and depend on a number of other factors that correspond both to the individual and organisational elements. Thus, understanding and realising an innovative behaviour in an organisation is a challenge for many organisations (França et al., 2017).

An initial review of the literature indicates that while prior studies have explored innovation competency, which is the first step in fostering an innovative culture in organisations, very limited information can be found as to how the competency in employees in an organisation enhances or inhibits innovative behaviours (Kurucz, Colbert, Luedeke-Freund, Upward, & Willard, 2017). Furthermore, although the literature review shows an increased body of work on leadership (Breuer & Lüdeke-Freund, 2014) and creativity over the past decade, however, there is limited research on innovative behaviours. Therefore, this warrants the need for further research to identify a more comprehensive set of constructs and associated variables to understand how these contribute to innovative behaviours in organisations. This is echoed by (Kim & Yoon, 2015) who stated that such a study would lead to the discovery of the level of innovative activity and the existence of an innovation climate (Kim & Yoon, 2015).

Nowadays, with an increased level of uncertainty, planning, strategizing and forecasting is no longer serving businesses and planning ahead is more difficult than ever. Businesses are now focused on the next process and new products/services and leaders are now in need of innovation leadership, which will allow them to create a climate for innovation as innovative behaviour has become the source of distinct competitive advantage (Horth, 2014). Companies that want to promote innovation, design and creativity need to develop a

different competency model, as well as a change in cultural values to embrace change and continuous learning as part of their business model (França et al., 2017).

Although the literature review shows an increased body of work on leadership (Cropley & Cropley, 2017) and creativity over the past decade, however, there is limited empirical research on leadership practices that promote a climate for creativity and some limitations have been identified that could be addressed in this research, to provide more accurate data.

The previous research presents a conservative view of competencies across a variety of industries that do not consider culture, gender, and other demographical data as a limiting factor. Thus, the overarching objective of this study is to explore how key organizational factors such as organizational culture, gender, skill sets, HRM reforms and motivational factors influence innovative behaviours in organisations and determine variables that contribute to such an influence (França et al., 2017; Kim & Yoon, 2015; Kurucz et al., 2017).

Organizational culture and innovative behaviour

Innovative performance occurs when the organizational culture supports it and when the innovative behaviour is rewarded, this involves the support of those in power. There is support for this notion (Kim & Yoon, 2015), that creating a climate for innovation is subject to the degree of support provided to employees to explore new and creative ways in an organization by those in power, signifying that leadership practices play a significant role in the cultivation of a culture of innovation in organizations.

Prevalently, previous research on innovative cultures in organizations has identified dimensions such as high autonomy, risk-taking, tolerance of mistakes, and low bureaucracy to be the most dominant characteristics of an innovative culture (Kondratenko & Zaporozhets, 2018). These dimensions of an organizational culture are highly influenced by leaders as they play a direct role in setting the level of bureaucracy, autonomy and tolerance of mistakes within an organization. Therefore, when examining the relationship between organizational culture and innovative behaviour, it is important to consider the leadership behaviours that promote a culture of innovation.

In the Interactionist Perspective of Organizational Creativity theory, individual innovative behaviour is a result of interactions between group members, group characteristics, team processes and contextual influences of the organizational culture (Anderson, Potočnik, & Zhou, 2014). While there is increased research on organizational dimensions affecting the climate for creativity (Carlucci, Mura, & Schiuma, 2020), there appears to be relatively limited

research on exploring the relationship between the climate for creativity and an innovation-driven organizational culture in the public sector, which needs immediate attention.

On the other hand, organizational values and shared norms as part of an organizational culture also play a vital role in creating a climate that promotes innovation. Individuals tend to actualize their potential and engage in innovative behaviour when the organizational culture is consistent with its own values, capabilities and interests (Saether, 2019). The study of innovation in an organization (Anderson et al., 2014) also highlights the significance of values as the 'guiding principle of employees' lives' that provide direction and effects of their actions. Therefore, it is important to examine the role of values in all aspects of employees' innovative behaviour process.

Prior studies have indicated that organizational innovation capability include many areas of knowledge, not just individual skills and their passion to become innovative (Carlucci et al., 2020; Saether, 2019). Coupled with this individual passion, the process of innovation management in organisations is complicated as many other activities are involved in fostering innovations, such as the culture in the organisation. Furthermore, merely investing significant finances may not directly correspond to reliable solutions leading to innovations (Cropley & Cropley, 2017), as organisations need to identify and evaluate factors that influence innovation and determine their associations (Breuer & Lüdeke-Freund, 2014; França et al., 2017).

In the literature pertaining to innovation, Organizational culture has been singled out in the last few decades as it is considered to be improving the organization's future prospects from the managerial perspective (Fisher & Wilmoth, 2018). For example, when innovation is discussed, organisations such as 3M and McDonalds have been constantly mentioned due to the culture found in these organisations. Culture is synchronous to the notion that something is cultivated (Rarenko, 2020), however, culture is more akin to setting of values, attitudes and behaviours that are shared by a group of people and communicated between generations (*Entrepreneurship and Organizational Innovation*, 2020). Thus, in recent years, management studies within the context of organisational behaviour tend to focus on values, behaviours and attitudes leading to development processes.

A prior study states that positive cultural characteristics can provide an organisation with the necessary ingredients to innovate (Rarenko, 2020). There is evidence that innovation and culture are intrinsically associated (Saether, 2019). In order for organisations to succeed, culture is very important, however, employees should be fully committed to the

organisation's mission, vision and goals. Organizational culture is the key ingredient in fusing the aims of employees to achieve the subsequent levels of excellence, as well as reflecting the organisation's image. On the other hand, research indicates that innovation fails to thrive in organisations (and individuals) if the environment and organisational culture are not conducive to nurturing these capabilities. This has been proven in numerous studies and specific inhibitors have been identified (Carlucci et al., 2020). These include: employee complacency and cynicism, fear of failure and change, bureaucratic top down decision making, lack of leadership advocacy, empire building and office politics, lack of diversity, a focus on financial controls and mitigation of risk (Lukes & Stephan, 2017).

There appears to be two scenarios of culture variations in any given organization; a single homogenous culture (Ziaei Nafchi & Mohelská, 2020) and multiple (or heterogeneous) cultures or subcultures (Bilan et al., 2020). The homogenous culture provides a 'signature' to an organisation, for example McDonald's stores have the same and uniform style of functioning throughout and such a culture is rigid and seldom accommodates changing conditions. On the other hand, a heterogeneous culture accommodates variation, for example Ford Motors, providing flexibility based on domestic or context-based cultures. These varying styles are essential to develop innovations to address the contextual factors, and there is ample evidence from prior studies to this notion that there is an association between organizational culture and innovation (Carlucci et al., 2020; Fisher & Wilmoth, 2018; Pilotti et al., 2017). A prior study also provided evidence that corporate culture is the strongest driver of radical innovation across nations and firms (Bilan et al., 2020). Additionally, to improve innovative cultures in organisations, organisations should firm up a process leading to the generation of innovative behaviours (Jaskyte & Kisieliene, 2006) as the processes influence innovative behaviours. Therefore, to improve an innovative culture in an organisation, new ideas should be supported with processes (Bendak, Shikhli, & Abdel-Razek, 2020). In essence, innovation or innovative behaviours in an organisation is dependent on a cultural climate and an innovative behaviour that enhances creativity.

Moreover, the literature identified four specific culture characteristics, namely creativity, freedom, teamwork and risk-taking, leading to innovative behaviours in organisations (Lambrecht, Crivits, Lauwers, & Gellynck, 2018). These are further augmented by existing culture and availability of resources, customer orientation, employee participation, cooperation, continuous learning orientation and flexibility. However, limited studies have been found by the researcher on the relationship between organizational culture and

organizational effectiveness in fostering innovative behaviours. Thus, it would be worthwhile exploring these factors.

Skill sets and innovative behaviour

To investigate the relationship between employee skill sets and innovative behaviour, it is important to understand that to innovate, the ideas must be put into practice and research shows that different factors that influence implementation of innovation and idea generation that require closer attention (Birdi, Leach, & Magadley, 2016).

To achieve the vision of valuable innovation, organizations need more innovative employees that intentionally engage in generation and introduction of useful new ideas, products/ services, and novel ways of working into roles, this brings attention to employee skill sets and capabilities. Results from prior research (Birdi et al., 2016) demonstrated the strong role of job expertise and operational skills to innovation and idea implementation. Using the componential model of creativity (Amabile & Pratt, 2016), (Birdi et al., 2016) state that expertise and technical skills are a key component of innovative behaviour as these allow individuals to diagnose the need for creative solutions and the understanding of how they could be implemented in a particular context. The influence of skill sets on innovative behaviour is further supported by (Anderson et al., 2014) who suggests that based on the Model of Individual Creative Action, three groups of factors influence individuals to make the decision to innovate; sense making processes, motivation and knowledge and skill sets.

The literature on the types of individual capabilities that are best to be developed to result in innovative behaviour is still unclear and requires further research (Anderson et al., 2014; Sarantakos, 2013). There is also a need to examine and identify the managerial practices by which these specific skills may be enhanced (Fischer et al., 2019).

Skills in the context of innovation include a range, starting from academic qualifications to leadership skills. In the context of this study, while academic qualifications are assumed to be validated in the chosen, context, leadership skills are mainly discussed as many studies highlighted the importance of leadership skills within the context of innovative behaviours (Pei-Li, 2017). Specifically, due to the various nature of the workplace, especially the public service organisations, and as the incentives associated with innovative behaviours also vary, skills that make up the self-leadership is a major influence through individuals demonstrate innovation. This self-leadership skills (or rather qualities) enable individuals to navigate, motivate and lead themselves towards achieving the desired innovative behaviours and outcomes (Pei-Li, 2017). Self-leadership is a cognitive type of skill, and encompasses three

behavioural dimensions and these are: (1) behaviour-focused; (2) reward focused; and (3) constructive thought focused. Behaviour-focused leadership skills are often directed towards enhancing the self-consciousness and are sometimes unpleasant (Stewart, Courtright, & Manz, 2019). These skills normally include self-observation, self-goal setting, self-motivation, positive self-feedback and reward, and self-coaching. Skills associated with self-observation provide individuals with the expertise to identify specific behaviours that need to be changed, enhanced or terminated (Stewart et al., 2019). Reward focused skills on the other hand have positive effects on employee motivation as there is an explicit acknowledgement in this method, and might enable employees to reach desired behaviours by avoiding mistakes and correct them as they occur, prior to the execution of innovative ideas (Megheirkouni & Mejheirkouni, 2020). Thought focused skills refer to those thought patterns that are constructive in nature, and involves thought patterns that are integrative and repetitive. Individuals may be able alter their thought patterns to focus on potentially available opportunities, rather than thinking about the difficulties as obstacles, using optimistic thought patterns to create opportunities so as to better cope with difficulties that may impede them from attaining their innovative behaviours and associated outcomes. This will enable employees to transform their dysfunctional thoughts into functional ones through a self-assessment processes, and enable them to self-influence and direct self-efficacy (Bednall, E. Rafferty, Shipton, Sanders, & J. Jackson, 2018).

In organisational contexts, Innovation refers to a more complex process (Cropley & Cropley, 2017), and an activity that aims to carry, develop, and modify ideas. This includes generating as well as introducing application of ideas, aimed at improving organisational performance (Henderson, 2017, May 8). Therefore, innovative behaviour in the workplace is a complex behaviour consisting of a three-stage process (Hughes, Rigtering, Covin, Bouncken, & Kraus, 2018) wherein in the first stage an individual recognises a problem and finds a solution, in the second stage the individual seeks ways to promote the solution and the final stage, a prototype of the model(solution) is produced. While these three stages are easy to conceive in a product innovation, this is a much more complexed problem in a process innovation as the number of players involved will be more. Therefore, in the case of process innovation, the behaviours will involve multiple stages (Yuan & Woodman, 2010).

The literature review indicates that there is a positive connection between leadership and work outcome. Furthermore, the relationship between leadership and innovative behaviour appears to be connected, and specifically centred around creative self-leadership (Vandavasi, McConville, Uen, & Yepuru, 2020), referring to a reflective internal process by which an

individual contributes to changes and innovations in organisations. In public service organisations people tend to embrace stability and resist the insecurity and uncertainty that is correspondent with the changes the innovation process entails. Studies report the importance of organizational fairness and justice (Muhammad Anwar ul, 2017; Quratulain, Al-Hawari, apos, Ahmad, & Bani-Melhem, 2020; Wang, Fang, Qureshi, & Janssen, 2015) in reducing stress in employees facing new circumstances as a result of innovation leading to changes.

When innovation is discussed in the context of public service, self-efficacy should be considered within the context (Mielniczuk & Laguna, 2018). This is because, self-efficacy refers to the belief in one's capabilities resulting in higher performance levels (Mielniczuk & Laguna, 2018; Newman, Tse, Schwarz, & Nielsen, 2018) rather than the number of skills that one has. Prior studies found that self-efficacy mediates the relationship between leadership and performance outcomes (Mielniczuk & Laguna, 2018; Newman et al., 2018). Thus, Self-leadership is about people who learn to lead themselves and others. In the innovation process, it is clear that self-leadership skills are critical for displaying innovative behaviours. To this end, individuals with high levels of self-leadership can lead others to support their new ideas and solutions. Explanation can be found in support of this notion in the form that individuals, when an informal opportunity is provided, volunteer to promote the idea [of self-efficacy] with conviction and persistence, and ensure success (de Jong, Parker, Wennekers, & Wu, 2015).

The review also indicated that income and tenure also influence innovative behaviours in organisations (Bendak et al., 2020; de Jong et al., 2015; Liu, Chow, Gong, & Wang, 2016). While income refers to the financial and monetary benefits, people who work for a longer period in their current job, are likely to develop skills that are relevant and specific to the domain. These skills in turn help to solve issues in organisations in a relevant way.

HRM reforms and innovation

Early stages of public sector reforms in the 1980s and 1990s under-stated the importance of HRM in the public sector, which contributed to the widening of the social gap. Since then, governments and social enterprises have placed their focus on rectifying this strategic error.

Staff in organisations are encouraged to find innovative ways to enhance organizational performance and in this context knowledge of employees are viewed positively and used effectively to add value to business outcomes (Gabutti & Morandi, 2019). This notion encouraged organisations to take initiative and reach collective agreements with their

employees in terms of employment such as remuneration and working conditions. In addition, organisations also recognised that flexibility in the workplace, provision for resources to facilitate innovation, as well as the development of strategies to realise innovation are essential to maintain the competitive advantage in the ever changing and challenging demands of governance (Gabutti & Morandi, 2019).

Strategic Human Resource Management has been identified as a key factor influencing enterprise performance through aligning and promoting employee's behaviour to the requirements of an organization's goals and strategies therefore highlighting its ability to shape the organization's innovation culture (Gara Bach Ouerdian, Mansour, Al-Zahrani, & Chaari, 2017). Moreover, a prior study has found that transformational leadership and individual innovations are positively correlated (Gara Bach Ouerdian et al., 2017). Transformational leadership theory views leaders as change agents that play a key role in initiation and implementation of novel ideas in a workplace and while there has been an increased interest in researching transformational leadership, (Kim & Yoon, 2015) assert that there is a need for empirical research on the associations of transformational leadership, climate of creativity in local governments and the organizational culture of innovation.

Prior studies also confirm that the role of strategic HRM activities such as career development and staff training programs, performance pay, temporary employee management to have major positive impact on enterprise performance and innovation (Dedahanov, Rhee, & Yoon, 2017; Li, Li, & Chan, 2019). Therefore, the challenge for government leaders of today is to find the best ways to utilize management reforms and practices that foster innovation in an organization, which indicates an increasing need for studying HRM reforms in local government (Kim & Yoon, 2015). Furthermore, future research should also consider the impact of political factors and HRM reforms on employee's innovative behaviour.

The HRM practice of "training and development" was found to significantly influence IWB in several studies (Clinton & Whisnant, 2014; Cropley & Cropley, 2017; Wang et al., 2015) and all these studies found a direct positive effect between HRM efforts and innovative behaviours in organisations. Furthermore, the researcher of this study, through own experience, is aware that training and development is a composition of various activities that aim to develop competence and knowledge within organisations. In addition, literature also indicates that the relationship between knowledge resources, knowledge management and innovative behaviour is seen as a significant trigger (Anser, Yousaf, Khan, & Usman, 2020), as well as training and development activities of competency in individuals leading to career enhancing practices (Liu et al., 2016).

The literature on human resource processes and innovative behaviour for this study was further examined within the context of the relationship between "training and development" and innovative work behaviours and it was found that there is a positive relationship between these two constructs (Anser et al., 2020; Vandavasi et al., 2020). Also, there is a direct relationship between the individual capabilities and the collective knowledge available in an organisation leading to innovation, and this association is further enhanced by well-defined training and development practices within the organisation to increase employee knowledge, skills and abilities (De Spiegelaere, Van Gyes, & Van Hootegem, 2018). This in turn will foster employee engagement in organisations. In addition, the relationship between training practices and innovative behaviour set within a social context where knowledge is freely shared, leads to the better understanding of training and development practices, culminating in the organisation's commitment to positive attitudes and behaviours that are not formally rewarded or contractually enforceable.

The literature also provides further evidence that the relationship between training practices and innovative behaviour is moderated by the context in which an organisation operates. While limited information can be found in the literature between private and public service organisations in this matter, or product and process innovation spectrum, the relationship between private and public organisations varies, and the effect on innovative behaviours as a result of training and development practices is lower in public organisations than in private organisations (Wynen, Boon, Kleizen, & Verhoest, 2019). Therefore, it could be argued that training and development practices have less effect on idea generation and the realisation of innovative ideas for public service employees because public service employees are generally more highly educated (within the context of innovation generation) than private service employees and, therefore, further competence development in the form of training and development practices have less effect on innovative behaviour (A. Bos-Nehles, Bondarouk, & Nijenhuis, 2017).

One of the key components of human resource department is, rewarding employees that have shown an ability to innovate within the organisations as this reward has been shown to positively influence an employees' engagement in the innovative behaviours (Yi, Uddin, Das, Mahmood, & Sohel, 2019). The reward schemes have been described in the literature in many forms such as the expectancy clarity, financial mechanisms, and non-financial benefits (Phan et al., 2018). The expectancy clarity deals with the linkage between innovative performance and reward, and this is normally linked to financial incentives. Within this primary and secondary organisational rewards such as promotion, one-time incentive, bonus

schemes, and other incentives such as elevation in status are discussion. Non-financial benefits include leave options, membership allowances and transfers to coveted positions. Additionally, these variables vary from organisation to organisation, and are context dependent. While the concept of reward is explicit in private organisations (for example career growth through promotion), these are not visible in public service. This can be seen as the relationship between rewards and innovative work behaviours is ambiguous, and there appears to be some form of disagreement in studies that reported outcomes of these two constructs (A. Bos-Nehles, Renkema, & Janssen, 2017). While some reported positive correlations, others reported otherwise. Within the studies that have reported negative relationships between reward and innovative behaviours, some of them reported a significant positive linkage between financial and non-financial rewards and innovative behaviours. One explanation could be that these positive relationships could have culminated due to clarity in contracts in which employees and employers have agreed to get the best out of their relationship for both parties. It appears that the mutual relationship between the employer and employee influences innovative work behaviours. Furthermore, the perceptions of effort-reward are necessary for this mutual relationship to emerge, with fairness and transparency in-built.

The relationship between rewards and innovative behaviours also provides insights from theories such as the Self-determination and Social Exchange Theories (A. Bos-Nehles, Renkema, et al., 2017). These two theories explain how rewards and innovative behaviours are associated, and the contribution made by these two constructs in establishing the link. While some authors relied on the social exchange theory to provide evidence on the relationship between rewards and innovative behaviours, others have used psychological contract arguments to explain constructs such as "expectations met" and "obligation to innovate". Also, when rewards are based on performances, they have been found to influence innovative behaviours, as performance is a reflection of intrinsic behaviours (Yidong & Xinxin, 2012). Performance, defined as short-term outputs and outcomes, signals to employees that it is better to focus on 'proven ways of doing things' rather than engaging in more risky means that challenge the status quo. However, when employees are not intrinsically motivated to engage in innovative behaviours and perceive innovation as an extra-role behaviour, they expect to be rewarded for such extra efforts. When organisations used compensation systems to signal to their employees that extra-role behaviours, such as innovative behaviours, were recognised and valued, employees perceived their engagement in such behaviours as of value. However, employees tend to reciprocate with innovative

behaviours only when they feel fairly rewarded for their efforts. Employees strongly feel they are rewarded for their contribution to the innovation process rather than its outcome (Phan et al., 2018). The extrinsic motivation argument would seem especially relevant to public organisations since innovation is considered to be a top-down process. Public service employees need a clear signal before indulging in innovative behaviour because they consider this to be a risky behaviour and thus believe that innovative behaviour should be ordered and paid for by the system (Miao, Newman, Schwarz, & Cooper, 2018).

Gender and innovative behaviour

Prior research confirms the existence of gender segregation and underrepresentation of women in in male–dominated industries yet gender equality and innovation are often separated when comes to innovation-based research (Abukhait, Bani-Melhem, & Zeffane, 2019). There are a number of internal and external factors that contribute to innovation by women. These include organizational climate, leadership practices and biases and different aspects of economic and political environments (Bibi & Afsar, 2020).

An individual's behaviour is highly dependent on the position in the organization. The capacity to innovate by female employees was suppressed by unfavourable organizational climate (Cropley & Cropley, 2017). There is evidence in the literature on gender bias, to the effect that female managers are more prone to ridicule or failure due to different role expectations as compared to male managers (Purc & Laguna, 2019). Furthermore, women are minorities in managerial positions, and are viewed as 'test cases' and are also subject to stereotypical assumption that they are not suitable for managerial positions (Cropley & Cropley, 2017). Consequently, any failure or weakness of female managers is linked to them being 'women' attributing to their 'inappropriate traits, attitudes and behaviours whereas male values are commonly recognized as the key factors of success. This perception of the role of female managers is insinuated to constrain innovative behaviour.

The relevance of gender differences and innovative behaviour indicate that managers tend to exhibit bias towards employees of the same gender (Reuvers, van Engen, Vinkenburg, & Wilson-Evered, 2008) and that subordinates are more likely to engage in innovative behaviour when their leaders are of the same gender, which is congruent with the similarity attraction theory (Steyn & De Bruin, 2018). This can explain the results of studies conducted in male dominated industries which associate innovative behaviour to males. Overall, men and women are known to be equally innovative yet innovative behaviour appears to be associated more with male managers in the available literature. Meanwhile, statistics show a consistent increase in representation of females in managerial positions, but whether the

gender of managers or subordinates, plays a role in leadership practices that influence innovative behaviour, (Steyn & De Bruin, 2018) is questionable.

Scholars also argue that to date, much of the research on innovation has been conducted in male controlled industries where very few women are in leading positions. Furthermore, even in these situations, female leaders are confined to the implementation of new processes and products in highly competitive markets, with little evidence on other types of innovation such as social and environmental innovations. This has compelled the need to observe a wider scope of innovation including the public and service sector (Battistelli, Odoardi, Vandenberghe, Di Napoli, & Piccione, 2019).

The reviewed literature indicates that despite shortcomings and constraints, many women lead enterprises, and participate in national economic decisions. Female employment is influenced by various domestic activities and associated roles, and personality factors. Within the chosen context of this study (UAE), this may seem to be pronounced as many literatures are based on western societies. Further literature reviewed reported gender issues for American women, and there are some references that these are also common to Nigerian women (Purc & Laguna, 2019). Socio-cultural problems are also attributed to Nigerian Women, highlighting the involvement in innovative behaviours (Singh, Simpson, Mordi, & Okafor, 2011). Thus, in addition to personality factors, socio-cultural factors also appear to be influencing female participation in exhibiting innovative behaviours.

Additionally, in many cultures, women are not expected to be involved in occupations that will take them outside their matrimonial home. While this is seen as "being submissive to their husbands" (Singh et al., 2011), a critical insight into these cultures will reveal that this is actually a protection for females. However, the economic necessities have seen women increasingly participating in careers that display their talents, leading to innovative behaviours (van der Zwan, Thurik, Verheul, & Hessels, 2016). These behaviours are seen in small-scale businesses as the innovative behaviours associated with these ventures seem to be less demanding. Furthermore, there is support to the notion that female entrepreneurs are higher in informal sector than male entrepreneurs (Demartini, 2018).

Studies showed that innovative behaviour is one of the most critical capabilities to be successful because it relates to the production of useful ideas and idea implementation (Abukhait et al., 2019; Demartini, 2018; Vandavasi et al., 2020). It has been found that on many occasions, innovative ideas result in the re-structuring of existing processes, and lead to the establishment of dominant competitive positions in the market (Dedahanov et al.,

2017). While this notion is held in the product development associated with innovation, the same applies to process innovation in public services, as the public service is mainly concerned with people and any innovative changes that will make people's lives better. Thus, researchers had a view that innovative behaviour should be focused on the ability to generate ideas and the willingness and skill to work with these ideas.

In organisations, be it private or public sector, within the given constraints, innovation begins with problem recognition, then generation of solutions, and subsequently transforming these solutions to results using creativity (Miao et al., 2018). Within this context, innovative behaviour of individual actions is directed at the generation, introduction and application of beneficial novelty at any organizational level (Carlucci et al., 2020). Thus, it can be inferred that the foundation of innovation is ideas, not gender. Although the context of gender appears in many western studies, however, it appears that little attention is paid to systematic empirical studies in this domain. Furthermore, there is little evidence that studies have explored innovative behaviours of women in organisations, especially public service organisations. Even studies reviewed within this domain appear to be relying on generalized conclusion, leading to systemic error regarding the specific nature of women entrepreneurs.

A person's behaviour is motivated by the expectation that her behaviour will lead to certain outcomes, together with the values she places on those outcomes. This was based on the notion that behaviour is a function of interaction of personality and the environment. If this assumption is held to be true, then the environment of the organisation plays a critical role in shaping up innovative behaviour, preceding gender. If this notion is applied to women innovators, then the level at which women will engage in innovative behaviour is dependent on how well they desire growth (valence), their perceived probability that their efforts will lead to achievement of their goal (their organisational growth) and their innovativeness which will have a positive effect on the organisation. Despite these, studies show women value personal considerations more as compared to monetary benefits offered by organisations, and therefore, it can be argued that different approaches to venture creation and involvement among women in displaying innovative behaviours may lead to their varying expectancies (Demartini, 2018; Kerr, Kerr, & Dalton, 2019).

Innovation crosses gender in two ways; how people are acknowledged and what the innovation is about. Innovation crosses gender in how people are acknowledged and what the innovation is about (Bani-Melhem, Abukhait, & Mohd. Shamsudin, 2020). It appears that, in the context of 'how people are acknowledged', of 'people' in innovation are invisible, mainly because these people are mostly ignored with the concentration on outcomes [of

innovation] and this blinds the gender. The dominating image of innovation and innovators, builds on stereotypical notions of gender, promoting men and certain forms of masculinity as the norm, as many innovations are associated with products, where males dominate in the production environment (Anderson et al., 2014). Furthermore, the dominating image of innovation is centred on stereotypical notions of gender, mainly promoting men as early innovations from the production environment where male members were working (Demartini, 2018). The researcher inferred this as masculine gender fitting the innovation agenda, rather than an ethnic minority woman who would realise outcomes as a result of her innovative idea realisation. (Bibi & Afsar, 2020). Furthermore, evidence can be provided in the form of Swedish strategy policy for technical innovation and industrial development implicitly indicating men as the main actors in natural sciences, technology and mathematics, and women as lacking the required technical skills (Taalbi, 2017). Thus, it appears that women are silently omitted in their acknowledgement of innovative behaviours. In terms of what is understood as 'innovation', specific construction of masculinity stresses traditional masculine industries as places where innovations emerge (Taalbi, 2017). Thus, there is a false perception that [male] gender and innovation are linked in innovation policies, when the innovation system concept is mainly linked to industries where physical strength is valued in certain production environments. Thus, majority of the studies in the early 70's to 90's discussed innovative behaviour with masculine gender. Hence, it appears that, in the early years of innovation literature, women have been silently omitted in their acknowledgement of innovative behaviours (Opoku, Choi, & Kang, 2019). Other studies also state that there is bias in stereotyping innovation with masculine gender, especially in product innovation (Battistelli et al., 2019; Demartini, 2018). Thus, it appears that innovative behaviour is biased with masculine gender.

In the context of UAE, gender differences which relate to innovative behaviours, remain relatively under researched (Abukhait et al., 2019), (Gharama, Khalifa, & Al-Shibami, 2020). This is even more visible when emerging economies such as the UAE are considered for review as these countries are viewed as a traditional 'patriarchal society'. However, the UAE government has introduced several policies aimed at empowering women and reducing the substantial gap between men and women (Anser et al., 2020), (Bibi & Afsar, 2020; Gharama et al., 2020). The main purpose of these policies is to promote the country's ranking and reduce the gaps between men and women at work and excel in the field of women's empowerment. This is considered an important part of the country's strategy to emerge as one of the countries, among the others, that are at the forefront of women's empowerment

(Anser et al., 2020). With regard to innovative behaviours, a recent study provided evidence to the fact that working women in the UAE showed relatively higher innovative potentials and even surpassed their male counterparts by making up the majority of the UAE innovators (Gharama et al., 2020). This is perhaps because of the initiatives to encourage females to participate in the economy, and associated strategic initiatives and government policies. These claims need to be verified.

Innovative behaviour in public service agencies is important because innovation influences policy changes at government level leading to effectiveness and efficiency (Li et al., 2019). While innovations are linked with growth, the public sector is often viewed as not innovative, as there is a perception that public sector is not conducive for innovation due to inefficiencies and lack of competition (Osborne et al., 2019). Studies also found that in government-led versus community-led open innovation, the lack of inside out open innovation and the need for developing an overarching strategic plan in citizen sourcing were three key elements of innovation in the public sector organisations (Yan, Chi, Yang, & Chien, 2019).

Innovative behaviour in public service agencies is important because innovation influences policy changes at government level leading to effectiveness and efficiency (Gharama et al., 2020). While innovations are linked to growth, the public sector is often viewed as not innovative, as there is a perception that public sector is not conducive for innovation due to inefficiencies and lack of competition. A prior study found that government-led versus community-led open innovation, the lack of inside out open innovation, and the need for developing an overarching strategic plan in citizen sourcing as three key elements of innovation in the public sector organisations (Bani-Melhem et al., 2020). Innovation in public service organisations in Australia indicate that senior managers(Australian context) in the public service organisations are liable for resourcing innovation within public service organisations, indicating top-down approach, and the need to develop competencies required, that align with strategic approaches (Wynen et al., 2019). (Skålén, Karlsson, Engen, & Magnusson, 2018). In public service organisations, due to process orientation and the complexity of operations and interdependencies, it may be challenging to establish the relationship between innovation and performance (Wynen et al., 2019). Further insights into the innovative capacity of public service organisations in terms of the sector's capacity to innovate and indicate that public sector innovativeness is about balancing between exploration and exploitation, require a multifaceted approach to realise innovation processes. Further innovative capacity of public service organisations is dependent on many other factors such as the connectivity one has, as the process is multi-faceted and complex.

Leadership and innovation are closely linked as the literature on public sector innovation showed that an innovative culture must be supported by individuals in power (Opoku et al., 2019). Literature also indicates that public service employees' innovative behaviour relies on their interaction with other employees in the sector, and on the environmental contextual factors within the sector (Fang, Chen, Wang, & Chen, 2019; Opoku et al., 2019). Among the many factors examined, leadership has been singled out for accomplishing effectiveness and innovation, and providing employees with autonomy and freedom, reduced bureaucratic obstructions, and senior leadership support influence innovative performance in the public sector (Skålén et al., 2018). In public service organisations, without support from senior managers, it is rather impossible to accomplish innovation in the public service, as innovation and associated behaviours in the public service organisations involve various elements of multi-faceted, and complexed processes to realise innovation.

Summary of literature

The literature reviewed indicates that recurring patterns of behaviour is a result of a combination of skills, knowledge and abilities, and these help to evaluate employee performance and propose the ideal patterns that are required for remarkable performance. Relevantly, executives identify designing new business models based on the employee skills as a more valuable source of competitive advantage, and innovation is a central piece of these new business models, than new products/services (Bilan et al., 2020). Therefore, in order to build a competent workforce, organisations need to include innovation as a key part of their competency models to develop strategic leaders and fill the leadership gaps (Suseno et al., 2019).

Furthermore, the literature reviewed provides ample evidence to support the importance of leadership development strategies that build innovative competencies and achieve a sustainable competitive advantage (Megheirkouni & Mejheirkouni, 2020), and the existence of a positive relationship between a leader's transformational leadership and perceived culture of innovation by the employees (Kim & Yoon, 2015). Creating a climate for innovation is dependent on the degree of support provided to employees to explore new and creative ways in an organisation by those in power. This climate is influenced by several organisational aspects such as reward and recognition, available resources and organisation's flexibility (Kim & Yoon, 2015). The importance of organisational climate is also emphasized in the literature, highlighting the relationship between gender and organisational capacity for innovation (Cropley & Cropley, 2017), with suggestions that the capacity to innovate by female

employees was suppressed by unfavourable organisational climate, where male gender appear to be dominating innovation.

The innovative behaviour is also linked to the broader concept of creativity and encompasses a variety of behaviours involved in the generation, promotion, and implementation of new ideas (Fischer et al., 2019). Management research on innovative behaviour focuses on the human aspect, rather than the technical aspect, of innovation. With its focus on human behaviours and processes, innovative behaviour is concerned with this body of work, to understand situations and factors that influence the innovative behaviour of individual employees and groups of employees in the organisational setting (Pei-Li, 2017).

A great amount of research has been focused on identifying factors that may encourage and enable employees to demonstrate innovative behaviour at work. Frequent topics include individual characteristics, motivation and affect, as well as contextual antecedents such as organisational culture, job characteristics, leadership, and social relationships (Kondratenko & Zaporozhets, 2018; Muhammad Anwar ul, 2017; Pilotti et al., 2017). On the other hand, Innovative behaviour at the group level is concerned with behaviours and processes that are unique to a team environment, and beyond the scope of this study.

Innovative Work Behaviour: Measurement and Validation

The ability to continuously innovate and improve products, services and work processes is crucial for organisations. Individual employees need to be both willing and able to innovate if a continuous flow of innovations is to be realised (Skålén et al., 2018); the idea that actions of individual employees are of crucial importance for continuous innovation and improvement (Kim & Yoon, 2015), and for total quality management of the innovative processes (Wang et al., 2015) and corporate entrepreneurship (A. Bos-Nehles, Renkema, et al., 2017).

Individual innovation has been studied in terms of personality characteristics, outputs, and behaviours, and studies that examined these aspects focused on generalised willingness to change, a personality-based aspect of individual innovation. The role of innovation at an individual level appeared to have captured how many changes an individual has initiated in his or her job in comparison to the last role occupant. Similarly, the measures used assessed individuals' self-ratings of their suggestions and converted these into realisation of innovations. These approaches were oriented towards an output-based view of individual innovation (Lukes & Stephan, 2017). Others studies conceptualised individual innovation as a set of discretionary employee behaviours (Henderson, 2017, May 8).

Skill sets and innovative behaviour

To achieve the vision of valuable innovation, organizations need more innovative employees that intentionally engage in the generation and introduction of useful new ideas, products & services, and novel ways of working into roles, this brings attention to employee skill sets and capabilities (Fang et al., 2019). Prior studies demonstrated the strong role of job expertise and operational skills to innovation and idea implementation (Bibi & Afsar, 2020; Gharama et al., 2020). The literature also provides information on the influence of skill sets on innovative behaviour based on the Model of Individual Creative Action (Skålén et al., 2018), and discusses three groups of factors that influence individuals to make the decision to innovate, namely, sense making processes, motivation and knowledge and skill sets (Taalbi, 2017). Despite all these details, it appears that the types of individual capabilities that are best suited to realise innovation in public service appears to be under developed.

Motivational Factors

The perceptions of rewards (e.g., payment) received for the work completed have been identified as an important factor influencing innovative behaviour in organisations, both public and private sectors. This further influences the predictability of work-related behaviours and outcomes. Prior research has provided considerable insights into personal and contextual aspects of motivational factors associated with innovative behaviours in organisations (Bani-Melhem et al., 2020; Osborne et al., 2019). Antecedents such as the organisational climate, job characteristics, and social contexts have been identified as influential factors leading to individual innovation behaviour. Within the domain of individual innovative behaviour, studies have identified personality traits, goal orientations, values, thinking styles, knowledge and abilities, psychological states, and motivation leading to innovative behaviours in organisations. Furthermore, individual differences play a fundamental role in shaping goals and behaviours, and these differences serve as guiding principles in the life of a person, leading to strengthening intrinsic motivational factors. These differences can motivate actions, providing direction and emotional intensity, to function as standards for judging and justifying action, as individual innovation behaviour comprises decisions and activities directed to creating, introducing and applying new ideas at the workplace. Also, it can be expected that an employee's values substantially influence creativity and innovation. Despite this knowledge that individual motivational differences play a crucial role in defining innovative behaviour, surprisingly very few studies have explored them, requiring a systematic examination of the role of values in employee's idea generation and implementation.

Innovative workplace behaviour is a constituent of proper and quick services. Both public and private organisations require innovative behaviour due to its needs of maintaining organisational performance, and the element that leads to efficient workplace behaviour is motivation (Wynen et al., 2019). For a well-developed organisation, highly motivated and skilful employees are an essential component to maintain efficiency and for delivering a high-quality service. To maintain positive customer relationships, sharing information between and among various organisational units is an essential ingredient of an efficient job performance (Megheirkouni & Mejheirkouni, 2020).

Similarly, to fulfil the workplace demands, motivation is necessitated to increase the efficiency of workers. Employees' motivation and performance is the pivotal element in achieving the goals and objectives of any organisation. Motivation level significantly influences the performance of employees, and it is motivation that decides the work competency and work place behaviour of the employees. Work competency and satisfaction are influenced by motivational level. Both intrinsic and extrinsic motivations positively influence the external work place environment, nature of provisional tasks and incentives to enhance motivation that is involved in workplace behaviour of employees. Employees who are internally motivated, perform well and behave positively at their workplace because, their source of motivation is their inner ability to acquire skills and do work in a productive and efficient way. The extrinsic motivation is equally important as individuals do not take interest in doing productive work for a longer period of time in the absence of rewards. So, it is the fact that both internal and external motivation boosts the performance of employees of an organisation.

Thus, it is possible to identify various elements that contribute to motivational factors leading to innovative behaviour in organisations. Within the scope of this study, the initial factors that will be considered for further exploration include skills acquisition, new idea development, and satisfaction in job, work competency and sustaining productive work results, even in the absence of rewards. The exploration also will be based on intrinsic and extrinsic standpoints.

Research aim/objectives:

Based on the initial discussions presented above, the overarching objective of this study is:

To explore how key organisational factors such as organisational culture, gender, skill sets, HRM reforms and motivational factors influence innovative behaviours in organisations and determine variables that contribute to such an influence.

With this objective in mind, this study posits the following two main research questions for further exploration. They are:

1. **What set of factors influence innovative behaviours in organisations?**
2. **Do the factors influencing innovative behaviour differ between public and private organisations?**

The literature review identified a number of variables influencing innovative behaviours in organisations. The identified variables have been encapsulated in an initial conceptual model as shown below:
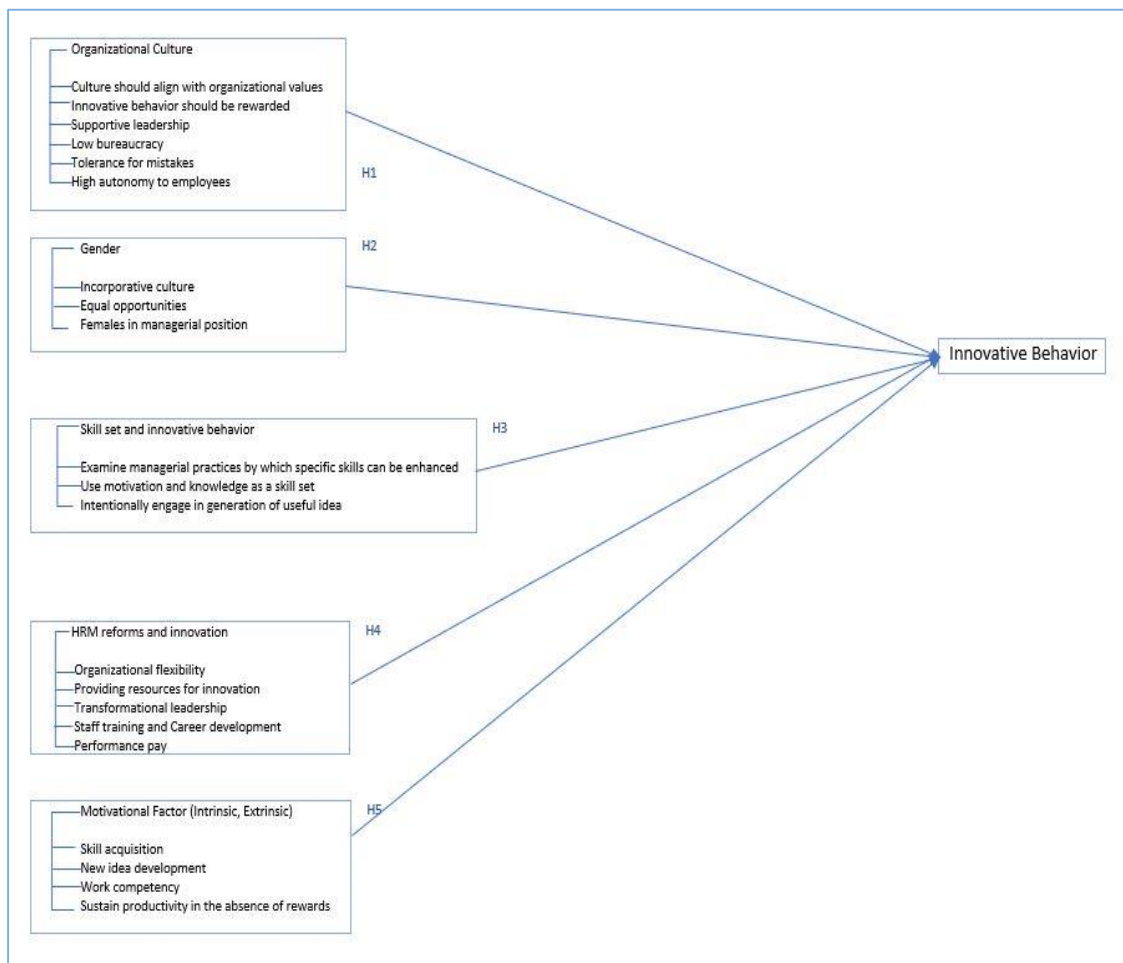
Figure 1 Initial Conceptual Model

The approach to validate the model is discussed in the next chapter, 'Research methodology'. Based on the literature review, the researcher is able to identify an initial set of provisional hypotheses as shown below. There is adequate evidence in the literature to assert directed hypotheses and hence the researcher developed directed hypotheses at this stage of the study.

H1: Organisational culture positively influences innovative behaviour in employees in organisations.

H2: Gender positively influences innovative behaviour in employees in organisations.

H3: Skillsets in employees positively influences innovative behaviour in employees in organisations.

H4: Reforms undertaken by HR in an organisation positively influence innovative behaviour in employees in organisations.

H5: Motivational factors of individuals positively influence innovative behaviour in employees in organisations.

This initial conceptual model will undergo further refinement once the first stage of this study, the 'Qualitative Exploratory Phase', is completed. The research method is explained in the following chapters.

CHAPTER 3: RESEARCH METHODOLOGY

In this study, research methodological approaches to address the five hypotheses posited in the Literature Review involve a sequential qualitative-quantitative spectrum. The main reason for this approach is to understand and confirm the mental model of UAE public service by the researcher using a qualitative discussion, and then to seek a pseudo generalisation using a quantitative approach. The researcher followed Saunder et al's Research Onion (Saunders, Lewis, & Thornhill, 2015) to accomplish the research methodology employed for this study. The Onion is shown below.

Research Onion Diagram (based upon Saunders et al's diagram, 2009)
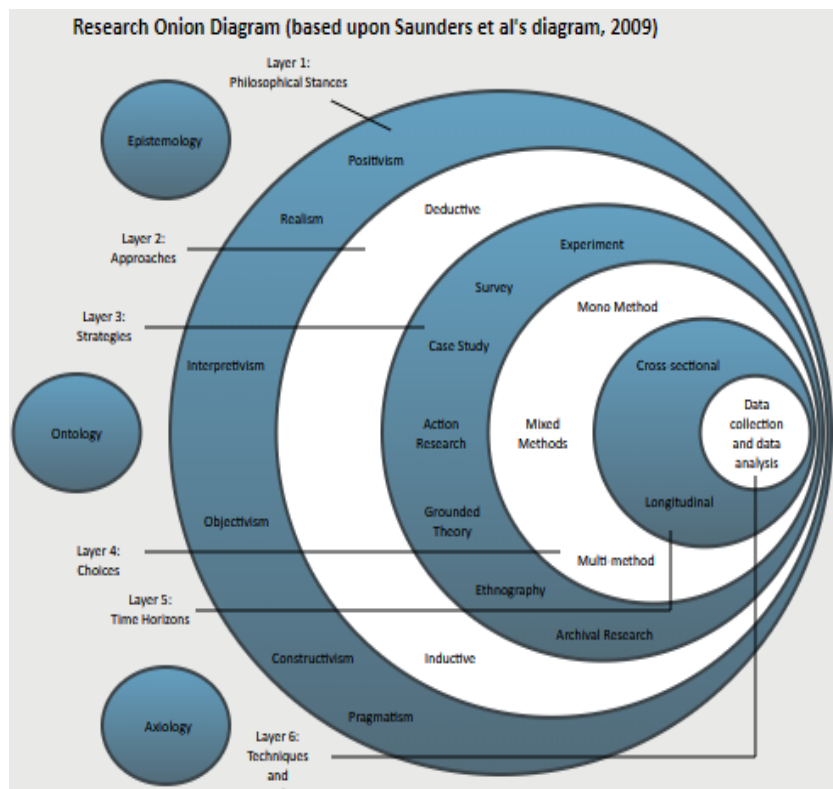
Figure 2 Research Onion

Research Approach

Data Treatment:

This study applied Saunder's Research Onion (Saunders et al., 2015) to develop an appropriate research methodology. The Saunder's model consists of six layers and is considered to be a good model to start from data and navigate to the philosophy at the time of design and vice versa at the time of execution.

When the Research Onion is examined from right to left, it can be seen that the data aspects are kept at the kernel level. This is important for a study of this nature as the data elements are crucial to uncover key aspects of how innovation is fostered in organisations (Tharenou, Donohue, & Cooper, 2007). The data consideration further involves the inclusion and exclusion criteria, population and sampling issues and the data collection aspects. In the context of this study, it is evident that the published literature is limited, as the context is very specific to an organisation, a selected United Arab Emirates Pubic Service. Also, as the study is scoped within the HR domain, to better comprehend the context of the current study, both qualitative and quantitative components were considered. In addition, due to the time constraints faced while undertaking the study, only the cross-sectional data was collected.

Thus, in terms of the Onion, the researcher is able to determine that both qualitative and quantitative data needed to be collected as a cross sectional point, indicating that the data collection will have one single point of collection and won't have recurrence collection points (Sarantakos, 2013). Thus, in terms of the Onion, the researcher is able to determine that both qualitative and quantitative data are needed to be collected as a cross sectional point, indicating that the data collection will have one single point of collection and won't have recurrence collection points (Sarantakos, 2013).

Method Treatment:

The second layer of the onion indicates the data collection method treatment, whether a mono or mixed method is involved. As indicated earlier, the nature of the study warrants an understanding of the context and hence a qualitative component is believed to provide such an understanding (Remenyi, Williams, Money, & Swartz, 1998). Furthermore, in order to generalise the outcome and assert hypotheses, a quantitative component is essential. Therefore, it is imperative that the study employs a mixed method approach.

The type of mixed method used is another aspect that requires close attention. While Saunder's Onion provides an indication as to what type of methodology treatment could be attributed, it doesn't go into depth as to what this treatment could be. Within the mixed method, there are various options such as sequential, concurrent and parallel. In this study, the researcher has to understand the basic principles of innovation as managed in the organisation, prior to asserting hypotheses. Therefore, a sequential mixed method design was considered appropriate with qualitative stage conducted first,

followed by the quantitative stage. The main reason for this consideration was to accommodate any refinement to the conceptual model identified, and then to test the hypotheses as formulated from literature review (O'Dwyer & Bernauer, 2014).

Strategic choice of research approaches:

A key consideration in any research design is the choice of research approach as this is a harbinger of the research orientation. The approach can vary from experiment to archival research. In this study, the main proposition is to examine the nature of how innovation is fostered in an organisation, and a single case is chosen for this examination, a public service unit in the UAE. Therefore, the study follows a case study approach with a sequential mixed method design.

While case study is a specific methodology, in this study, the context is chosen as the public service unit rather than examining nuances and context specific factors. Therefore, the study is more aligned with a survey type approach where quantitative data are used to make the assertion, with qualitative component guiding the quantitative component (Mertler & Reinhart, 2017). This is a major distinction in the research design adopted for this study, hence, pitching the choice as such (as per the Onion) between the survey and case study.

A detailed look at the main thesis of this research conveys this idea well. The main premise of the study is to explore the innovative behaviour in organisations, wherein, a public service organisation in the UAE is chosen for discussion. The study design is generic and there is no specific organisational related investigation conducted in the study, hence it can be argued that this study is not a strict case approach. Similarly, due to the quantitative and qualitative spectrum, this study is not 'survey'-based, as this will infer quantitative aspect only. Due to the subtle difference that the study is beyond qualitative and beyond specificities of an organisation, and assuming that the organisation is chosen for convenience of data collection, this study has strategically made a choice that the approach is between case study and survey as per the Onion's depiction. Due to the subtle difference that the study is beyond qualitative and beyond specificities of an organisation, and assuming that the organisation is chosen for convenience of data collection, this study has strategically made a choice that the approach is between case study and survey as per the Onion's depiction (Leavy, 2017).

Approach in data analyses treatment:

The strategic approach stated earlier is essential to determine how data will be analysed – deductive or inductive. A deductive approach is formative in the sense that it draws its constructs from theories, develop testable propositions and follows rigorous data analyses procedures to provide scientific evidences (Kothari, 2004). On the other hand, an inductive approach involves specific objectives to be investigated through qualitative data and involves a subjective inference. These two approaches are polar opposites and require varying treatments to the design elements. The nature of this study requires both approaches as the Innovative Behaviours in organisations have to be understood first, prior to the determination of such behaviours in the chosen context (Tharenou et al., 2007). Therefore, it is assumed that the exploration will follow an inductive approach so that the context is well understood and the investigation will follow a deductive approach so that hypotheses can be tested. This is essentially a sequential approach as the qualitative will guide the quantitative component, hence this study follows a sequential mixed method approach in terms of data analyses treatment.

In making this choice, two key assumptions were made in this study. The first assumption is that despite the plethora of available literature on innovative behaviour in organisations, specific literature on the UAE is limited. This is due to the contextual factors. Furthermore, public service departments in the UAE are guided by various norms as prescribed by the governments. Hence, the study considered exploring innovative behaviours in a public service department of the UAE. The second assumption is that, as indicated in the introduction, UAE has invested significantly in changing the business environment and the government has recognised that as a key ingredient in realising the change in innovation. This has precipitated a change in the culture where innovative ideas are listened to and fostered. Hence, it was felt that a clear understanding of the context is essential prior to testing the hypotheses (Sekhar & Lidiya, 2012), drawn from the extant literature in the domain of innovative behaviours in organisations. Hence these elucidate the choice of sequential explorative mixed method for this study.

Philosophical position:

The above factors were then encapsulated within a suitable philosophical assumption. While the literature states various assumptions such as the positivist and constructivist, this study uses a mixed philosophical disposition. Recognising that this study will be initially guided by an inductive approach, interpretivism is essential in terms of the

study's orientation. However, the study also has a quantitative orientation, making a positivist flavour imperative for the study. Thus, the sequential exploration of the mixed method approach in data treatment requires more than one philosophical approach. Hence, this study assumes that both interpretivist and positivist approaches are essential to guide the study.

In summary, using the Research Onion as suggested by (Saunders et al., 2015), this study has arrived at the following model:

Table 3. 1: Model used based on Research Onion

Data collection consideration	Qualitative exploration to understand the context	Quantitative exploration to assert hypotheses
Data collection points	Single/multiple points	Single point
Methodological orientation	Multimethod	Mono method
Strategic orientation	Case Study type	Survey type
Approaches assumed	Interpretation	Deduction
Philosophical stance	Interpretivist	Positivist
Summary	Possibly multimethod qualitative	Single point survey

Research Design

Research design is a crucial creative activity to guide a research idea to its conduct. In designing, the research consideration will be provided to elements such as the design and duration of various data collection activities, the inclusion and exclusion criteria of samples, the procedures adopted for collecting and recording data and finally keeping participants informed of the overall procedure. In this section, these are discussed so as to arrive at a fitting research design that can guide this study.

How many data points?

In the context of the study, data are crucial for the following specific reasons:

1. In order to understand the context, the researcher has to first discuss the innovative behaviours and how they are fostered in an organisational context. While literature provides some insights to this, within the context of UAE public service, this information is scanty. As indicated earlier, due to the recent change in business environment, new developments are taking place in the UAE public service to foster innovation and this requires discussion with appropriate stakeholders to understand how innovative behaviours are supported.

2. Such an understanding requires both qualitative and quantitative domains as the qualitative will provide an understanding of the context in which this study is situated and the quantitative will help to test the hypotheses (Zikmund, Babin, & Griffin, 2013)Such an understanding requires both qualitative and quantitative domains as the qualitative aspect will provide an understanding of the context in which this study is situated and the quantitative aspect will help to test the hypotheses (Zikmund et al., 2013). Therefore, a research design should include provisions for both qualitative and quantitative analyses.

3. Although the initial conceptual model was derived from extant literature, there could be subtle context-dependent variables and these need to be corrected before testing hypotheses. While it is assumed that the formulation of hypotheses holds good as a testable entity, the constructs and their composition might require correction depending upon the context (Walliman, 2011). This can be explored only through a qualitative discussion so that research design can be validated.

4. The survey instrument hasn't emerged completely at the initial stages of idea conception and is deliberately deferred so that it can be made relevant to the given context. The assumption made in this study was for the qualitative phase to lead the quantitative including instrument considerations.

5. Finally, to understand the context fully, employing a quantitatively only approach won't provide comprehensive context-sensitive issues (Remenyi et al., 1998) which, in the researcher's view, should be understood thoroughly. This is possible through a qualitative component where the researcher is part of the data collection process (O'Dwyer & Bernauer, 2014), in the sense, that the researcher can probe for more information. This is believed to improve the comprehension of the context.

For these reasons, this study decided to use a qualitative component as the first phase. In doing so, the literature was reviewed and it was noted that a plethora of techniques such as interviews, brainstorming, observation, field study and focus group sessions were available to extract the required information. To define the data points for data collection, the researcher has to determine the technique that would be employed so that relevant qualitative data can be collected.

This resulted in an evaluation of various techniques available on hand. Upon reviewing the observation and field study, the researcher did not consider these techniques as they were not aligned with the aim of study. It might be challenging to use the techniques to interact with participants, in an attempt to understand the context. Thus, the researcher was left with three specific techniques – brainstorming, focus group discussions and individual interviews.

The researcher weighed the pros and cons of conducting a brainstorming session. The advantages of conducting brainstorming sessions include participants' ability to trigger key themes by listening to others (McMahon, Ruggeri, Kämmer, & Katsikopoulos, 2016), quick generation of key themes, extraction of key themes within limited time and participants' ability to 'snowball' conversations leading to key themes. The disadvantages are that it is difficult to organise (McMahon et al., 2016) as identifying suitable participants and assembling them in a venue is challenging, the focus of the session can be lost if there are dominating participants, the researcher should be experienced to channel the discussion to the purpose of the research on hand. Brainstorming normally identifies key themes and these themes have to be explored further (Leavy, 2017).

On the other hand, focus groups are somewhat an extension of brainstorming sessions. While the key advantages and disadvantages remain the same, in focus group discussions, as the name indicates, the researcher can probe further to explore the views of participants. A key advantage is that participants can get into a dialogue and provide insights to some depth, and this will enable the researcher to comprehend the context better (Leavy, 2017). The discussion format is semi-structured in focus groups, so the researcher can retain control quickly if required.

Individual interviews can be thought of as an extension to focus group where the researcher can probe key details of the problem on hand with individuals. The advantage of interviews is that the researcher can investigate issues in depth using either a free flow conversation or a structured question and answer session or a format in-between

(Besen-Cassino, 2017). The disadvantage of interviews is that participants won't have 'triggers' and won't be able to correlate their context to someone else's as possible in brainstorm and focus group discussions.

In addition to examining the techniques available on hand, the researcher also examined the project management aspect of these techniques that involve physical organisation of location, expertise in controlling the sessions, access to participants, their availability to meet at a common room and the time required for the discussions. An additional requirement was to have a senior person who is conversant with these activities.

When the protocols associated with qualitative data collection were reviewed, the researcher noted that the following is a sequence of activities to ensure the successful conduct of such sessions:

1. To identify suitable participants that would provide contextual information and the answers for the research questions asked in the study;
2. Once the participants are identified, to come up with a recruitment strategy by considering how they may be approached;
3. To encapsulate the research questions into smaller chunks so that relevant answers, as well as discussions, can be facilitated;
4. If required, to receive approval from the UAE public service department to recruit participants;
5. To decide on the best strategy to conduct the qualitative study;
6. To decide on the type of qualitative study to be conducted;
7. To decide on the project issues;
8. To develop an appropriate consent form, participant information form and seeking in-principle support to recruit participants;
9. To articulate all these into an ethical application so that ethics approval can be obtained; and
10. Finally, preparing for the qualitative study.

A basic determination that had to be made in terms of designing the qualitative study of this research was the appropriate technique required to collect exploratory data. This research eliminated brainstorming sessions as key themes have already been extracted and the scope was derived from examining the literature. The research also identified that due to various practical reasons, interviews would be difficult to manage as the researcher and his supervisors are residing in Australia while the UAE public service is in

Dubai. This geographic location and associated time zones, cultural issues (Islamic religious patterns), working nature of the public service employees and their dispersed location, travel associated with data collection and potential language barriers were key considerations in undertaking interviews. So, the focus group discussions were found to be most appropriate to blend the brainstorming and interview techniques as there was sufficient flexibility for such an approach in focus group discussions.

This study, therefore, decided on conducting four focus group discussions discussing key aspects of the research with the researcher determined to align the project aspects of conducting these discussions to achieve a qualitative exploration. . In doing so, the researcher identified the following key principles that guided the qualitative research design:

1. The qualitative discussion will capture all contextual information within the scope of this study;
2. The qualitative discussion will also gather data to help the development of the instrument;
3. The researcher will invite a senior academic to guide him in the process; and
4. The sessions will be managed physically as well as virtually to minimise disruption to work.

In essence, the researcher identified that qualitative phase of the study should come first to gain a comprehensive understanding of the context (domain) and the knowledge gained in this phase will enable the development of the survey instrument to maximise the reliability of the quantitative study. In making this determination, the researcher followed guidelines provided by (Gururajan et al., 2016). The ten steps outlined above are explained below.

1. *To identify suitable participants that would provide contextual information and the answers for the research questions asked in the study*: In terms of capturing the contextual information, the research design of the qualitative phase is organised into four separate sessions, with key principles of the study split into four focus group questions. This approach was taken in order to gain as much understanding as possible about the various innovative behaviours. Additionally, this approach is taken to accommodate more widespread views of various HR staff leading to a normalised collection of views. This approach is also believed to minimise any potential bias if only one or two focus group sessions were

organised. Evidence of this design can be found in (Gururajan et al., 2016). An underlying principle of this approach is to identify suitable staff within the public service to extract key information. In doing so, the research design was developed to approach key Heads of Departments through the UAE public service register to seek feedback for the inclusion and exclusion criteria for participants' selection, as this approach was deemed to be suitable. Furthermore, this approach will also comply with various protocols of the UAE public service. The primary reason for using this approach is because UAE public service protocols warrant high levels of confidentiality as key intellectual policies, financial data and other investment planning are confidential information. Therefore, participants have to be cognizant of this information as sometimes these are kept confidential within the departments. Hence, it was decided that the Department Heads would be able to make suitable recommendations for potential participants to be included in this study.

2. *Upon identifying participants, to come up with a recruitment strategy by considering how they may be approached*: Prior studies (Arino, LeBaron, & Milliken, 2016) provide guidelines as to the conduct of the focus group sessions. While there are many recruitment strategies such as approaching people directly, or via mail, or through third-party services, considering the nature of this study, it was decided that participant recruitment strategy will follow a two-stage approach. In the first stage, the researcher, who was residing in Australia at the time of data collection, will approach the UAE embassy in Melbourne to receive formal written approval to collect data through the UAE public service department. This required internal UAE public service ministry protocols to be followed. The second stage involved receiving a list of potential participant departments along with the key personnel details so that these people can be approached for participant selection. In terms of the population for the focus groups, the design included approaching between 6 – 8 participants per question, thus organising four focus group sessions, with 3 – 5 participants expected to participate in each session.

3. *To encapsulate the research questions into smaller chunks so that relevant answers as well as discussions can be facilitated*: As indicated earlier, in order to capture various salient aspects of innovative behaviours with the UAE public service, the design of the focus group questions comprised four key elements. The reason for employing four parts is to accommodate a number of key

elements as identified in the initial model, and it was felt that more than two discussions were essential to capture in-depth conversations. Furthermore as the main constructs identified through the initial literature covered a wide gamut of factors from organisations culture to motivational factors, and as the HR in the UAE is segmented based on functional elements, it was decided that about four focus group sessions involving various groups of people would be necessary to understand the context. Hence the arbitrary choice of four sessions. This also enabled the researcher to focus on four key domains – how information & knowledge leading to innovation is managed, how talent is fostered to realise innovation, how innovative behaviour is supported and finally how staff with innovative behaviour are retained in the public service. These four key aspects explored were aligned with the key constructs identified in the literature.

4. *If required, to receive approval from the UAE public service department to recruit participants*: The research design explicitly included receiving approval from public service ministry in the UAE. As this study is unique and normally UAE public service declines such requests, the researcher presented the study aims to the concerned approval body within the UAE public service, and after undertaking that no sensitive public service details will be recorded or explored, the researcher received approval from the UAE public service to conduct the study.

5. *To decide on the best strategy to conduct the qualitative study*: The study was designed based on considerations for physical locations(assembling participants in one location if possible) a senior academic monitoring the discussion (access issues as many UAE public service premises require multiple level of permissions to enter) and the availability for the duration of the sessions. Considering all these, the study decided that the sessions will be conducted via a physical location with a virtual connection provided, and recording of the conversation will be done using both physical as well as virtual recording facilities. These design elements were crucial for ethical approval.

6. *To decide on the type of qualitative study to be conducted*: This study examined various options available on hand and in order to capture meaningful, in-depth discussion, a semi-structured free flow discussion format was used. . To keep the focus, the researcher briefed the group about the purpose by explaining the question chosen for the session and requesting participants to not disclose sensitive information and to keep the conversation to key points. A major

consideration was the language aspect as the national language in the UAE is not English, so the main conversation was held in English wherein participants used local terms when necessary, to maintain the context. Prior studies in knowledge management ((Al Ariss, Cascio, & Paauwe, 2014)) have supported such an approach.

7. *To decide on the project issues*: The project issues included time imposition, management of issues and removal of biases, which were addressed through the ethics application. One key project issue was complying with data collection outside the country where the study is undertaken and this was a key ethical concern which required special consent. This aspect was complied with in the ethics application.

8. *To develop appropriate consent form, participant information form and seek in-principle support to recruit participants*: This was a standard requirement for compliance in the research design and following the institution's guidelines, these were included in the research design. Further, these elements were also considered for peer review to ensure linguistic aspects as English is not the first language spoken in the UAE.

9. *To articulate all these into an ethical application to obtain ethical approval:* The design was then spelt out in the ethics application so that each element discussed was elaborated in the application. In order to collect primary data, ethics approval is essential so careful research design allowed the clear explanation of the eight key elements in the ethics application.

10. *Preparing for the qualitative study*: The preparation for qualitative study consisted of agreeing on suitable days and dates so that these could be conveyed to participants at the time of recruitment, to understand their availability. These dates and time were also imperative to get approval from various physical locations for access, as the success required security approval – participants in the UAE public service were constrained to physical locations. Moreover, recording equipment and other digital devices require permission for use in the public service premise, akin to the installation of the virtual conference application on official computers. These aspects were part of the research project design.

A key research design consideration of this study was to defer the development of survey instrument. It is a customary practice in many studies of this type to extract survey

questionnaire items from the literature. However, (Gururajan et al., 2016) have highlighted various limitations of this approach as key contextual details can be missed. Thus, in this study, the four key questions asked in the focus group discussions were developed in such a way that participants could discuss various contextual matters associated with innovative behaviours within a public service department in the UAE in depth. The researcher will be able to go through the transcript to develop a final version of the survey instrument, thereafter. This approach was deliberately employed in this study as limited information can be found on innovative behaviours of the UAE public service, and literature reviewed appear to be based on western countries. As indicated earlier, as UAE is emerging as a major business hub with significant investments being made, along with the unique style of management leading to swift decision making, innovation has been fostered at all levels in the past decade. This research is keen to capture these non-published details and hence, pays close attention to capturing the required information leading to a survey instrument.

Protocols to ensure validity aspects of data collection

In this study, a number of aspects were provided with specific attention to ensure validity of data collection procedures so that data obtained would be of good quality. The primary data collected in this study was for specific context related issues and hence appropriate tools such as interviews and surveys have been employed as suggested by (Hox & Boeije, 2005) and (Koranteng, 2014). Secondary data sources used for this research included reports, other PhD theses (these were useful in developing the draft instruments) and journal papers following the recommendations of (Koranteng, 2014).

In terms of population considerations, this study considered a two-stage approach; 1) target population to arrive at a larger cross section of possible participants and 2) target population for actual data collection as recommended by prior studies(Bryman, 2015; Cooper & Schindler, 2011). The target population considered for this study adhered to the following guidelines:

1. the population was aware of various HR procedures with respect to staff skills, training needs, performance reviews and development activities. These are essential innovation aspects wherein talent identification can be comprehensively discussed;

2. the population was conversant in English as the thesis is from an English-speaking institution and the examiners would be reading the thesis in English;

3. the population had comprehensive and intricate knowledge of various public health service provisions within the context of UAE; and

4. the population was senior in organisational hierarchy so that ideas and discussions could be conducted without any inhibition.

Once these inclusion criteria were defined arbitrarily for the population, sampling issues were considered so that the research design for this study could be refined. Considering the specific context of the study, purposive sampling was believed to be an appropriate method. For the qualitative component, non-random sampling was assumed to allow an appropriate number of participants, considering the quality and quantity in the selection process as suggested by (Walliman, 2011). For the quantitative component, random sampling within purposive sampling was considered to be appropriate.

In terms of sampling size, considering that this study will adopt a mixed-method approach with qualitative leading the quantitative component, the research design included different sample sizes for these two different phases. . Due to its nature, the qualitative component required a smaller sample than the quantitative component as recommended by (Keeley et al., 2016). In this study, the sample size for the in-depth focus group sessions were determined to be a maximum of eight participants and based on prior studies (Lefika & Mearns, 2015; Masadeh, Al-Ababneh, Al-Sabi, & Maaiah, 2016), this size was considered adequate. For the quantitative phase, considering the context in which the data would be collected, the study considered a smaller size, about 100 data samples. This consideration raised the question of adequacy for data analyses; hence the design of this study included a PLS based application for quantitative data analyses.

In addition to the sampling size determination, this study also examined the quality assurance of instruments used. As indicated earlier, the qualitative component was planned to be conducted in four stages, so the supervisor and researcher went through the questions to collect data and this procedure was considered adequate. In terms of quantitative instrument, the research design considered a formal peer review of the instrument.

In summary, the research methodology adopted in this study ensured an appropriate and relevant research design was considered for this study, befitting the context of the public service departments in the UAE. Hence, key aspects impacting the practical nature

of the study were given importance in developing the research design. In the next chapter, Qualitative Data Collection and Analyses techniques are discussed.

CHAPTER 4: QUALITATIVE DATA COLLECTION AND ANALYSES

In this study, considering the nature and context, qualitative component was considered as the leading phase in order to understand the nexus between organisational issues and how these are managed by humans (Creswell, 2014). In this chapter, qualitative data collection and analyses procedures are explained.

For the study, study, a quasi-focus group and interview type of qualitative approach was employed so that verification to the initial themes can be assured, and this was the main reason for conducting the qualitative component. Also, since the discussion of innovative behaviours in organisations was limited in the UAE context, as described in the literature, to verify the fit of identified themes in the chosen context, focus groups and interview style qualitative phase were considered to provide assurance to the themes that require consideration for generalisability. Thus, the core focus of the qualitative phase employed in this study is to explore processes associated with innovative behaviours in the public service units of the UAE.

Introduction

In the literature review, it was argued that while the constructs leading to the measurement of innovative behaviours in organisations is well explained, the specific context in which the study is conducted, namely, public service in the UAE, is found to be lacking. It is noticed that the literature is biased on Western Countries, and despite the fact that the UAE is rapidly developing, limited information was found in the academic literature. However, a review of grey literature indicates the financial investment made in the development of the UAE as a tourism, educational and financial hub with trillions of dollars being invested. An underlying factor of this investment is the identification of the 'innovation' that can lead to the transformation of a dessert state to an economically vibrant economy. To reach this vison, public service plays a key role and so do the processes involved in fostering innovation in the public service units of the UAE. This exploration can occur only through a qualitative study as context dependent information can be extracted from this approach. Hence, the qualitative study led to the data collection.

A range of techniques are available for qualitative data collection, such as brainstorming (Brannen, 2017) The researcher is a senior public servant, and assuming that he has intricate knowledge of the domain, to derive themes that reflect the processes involved in defining the innovative behaviours and associated processes in the UAE public service, this study employed a mix of focus groups and interviews. It is unique to combine these two techniques

as focus group is a discussion focusing on a research issue while interview is a conversation to probe many items of a research topic. By employing a mix of these two techniques, the researcher was able to bring focus to the discussion, and at the same time probe key themes leading to the process and innovative behaviours employed in the UAE public service.

Ethics Approval

A key requirement in the institution through which this study was conducted included receiving ethics approval. The process of ethics approval involved three stages. The first stage was receiving confirmation from the UAE public service as this approval was necessary to recruit participants. This is simply a 'relationship' exercise as the researcher had to approach the right network to receive approval, which is dependent on the organisational structure. In receiving the approval, the researcher contacted the Australian arm of the UAE for guidance, which guided the researcher to the relevant personnel. This enabled a written approval. This is attached as Appendix 2.

The second stage of ethics approval consisted of complying with university regulations. Although the researcher works and studies in Australia, the data collection was conducted in the UAE, characterising the unique element of this study. This combination required additional ethics approval items to be completed. For example, Clause 4.1 of the National Ethics Code required explicit consent from the UAE Public Service for the data collection to be approved. However, UAE public service is not a research institution, and hence does not t have a constituted body.

This warranted the researcher to approach a university in the UAE and seek its help in receiving endorsement as the initial ethics application was endorsed by the host institution. The UAE public service was comfortable with this approach and provided in principle approval to conduct the study in its organisation. However, this approach did not comply with clause 4.1, which required additional information to be provided about the safety and security of participations, drawn from an overseas organisation. The researcher was able to receive appropriate guidance from the UAE public service in terms of safety within an organisational environment and these were disclosed in the ethics application to receive full approval. This is truly a unique learning experience from this study as literature seldom discusses these issues.

Data Collection consideration

The participants of this study are specific and hence the sampling technique used was purposive sampling. In order to extract organisational specific information, it was imperative

that key public servants of UAE were engaged. Hence, the recruitment of participants involved identifying such participants through senior members of the public service. Another key ethics declaration was that participants had to be fluent in English, and hence at the recruitment stage, this was considered as one of the inclusion criteria.

The group heads of the UAE public service recommended 25 initial names for data collection and these were made available to the researcher. The researcher contacted them to ascertain their willingness to participate in the study and this was considered adequate for the initial stage. There was a possibility to recruit additional participants if required.

Upon reviewing the participants' profiles, it was apparent that the data collection technique needed some minor deviation. This resulted in two groups, a high-level group providing scope to the themes and the middle level group providing depth to the discussions. This enabled the researcher to conduct brainstorming discussions within the initial idea of mixing interview type of discussions as stage 1 of qualitative data collection, and then a focus group type of discussion with in-depth probe as stage 2. Thus, participants were spilt into the two stages accordingly, and this resulted in 9 participants identified for stage 1 and 16 participants identified for stage 2. This is shown in a summary table below:

Table 4. 1: Summarised information for stages 1 and 2

STAGE 1	Brainstorming and interview style sessions	9 participants	90 minutes duration involving theme identification and discussion on the applicability and relevance of themes
STAGE 2	Focus Group and interview style sessions	16 participants and 4 sessions, where the research objectives were split into four specific chunks to extract information based on participants' expertise in the UAE public service	Roughly 4 participants per group with 60 minutes in-depth discussions with structured style questions and answers

This approach is somewhat different from the traditional approach, however, recognising the context and nature of participants, the researcher felt that the current approach would

culminate in quality data being collected. Hence, the proposed research project methodology was employed in this study.

Qualitative Data Collection

In collecting qualitative data, this study focused on both group and individual ideations (Korde & Paulus, 2017; Kornish & Hutchison-Krupat, 2017). This approach enabled the researcher to explore the generation of additional ideas, and the unique method of combining brainstorming/focus groups with interview- style enabled ideas to be discussed and validated for the given context (Gururajan, Hafeez Baig, Sturgess, Clark, & Gururajan, 2015; Silverman, 2014).

To establish the relevance of the instrument used for the qualitative study, the researcher arranged a peer review to be conducted, to determine technical issues before the data collection (Rozenblat et al., 2017). In this study, the participants were selected from a Non-English-Speaking Background (NESB) and hence it was felt it is even more important to develop the instrument so that participants will be able to comprehend the questions and then answer accordingly. This procedure is a key criterion to ensure data quality (Zikmund et al., 2013). The researcher satisfactorily undertook such a process by validating the instruments through a native English-speaking person, as well as from a member of the UAE public service posted in Australia.

During the qualitative data collection phase, the study employed inductive reasoning with open-ended questions to facilitate discussions. This followed the recommendations made in the prior studies for such an approach (Sekaran & Bougie, 2016).

The researcher was a rookie to the research environment, so a pilot study was conducted to ensure that both the researcher and the participants were comfortable with the procedures involved. During the study, a few technical issues with Zoom sessions were encountered and resolved. This provided the confidence for the researcher to progress to the main study.

The sessions were conducted as planned and the video and audio recordings enabled transcription. While it is a customary practice to blind check the transcription using techniques such as file comparators, due to the nature of the study, this was not followed. The main justification for not following such traditional approaches include the following:

1. The researcher was familiar with the environment;
2. The purpose of the qualitative phase was to define the scope;
3. The qualitative phase was conducted to identify context related factors; and

4. The qualitative phase was to extract processes employed in fostering innovative behaviours, leading a quantitative survey.

For the above reasons, this study decided to analyse the qualitative data and then using the data to develop a survey instrument to establish reliability. This was considered adequate for meeting the objectives of the study.

Qualitative data analyses

The first stage of the qualitative analyses included defining the scope of themes as this provided the boundaries for further investigation. The scope definition included the brainstorming session, where participants were quizzed for various processes employed in the UAE public service with a view to arrive at a list of key themes. The session was mainly facilitated to understand the context in which innovative behaviours are fostered.

Stage 1 – setting the scope

The initial discussion which was conducted for 30 minutes provided a list of 50 themes as shown in the table below:

Table 4. 2: List of 50 themes extracted based on the discussion

Innovation and Happiness Committ	Legislations	competency profile
Training and development	Physical Environment	performance management
Patent rights	Government support	training
Innovation Diploma	Recognition	benefits and compensation
Innovative Ambassador program	Rewards	job analysis and description and specification
KPI's	Training	personal development plans
Benchmarking	Innovation committee	Job design
Innovation Platform	Innovation Diploma	coaching and mentoring
Recognitions and rewards	Ambassador program	Online training
Specialised learning opportunities	Training courses	Career development
Innovation Ambassador initiative	Develop innovation	Leaders development
Recognition and acknowledgement	Innovation studies	Potential Leaders
Innovation committee	Happiness and innovation c	Succession Planning
Innovation events	Innovation Diploma	Recruitment
Innovation platform	Recognition and rewards	Institutionalisation
KPI's in innovation training	Benchmarking	Strategy
	Government Strategy	

From the table above, the researcher inferred that the UAE public service departments were adequately supported with the infrastructure required to foster innovative behaviours as key terminologies such as 'innovation committee' and 'innovation training' indicated that the

public service departments were tasked with an oversight of various processes involved with innovation.

Once it was ascertained that innovative behaviours are fostered, the specific process aspect leading to innovation was explored through discussions. The discussion was conducted with a view to extract key themes and the following table provided a convergence on activities that fostered innovation in the UAE public service.

Table 4. 3: List of activities that fostered innovations.

Innovation and Happiness Committee Training and development Patent rights Innovation Platform Recognitions and rewards job analysis and description and specification Strategy

The researcher was able to infer from the discussion that in addition to fostering, there is adequate evidence that innovation behaviours are properly managed in the public service. The key terms such as 'patent rights', 'innovation platform' and recognition and awards' indicate that innovative behaviours were taken seriously in the UAE public service.

The discussion further explored how and where innovative behaviours were supported and the following table was derived as a result of consolidating various activities within the UAE public service.

Table 4. 4: Various activities highlighting innovative behaviours

Key Departmental Support					Total Score
Government support	8	8	8	7	31
Learning and development	7	7	5	8	27
Compensation	6	4	6	6	22
Institutionalisation	3	5	7	5	20
competency profile	4	6	4	3	17
Committee	5	3	3	4	15
Physical Environment	2	2	2	2	8
Patent rights	1	1	1	1	4

The participants were directed to form groups and identify key support schemes leading to fostering innovative behaviours and the various factors identified as a generic brainstorming were regressed into key departmental activities. This resulted in eight key departmental

activities as shown above. The researcher inferred from the above that UAE public service fostered innovation in a transparent way as evidence can be found for committee structures and other environment related factors. Further learning and development were also discussed within the context, a testimony that innovative behaviours were explicit in the public service.

Then participants were asked to provide their views on the weights, 1 being low and 10 being high, for each of the themes consolidated. Government support weighed the highest, indicating that there is a heavy reliance on the UAE government, with the public service, for realising innovative behaviours. This is supported by learning and development so that the behaviours can be enhanced, and once evidenced, compensations were provided. In the initial part of the discussion, participants talked about rewards and hence it was inferred that where there is a clear demonstration of innovation, adequate rewards were also provided. The physical environment and patent rights did not weigh highly in the participants scoring, and when this was explored it was revealed that being a public service, the scope of fostering innovative behaviour is restricted to public service activities and not research. Therefore, participants were seen as people with an oversight on fostering innovative behaviours, rather than arriving at the innovation. Within the context chosen, this appears to be acceptable. Participants highlighted that, despite the fact that there is no product innovation, process innovation, policy innovation and other elements were within the scope of fostering behaviours, including awareness and knowledge.

The brainstorming session provided the scope for further exploration, and it was clear that the innovative behaviours in the UAE public service was limited to fostering innovations in UAE rather than arriving at innovation, leading to IP.

Stage 2 – exploring innovative behaviours

Once the context in which the innovative behaviours were fostered was understood, this was aligned with the research objective. As indicated, the product type of innovation was eliminated and this study focused on the process type of innovation, specifically exploring public service perspectives. In order to achieve this, the research objective was discussed with four different groups with a specific question provided to each group. These questions were:

Table 4. 5: Research questions provided to each group

Group 1	How was the new information and knowledge created in your organization?
Group 2	How is talent used to foster innovation in your organization?
Group 3	How is innovative behaviour supported in your organization?
Group 4	How does your organization retain staff with innovative behaviour?

As can be seen from the above table, the questions were 'how' questions, and hence qualitative approaches were found suitable for exploration. In doing so, each group consisted of 4 participants drawn from the Human Resource Departments of UAE Public Service as this is where the innovative behaviour was overseen. The discussion was semi-structured, in the sense, participants were allowed to have a free flow discussion with the researchers with a senior academic member controlling the discussion path, so that any deviation could be minimised.

Each group discussion was in the form of 'question and answer' to explore points discussed so that contextual comprehension could be attained by the researcher. This also helped the researcher to align the discussion with the objectives of the study. As stated earlier, this new approach, where focus group discussion and interview style combined into one session, helped to understand the context, domain as well as the meaning of the discussion.

Once the discussions were completed, the data were transcribed and the researcher checked the accuracy of the conversation. This was crucial as during the conversation, some non-English phrases were used and the researcher moderated these in the final transcription prior to any analyses.

The data were then analysed using Leximancer application, a text analysis tool. The analyses included four key stages. The first one was refinement to the 'seed', a set of key words the application could search for. Stage 1 of the qualitative research helped in identifying various keywords to provide to the application. The second was to develop a thesaurus so that terms that represent the keywords could also be included. The third one was to remove any duplicates based on the thesaurus and finally generating various concept maps to understand the focus of the discussion.

The word file containing the transcript was submitted to the Leximancer application. The following concept map provides a visual representation of the first stage of exploration, namely, '**How was the new information and knowledge created in your organization?'**
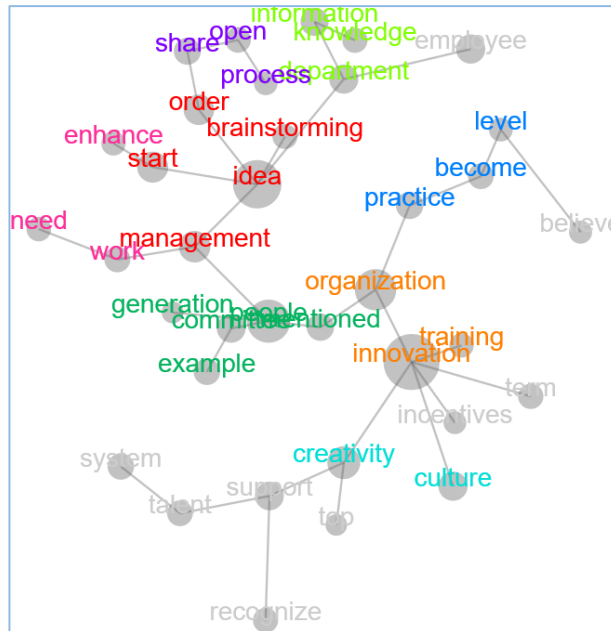
Figure 3 Concept map produced by Leximancer tool for Group 1

The above figure produced by Leximancer is interpreted as follows:

The keywords that appeared are shown in bold letters, and any association to these keywords is shown with a line linking them. The distance between the keywords and the association is indicative of the closeness (nexus) of themes.

From the diagram above, it can be seen that 'idea, brainstorming, order, start and management' appear to be more easily visible as compared to the other words. The indication of these key themes is the organisation facilitates and manages idea generation. Other themes such as training, process and share also indicate the various activities that are fostered in developing innovative ideas leading to knowledge creation within the public service.

While the visual representation provides an attestation that the discussion was aligned to the chosen topic, further evidence was extracted from Leximancer to explore the focus of the discussion. The researcher used a frequency table as the table provides how many times

a particular keyword as identified in the seed was discussed to emphasize the focus of the discussion. For the first focus group, this is provided below.

theme	hits
innovation	75
idea	62
department	19
creativity	40
share	10
work	11
system	15
culture	17
become	10
employee	19
practice	12
recognize	13
believe	10

It can be inferred from the above list that new knowledge leading to innovation is created at the unit level, by enabling creativity and sharing of information, at the employee level and the organisational unit recognises and acknowledges this creativity. The term 'believe' was in different contexts and the researcher was not able to attribute any specific meaning to this term.

The analyses further focused on the frequency and percentage tables of key themes, as shown below.

Table 4. 6: Frequency and percentage of key themes for Group 1

Concept	Count	Relevance percentage
innovation	57	100
idea	42	74
organization	34	60
people	32	56
creativity	21	37
employee	19	33
management	17	30
start	17	30
culture	17	30
support	16	28
committee	15	26
system	15	26
order	14	25
department	13	23
mentioned	13	23
talent	13	23
recognize	13	23
information	12	21
practice	12	21
example	12	21
work	11	19
open	11	19
term	11	19
need	11	19
share	10	18
become	10	18
level	10	18
believe	10	18
knowledge	9	16
training	9	16
brainstorming	8	14
enhance	8	14
process	8	14
incentives	7	12
generation	6	11
top	6	11

The above provided further insights as to how innovation is fostered in the UAE public service. The items 'innovation, idea, organisation, people and creativity' were discussed

most, reaching the top five spots in terms of frequencies. The inference of these list is that innovation is through people (rather than products) and oriented towards idea generation. As we scanned the table, further evidence was seen in terms of keywords such as 'culture, support, committee and share' indicating an underlying infrastructure facilitating innovative behaviour. Other keywords such as 'open and 'share' indicate that the UAE public service is open to the innovative behaviour and this appears to be transparent, as the keyword 'committee' indicates underlying processes employed. The keywords 'knowledge' and 'training' further indicate that public servants are provided with opportunities to enhance their innovative behaviours. Finally, the terms 'process' and 'incentives' indicate a system where people are rewarded.

It can be inferred that these terms were initially identified in the theme extraction exercise conducted in stage 1. The first focus group discussion also identified similar terms, despite the fact that the participants were totally different. This affirmed that the **data quality was reliable**, and that the instrument (the question asked) aligned with the objective of the research. This is a key factor in this research, as the literature examined provided little information in assuring reliability in qualitative research. Further, the themes were aligned with the initial theme set, and hence saturation is also evident in the first focus group session conducted.

When the transcripts were reviewed, the researcher found additional evidence.

In terms of **talent** fostering, participant A stated this: "The government has spent a lot in investing in the young generation, who are involved in hundreds of leadership, creativity and innovation programs. r These programs are delivered by top educational institutions like Harvard wherein top young people from all government organization are selected and sent to Prime Cabin training institute "indicating underlying schemes and processes employed in the UAE public service.

 Participant B shared this: " We have records of them (people who went for training) and it is very easy for us. When an idea comes up and someone is available to adopt it, most of the time, this person gets transferred to embassies abroad because everybody wants this person who is prepared and trained" indicating the transfer of skills and knowledge as a result of fostering innovative behaviour, and this was discussed under **incentives and rewards**.

In terms of generating innovative ideas, participant C stated that "People come up with all these brainstorming ideas about how to serve the best to customer"' indicating the

transparent processes available to **develop ideas**. This is an evidence indicating process innovation culture followed in the UAE public service.

In terms of **cultural aspects leading to innovation**, participant D stated that "There is room for change and there is acceptance from the leaders and the management and they encourage us to enhance and share ideas and give our inputs to our organization for we even share our processes and practices with other initiatives" indicating that this is a top down culture. The tone of the statement also indicates that the cultural shift is occurring across all public service ministries indicating a national and unified agenda.

In terms of **talent management**, participant E mentioned this: " If we look at this practice in our human resources, they are taking care of people who come to the ministry, people who have innovation - we support in terms of training, if we have incubated the innovative people with the organization and given them incentives, we have recognized them, the system is there to support innovative ideas" indicating there is a clear process to support **people with innovative ideas**. These statements indicate that the public service departments in the UAE indeed support innovative behaviours.

Analyses of Focus Group 2 data

Similar to the analyses conducted for Focus Group 1 data, the second data explored the question: **How is talent used to foster innovation in your organization?**

As indicated earlier, this exploration required another set of suitable participants and four public service officers were recommended for this exploration by the UAE ministry. The data was then analysed using Leximancer, the following concept map was returned by the system to provide a high level visual.
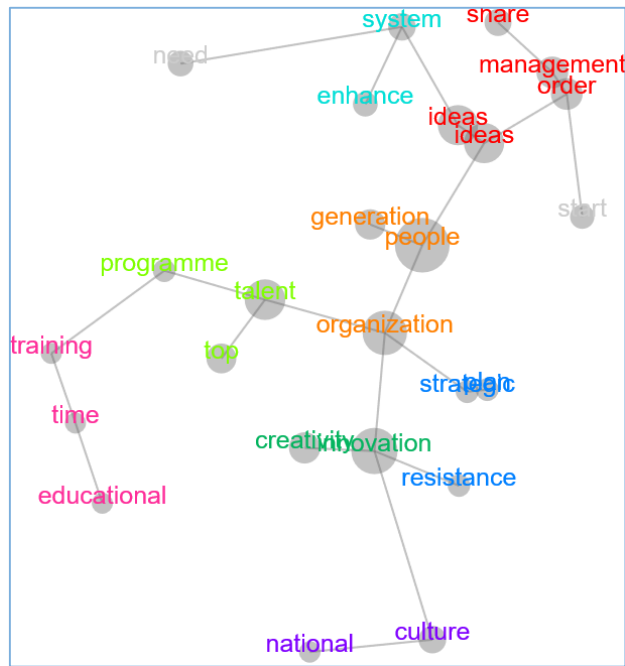
Figure 4 Concept map produced by Leximancer tool for Group 2

It can be inferred from the diagram that the discussion generated themes such as 'creativity, strategic, people, training, educational, ideas and share'. The focus group discussion explored the 'used' idea and it can be seen that the organisation provided a systematic underlying principle to generate and share creativity leading to fostering innovative behaviour. For instance, the themes 'organisation – people – ideas' provide links to the path through which ideas are shared, with people kept as the focus. On the other spectrum, the concepts 'organisation – talent – programme – training' indicate the systems available within the ministry to develop people towards innovative behaviours. This is further evidenced by the reference to 'culture'. Thus, it is possible to identify key themes that are linked to demonstrate the various steps involved in showing how organisational talent, namely people, are used in fostering innovation.

Further exploration into the themes table as generated by Leximancer based on the keywords and their distances provided evidence to the concentration of themes identified. The table is given below:

theme	hits
people	20
innovation	13
talent	12
ideas	9

culture	6
need	5
system	4
start	3
plan	2
educational	2

From the above statistics, it can be inferred that 'people, innovation, talent, ideas and culture' occupy the first five hits and this is congruent to the question explored. The main premise of the focus group was to explore *how talent is used to foster innovation within the organisation*. A cursory look at the top themes indicate that people are at the centre of such usage, and the themes such as the education and culture provide additional insights as to how this is used within the organisation.

The data tables were further examined for additional evidence, and the examination involved the frequency of discussion of key concepts leading to exploring the questions asked. The table is provided below.

Table 4. 7: Frequency table for Group 2

Concept	Count	Relevance percentage
people	15	100
innovation	13	87
organization	11	73
talent	10	67
ideas	8	53
top	6	40
culture	6	40
management	5	33
order	5	33
creativity	5	33
need	5	33
generation	4	27
system	4	27
share	4	27
enhance	3	20
start	3	20
resistance	3	20
national	3	20
plan	2	13
programme	2	13
strategic	2	13
educational	2	13
time	2	13
training	2	13

The key terms emerged in the discussion and their frequency indicate that the discussion was centered on concepts such as 'organisation, people, idea, talent and innovation'. The frequencies and associated distances were key in the categorisation of these terms statistically, and hence, there is clear evidence that the UAE public service has procedures to 'use' talent found in individuals, or able to foster such talents arriving at a culture leading to innovative behaviours within the organisational units.

The qualitative data was once again examined to seek further evidence. The following statements provided further evidence to the fact that talents found in individuals are appropriately used to generate creativity or provide training schemes to develop people towards generating innovation within the organisational contexts. The evidences as extracted from the transcripts are provided below:

Participant A had stated "The government has spent a lot in investing in the young generation, who are involved in hundreds of leadership, creativity and innovation programs. These programs are delivered by top educational institutions like Harvard wherein top young people from all government organization are selected and sent to Prime Cabin training institute "indicating there are schemes available to train people to **use their talent**.

In terms of **fostering talent**, a participant stated "Our talents are empowered, encouraged as well as incentivized to participate as well as to create ideas". Another participant while indicating **organisational cultural shift** towards creating innovative ideas stated: We need to force innovation in our organization because they are expecting new ideas". In terms of **encouragement** given to employees within the organisation, a participant stated: "Management has to encourage and force itself or middle level managers in the organization to accept the young generation or the new ideas by them, regardless of whether it is costly or can be implemented. Within the same context, another participant stated: "They [management] has to encourage this people to share to get the opportunity, the ministry give them the opportunity to share their ideas and from the start they have to share their ideas in proposals and walk the talk" indicating there is provision within the organisation to **share innovative ideas**, indicating a shift in which the public service is operating.

Thus, it is possible to find evidence that innovative ideas are recognised, shared, developed and individuals are developed to reach a stage where they are capable of generating ideas leading to innovative processes within the UAE public service.

Analyses of Focus Group 3 data

Similar to the previous group analyses, in Focus Group 3, two specific aspects were examined:

1. **How is innovative behaviour supported in your organization?**
2. **How does your organization recognize innovative behaviours?**

The main reason for analysing these two themes in conjunction was due to the nexus the two themes had, and the convenience in exploring these as participants were drawn from the same unit to explore these two related themes.

The Leximancer analysis produced the following diagram to indicate the concentration of discussion themes.
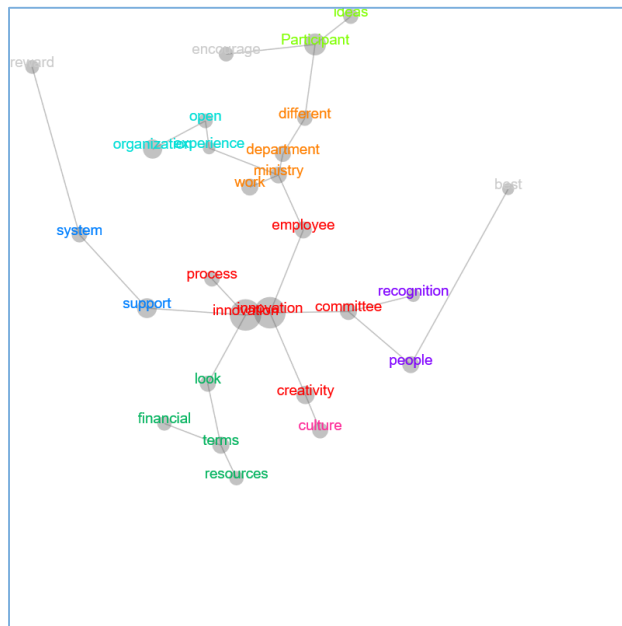
Figure 5 Concept map produced by Leximancer tool for Group 3

From the above diagram, it can be inferred that the discussion generated themes such as 'innovation', 'innovative', support', 'project', 'encourage' and 'system'. The generation of themes ensured that there was adequate discussion to answer the 'how is innovative behaviour supported' and 'how such a behaviour is recognised' questions. The themes such as 'committee, processes and system' indicate that 'how' component. The recognition is inferred from the themes 'support, encourage and reward'.

Further evidence was sought to the strengths of these themes by exploring the data statistics. The following table shows the frequency of themes discussed indicating the depth of conversation leading to the themes generation by Leximancer.

Table 4. 8: Frequency table for Group 3

theme	hits
innovation	33
work	11
Participant	19
organization	12
support	13
people	10
culture	7
encourage	5
reward	8
best	4

Further analyses were conducted to see the weight of these discussion, mainly to explore the concentration of the discussion in percentage terms. This is particularly important to ascertain the usage of key terms so that the researcher can form a mental model, as per the terms distributed and weighed by the application Leximancer. This is shown in the following table.

Table 4. 9: Frequency and percentage of key themes for Group 3

Concept	Count	Relevance percentage
Participant	19	76
innovation	25	100
support	13	52
organization	12	48
creativity	10	40
people	10	40
terms	8	32
committee	8	32
system	8	32
reward	8	32
work	7	28
look	7	28
culture	7	28
ideas	7	28
ministry	6	24
process	6	24
department	5	20
different	5	20
encourage	5	20
open	5	20
resources	5	20
financial	5	20
recognition	5	20
best	4	16
experience	3	12

It can be seen from the table above, that the UAE public service supports its employees for innovation and there is a system available for such a support. The top five key words reflect this. Other keywords such as 'financial' and 'reward' also indicate how these innovations are recognised in the chosen context.

While the key themes and associated statistics provide initial indication as to the relevance of the discussion, these do not provide strong evidence. Therefore, in order to identify the evidence, the transcript data was examined and the following evidence was found in the transcript.

In the context of **how innovative behaviour was supported** in the organisation, the researcher was able to find evidence in the form of 'In terms of financial resources' It is clear how much investment we do in terms of our innovation. As part of our innovation trainings, we also have the 'Creative Hour' for example, that is executed by the happiness & creativity committee. The purpose of this training is to teach the culture of innovation. More people are seen participating with incentives given to them. The incentives for participation are provided through the 'creativity platform'. This statement indicates the organisational level support provided through various schemes and associated investment made. Another participant stated, "In terms of costing, we look at two main things, managerial practice and managerial process. The managerial process includes strategic planning with innovation embedded.   Our organization's structure includes committee and in terms of recruitment structure, we also rely on innovation. Overall, we can see that innovation is a part of our lives. Considering the culture of the organization, there are some limitations and challenges but if one looks past these, and compare the organisation two years back and now, it is noticeable that innovation is very well supported in our organization and embedded within our all practices and as I had said, we will reach the wisdom side of innovation when it becomes as part of us". This statement indicates that there is a top down culture where support for innovation is starting from top managers and permeating through various levels, indicating a desire for a cultural shift in the UAE public service.

Another participant echoed this sentiment by saying "If I may add, supporting innovation is basically supporting innovative or creative people, its true about system and its true about culture" indicating wide awareness of such schemes in organisations where people are the key ingredient in innovation within the UAE public service.

Another statement, "I think the ministry and the minster … encouraging innovation in xxxx and we can see xxxx award that was created in 2014 that encourage the employees to share their innovative ideas regardless of whether its within their departments or from their own point of view that they see a gap in other departments", indicates the recognition for innovation. Furthermore, the same participant stated, "If I am from HR and I see something missing with the finance department, we will meet together and share ideas in order to bridge this gap" indicating how collaboration occurs at the public service.

Another participant supported this view by affirming, "All of us working together towards one goal is supported by management and it does not have any issue if people come from different departments or organizations to innovate and share information with each other. I think we have all the support from the management and leader as well regarding the innovation and participating in the ministry".

In terms of recognition for innovation a participant stated that "(the minster) called for the category so we already took this to the strategic department & raised it to his highness office and the deputy office and got it t approved God Willing. Starting from next year there will be two categories; the innovative department and the innovative employee, so, this is good news" indicating the public service has provision to facilitate new ideas and rewards for innovation and innovative ideas.

Thus, it was possible to identify supporting statements that innovation is supported at various levels, hence leading to a cultural shift, and reward schemes are available in the UAE public service to reward innovation.

Analysis of Focus Group 4 data

In this focus group discussion, the discussion centred on the organisation retaining staff with innovative behaviour. Similar to the previous focus groups, the discussion was semi-structured with the researcher controlling the flow of the discussion and providing clarity to questions for which, answers were sought. The main theme pursued was:

How does your organization retain staff with innovative behaviour?

The transcript file was uploaded to the Leximancer application and the following thematic diagram was generated based on the keywords (see diagram below).
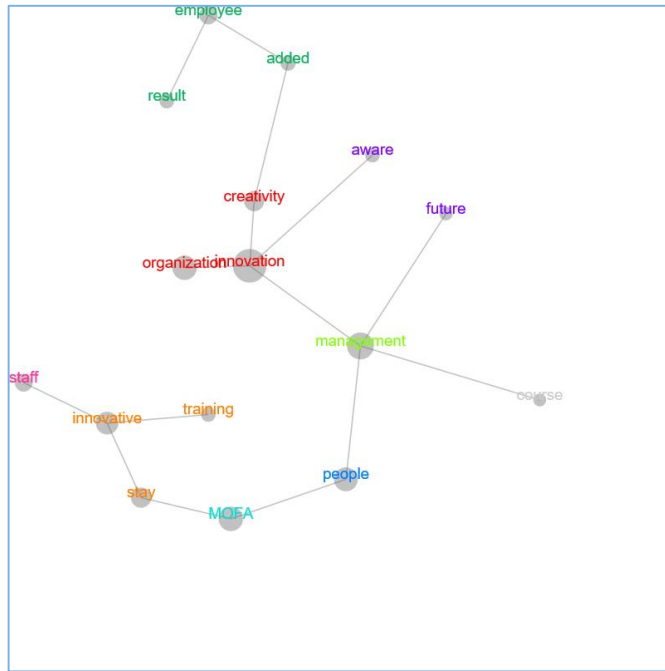
Figure 6 Concept map produced by Leximancer tool for Group 4

From the thematic diagram, it can be inferred that the discussion cantered on key themes such as 'organisation', 'innovation', 'training', 'creativity', 'stay' and 'staff' indicating the main themes discussed in the group aligned with the question posited. The keywords such as 'stay' and 'training' enabled the researcher to understand that staff were provided with options to develop their skills leading to creativity and the organisation encouraged them to stay by providing various incentives and rewards (as seen in the previous focus group discussion). The difference in the question asked was 'retain' and this was reflected in the themes 'stay', 'result' and 'future' to indicate there were provisions to retain staff with innovative behaviour and the organisation provided them with various options so that they can be accommodated within the organisation.

The data was further examined for frequencies and the following two tables provide details of keywords extracted by the Leximancer application.

Table 4. 10: Frequency and percentage of key themes for Group 4

Concept	Count	Relevance percentage
MOFA	6	55
innovation	11	100
management	7	64
people	6	55
organization	5	45
innovative	5	45
stay	4	36
employee	4	36
staff	4	36
creativity	3	27
added	2	18
aware	2	18
result	2	18
training	2	18
future	2	18
course	2	18

The theme summary indicated that the main thesis items were appropriately discussed.

Table 4. 11: Frequency table for Group 4

theme	hits
innovation	13
innovative	6
employee	4
management	7
MOFA	6
people	6
aware	2
staff	4
course	2

When the key themes and keywords were examined, it was apparent that the discussion was centring on employee and innovation with innovation coming within the top themes indicating that the focus of the discussion was the staff who exhibit innovative behaviours in the organisation. Other keywords s such as 'future' and 'training' indicate schemes available to retain staff in the organisation.

To confirm this inference, the researcher examined the transcript to find evidence to this inference.

One participant stated: "…if we look at this practice in our human resources, they are taking care of people who come to the ministry and we support people with innovation in terms of training. If we have incubated the innovative people with the organization and given them incentives, we have recognized them" This statement indicates the organisational culture to **retain** staff. Another participant stated: "By the way, MOFA is one of the organizations that does not let people leave … because we care about our employees provides strong evidence as to the **principles in retaining staff**. Further evidence was found in the statement, "we appreciate our staff, we encourage our staff to stay specially the innovative people".

In terms of providing an infrastructure to retain staff with innovative ideas, a participant stated this: "There is a way in the performance system to appraise your employee, … they have to take into account to develop a skill or to have a competency to add to their CV" indicates the effort taken by the public service to **retain staff**. This was echoed by another participant who stated: "All courses related to creativity and innovation are offered   more than once during the year" indicating there are formal systems in place at the public service to retain staff by enabling them to attend training programs and the organisation upskills people and provides appropriate **incentives to retain them**.

Thus, it was evident from the above qualitative analyses that within the UAE public service, innovative behaviours leading to creation of innovative processes are evident, there is a systematic manner in which skills in individuals are discovered and further refined through training programs. Once staff demonstrate their innovative abilities, the organisation provides them with rewards and incentives to retain them.

To get a full picture, the entire transcript was analysed by uploading the combined transcript into Leximancer. The purpose of this exercise was to regress themes that had been identified through individual discussions so that a higher-level thematic diagram could be arrived at. This is essential for the quantitative analyses stage discussed later.

The following thematic map was generated by Leximancer as a result of processing the transcript.
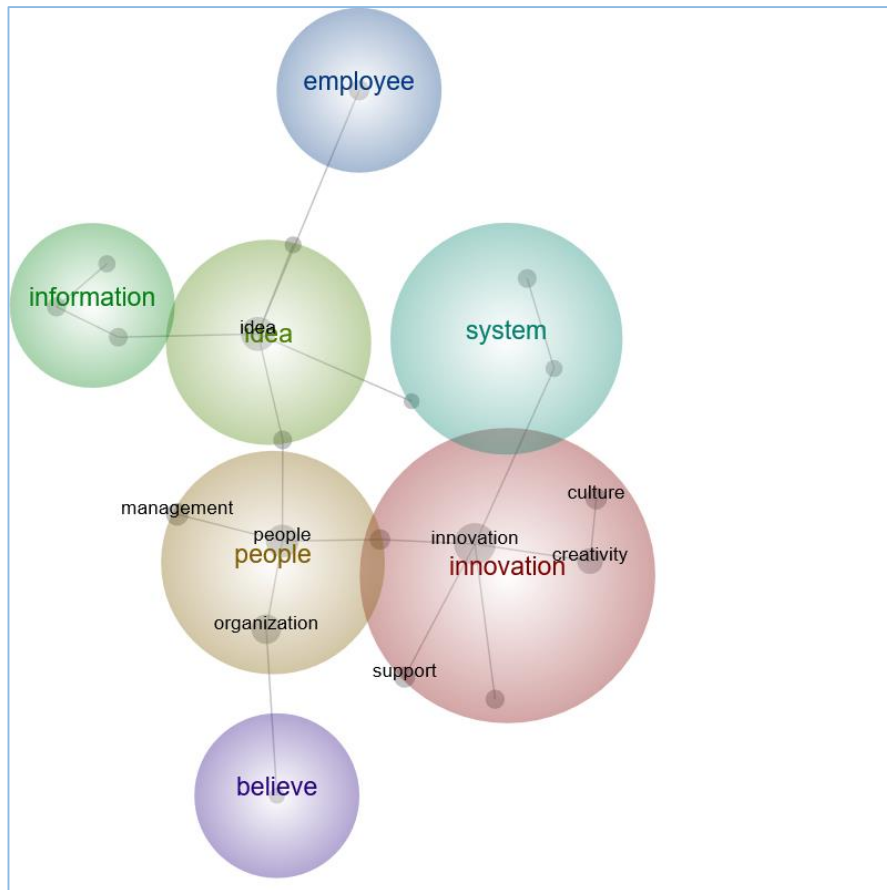
Figure 7 Concept map produced by Leximancer tool for entire transcript

The bubbles represent the key themes and the letters within the bubbles indicate attributes (discussion strength) leading to the themes. It can be seen from the above diagram that the theme 'Innovation' is the biggest bubble to indicate the qualitative group discussion centred on the main theme considered for discussion. Within this, 'Innovation – Creativity – Culture – Support', indicate that the organisation has a culture to support innovation and creativity among its employees. The two adjoining bubbles – 'employee and system' – show the nexus of these themes indicating that people are valued as the most important ingredient of innovation and there is a system available to support innovation. In the context of the public service organisation of the UAE, the innovation is NOT product innovation and therefore the bubble representing people assumes prominence is appropriate. This bubble is linked to the two bubbles – 'idea and believe' – indicating that ideas are generated through people and the belief system and that innovative behaviours are possible through support and appreciation shown by the public service through various support schemes such as training, rewards and incentives. The far most bubble 'employee' is a result of staff related factors such as retention, promotion, performance review and developing a culture that is top-down. Thus, the overall discussion appears to align with the key point of the research.

Similar to the previous style of data analyses, with the combined transcription, a frequency table was generated to see the depth of discussion. This table is shown below.

Table 4. 12: Frequency and percentage of key themes for entire transcript

Concept	Count	Relevance percentage
innovation	56	100
idea	42	75
organization	34	61
people	33	59
creativity	24	43
employee	19	34
management	17	30
culture	17	30
support	16	29
committee	15	27
system	14	25
talent	13	23
information	12	21
work	11	20
share	10	18
believe	10	18
knowledge	9	16
training	9	16
enhance	8	14
generation	6	11

The researcher was satisfied that key themes that formed the research proposition of this study were discussed in depth by the group of participants, drawn from various departments of the UAE public service departments. The frequency of the discussion and the tapering of the themes provided an indication that key themes were adequately discussed, thus leading to reliability of concepts generated. The frequency and percentage counts, along with the themed bubbles also provided some form of reliability to the qualitative data, especially in saturation aspects.

Furthermore, the individual discussions with specific questions indicate that there is consistency in the discussion as participants were able to echo sentiments similar to each other. Despite the fact that participants were drawn from various departments of the UAE public service and each of them had a different portfolio of responsibility, it was evident that the discussion was consistent, demonstrating consistency in the data.

This consistency as well as the depth of discussion, as evidenced by the transcript examination, clearly indicate that the culture of innovation was evident in the public service and such a culture is fostered in a transparent manner.

Thus, the researcher was convinced that the qualitative discussion provided an in-depth examination of innovative behaviours within the UAE public service and that various schemes are available to support and foster such behaviours. This helped the researcher to refine the conceptual framework posited at the end of literature review chapter. This is discussed in the next chapter Conceptual Model Development.

The conceptual model provided a framework to the researcher to collect quantitative data. The qualitative data collected were used to develop a survey instrument and further refine the hypotheses in order to finalise the quantitative phase of this research. These are discussed in the chapter 'Quantitative data Collection and Analyses'.

CHAPTER 5 - CONCEPTUAL MODEL DEVELOPMENT

The previous chapter on 'Qualitative Data Analyses' provided the foundation to identify context related factors impacting this study as the study specifically chose the public service in the UAE. Despite the fact that literature evidence leading to innovative behaviours is available, the literature mainly focused on private originations and limited information was found on innovative behaviours in public service organisations. Also, due to the bias identified in the literature, wherein many studies focused on innovative behaviours in the developed countries, and very limited information was found about other contexts where innovation occurs, this study identified the UAE context for exploration. Adequate justification was provided to justify this choice.

In order to understand the context in which the study was pitched, a qualitative phase was introduced and the data analyses indicated the following key elements:

1. It is possible to find evidence in the text analyses that innovation is indeed a central theme in the UAE public service;

2. The innovative behaviour is a top down initiative where strong support is provided to foster innovative behaviour in the public service organisations of the UAE;

3. There is considerable evidence to infer that innovative behaviour is facilitated through various Human Resource initiatives in the public service;

4. Where individual staff members exhibit innovative ideas, schemes are available to systematically validate and then implement such ideas;

5. These staff members are also rewarded adequately to recognise their innovation;

6. As a public service department, the culture of innovation is visible through various training programs;

7. The public service provides adequate resources to develop innovation in individuals;

8. The innovative culture is propagated through leaders and hence there is a culture of looking beyond the 'employee' thus the leaders exhibit transformation leadership qualities;

9. Public service staff are motivated to realise innovation;

10. Skills development leading innovation is a key measure to foster innovation;

11. Adequate opportunities are available for staff to train themselves so that they can attempt to generate ideas towards innovation;

12. The schemes are transparent, provisions allow staff to share their innovative ideas thus there are low levels of organisational controls;

13. Employees are provided with freedom to generate ideas and present the same to panels for further progress indicating autonomy, irrespective of gender differences;

14. Through high quality support for training and education, staff are given opportunity to further qualify themselves in the domain of innovative competencies; and

15. The senior management is very supportive of innovative behaviours in the public service.

As indicated in the chapter on 'literature review', the literature reviewed echoed similar characteristics in private service employees. What is unique in the context of this study is that the UAE public service is a process-oriented organisation that displays characteristics comparable to private services that realise product innovations. In this aspect, the chosen context is found to be comparable to what the literature indicated as innovative behaviours in organisations.

In addition, while the literature indicated gender bias in specific segments and contexts, the qualitative study employed in this study did not find any evidence for gender influencing innovation.

This provided confidence to review the initial framework identified in this research with a view to refine the framework so that the operationalisations can be defined.

Refinement to the initial framework

The initial framework posted five key constructs as having an influence on innovative behaviours. These are:

1. Organisational culture;
2. Gender;
3. Skill set and innovative behaviours;
4. Human Resource Management reforms and innovation; and
5. Intrinsic and extrinsic motivational factors.

The initial framework along with associated attributes are reproduced below, as shown in an earlier chapter.

Organizational Culture

Culture should align with organizational values
Innovative behavior should be rewarded
Supportive leadership
Low bureaucracy
Tolerance for mistakes
High autonomy to employees

H1

Gender

Incorporative culture
Equal opportunities
Females in managerial position

H2

Skill set and innovative behavior

Examine managerial practices by which specific skills can be enhanced
Use motivation and knowledge as a skill set
Intentionally engage in generation of useful idea

H3

HRM reforms and innovation

Organizational flexibility
Providing resources for innovation
Transformational leadership
Staff training and Career development
Performance pay

H4

Motivational Factor (Intrinsic, Extrinsic)

Skill acquisition
New idea development
Work competency
Sustain productivity in the absence of rewards

H5

Innovative Behavior

Figure 8 Initial Conceptual Model

As a result of the qualitative phase, this study did not find any evidence for the attributes – 'females in managerial positions' and hence this attribute was eliminated. Within the framework shown above, all other attributes were evidenced in the qualitative data.

Moreover, when the literature and the qualitative data were considered in synchronisation, it was possible to find support for various factors. These are:

1. The public service is keen to identify 'talent' in individuals by providing them a platform. This platform is provided through training, idea generation, progressive appropriate work environments, effective recruitment strategies and channelling employees that exhibit innovative behaviours into the right organisational entities. This collection of factors is arbitrarily termed as **identifying talent** in the UAE public service.

2. Once an individual exhibits an appetite to be innovative, the public service provides him or her with opportunities to develop such talents. These include strategies to develop innovative ideas in these individuals such as training programs, formal

studies, skill utilisation by posting them to overseas appointments, developing leadership qualities and career development opportunities. These collective factors are arbitrarily termed as **talent development** in the UAE public service.

3. Once the talent is developed, it is imperative that the public service is keen to retain such individuals as significant investment has been made on them. The literature as well as the qualitative data indicate that various factors leading to **talent retention** include various strategies required to retain these individuals; compensation systems (reward and incentives), supportive learning environments (training and skill development) and employee satisfaction measures.

4. Within these three key constructs, the participants discussed organisational culture and other aspects. The gender was not prominent in the discussion and there is strong evidence that the talent identification is not gender based, but merit based with the UAE public service. Hence Gender was not explored further in the context chosen.

So, taking these into account, this study has refined the initial framework to consist of four major constructs – Organisational Culture, Talent Identification (Skill Set and Innovative behaviours), Talent Development (Human Resource Processes for Innovation) and Talent Retention (Motivational Factors).

The four key constructs then enabled the identification of key concepts from both the literature reviewed and the focus group discussions leading to the following initial key constructs and associated themes.

In essence, as indicated in the literature review chapter, initial survey framework was developed and further validated with the qualitative study. This culminated in a refined survey consisting of context relevant survey items. The numbers indicate the researcher's catalogue of these themes originating from the qualitative analyses and this numbering system helped to operationalise the variables:

Skill Sets & Innovative Behaviours (Talent Attraction)

1   Attracts more talented employees through providing them with social support in difficult times (e.g. maternity, paternity, death, and financial difficulties).

2   Attracts more qualified employees through having a socially progressive work environment (e.g. multicultural).

6   Has effective recruitment strategies for attracting the most suitable and appropriate staff.

7   Has a good reputation through high-quality networks to enable the organisation to attract the most suitable and appropriate staff.

8   A high visibility in the region enables the organization to attract the most suitable and appropriate staff.

10   Has a desirable organisational climate in order to attract the appropriate talents (e.g. having social friendships at work).

11   Attracts more talented staff through having a high-quality working environment that encourages talented employees to realise creativity and innovation (e.g. physical aspects such as well-equipped workplaces).

Human Resource Processes for Innovative Behaviours (Talent Development)

12   Has effective talent development strategies aligned with its organisational strategies.

13   Determines training needs for talented individuals who have desired skills.

14   Facilitates employee performance and development with tailored training plans.

15   Uses human resource planning to ensure effective skill utilisation and development.

16   Identifies areas needed for employee's personal development (e.g. skills gap analysis).

18   Develops staff through sessions with training and other workshop activities.

19   Develops essential staff with training and mentoring programs.

20   Develops its own online training materials for talented staff to gain required knowledge and skills.

24   Supports high potential employees to become leaders, in order to build a strong talent

        pool.

25   Assists leaders to be professionals through career development programs.

26   Develops succession planning, and identifies alternative talented employees for leadership positions.

Motivational Factors (Talent Retention)

28   Benchmarks with other organisations to evaluate talent retention strategies.

29   Benchmarks with other organisations outside the country to evaluate talent retention strategies.

30   Has a competitive compensation system which is a motivating factor to retain talented employees.

31   Provides a highly competitive compensation system for long-term to retain talent.

32   Has a supportive learning environment which promotes employee job satisfaction to retain qualified employees.

33   Has high-quality working conditions to retain the high qualified talent.

36   Ensures talented employees are satisfied.

37   Provides assistance with healthcare and safety issues to retain its qualified employees.

38   Accounts for personal factors and life events (e.g. family responsibilities) to encourage its talented staff.

39   Provides fair acknowledgement of employee work efforts and achievements to better keep employees.

40   Provides flexibility for work hours, roles, and tasks (e.g. for caring of young children) to retain its qualified employees.

41   Has a good system of financial and other non-financial rewards to retain talented staff.

43   Keeps employees engaged and motivated to retain talented staff.

45   Retains its qualified employees through providing them with sufficient freedom to actively perform their jobs.

46   Retains its talented staff through providing them enough authority to complete their work efficiently.

47   Retains its qualified employees through providing them opportunities to develop their careers.

48   Retains its talented staff through financial rewards, high salaries or remuneration.

49   Retains its qualified employees by providing them with individual funding for
        academic research.

Organisational Culture

3   Supports the staff community through involvement in social, cultural, or economic
        initiatives to attract more talented employees.

4   Provides work-life balance and social networking activities are also available to
        employees.

5   Has a good work-life balance (e.g. socialising with colleagues, proper location and
        amenities, recreation or lifestyle opportunities) to attract talented individuals.

9   Has an innovative culture enabling it to attract more talented individuals.

17   Facilitates internal job rotation to strengthen talented employees' experiences and
        development in different faculties, departments, and divisions.

21   Provides staff with career development opportunities (e.g. further education,
        certifications, scholarships, etc.).

22   Includes leaders' development in the design of all job roles.

23   Develops leaders through managerial level initiatives and succession planning
activities.

27   Determines the right type of talent retention strategies for organisational innovation
        to be most effective.

34   Managers treat employees well through relationship building to retain talent.

35   Promotes equal opportunity to retain its qualified employees.

42   Encourages innovative thinking, and promotes creative ideas from talented
employees.

44   Adopts management by participation, and career enrichment programs to increase
        talented employees' confidence in themselves.

50   Monitors performance and suggests advice regularly (e.g. per semester) in an
        encouraging manner to retain its talented staff.

51   Utilises an employee growth program for the development of motivation and
        engagement to retain its qualified employees.

Thus, the finalised set of constructs culminated in 51 specific items. This enabled the researcher to properly categorise these under the constructs enabling the operationalising of items. This is discussed in the next section.

Questionnaire Development and Operationalisation of construct items

The development of the Questionnaire used for the quantitative phase consisted of three key elements – scale development, validity and alignment with hypotheses. These are discussed below.

Scale development

The premise of the research is to identify factors leading to innovative behaviours in the UAE public service and hence the demographic details were not considered in the study. The sampling technique was purposive sampling, so a Likert Type of scale was believed to be adequate to obtain required feedback. In order to enable granularity, this study introduced a five-point Likert-type scale with – Strongly Disagree, Disagree, No/Don't Know, Agree, Strongly Agree options– in the same order to obtain user responses. Prior studies (Sarantakos, 2013; Tharenou et al., 2007; Zikmund et al., 2013) have recommended this approach.

Instrument Validity

In addition to the scale development, this study employed peer review of the quantitative survey instrument to assure both face validity and content validity (Holden & and Lynch, 2004). The initial instrument was drawn from the literature review and as indicated earlier, the relevance to the chosen context is always an issue. This is because:

1. The majority of the literature was biased on private organisations where product innovation and associate behaviours were considered;
2. The literature mainly focused on human resource issues – talent, recruitment and so on – with little investigation of specific process related innovative behaviours as this is different from product related innovative behaviours;
3. The literature was mainly on non-public service organisations;
4. The specific context dependent issues – mainly in the middle eastern context – was not prominent in the literature; and
5. The literature did not specifically discuss how the regional influences were handled – for example the chosen context is the public service in the UAE and the

administrative structures in the given environment are different from that of other countries.

For these reasons, the survey instrument required a closer look. In this study, in order to realise maximum reliability of the instrument, it was decided to mix the literature information with the qualitative data to prepare a survey instrument so that it could meet the expectations of the stakeholders of the chosen context.

This involved converting the 51 themes identified above into appropriate questions. The consideration included the nature of linguistic issues – the population is non-English-speaking background (NESB), despite the fact that the participants chosen were fluent in English; there could be certain nuances of the terms used in the given context; and the appropriateness of the instrument itself.

Therefore, the instrument prepared initially was sent to academic peer reviewers and these reviewers (3 senior academics with English-speaking background) examined the instrument for:

1. Relevance of the questions;
2. Whether participants would be able to comprehend the questions;
3. Whether the questions make sense in terms of reading and associated interpretation;
4. Whether the terminologies used make sense to a NESB participant;
5. Whether the scales would provide meaningful granularity to the answers; and
6. Whether the constructs would lead to a meaningful hypotheses testing.

A number of suggestions were made by these senior academics and based on their comments, the questionnaire was refined, as well as re-ordered. This is shown in Appendix 1.

The following is the main list of questions presented in the instrument.

Table 5. 1: List of questions presented in the instrument

Construct and Items
Skill Sets & Innovative Behaviours (Talent Attraction) Attracts more talented employees Attracts more qualified employees through a progressive work environment Has effective recruitment strategies for attracting the most suitable and appropriate staff.

Has a good reputation to enable the organisation to attract the most suitable and appropriate staff.

A high visibility in the region enables the organization to attract the most suitable and appropriate staff.

Has a desirable organisational climate in order to attract the appropriate talents

Attracts more talented staff through having a high-quality working environment that encourages talented employees to realise creativity and innovation

Human Resource Processes for Innovative Behaviours (Talent Development)

Has effective talent development strategies aligned with its organisational strategies.

Determines training needs for talented individuals who have desired skills.

Facilitates employee performance and development with tailored training plans.

Uses human resource planning to ensure effective skill utilisation and development.

Identifies areas needed for employee's personal development (e.g. skills gap analysis).

Develops staff through sessions with training and other workshop activities.

Develops essential staff with training and mentoring programs

Develops its own online training materials for talented staff to gain required knowledge and skills.

Supports high potential employees to become leaders, in order to build a strong talent pool.

Assists leaders to be professionals through career development programs.

Develops succession planning, and identifies alternative talented employees for leadership positions.

Motivational Factors (Talent Retention)

Benchmarks with other organisations to evaluate talent retention strategies.

Benchmarks with other organisations outside the country to evaluate talent retention strategies.

Has a competitive compensation system which is a motivating factor to retain talented employees.

Provides a highly competitive compensation system for long-term to retain talent.

Has a supportive learning environment which promotes employee job satisfaction to retain qualified employees.

Has high-quality working conditions to retain the highly qualified talent.

Ensures talented employees are satisfied.

Provides assistance to retain its qualified employees.

Accounts for personal factors and life events to retain its talented staff.

Provides fair acknowledgement of employee work efforts and achievements to retain employees.

Provides flexibility for work hours, roles, and tasks to retain its qualified employees.

Has a good system of financial and other non-financial rewards to retain talented staff.

Keeps employees engaged and motivated to retain talented staff.

Retains its qualified employees through providing them with sufficient freedom to actively perform their jobs.

Retains its talented staff through providing them enough authority to complete their work efficiently.

Retains its qualified employees through providing them opportunities to develop their careers.

Retains its talented staff through financial rewards, high salaries or remuneration.

Retains its qualified employees through providing them with funding for additional skills.

Organisational Culture

Supports the staff community through economic initiatives to attract more talented employees.

Provides work-life balance to employees.

Has a good work-life balance schemes to attract talented individuals.

Has an innovative culture enabling it to attract more talented individuals.

Facilitates internal job rotation to strengthen talented employees' experiences and development in different areas of the public service.

Provides staff with career development opportunities

Includes leaders' development in the design of all job roles.

Develops leaders through managerial level initiatives and succession planning activities.

Determines the right type of talent retention strategies for organisational innovation to be most effective.

Managers treat employees well through relationship building, to retain talent.

Promotes equal opportunity to retain its qualified employees.

Encourages innovative thinking, and promotes creative ideas from talented employees.

Adopts management by participation, and career enrichment programs to increase talented employees' confidence in themselves.

Monitors performance and provides career advice regularly to develop individuals.

Utilises an employee growth program for the development of motivation and engagement to retain its qualified employees.

The above items were then presented in a survey instrument with a Likert scale type of questionnaire so that quantitative data could be collected from participants.

Conceptual Framework and Hypotheses

The above themes were then mapped to the initial framework to arrive at a conceptual framework. As can be seen from the above box, the five constructs identified in the literature were regressed to four in the refined framework, and hence the hypotheses were also regressed. Each construct had a set of themes to measure, and hence the hypotheses required another verification to ensure alignment. Thus, in this study, these four hypotheses were finally set for testing based on the independent – dependent variables confirmed through the qualitative phase:

Table 5. 2: Hypotheses for testing

H1: Organisational culture positively influences innovative behaviour in employees in organisations.

H2: Skill sets of employees positively influence innovative behaviour in employees in organisations.

H3: Human Resource Processes positively influence innovative behaviour in employees in organisations.

H4: Motivational factors of individuals positively influence innovative behaviour in employees in organisations.

The above set of hypotheses along with the dependent-independent variables are presented in the **Conceptual Framework** as shown below:
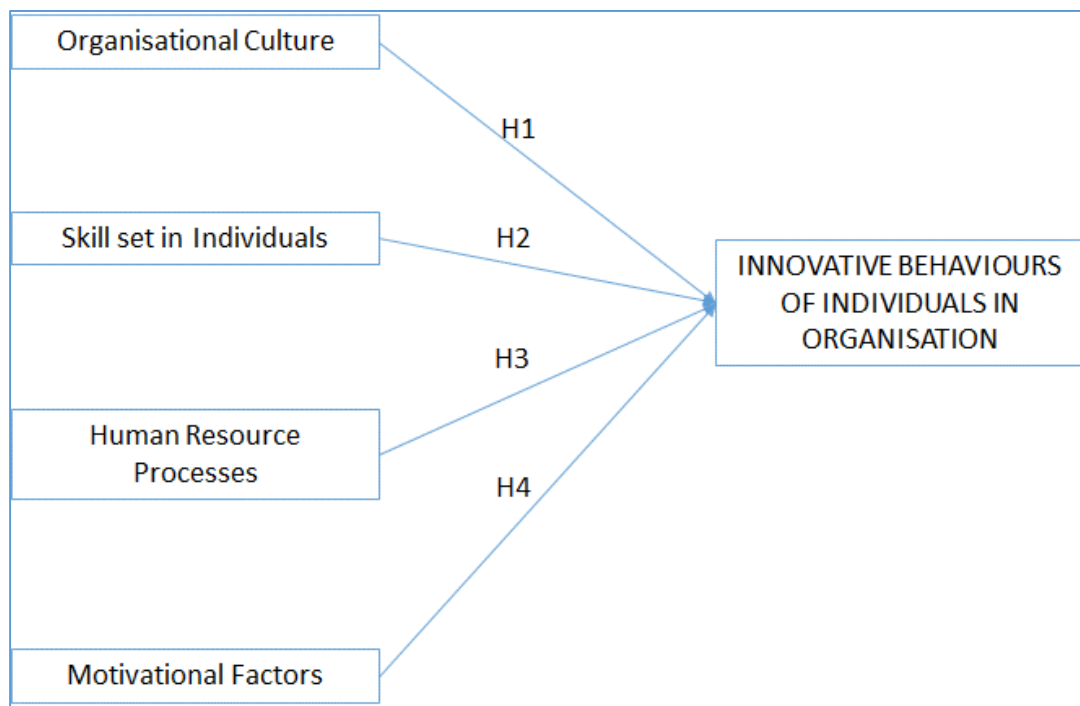
Figure 5.2 Conceptual Framework

The above conceptual framework was tested using quantitative data collection exercises and this process is explained in the following chapter.

CHAPTER 6: QUANTITATIVE DATA ANALYSES

In the previous chapter, the refined research framework was established after analysing the qualitative data. In this chapter, quantitative data collection along with analyses conducted will be explained. The chapter includes sampling techniques employed in the study, data collection procedures, and data analyses results based on the Partial Least Square application. The chapter is concluded with hypotheses testing outcomes.

Hypotheses established

In the preceding chapter, as a result of conducting qualitative analyses, the gender issues were not found to be strong in the discussion, and this original construct was eliminated from the initial conceptual model. Moreover, the statements of hypotheses were refined and the following four directed hypotheses were formulated for testing:

H1: Organisational culture positively influences innovative behaviour in employees in organisations.

H2: Skill sets of employees positively influence innovative behaviour in employees in organisations.

H3: Human Resource Processes positively influence innovative behaviour in employees in organisations.

H4: Motivational factors of individuals positively influence innovative behaviour in employees in organisations.

In order to test the hypotheses, quantitative data were collected.

Sampling Techniques Employed

The study setting was the UAE public service, and as such, the sampling selection was a key consideration for the study. Due to the nature of the study, it was apparent that key officers of the UAE public service, with adequate knowledge of how innovative behaviours will be supported in the organisation, were assumed to provide the data for this phase of the study. Thus, the samples would be specific for the purpose, and hence this study used the 'purposive' sampling techniques.

Within this context, the researcher anticipated that the population was going to be limited as not all public service officers are involved in this strategic initiative of the UAE public service. Through the Departmental Heads, an assessment was conducted to determine the population, and this assessment revealed that it is possible to identify about 200 such officers. Thus, the population of the study was fixed as 200.

This indicated that with the standard quantitative survey return of 15 – 20%, the researcher will at best receive about 50 – 60 filled in surveys. Therefore, the researcher decided to use a Partial Least Square based analyses rather than a standard full statistical (AMOS) analyses.

Data Collection

The Data collection activities in this study involved three key stages. They are instrument validity, data collection and preparing data for analyses.

The study followed various guidelines provided (Besen-Cassino, 2017; Collis & Hussey, 2013; Gray, 2013) in terms of validating the instrument such that it is reliable for data collection. This included face validity and content validity tests. As a result of conducting these two tests, and including all feedback, the instrument used was perceived to be of good quality.

In the context of this study, the face and content validity tests are essential because the population is predominantly from the NESB background, whose first language is NOT English. Therefore, extra care was taken to ensure that the statements convey the meaning clearly by using familiar and simple terms, mainly terms used in the qualitative discussions. This approach was taken in this study to ensure that the population is aware of these terminologies and the dictionary of UAE public service terms are automatically embedded in the statement.

The quantitative instrument consisted of a total of 51 questions. Due to the refinement to the initial conceptual model, the questions were reorganised to fit the four major constructs identified so that the statements reflect the activity within the construct.

The survey instrument was distributed to the population. One notable deviation in this study was a pseudo census type of approach whereby all public service officers were requested to fill in the survey. As the data collection process was voluntary and anonymous, the researcher thought this would be the best approach to maximise the return. The Departmental Heads in the UAE public service were approached and printed surveys were left with them for a fixed time for their staff to fill in.

This resulted in 57 surveys returned to the researcher. However 3 surveys contained incomplete data and these were removed from final analyses. After verification that the surveys had been filled in properly, the researcher transcribed these into an excel file. This process identified three incomplete surveys, and these were removed from the final data set presented for analyses. Thus, the study used 54 final data sets for analyses. The individual fields were coded by the researcher to indicate whether the questions pertained to Talent Attraction – referring to questions reflecting skill sets relevant to details, Talent Development

– referring to questions pertaining to Human Resource Processes to develop various activities, Talent Retention – indicating a set of motivational factors to enable staff to continue and Organisational Culture – implying various public service procedures pertaining to fostering innovative behaviours. These were arbitrarily titled by the researcher for coding purposes.

Once the spreadsheet file was prepared, the file was presented to ADANCO, a Partial Least Square software for data analyses. We set the iterations as 999 (default value) to run the models.

Quantitative Data Analyses

While the data could have been analysed using applications such as the SPSS, due to the small data set, the researcher decided to use a Partial Least Square (PLS) application to conduct data analyses as PLS is capable of analysing small datasets using t-tests, a specific statistical test for small samples. The PLS data analyses consisted of the following key steps:

Measurement Models

1. Establishing reliability of construct scores
2. Average Variance Extraction
3. Establishing Discriminant Validity

Structural Model

1. Deriving Inter-Construct Correlations
2. R^2 and adjusted R^2 values derivation
3. Deriving Path Coefficients
4. Arriving at Total Effects
5. Determination on Effect Size

These eight steps are considered key steps in determining the outcomes of data analyses leading to hypotheses testing. In this study, these eight steps were systematically arrived at so that the structural model could be asserted. Further, we used one sided testing as the hypotheses were directed hypotheses.

Measurement Model

In the ADANCO application, the measurement model specifies the relationship between constructs and their indicators, where indicators are observed as variables. In simple terms, every questionnaire item is a variable. In developing the measurement, PLS requires at least one available indicator, wherein an indicator is a composite variable. In this study, the

construct identified – for example, skillset, as an indicator and the individual item that makes up the indicator is a variable.

Due to the data size, this study used the 'composite modelling' option in ADANCO as this provides the flexibility to overlook covariance restrictions. While covariance can be properly measured in large samples, due to the small size, it may not be possible to measure covariance. Despite this fact, in PLS applications, composites serve as proxies of the scientific concepts being tested. Therefore, this approach was considered legitimate. Other studies such as (Henseler, 2017) have adopted this approach.

Reliability

The ADANCO model provides reliability scores by using various tests such as the Dijkstra-Henselesr's rho, Joreskog's rho and Cronbach's alpha. In assessing the reliability, for any new instrument, a score of 0.7 is acceptable, whereby a score towards zero indicates poor reliability and a score towards one indicates high reliability. In this study, five constructs were used as measurements – Innovative Behaviour, Organisational Culture, Skillset, Human Resource Processes and Motivational Factors.

Dijkstra-Henseler's rho (ρA) estimates reliability of construct related to a reflective measurement model to determine these scores. The ρA is only calculated for reflective measurement models in combination with the weighting scheme "Mode A consistent". Currently, the ρA is the only consistent estimate of the reliability of construct scores obtained through PLS path modelling. In this study reliability estimates for all constructs were above 0.75 indicating reliability consistency.

The composite reliability is an estimate of the reliability of sum scores relevant to a reflective measurement model. Composite reliability is otherwise known as factor reliability, DillonGoldstein's rho, and J¨oreskog's rho. The following symbols are typically used for composite reliability: ρc or ω, according to Henseler et al. (2009). In this study, the composite reliability for each construct was found to be 0.84 and above, indicating high composite reliability.

Cronbach's alpha is a lower bound estimate of the reliability of sum scores pertaining to a reflective measurement model. The following symbol is typically used for Cronbach's alpha: α. In this study, constructs showed high reliability as the minimum score was 0.71 and moving to 0.92.

The reliability scores returned by ADANCO are as shown below:

Table 6. 1: Reliability scores from ADANCO

Construct	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_c)	Cronbach's alpha(α)
Innovative Behaviour	0.8849	0.9098	0.8833
Org Culture	0.9190	0.9280	0.9141
Skill Set	0.7540	0.8413	0.7190
HR Processes	0.8940	0.9071	0.8851
Motivational Factors	0.9340	0.9399	0.9281

Thus, it is evident that, in this study, all constructs were exhibiting a value of 0.7 and above for each of the tests conducted. Furthermore, the key dependent variable 'Innovative Behaviour' returned values 0.88 and above for each of the tests conducted. This indicates that the instrument used is reliable in terms of constructs.

Average Variance

In ADANCO, the average variance extracted (AVE) equals the average indicator reliability. It takes values between zero and one. The AVE is typically interpreted as a measure of one-dimensionality, which is another test performed to measure reliability of constructs. In terms of interpretation of AVE, reflective constructs exhibit sufficient one-dimensionality if their AVE exceeds 0.5 (Fornell & Larcker, 1981). In this study, this was established as each of the constructs measured returned a value of 0.5 and above, but for Human Resource Processes, with AVE value of 0.498. As this is close to 0.5, it was assumed that the constructs considered for this study exhibited one-dimensionality. This is shown in the table below.

Table 6. 2: AVE scores from ADANCO

Construct	Average variance extracted (AVE)
Innovative Behaviour	0.5918
Org Culture	0.5419
Skill Set	0.6414
HR Processes	0.4981
Motivational Factors	0.6120

Discriminant validity

Discriminant validity is a test conducted to ensure that two conceptually different constructs differ statistically. This is to ensure that the dependency between the constructs are eliminated. In ADANCO, this can be assured using two approaches, namely, the Fornell-Larcker criterion and heterotrait-monotrait ratio of correlations (Henseler, 2017).

The Fornell-Larcker criterion postulates that a construct's average variance extracted should be higher than its squared correlations with all other constructs in the model. In ADANCO, this is tested by examining the reflective constructs' average variance extracted in its main diagonal and squared inter-construct correlations. Discriminant validity is regarded as given if the highest absolute value of each row and column is found in the main diagonal.

Table 6. 3: Discriminant validity of AVE scores

Construct	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour	0.5918				
Org Culture	0.7743	0.5419			
Skill Set	0.5898	0.6171	0.6414		
HR Processes	0.6984	0.7198	0.4436	0.4981	
Motivational Factors	0.7667	0.8206	0.5367	0.6705	0.6120

In this study, the 'Fornell-Larcker' criterion table as produced by ADANCO, was examined. It can be inferred from the table above that AVE scores indicate discriminant validity.

In addition to the Discriminant Validity test, the researcher conducted the 'Heterotrait-monotrait' (HTMT) ratio of correlations to measure factors' discriminant validity (Henseler, 2017). The HTMT ratio of correlations often outperforms alternative approaches, and the smaller the HTMT of a pair of constructs, the more likely they are to be distinct. HTMT values are normally expected to be below 0.9. Furthermore, 95% quantile of bootstrapped HTMT values is part of the bootstrap output table provided by ADANCO, and these values should be smaller than one; if they are not, there is a lack of discriminant validity. In this study all values were found to be less than 1.0, and hence it is assumed that the HTMT discriminant test was competent. This is shown below.

Table 6. 4: Discriminant validity of HTMT test

Construct	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour					
Org Culture	0.9704				
Skill Set	0.9406	0.9459			
HR Processes	0.9439	0.9385	0.7937		
Motivational Factors	0.9625	0.9875	0.8808	0.8960	

Indicator results

The above tests indicate that the instrument was reliable and hence further tests can be conducted on the data. The next set of tests are indicator weight tests.

Indicator weights

In the context of ADANCO, the indicator weights determine the construct scores as a weighted sum of their indicators. The researcher set the indicator weights so that they all have the same value, and this approach is followed to maintain consistency. As a diagnostic tool for quantifying the amount of multicollinearity, the researcher calculated the variance inflation factor (VIF) for each set of indicators. In the tables presented below, the higher variance inflation factor indicates higher degree of multicollinearity. The loading is the simple regression slope if an indicator is regressed on its construct. Using ADANCO, the researcher standardized the loadings that equal the correlation between an indicator and its construct. Additionally, the correlations between reflective constructs and their indicators usually have greater absolute values than the correlations between indicators and construct scores. These scores are reported in the following tables.

Table 6. 5: Indicator weights

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			0.8689		
Qualified Employees			0.8476		
Innovative Culture in Organisation		0.6371			
High quality work environment for talented staff			0.6713		
TD-EffTalent				0.6538	
TD-TrgNeeds				0.4974	
TD-HRPlng				0.7279	
TD-EmplNeeds				0.8190	
TD-JobRotatn		0.6513			
TD-StaffTRg				0.7058	
TD-Mentoring				0.7226	
TD-TrgMatl				0.6032	
TD-CareerDevl		0.7412			
TD-LeaderDev		0.6525			
TD-SuccsnPlan		0.7798			
TD-TalentPool				0.7466	
TD-Professional				0.7399	
TD-LeaderPositions				0.7853	
TR-RightTalent		0.8185			
TR-BenchmarkOrg	0.7238				
TR-CompetitiveCompensate	0.8292				
TR-LongTermRetn	0.8240				
TR-LearngEnv					0.7944
TR-WorkCondition					0.8348
TR-EmployeeTreatment		0.7111			
TR-EqualOpp		0.8280			
TR-Satisfaction					0.6463
TR-HalthcareAssistance	0.6981				
TR-LifeEvents	0.8421				
TR-Achievements					0.8700
TR-Flexibility					0.6499
TR-FinancialSupprt					0.8123
TR-EmpEngaged					0.8347
TR-MgtParticipation		0.7903			
TR-RetainQualStaff	0.6816				
TR-ReatainTlntStaff	0.7688				
TR-RetainCareer					0.8217
TR-FinRewards					0.8038
TR-AcadmRsrch					0.7192
TR-PerfmMonitor		0.7915			
TR-EmpGrwthPrg		0.6604			

Table 6. 6: Indicator Multicollinearity

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			0.7551		
Qualified Employees			0.7184		
Innovative Culture in Organisation		0.4059			
High quality work environment for talented staff			0.4507		
TD-EffTalent				0.4275	
TD-TrgNeeds				0.2474	
TD-HRPlng				0.5298	
TD-EmplNeeds				0.6707	
TD-JobRotatn		0.4241			
TD-StaffTRg				0.4981	
TD-Mentoring				0.5222	
TD-TrgMatl				0.3638	
TD-CareerDevl		0.5493			
TD-LeaderDev		0.4258			
TD-SuccsnPlan		0.6081			
TD-TalentPool				0.5574	
TD-Professional				0.5475	
TD-LeaderPositions				0.6167	
TR-RightTalent		0.6699			
TR-BenchmarkOrg	0.5239				
TR-CompetitiveCompensate	0.6876				
TR-LongTermRetn	0.6791				
TR-LearngEnv					0.6310
TR-WorkCondition					0.6969
TR-EmployeeTreatment		0.5056			
TR-EqualOpp		0.6855			
TR-Satisfaction					0.4178
TR-HalthcareAssistance	0.4873				
TR-LifeEvents	0.7091				
TR-Achievements					0.7569
TR-Flexibility					0.4223
TR-FinancialSupprt					0.6599
TR-EmpEngaged					0.6967
TR-MgtParticipation		0.6245			
TR-RetainQualStaff	0.4646				
TR-ReatainTIntStaff	0.5911				
TR-RetainCareer					0.6752
TR-FinRewards					0.6461
TR-AcadmRsrch					0.5172
TR-PerfmMonitor		0.6265			
TR-EmpGrwthPrg		0.4362			

The scores in the tables indicate values over 0.5 for most of the constructs chosen, and this underscores that the multicollinearity is strong between the constructs, demonstrating that

the dependence between the constructs and associated variance is explained by the model adequately.

Thus, the above tests have provided confidence to the researcher to progress further in developing a structural model. In developing the model, this study tested for inter-construct correlations, R^2 and adjusted R^2 values, path coefficients, indirect effects, total effects and the effect size. These six steps are imperative to determine the model in ADANCO. These are explained below.

Structural model results

Using ADANCO, the researcher set the parameters to run the structural model, as the reliability tests indicated that the correlations between the variables are acceptable, and the dependency of variables through the variance have been adequately explained. The following six steps provide further details of the structural model run using the datasets.

Inter-construct correlations

The inter-construct correlation matrix represents the estimated correlations between constructs. Owing to symmetry, the researcher presented only the lower triangle of the inter-construct correlation matrix as seen in the table below. The inter-construct correlations can differ from the correlations between the construct scores. This will occur if one or more constructs have a 'mode A' as a weighting scheme 9a parameter set in the ADANCO application), or if one or more composite measurement models are assumed to have a random measurement error, i.e., the reliability was manually set to a value different from one. In this study, the reliability was not set to manual scores and the algorithm in ADANCO was allowed to choose the score based on the iterations conducted. The table below shows the inter-construct correlations of the structural model.

Table 6. 7: Inter-construct correlations of the structural model

Construct	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour	1.0000				
Org Culture	0.8800	1.0000			
Skill Set	0.7680	0.7856	1.0000		
HR Processes	0.8357	0.8484	0.6660	1.0000	
Motivational Factors	0.8756	0.9058	0.7326	0.8189	1.0000

From the table it can be seen that the scores are in the 0.7 plus range indicating the constructs are very reliable. The higher score indicates the power of reliability, and in this study, the correlations between constructs is high, signifying the association between various constructs.

R^2 and adjusted R^2

For every endogenous construct, ADANCO determines the R^2 and the adjusted R^2. The R^2 values are printed in the model's graphical representation. The table below shows the ADANCO's reporting of the R^2 and the adjusted R^2 values.

Table 6. 8: R^2 and the adjusted R^2 values from ADANCO

Construct	Coefficient of determination (R^2)	Adjusted R^2
Innovative Behaviour	0.8382	0.8250

R^2

The coefficient of determination (R^2) quantifies the proportion of an endogenous variable's variance that the independent variables explain. Possible R^2 values range from zero to one. Henseler et al. (2009) states that the R^2 is not calculated for exogenous constructs. Hence, in this study R^2 values are required only for the dependent variable Innovative Behaviour.

Adjusted R^2

The adjusted R^2 is a modification of the R^2 that takes the sample size into account and compensates for the independent variables added to the model. The adjusted R^2 will never exceed the R^2. It can be negative. The adjusted R^2 is not calculated for exogenous constructs.

From the table, it can be seen that the R and R^2 values are in the 0.8 range indicating a high model fit. This is essential to assure that the constructs chosen for the study, and the measurement carried out, are indeed valid in the study.

Path coefficients

The path coefficients are standardized regression coefficients (beta values). A path coefficient quantifies the direct effect of an independent variable on a dependent

variable. Path coefficients are interpreted as the increase in the dependent variable if the independent variable increased by one standard deviation and all the other independent variables in the equation remained constant. The table below reports the path coefficients as produced by ADANCO. As the deviations are small, it can be interpreted as the data is leaning towards normality with small variance, indicating data concentration. This implies that participants expressed their views in similar quantifications for every variable and constructs, indicating consistency and reliability.

Table 6. 9: Path coefficients from ADANCO

	Dependent variable
Independent variable	Innovative Behaviour
Org Culture	0.2075
Skill Set	0.1818
HR Processes	0.2565
Motivational Factors	0.3444

Indirect effects

If a variable X has an effect A on the variable M, and the variable M has an effect B on the variable Y, then the indirect effect of X on Y is A×B. Indirect effects are an important element of mediation analysis (Byrne, 2016). The following table reports the indirect effects calculated by ADANCO.

Table 6. 10: Indirect effects from ADANCO

	Dependent variable
Independent variable	Innovative Behaviour
Org Culture	
Skill Set	
HR Processes	
Motivational Factors	

From the table, it can be seen that ADANCO didn't return any values and this indicates that there is no indirect effect. This is important as if there are indirect

effects, then the factor loading won't be independent, leading to confounding effects.

Total effects

The total effect of one variable on another is the sum of the direct effect and all the indirect effects. The value of the total effect is interpreted as the increase in the dependent variable if the independent variables were increased by one standard deviation. Total effects are particularly useful in business success factor research (Byrne, 2016). The table below reports the total effects.

Table 6. 11: Presentation of total effects

Independent variable	Dependent variable Innovative Behaviour
Org Culture	0.2075
Skill Set	0.1818
HR Processes	0.2565
Motivational Factors	0.3444

Effect size (Cohen's f ^{2})

The effect size indicates how substantial a direct effect is. Its values can be greater than or equal to zero. In ADANCO, the effect size is represented by symbol f ^{2}. (Henseler, 2017) provides a table to interpret the Effect Size, and this table is reproduced below.

Table 6. 12: Interpretation of effect size

Effect size	Interpretation
$f^2 \geq 0.35$	strong effect
$0.15 \leq f^2 < 0.35$	moderate effect
$0.02 \leq f^2 < 0.15$	weak effect
$f^2 < 0.02$	unsubstantial effect

Source: Henseler, 2017

In this study, the size of each effect as part of an effect overview, was computed using ADANCO's model functions. The following table reports these values.

Table 6. 13: Effect size computed using ADANCO

Independent variable	Dependent variable Innovative Behaviour
Org Culture	0.2075
Skill Set	0.1818
HR Processes	0.2565
Motivational Factors	0.3444

When the table was matched with guidelines provided by (Henseler, 2017), it can be seen that Organisational Culture, Skill Set and HR Processes show moderate and strong effects respectively. Motivational Factors demonstrate the strongst effect.

The above Effect table provides an indication as to the potential outcome of hypotheses testing. However, to confirm this, another test, called the Bootstrap was run using ADANCO.

Bootstrap inference statistics

In order to establish, statistical significance and to generalize results from a sample to a population, the path coefficients should be evaluated for significance. This is a fundamental notion in quantitative studies. To obtain inference statistics, in ADANCO, a researcher must open the run dialog in order to obtain Inference statistics including the empirical bootstrap confidence intervals, as well as p-values for one-sided or two-sided tests.

A path coefficient is regarded as significant (i.e., unlikely to purely result from sampling error) if its confidence interval does not include the value of zero, or if the p-value is below the pre-defined alpha level. Despite strong pleas for the use of confidence intervals (Cohen, 1994), the reporting of p-values still seems to be more common in business research.

In this study, using ADANCO, five specific result tables were used to make an inference. These are explained below.

Direct Effect

Fig 6.1 shows the direct effects' bootstrap results provided by ADANCO with p-values for one-sided and two-sided tests as well as the lower and upper bounds of 95% and 99% confidence intervals.

Effect	t-value	p-value (2-sided)	p-value (1-sided)	Percentile bootstrap quantiles			
				0.5%	2.5%	97.5%	99.5%
Org Culture -> Innovative Behaviour	1.2072	0.2276	0.1138	-0.2569	-0.1037	0.5822	0.7478
Skill Set -> Innovative Behaviour	1.6094	0.1078	0.0539	-0.1172	-0.0627	0.3799	0.4338
HR Processes -> Innovative Behaviour	1.9149	0.0558	0.0279	-0.0632	0.0169	0.5304	0.6446
Motivational Factors -> Innovative Behaviour	2.4258	0.0154	0.0077	-0.0946	0.0396	0.6011	0.6620

Fig 6. 1: Bootstrap results using ADANCO

As seen from the Figure above, HR Processes and Motivational Factors show significance.

Indirect Effect

ADANCO did not return any indirect effects significance test results as there was no indirect effect identified in this study.

Total Effect

Fig 6.2 shows the total effects derived through the bootstrap results.

Effect	p-value (2-sided)	p-value (1-sided)	Percentile bootstrap quantiles			
			0.5%	2.5%	97.5%	99.5%
Org Culture -> Innovative Behaviour	0.2276	0.1138	-0.2569	-0.1037	0.5822	0.7478
Skill Set -> Innovative Behaviour	0.1078	0.0539	-0.1172	-0.0627	0.3799	0.4338
HR Processes -> Innovative Behaviour	0.0558	0.0279	-0.0632	0.0169	0.5304	0.6446
Motivational Factors -> Innovative Behaviour	0.0154	0.0077	-0.0946	0.0396	0.6011	0.6620

Fig 6. 2: Total effects results derived from bootstrap results

Student t-values

Fig 6.3 reports the loadings' bootstrap results, with only Student t-values provided.

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			14.4269		
Qualified Employees			20.7678		
Innovative Culture in Organisation		8.3776			
High quality work environment for talented staff			4.4733		
TD-EffTalent				7.2690	
TD-TrgNeeds				3.9355	
TD-HRPlng				10.9504	
TD-EmplNeeds				16.3239	
TD-JobRotatn		6.3819			
TD-StaffTRg				6.7386	
TD-Mentoring				10.7491	
TD-TrgMatl				5.5814	
TD-CareerDevl		11.0801			
TD-LeaderDev		6.2434			
TD-SuccsnPlan		13.0843			
TD-TalentPool				12.5895	
TD-Professional				13.2850	
TD-LeaderPositions				15.3171	
TR-RightTalent		24.0310			
TR-BenchmarkOrg	10.4428				
TR-CompetitiveCompensate	18.5193				
TR-LongTermRetn	16.2370				
TR-LearngEnv					17.4240
TR-WorkCondition					21.4160
TR-EmployeeTreatment		8.1187			
TR-EqualOpp		16.5440			
TR-Satisfaction					5.2157
TR-HalthcareAssistance	8.6145				
TR-LifeEvents	20.4689				
TR-Achievements					26.1133
TR-Flexibility					10.2564
TR-FinancialSupprt					18.0356
TR-EmpEngaged					17.1216
TR-MgtParticipation		16.1070			
TR-RetainQualStaff	7.1244				
TR-ReatainTlntStaff	14.3975				
TR-RetainCareer					15.9808
TR-FinRewards					14.4361
TR-AcadmRsrch					11.8363
TR-PerfmMonitor		10.6339			
TR-EmpGrwthPrg		7.7226			

Fig 6. 3: Bootstrap results based on Student's t-test

Indicator Weight

Fig 6.4 reports the indicator weights' bootstrap results, with only Student t-values provided.

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			6.6666		
Qualified Employees			7.6006		
Innovative Culture in Organisation		7.3160			
High quality work environment for talented staff			6.1525		
TD-EffTalent				6.5308	
TD-TrgNeeds				3.9366	
TD-HRPlng				10.1889	
TD-EmplNeeds				10.3280	
TD-JobRotatn		6.3405			
TD-StaffTRg			6.4254		
TD-Mentoring				7.0372	
TD-TrgMatl			4.9080		
TD-CareerDevl		9.2511			
TD-LeaderDev		7.2137			
TD-SuccsnPlan		9.6915			
TD-TalentPool				8.0018	
TD-Professional				7.2474	
TD-LeaderPositions				8.8604	
TR-RightTalent			10.2335		
TR-BenchmarkOrg		8.8220			
TR-CompetitiveCompensate		14.8945			
TR-LongTermRetn		14.9376			
TR-LearngEnv					12.4934
TR-WorkCondition					11.2858
TR-EmployeeTreatment			10.6335		
TR-EqualOpp			9.2562		
TR-Satisfaction					5.1514
TR-HalthcareAssistance		9.9280			
TR-LifeEvents		12.1232			
TR-Achievements					12.2760
TR-Flexibility					7.7011
TR-FinancialSupprt					11.0858
TR-EmpEngaged					14.7784
TR-MgtParticipation			9.1621		
TR-RetainQualStaff		9.8857			
TR-ReatainTlntStaff		10.4978			
TR-RetainCareer					11.3287
TR-FinRewards					13.4043
TR-AcadmRsrch					11.3266
TR-PerfmMonitor			9.8622		
TR-EmpGrwthPrg			9.4375		

Fig 6. 4: Indicator weights bootstrap results based on Student's t-test

Hypotheses Testing

In order to conduct hypotheses testing, the path coefficients, standard errors, and P values were calculated first. The hypotheses testing employed P values and confidence intervals. With P values, frequently the criterion $P < 0.05$ is used instead of $P \leq 0.05$, for accepting a hypothesis. In practice, using either criterion tends to have the same effect, since it is rare for a P value to be exactly 0.05.

In this study, ADANCO reported the following P-values, as depicted in Fig 6.5.

Effect	t-value	p-value (2-sided)	p-value (1-sided)	Percentile bootstrap quantiles			
				0.5%	2.5%	97.5%	99.5%
Org Culture -> Innovative Behaviour	1.2072	0.2276	0.1138	-0.2569	-0.1037	0.5822	0.7478
Skill Set -> Innovative Behaviour	1.6094	0.1078	0.0539	-0.1172	-0.0627	0.3799	0.4338
HR Processes -> Innovative Behaviour	1.9149	0.0558	0.0279	-0.0632	0.0169	0.5304	0.6446
Motivational Factors -> Innovative Behaviour	2.4258	0.0154	0.0077	-0.0946	0.0396	0.6011	0.6620

Fig 6. 5: p-values based on ADANCO

The two constructs, Human Resource Processes and Motivational Factors reported p-values of 0.0279 and 0.0077 respectively on a 1-sided test. The other two constructs Organisational Structure and Skill Set returned a P-value of 0.1128 and 0.0539 respectively.

Therefore, based on the P-Values, this study is able to confirm that, Human Resource Processes influence Innovative Behaviour and Motivational Factors influence Innovative Behaviours.

Thus the following hypotheses are accepted or rejected:

H3: Human Resource Processes positively influence innovative behaviour in employees in organisations - **ACCEPTED**.

H4: Motivational factors of individuals positively influence innovative behaviour in employees in organisations – **ACCEPTED**.

H2: Skillsets of employees positively influence innovative behaviour in employees in organisations - **ACCEPTED**.

* The Skill Set constructs was very close to 0.05. This is assumed to be converging towards 0.05 level and hence this hypothesis also accepted.

H1: Organisational culture positively influences innovative behaviour in employees in organisations - **Rejected**.

* There is no strong evidence that Organisational Culture is converging towards 0.05 level on a 1-sided test for P-value. Hence, this hypothesis is rejected.

CHAPTER 7: DISCUSSION

In the previous chapter on 'Quantitative Data Analyses', as a result of conducting ADANCO tests, three hypotheses were accepted and one hypothesis was rejected. These are:

H1: Organisational culture positively influences innovative behaviour in employees in organisations - **Rejected**.

H2: Skillsets of employees positively influence innovative behaviour in employees in organisations - **ACCEPTED**.

H3: Human Resource Processes positively influence innovative behaviour in employees in organisations - **ACCEPTED**.

H4: Motivational factors of individuals positively influence innovative behaviour in employees in organisations – **ACCEPTED**.

In this chapter, a discussion is provided drawing evidence from prior studies so as to comprehend the overall outcomes of the statistical tests conducted.

Organisational Culture

In this study, there was insufficient evidence to support the hypothesis that organisational culture positively influences innovative behaviour in employees. A prior study has found that innovative performance occurs when organisational culture supports it, and adequate rewards were provided acknowledging such a performance (Kim & Yoon, 2015). Furthermore, (Kim & Yoon, 2015) also established that this is subject to the degree of support provided in the organisation, and depends upon the leadership. In this study, despite the fact that there is strong evidence that innovative performance is rewarded and that leadership is involved in promoting such performance, the hypothesis that organisational culture is positively influencing innovative behaviour is not supported. This needs further explanation.

The qualitative analysis clearly indicated that there is a cultural shift happening in the UAE public service, as stated by a participant, "In terms of **cultural aspects leading to innovation**, there is room for change and there is acceptance from the leaders and management and they encourage us to enhance and share ideas and put our values in the ministry in our organization for, even we share our processes and practices with other initiatives". The inference from this statement is that there is a top down cultural shift occurring in the public service, and there is a national and unified agenda within the public service. Further evidence was also found in the qualitative data analyses from the statement: "We need to force innovation in our organization because they [management] are expecting new ideas". This

statement can be interpreted as there is encouragement for innovative behaviours, and this is supported by various support schemes, however these are in nascent stages. If this argument is taken to be true, then it can be seen that within the UAE public service, innovative behaviours is encouraged, and that there are organisational level schemes available to reward this behaviour, however the 'climate' is not fully matured. (Kim & Yoon, 2015) noted that creating a climate for innovation is subject to the degree of support provided by employees, to explore new and creative ways in an organisation and within the context of public service organisations, such a climate could be restrictive. This could be one reason why this study is not able to find organisational culture having positive influence on innovative behaviour.

Further support to the argument that organisational culture may not positively influence innovation can be seen in (Yan et al., 2019) who stated that high autonomy, risk taking and low bureaucracy also influence innovative behaviours in organisations. If these dimensions hold true, then, within a public service context, there will be reluctance to take risk as the main purpose is to service the public rather than to make profit, and innovative behaviour is encapsulated within this context. While product innovation is normally based on 'trial and error' and the risk-taking aspect is built into the product innovation, when it comes to process innovation, such trial and error can't be possible. There is evidence in the qualitative data for this notion as one participant had stated: "Management has to encourage the middle level management to accept the young generation or the new generations of ideas, regardless of whether it can be implemented or not; it costs or doesn't". This statement indicates that cost is not a driver, rather public good is the driver for innovative ideas. Moreover, another participant stated that "It [management] has to encourage this people in order to share to have the opportunity. The ministry gives them the opportunity to share their ideas' indicating that the UAE public service encourages elaborate discussions leading to the considerations of innovative ideas, and hence these protocols might be dictating innovative behaviour. This is a major difference between product innovation and process innovation, where the ideas can be tested quickly in product innovation; between private and public enterprise where in the private enterprise, cost is a driver. So, these factors could be leading to insufficient evidences for not accepting the hypothesis.

(Anderson et al., 2014) also provide additional support to the notion that public service innovative behaviour is complex, as they state that interaction is a key element of innovative behaviour influencing organisational culture within the context of innovative behaviours. UAE public service is a complex organisation and comes with a top down hierarchy. Hence,

the interaction is also complex. The reference in a participant's statement that "ideas are encouraged for sharing" implies that the culture is still emerging in terms of idea sharing and then culminating in an implementation. Thus, it is possible that the organisational culture is still evolving and hence the hypothesis that organisational culture influences innovative behaviour hasn't found strong evidence.

(França et al., 2017) state that merely rewarding employees for individual innovation won't help, as organisations have to identify, assess and determine the association between factors that influence innovation. While the reward scheme is available within the UAE public service, it appears that the assessment and association of factors are yet to emerge, as in the qualitative discussion there was no reference to this notion. From the qualitative data, the researcher is able to extract the statement: "In terms of financial resources, it is clear how much investment we do in terms of our innovation" indicating there is direct reference to financial aspects. Further evidence to the fact that the associations haven't been explored was found by the researcher in the statement: "If I may add, supporting innovation is basically supporting innovative or creative people, its true about system and its true about culture', and from this statement it can be inferred that within the UAE public service, innovative behaviour is still pitched at individual innovation and the assessment and association of key behavioural factors leading to organisational culture is yet to evolve. (Amabile & Pratt, 2016) state that innovation and culture are intrinsically associated. (A. Bos-Nehles, Bondarouk, et al., 2017), and (McMahon et al., 2016) also state that setting values leading to a change in the organisational culture is key to innovative behaviours. While reward schemes and encouragement to foster individual innovations are found in the UAE public service, the various associations between the factors of innovative behaviours as a collective organisational entity appears to be evolving. Elements such as these could have contributed to the lack of evidence in supporting the hypothesis that organisational culture positively influences innovative behaviours. Hence, this study was not able to find strong evidence that UAE public service comes with an organisational culture to influence innovative behaviours.

Skill sets

This study found strong evidence that skill sets of employees positively influence innovative behaviour. Prior studies have indicated that in order to innovative, skills have to be put into use. Innovation, especially at the process level, is a complex entity, and requires a multitude of skills (Birdi et al., 2016)(Birdie et al., 2016). This study, in this context agrees with (Birdi et al., 2016).

From the qualitative data, the researcher was able to extract that "Regarding talent here [in UAE public service], actually the government spent a lot and they do a lot of investment in young generation, they organise 100s of leadership and creativity and innovation programs delivered by top educational institutions like Harvard and they select the top young people from all government organizations and we send them to Prime Cabin training institute". The implication of this statement is that there is concerted effort by the government to generate required skill sets in the next generation leaders so that innovation can be realised. In an earlier section, the researcher inferred that within the UAE public service, the cultural shift towards innovations is emerging but not mature yet. This study found that motivation, knowledge and skillsets are fostered in the UAE Public service and in this context, it agrees with the views of Anderson et al. (2014) who found that individuals are enabled to innovate when they are trained to diagnose the need for creative solutions and develop an understanding how these creative solutions can be implemented in a given context. The researcher is able to find evidence in **fostering talent** through statements such as "Our talents are empowered, encouraged as well as incentivized in order to participate as well as to create ideas"; "We need to force innovation in our organization because they are expecting new ideas"; "Management has to encourage and force the management or middle level management on the organization to accept the young or new generations ideas, regardless of whether it can be implemented or not, it cost or doesn't cost"; and "They [management] has to encourage this people to share by giving them the opportunity, the ministry gives them the opportunity to share their ideas and from the start they have to share their ideas in proposal and not just talk about it without doing it". These statement collectives indicate that there is an organisation shift for innovation, and individuals are 'empowered' or provided with necessary skills to realise their ideas within the public service. These views echo with (Anderson et al., 2014; Cropley & Cropley, 2017; França et al., 2017) who observed that in order to realise innovative ideas in organisations, different competency models need to be developed, and organisations have to 'unlock' the potential in individuals. Furthermore, the researcher found that the correlation between skill set and innovative behaviour to be 0.9406 (p=0.0539), indicating these two constructs are strongly linked. Hence, this study found adequate evidence to assert that skill set is essential for innovative behaviours.

This study also echoes the outcomes of (Wang et al., 2015) in establishing that the process of developing skill sets leading to the creation of ideas includes the ability to develop and modify ideas. Furthermore, Janssen et al found that creative ideas should co-exist with the application of ideas, and aim at improving organisational performance. The path to

performance improvement as a result of innovative behaviour hinges upon recognising a problem and finding a solution, individuals seeking ways to promote the solution and finally modelling the solution. It can be seen that these require multitude of skills and the realisation of innovation is thus complex, requiring a range of skill sets. There is sufficient statistical evidence to indicate the complex process within the UAE public service is facilitated through various training and development programmes, and these consist of the provision of training needs, human resource planning to match people with skills to innovation, job rotation so that wider skills can be obtained by skilled staff, and staff training to further acquire additional skills. In addition to these, mentoring and leadership programmes are also available in the UAE public service. These schemes collectively enable individuals to acquire required skill sets that match the organisational needs to realise innovation through creative ideas. This study has found scientific support for this notion.

This study also concurred with (Gharama et al., 2020) who found that within the public service, to realise innovation, self-efficacy is essential. (Gharama et al., 2020) refer to self-efficacy as one's self belief in achieving outcomes rather than just the skill set. (Fang et al., 2019) established that self-efficacy mediates leadership and performance outcomes. These arguments are true as the studies referred provided statistical evidences to these notions, hence, this study agrees with the outcomes of (Gharama et al., 2020) and (Fang et al., 2019). Participants of the present study stated that the HR department monitors performance of individuals where established reward schemes and promotion opportunities are provided. Additionally, the succession planning schemes within the UAE public service indicates leadership growth. Thus, there is strong evidence that the outcomes of this study are comparable to prior studies that have established skill sets having a positive influence on innovative behaviour.

Human Resource Management

The present study found that Human Resource Processes positively influence innovative behaviours. The statistical tests indicate that there is sufficient evidence (0.9439) to accept the hypothesis that human resource processes have a positive influence on employees' innovative behaviours in the UAE public service. The construct human resource process was measured in terms of employees' talent and their fit to the organisation, benchmarking UAE public service with others in the sector as well as the region, compensations schemes that are competitive, longer term retention of employees, learning environment provided to employees, working conditions, equal opportunities to employees, employee satisfaction, healthcare assistance packages and life events. These variables were explored through the

qualitative study and measured through a survey instrument. The statistical tests conducted showed that the construct as well as variables were associated with positively influencing innovative behaviours in employees. So, in this context, this study agrees with the outcomes of the systematic literature review conducted by (Seeck & Diehl, 2016) who found that commitment of HR practices fosters innovative behaviours in organisations.

Prior studies have found that organizations encourage innovative behaviours through HR practices, and bring out specific desired behaviours to suit organisational needs (Bergh, Connelly, Ketchen, & Shannon, 2014). Signalling theory also shows that employees see human resource practices as signals of the organisation and align with organisational values through human resource practices (Wood & Ogbonnaya, 2018). The theory further argues that organisations send signals to employees on various reward schemes and employees interpret these signals to perform and behave accordingly. If employees perceive these signals as providing the values they expect, they reciprocate with organisations achieving its goals. Thus, if employees perceive human resource practices to yield to the reward schemes of innovative behaviours, and facilitate the generation and championing of new ideas, then employees tend to reciprocate these practices with innovative behaviours. This was evident in this study in the qualitative interviews. Prior studies support this notion and hence this study is in agreement with prior studies in this regard (De Spiegelaere et al., 2018; Osborne et al., 2019; Wang et al., 2015).

This study also agrees with (Devloo, Anseel, De Beuckelaer, & Salanova, 2015) who established that individual-level outcome is key to innovation in organisations, and this is facilitated by generating new ideas, procedures, and work processes. Through this study, it was found that employees of UAE public service are encouraged to conduct these tasks as qualitative data suggests these. Through qualitative extraction, the researcher is able to establish that there are processes and support schemes available within the UAE public service to foster the generation of new ideas and then to take the ideas to realisation, in support of this statement: "We have records of them (people who went for training) it is very easy for us when an idea comes up and who wants to adopt it, who want to take over, … and if they are available … most of the time they got transferred to embassies abroad because everybody wants them they are prepared, they are trained". This realisation leads to individual-level outcome as suggested by (Devloo et al., 2015). When the statistical tests were analysed, the factor loading for various elements such as staff training and professional development were returned with higher factor loading (0.8 and above) indicating alignment with qualitative and quantitative data.

This study is able to provide further evidence that organisational procedures are effective and successful in terms of fostering innovative behaviour in employees. For example, employee needs and employee satisfaction were returned with high loads (0.7 and above) indicating that the human resource procedures in enabling innovative behaviours in the UAE public service is well aligned. This is recommended by (Yuan & Woodman, 2010) who found that comprehensive innovative behavioural construct comprises the generation of ideas and their transformations into concrete innovations.

This study also agrees with the views of (A. C. Bos-Nehles & Veenendaal, 2017) who found that innovative behaviour is also seen in terms of discretionary behaviour that goes beyond prescribed role expectations. In essence, in order to realise innovation, employees have to go beyond that prescribed job specifications, and perform in domains that are not explicitly expected by employees. In the qualitative data, the researcher was able to find evidence for this in the statement "In terms of financial resources, it is clear how much investment we do in terms of our innovation, yesterday we did training in terms of innovation, we have also for example (Creative Hour) that is done by happiness & creativity committee, this teachers the culture of innovation". People are participating more and more and we also have the 'Creativity Platform' and people are also given incentives to participate" indicating the UAE public service offers more opportunities to people and this has culminated in a shift in the way people are allowed to perform as attested by a participant; "All of us working together for one goal is supported by the management and it doesn't have any issue if people work from different departments or from different organizations to innovate and share their information with each other. I think we have all the support from the management and from the leaders as well, regarding the innovation and participation, in the ministry". Additionally, the quantitative data also indicates that appropriate compensation systems are made available to employees who perform and demonstrate their innovative behaviours, and the UAE public service benchmarks its practices in the region, thus echoing what (De Spiegelaere et al., 2018) referred to as the importance of innovative behaviours in creating a sustainable competitive advantage by understanding employee needs and stimulating the same through human resource procedures. Within the UAE public service, there is strong evidence that based on the belief that employees are encouraged to innovate leading to the organisational capacity of innovation, employees are encouraged to imagine and create various new procedures. The human resource procedures are conducive to identify, develop, evaluate, and reward innovative behaviours in the UAE public service.

The survey participants indicated that job satisfaction and associated issues such as equal opportunities are key in fostering innovative behaviours. Within the construct 'human resource processes', factors such as job satisfaction, equal opportunities and retention were grouped. In this context, this study is in accord with many prior studies. Within the UAE public service, workforce diversity is a core strategy, leading to fitting individual skills to realise innovation. This activity is conducted in a transparent manner, with proper HR policies and schemes, and public service employees were made aware of such schemes. In this context, this study is in agreement with (Dedahanov et al., 2017) who found that many organizations consider they have a duty to promote fairness and equality in the organizations in order to channel their human resource departments' energies to develop a positive working environment so that employees realise satisfaction in their workplace. Furthermore, a discovery made through this study is that support for UAE public service has processes for positive awareness in working environments, the selection of skilled employees, and the creation of advanced concepts to deal with job-related issues within the context of innovative behaviours and agrees with (Dedahanov et al., 2017).

In the context of workforce diversity, a key element established in this study was that UAE public service comes with procedures to eliminate issues such as an inappropriate job or unfavourable job assignments. The researcher was able to find statements to this effect; "In the UAE public service there is a way in the performance system to appraise an employee, ... they have to take into account to develop a skill or to have a competency added to their CV" indicating there are opportunities for diversity. In this context, this study is in agreement with (Moon & Christensen, 2019) who found diversity management a key to innovative work behaviour in organisations. While workforce diversity management includes various elements such as race, gender, age, ethnicity, education, experience, interest, status, and functional diversity, this study did not find support for gender having any influence on the innovative behaviour, indicating that within the UAE public service, equal opportunity exists.

Through this study, it was also discovered that job satisfaction is as a major factor in the context of innovative behaviour. In fact, the qualitative component had strong statements to this effect, and this was associated with retention strategies within the UAE public service. Prior studies found that higher job satisfaction and job performance are fundamentals of effective workforce diversity management (Moon & Christensen, 2019) and this study echoes similar sentiments that job satisfaction and job performance are highly correlated in the context of innovative behaviours (Vanderschuere & Birdsall, 2018) .

An important discovery made in this study is the importance of education and skills match, to realise innovation. Within the UAE public service, human resource processes have stringent selection procedures, however, in the context of innovation, employees require additional skill sets so that their fit can be aligned with the innovative strategies. In the UAE public service these additional alignments are realised by providing specialist training programmes. (Pei-Li, 2017) reported that any skill mismatch would become a critical issue in a given working environment, and that job mismatch is negatively related to employees' outcomes. The researcher found that in the UAE public service, through various training programmes, appraisal schemes and performance incentives, public service employees' job assignment, job engagement, job task and duties, job type, job environment, and job conditions are aligned to the individual skills and strategic alignment, and in this context this study agrees with (Gabutti & Morandi, 2019) who argues for these alignments. Furthermore, this study is able to provide support to the notion raised by (Vanderschuere & Birdsall, 2018) that the relationship between workforce diversity management and job outcomes should be well established in an organisation, leading to innovative work behaviours.

Through the qualitative component, the researcher was able to infer that job performance management occurred in a systematic manner in the UAE public service. Job performance is the activity toward the specific task which gives positive or negative outcome. (Vanderschuere & Birdsall, 2018) state that workforce diversity management is strongly linked to both work/job satisfaction and work/job performance. Also, positive diversity leads to a low turnover intention, high organizational commitment, and high job performance. These were inferred by the researcher in the discussion, confirming the notion that within the UAE public service there is strong correlation between job-related diversity and job outcomes. In this context, this study agrees with the outcomes of (Moon & Christensen, 2019), and (Park & Liang, 2019) who found that both merit-based practices and workforce diversity management positively influence organizational performances, resulting in the enhancement of such performances. The researcher is able to find statements to the effect that favourable working environment is provided by the UAE public service, and that staff selection is merit-based in order to realise effective utilization of employees' skills for better job performance.

Thus, various activities such as the retention of talent, performance evaluation, training needs assessment and provision, diversity to enhance job portfolio and incentive & reward schemes to staff that demonstrate innovative behaviours are managed successfully by the UAE public service human resource departments, and these collective activities positively

influence innovative behaviour in the UAE public service. This is found to be strongly validated in the statistical tests leading to the acceptance of the hypothesis that Human Resource Processes in the UAE public service positively influence innovative behaviours.

Motivational Factors

This study found that motivational factors of individuals positively influence innovative behaviour of employees in the UAE public service. The various factors that contributed to the motivational factors were; benchmarking UAE public service with other organisations to evaluate talent retention strategies, benchmarking UAE public service with other organisations outside the country to evaluate talent retention strategies, competitive compensation system, competitive compensation system for long-term to retain talent, supportive learning environment which promotes employee job satisfaction to retain qualified employees, high-quality working conditions to retain the highly qualified talents, assistance to retain qualified employees, fair acknowledgement of employee work efforts and achievements to retain employees, flexible work hours, roles and tasks to retain qualified employees and financial and other non-financial rewards to retain talented staff and employee engagement. While some of these factors could be included in the human resource processes, in the public services, these factors were seen as motivating factors by employees to contribute towards innovative behaviours and stay in the organisation. These factors mainly contribute to extrinsic motivation and are attested by (Fischer et al., 2019).

It is important to realise creativity in an organisation to be competitive and maintain sustainability in the market, however, public services have different principles, where supporting and servicing the public is the main activity. In this context, there are less incentives to innovate. However, in the context of public services, innovative behaviour is seen to improve processes rather than products. In the modern digital era, the products that demonstrate services – for example a web application, is seen to be leading towards innovation. Therefore, the distinction between product innovation and process innovation within the context of public service is also blurring. Thus, a range of organisational systems is required to motivate people to innovate, and this is seen in the form of identifying problems, establishing applicable and cost effective solutions, generating new ideas to implement these solutions, individuals championing these innovative solutions into products or processes, and then implementing these at an organisational level (Bibi & Afsar, 2020; Kondratenko & Zaporozhets, 2018). In this study there is evidence that these occur in the UAE public service.

The researcher is able to extract data from the qualitative discussions to the effect of this statement: "We have records of them (people who went for training) it is very easy for us when an idea comes up and who wants to adopt it, who want to take over, … and if they are available …'. The conversation was in the context of people attending specialist training programs and then developing their awareness about various innovative behaviours. It can be inferred from the statement that the UAE public service has a systematic way of training people, leading to innovative behaviour.

Prior studies have found that innovative behaviours depend on motivation of individuals (Anderson et al., 2014; Birdi et al., 2016). Studies have also found that individual fit to organisational strategies lead to innovative behaviours, as intrinsic behaviours realise innovation (Devloo et al., 2015; Fischer et al., 2019). While previous studies were not able to assert whether this factor is a dependent or control variable, in this study, the researcher is able to provide evidence to the fact that individual motivational factors are a dependent factor rather than a moderating, mediating or control factor. For example, the statement "If we look at this practice in our human resources, they are taking care of people who come to the ministry, people who have innovation - we support in terms of training, if we have incubated the innovated people with the organization and we have given them incentives, we have recognized them, the systems are there to support innovative ideas …" the researcher is able to identify that individual fit is ensured within the UAE public service, and that there are processes to cultivate such fit, leading to the fostering of innovative ideas, and hence innovative behaviours. Furthermore, in the quantitative data, the innovative behaviour and motivational factors were highly associated with a load of 0.8756, indicating high dependency. Thus, the researcher is able to assert that innovative behaviour is dependent on motivational factors. Additionally, in the factor loading, factors such as retaining quality staff, retaining talented staff, long term retention, competitive compensation and benchmarking, attained a load over 0.5, indicating the strength of these factors in determining innovative behaviours. The self-determination theory (SDT) also supports such factors as extrinsic motivational factors influencing innovative behaviours, and in this context this study agrees with (Fischer et al., 2019) who found that employee fit is conducive to innovative behaviours.

(Saether, 2019) found that individual fit is essential for innovative behaviour in an organisation. This is known as Person-Organisation Fit (PO), and is established that there is an association between innovative behaviour and PO. From the qualitative data, it is evident that the UAE public service is careful with its selection and recruitment processes, supported

by this statement: "…if we look at this practice in our human resources, they are taking care of people who come to the ministry, people who have innovation we support in terms of training" indicating that careful selection processes are found in the public service, signifying that PO is maintained. Also, as (Saether, 2019) had stated, in the UAE public service, identified motivation is found through various training programs. In this context, this study agrees with (Saether, 2019).

In terms of desired employee outcomes resulting from PO, especially factors such as increased job satisfaction, organizational commitment, and contextual performance were evident in this study. Other studies have also found that these factors contribute to innovative behaviours (Suseno et al., 2019). In this frame of reference, (Megheirkouni & Mejheirkouni, 2020) found that senior managers' contribution is crucial in developing and improving employees' innovative behaviours, as individual employees differ in their respective behaviours, and these managers have to recognise those factors that unite the employees towards an innovative culture to realise innovation in an organisation. In doing so, employees' perceptions of fit in the organisation is necessary. In this study, support for this notion is found both in qualitative and quantitative data. Especially, through the qualitative discussion, the researcher is able to establish this through these statements: "I think the ministry and the minster … encouraging innovation in xxxx and we can see xxxx award that was created in 2014 that encourages the employees to share their innovative ideas regardless of whether its within their departments or from their point of view that they see a gap in other departments"; 'All of us working together for one goal is supported by management" and "… (the minster) called for category so we already take this to the strategic department & raise it to his highness office and to the deputy office and got approved God Willing, starting from next year, the 'innovative department' & the 'innovative employee' will be the two categories, so this is good news" to indicate that senior managers support various initiatives to recognise individuals who befit the organisational goals of innovative behaviours. Thus, the outcome of this study is in agreement with prior studies, that motivational factors influence innovative behaviours.

Summary

The three hypotheses that have been accepted assert that human resource processes, motivational factors and skill sets influence innovative behaviours in the UAE public service. This study is able to find support for these in prior studies. While many prior studies discussed these constructs in the context of private organisations, that focus on product development, perhaps for the first time, this study is able to provide both qualitative and quantitative

evidence that these factors are also valid in a public service organisation. Hence, this study is able to validate and assert the following model with qualitative and quantitative evidences.
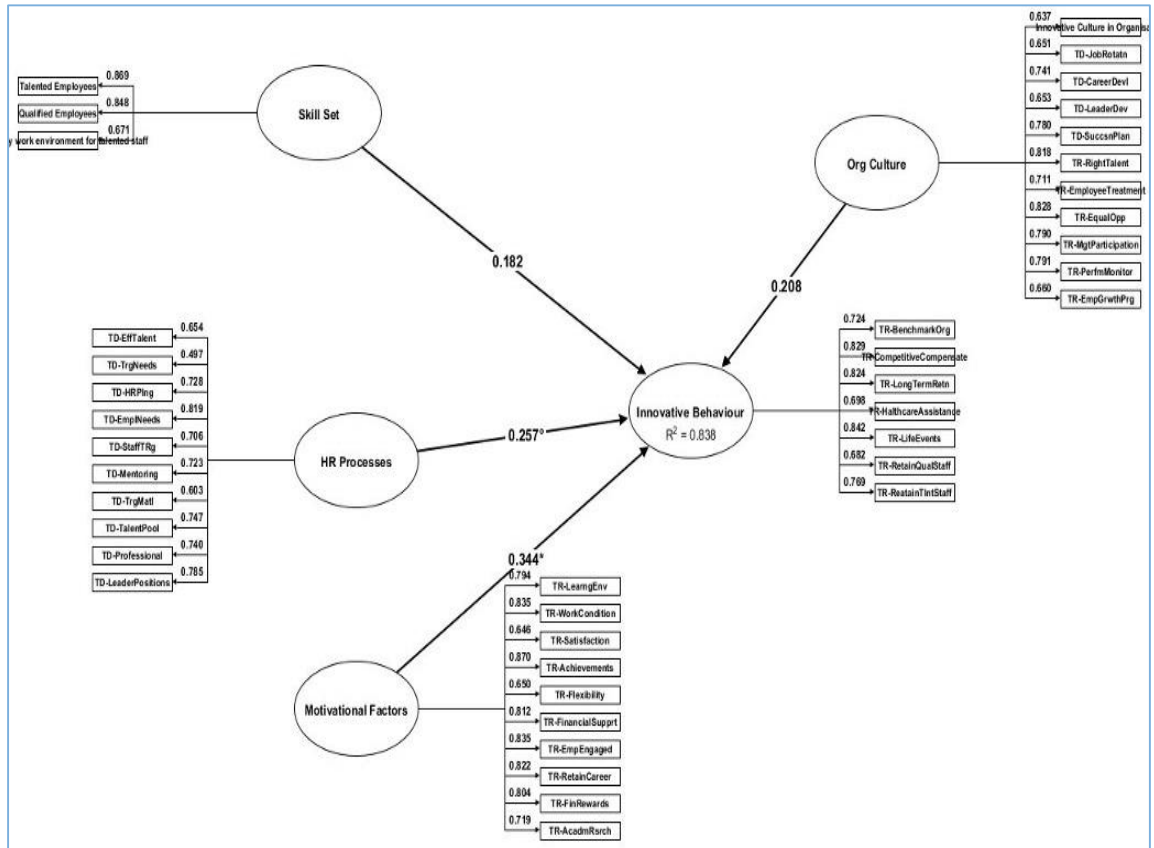

Figure 9 Model assertion with evidence

CHAPTER 8: CONCLUSION

The previous chapter provided a discussion on how this study agrees with many prior studies in establishing the following three hypotheses:

1. Skill sets of employees positively influence innovative behaviour in employees in organisations.
2. Human Resource Processes positively influence innovative behaviour in employees in organisations.
3. Motivational factors of individuals positively influence innovative behaviour in employees in organisations.

The study was able to find sufficient evidence using both qualitative and quantitative components to uphold the three hypotheses and found that employee skill set, human resource processes and motivational factors are essential ingredients for innovative behaviours in the UAE public service.

A close examination of the qualitative data indicates that these constructs are inter-related. For instance, for an individual to be motivated to think innovatively, mainly leading to the creation of ideas and refining processes in public services, they should come with the right skill set. From the qualitative study, as well as the literature reviewed, it is clear that skill sets come with two distinct phases: the first one is at the entry level, when an employee is recruited to a position. This could be the skills the employee possesses or the skills the employee acquires. Preceding literature indicates these as intrinsic and extrinsic skills.

The skills an employee acquires can be determined effortlessly through various documents such as qualifications certificates, training programs attended and other relevant certificates. The human resource departments merely validate these and extract measurable levels through an individual's portfolio or through his or her curriculum vitae. In addition to this, human resources facilitate augmentation of these skills through various training programs to eligible employees who exhibit innovative behaviours.

However, recognising whether an employee exhibits such innovative behaviours is a major challenge as individuals possess various skills that can't be documented. For example, communication and problem-solving skills. Considering problem-solving skills, within public service, problem identification skills are also included. It is still a cognitive exercise for managers to identify such skills and then foster these skills in a systematic manner – including exhibiting equity and fairness – so that there is no explicit bias in terms of individual growth. This falls under the leadership domain and the literature discussed many points under the

concept of transformational leadership, referring to how individuals are groomed to grow in their jobs so that their innovative behaviours are shaped up to meet organisational goals. While human resources play some role in fostering the 'shaping up' activities, leadership skills are necessary to recognise these talents in individuals. This is where the intrinsic skills of people are identified, brought out to the public, aligned with the organisational priorities and then realised in the implementation of creativity.

This research also found that creativity leading to the implementation of innovative ideas, especially in a public service, is a complex process. This process is different to that of a private sector, where product type innovation is given priority. Within this context, this study established that sharing ideas, working with teams, manoeuvring through the complex processes of public service and systematically following through the innovative idea to implementation, requires carefully crafted human resource processes. Thus, it can be seen that in order to reach the excellence in individual innovative behaviour, human resource processes play a crucial role in public services.

Furthermore, the literature review manifests that product innovation is mainly concerned with individuals. In this context, an individual gets an idea with trial and error processes, develops a product and tests it to establish the innovation. Subsequently, organisations bring the product to the market. In this context, the innovation is mainly the responsibility of an individual with the organisation backing it. So, organisational processes, rather than human resource processes are prominent in this type of innovation and associated behaviours. This leads to protection of the idea through various procedures, and financial benefits to those individuals.

On the other hand, the current study has established that in public service, due to the focus on public good, the innovative idea itself is shared from the onset. The reward scheme is through employment related benefits rather than financial benefits wherein in private organisations employees succeed through innovation gain shares or stock options. This is a major variation in the public service. As the public service innovation is a complex process and pointed to common good, rather than an individual good, this study asserts that the entire process of idea to implementation should be transparent, clear and systematically handled. Thus, while the individuals carry the innovative ideas to implementation, fostering the innovation in public service falls within the domain of human resource departments and associated processes. **This is a key finding this study established, and other studies didn't appear to provide such strong evidence. This is new knowledge**.

In order for such innovative ideas to be exhibited, skill set is crucial. While the technical knowledge is necessary, soft skills associated with the implementation of innovative ideas appear to be the central focus in the public service. This study is able to provide concrete evidence through the qualitative interviews that this was the case, and human resource processes play a crucial role in fostering these skills, aligning them with organisational objectives and then retaining them. Again, this is not discussed in the literature in depth, as the private sector is profit-oriented and the associated incentives for the organisation are different. This study also established that the public sector retains employees that demonstrate innovation and go to certain length in doing so. This knowledge appears to be new as literature reviewed provided limited evidence on longer term retention of employees within the context of innovative work behaviours.

In terms of innovative behaviours, which represent collective human resource creativity, this study has established that this is a top down process. There is clear evidence in this study to assert that unless the senior management takes such initiative, it is impossible to change the workforce to be creative. This involves giving freedom to be creative, with strong policies and processes encouraging individuals to 'think'. This is a completely new concept, as in the public service, employees are expected to 'do' rather than 'think'. This study has shown that it is possible to change the culture from 'do' to 'think and do' thus realising innovation to improve processes. However, the pivotal message is that the change in culture is dictated in a top-down manner starting from the most senior person, in this case the Minister, responsible for the portfolio. This is a key finding, this study has identified that in public service, innovation is for public good, and the financial and investment return is not a driver for innovation. However, processes associated with serving the public will be improved through innovation. As this is the motive, and as the scale of implementation is very large, unless this senior person in the public service is engaged, the innovation and associated innovative behaviour will not be developed. The present study has, perhaps, for the first time, provided evidence to this effect.

In terms of gender, while many studies reviewed established that the domain of innovation is dominated with one gender type, this study does not support this notion. This is despite the fact that the study was conducted in the UAE, wherein the perception is that the culture observed in UAE is male dominance. Contrary to this popular belief, and the stereotyping, this study established that innovative behaviour is an organisational matter and beyond gender stereotypes.

The current study has also found strong evidence that motivational factors influence innovative behaviours. While rewards and promotions are drivers of motivation, it was found that these should co-exist with sharing ideas in the organisation, processes to facilitate the ideas towards innovation and strong leadership to foster such behaviours. In this context, this study agrees with many other previous studies that discussed transformational leadership and innovation. While previous studies discussed intrinsic motivation as a driver for innovation, this study extended the notion by linking leadership to the identification of innovative behaviour and then developing such behaviour in a transparent, yet systematic manner through human resource processes. In this context, the present study provides a formula for systemising innovative behaviour as an organisational aspiration. This is a key difference as other studies didn't go to this extent, especially in a public service context. Therefore, this study establishes that innovative behaviour can be realised through systematic processes in an organisation, and that these processes can be realised in terms of training programs, sharing ideas, developing human resource processes to link innovation to rewards, and then articulating these in performance reviews. This is in contrast to private sector innovation where products are innovated and individuals or teams are rewarded as and when innovation occurs, without a systematic way of developing such innovation among employees. The main driver of innovation in the private sector is the availability of cutting-edge infrastructure and the motivations to innovate towards a competitive advantage. However, in public service these are not the drivers. With these differences in mind, perhaps, for the first time, this study has established that innovative behaviours can be systematically identified, developed and rewarded through human resource processes.

In essence, this study has established the following:

- Skill sets of employees is essential to support innovation, however, these skillsets should further be enhanced to align with organisational goals so that the innovation can occur in a given context in order to realise the innovation fully;
- Senior leadership support is essential in order to identify individuals with innovative behaviours and that this is a top down process;
- Human resource plays a crucial role in developing innovative behaviours in organisations through tailor made programs so that the innovation is realised within the organisational context;
- The process of developing innovative behaviours should be transparent, systematic and equitable;

- Individuals are motivated to innovate through reward schemes and in doing so, human resource plays a pivotal role in developing such behaviours;

- Gender appears to have no significant influences in determining innovative behaviours;

- Innovative behaviours are motivated by intrinsic factors and then developed collectively to reach a level of organisational culture, thus exhibiting an organisational wide innovative culture, not the other way; and

- Innovative behaviour in public service is a complex entity with interconnected individual motivational factors, individual skills and organisational human resource processes determining success, and the composition depends on the type of public service.

Limitations of this research

This research was focused on the determination of factors leading to innovative behaviours in the UAE public service. Within this context, a qualitative-quantitative sequential method was employed to initially understand the context and then test the hypotheses. In doing so, the UAE Ministry of Foreign Affairs was chosen for data collection as the researcher had access to the population in this domain. Hence, the outcomes of this research are flavoured with views from this sector of the UAE public service.

If the population was chosen from some other public sectors, for instance, roads and maintenance or civil aviation, the views could be different as these sectors of public service discuss innovation in both process and product areas. For example, the roads and maintenance will have different views of innovation as engineering innovation is well defined and hence the behaviours associated with these behaviours are also well established. The parameters for these types of innovation are also different to the ministry of foreign affairs, as the roads and maintenance is normally fixed to a local context, whereas the foreign affairs are not. These variations were beyond the scope of this study and hence were not normalised during the qualitative phases. Hence, there is an inherent bias in this study.

The samples are chosen based on a purposive – convenience sampling approach. Hence, it is imperative that the views of the samples were from a specific domain and hence could be biased with this view. Despite the fact that there is an in-built consistency in the qualitative conversations, this is limited to the sampling techniques employed, and hence the views could be polarised in this study.

The study was conducted within a public service environment and within this context it was recognised that major challenges still existed in assessing specific skills such as communication and problem solving. While these may influence how innovative behaviour is determined, these were considered to be beyond the scope of the study.

The importance of human resource departments and associated processes was identified in this research and this is new knowledge. As this knowledge was discovered only during the qualitative phase, this study deferred the examination of this factor to future studies.

The context related factors could have influenced this study as the UAE public service comes with their own processes. These processes could have influenced the outcome of this study, and if conducted in another context, this study might produce a variation in its outcome due to these context sensitive factors.

The quantitative component was used to test the hypotheses and the researcher had used a Partial Least Square Method for this. As such, a small sample size was adequate for the quantitative data. This could be a weakness despite the fact that many statistical tests were valid. By expanding the population, the outcomes of the research could be fully validated.

Future Research and Improvements

The researcher identified the following improvements to the present study:

1. A combination of secondary data pertaining to various documentations within the UAE public service, and primary data could be used, to further establish the outcomes of this research to bring assertive testing to the hypotheses posited;

2. To conduct a specific case study so that one innovative outcome could be tracked to understand the complete journey and provide recommendations based on this journey;

3. To expand the population in both qualitative and quantitative components to make the validity more pertinent;

4. To explore innovative behaviours in other sectors of the UAE public service; and

5. To examine the specific role of senior leadership leading to an innovative culture in the UAE public sector.

Conclusion

This study explored **how key organisational factors such as organisational culture, gender, skill sets, HRM reforms and motivational factors influence innovative behaviours in organisations and determine variables that contribute to such an influence.** These initial

constructs were considered as scope based on the literature review conducted. With this objective in mind, this study posited two specific research questions for further exploration.

1.   What set of factors influence innovative behaviours in organisations?

2.   Do the factors influencing innovative behaviour differ between public and private organisations?

The literature was further reviewed in this context and a set of hypotheses as shown below were raised in this study.

H1: Organisational culture positively influences innovative behaviour in employees in organisations.

H2: Gender positively influences innovative behaviour in employees in organisations.

H3: Skill sets in employees positively influence innovative behaviour in employees in organisations.

H4: Reforms undertaken by HR in an organisation positively influence innovative behaviour in employees in organisations.

H5: Motivational factors of individuals positively influence innovative behaviour in employees in organisations.

In establishing the hypotheses, the study used a qualitative-quantitative sequential methodology with qualitative discussions leading the quantitative testing. A unique characteristic of the study was the development of an instrument from the qualitative data in order to ensure the reliability of the instrument. The study used a Partial Least Square technique to test the hypotheses and established that:

1. Skill sets of employees positively influence innovative behaviour in employees in organisations.

2. Human Resource Processes positively influence innovative behaviour in employees in organisations.

3. Motivational factors of individuals positively influence innovative behaviour in employees in organisations.

Strong statistical evidence was provided in establishing the outcome of the study. The study also provided qualitative data in support as there is congruence in the qualitative – quantitative views. Furthermore, the study listed some limitations along with pointers to improve these, as well as future opportunities arising from this research.

REFERENCES

Abukhait, R. M., Bani-Melhem, S., & Zeffane, R. (2019). EMPOWERMENT, KNOWLEDGE SHARING AND INNOVATIVE BEHAVIOURS: EXPLORING GENDER DIFFERENCES. *International Journal of Innovation Management, 23*(1), 1950006. doi:10.1142/S1363919619500063

Al Ariss, A., Cascio, W. F., & Paauwe, J. (2014). Talent management: Current theories and future research directions. *Journal of World Business, 49*(2), 173-179.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in organizational behavior, 36*, 157-183. doi:10.1016/j.riob.2016.10.001

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework. *Journal of Management, 40*(5), 1297-1333. doi:10.1177/0149206314527128

Anser, M. K., Yousaf, Z., Khan, A., & Usman, M. (2020). Towards innovative work behavior through knowledge management infrastructure capabilities: Mediating role of functional flexibility and knowledge sharing. *European Journal of Innovation Management, ahead-of-print*(ahead-of-print). doi:10.1108/EJIM-09-2019-0250

Arino, A., LeBaron, C., & Milliken, F. J. (2016). Publishing qualitative research in academy of management discoveries. *Academy of Management Discoveries, 2*(2), 109-113.

Bani-Melhem, S., Abukhait, R. M., & Mohd. Shamsudin, F. (2020). Does job stress affect innovative behaviors? Evidence from dubai five-star hotels. *Journal of human resources in hospitality & tourism, 19*(3), 344-367. doi:10.1080/15332845.2020.1737769

Battistelli, A., Odoardi, C., Vandenberghe, C., Di Napoli, G., & Piccione, L. (2019). Information sharing and innovative work behavior: The role of work-based learning, challenging tasks, and organizational commitment. *Human resource development quarterly, 30*(3), 361-381. doi:10.1002/hrdq.21344

Bednall, T. C., E. Rafferty, A., Shipton, H., Sanders, K., & J. Jackson, C. (2018). Innovative Behaviour: How Much Transformational Leadership Do You Need? *British journal of management, 29*(4), 796-816. doi:10.1111/1467-8551.12275

Bendak, S., Shikhli, A. M., & Abdel-Razek, R. H. (2020). How changing organizational culture can enhance innovation: Development of the innovative culture enhancement framework. *Cogent Business & Management, 7*(1). doi:10.1080/23311975.2020.1712125

Bergh, D. D., Connelly, B. L., Ketchen, D. J., & Shannon, L. M. (2014). Signalling Theory and Equilibrium in Strategic Management Research: An Assessment and a Research Agenda. *Journal of management studies, 51*(8), 1334-1360. doi:10.1111/joms.12097

Besen-Cassino, Y. (2017). *Social research methods by example: Applications in the modern world* (1st ed.). New York and London: Taylor & Francis.

Bibi, A., & Afsar, B. (2020). Behavioural courage and its effect on innovative work behaviour of public sector employees: the role of managerial position and gender. *International Journal of Public Sector Performance Management, 6*(1), 124-142. doi:10.1504/IJPSPM.2020.105092

Bilan, Y., Hussain, H. I., Haseeb, M., & Kot, S. (2020). Sustainability and Economic Performance: Role of Organizational Learning and Innovation. *Inžinerinė ekonomika, 31*(1), 93-103. doi:10.5755/j01.ee.31.1.24045

Birdi, K., Leach, D., & Magadley, W. (2016). The Relationship of Individual Capabilities and Environmental Support with Different Facets of Designers' Innovative Behavior. *Journal of Product Innovation Management, 33*(1), 19-35. doi:10.1111/jpim.12250

Bos-Nehles, A., Bondarouk, T., & Nijenhuis, K. (2017). Innovative work behaviour in knowledge-intensive public sector organizations: the case of supervisors in the Netherlands fire services. *The International Journal of Human Resource Management: Leadership in global knowledge intensive firms, 28*(2), 379-398. doi:10.1080/09585192.2016.1244894

Bos-Nehles, A., Renkema, M., & Janssen, M. (2017). HRM and innovative work behaviour: a systematic literature review. *Personnel review, 46*(7), 1228-1253. doi:10.1108/pr-09-2016-0257

Bos-Nehles, A. C., & Veenendaal, A. A. R. (2017). Perceptions of HR practices and innovative work behavior: the moderating effect of an innovative climate. *International journal of human resource management, 30*(18), 2661-2683. doi:10.1080/09585192.2017.1380680

Brannen, J. (2017). *Mixing methods: Qualitative and quantitative research* (3rd ed.). New York, USA: Routledge.

Breuer, H., & Lüdeke-Freund, F. (2014). *Normative innovation for sustainable business models in value networks.* Paper presented at the The Proceedings of XXV ISPIM Conference-Innovation for Sustainable Economy and Society.

Bryman, A. (2015). *Social research methods* (5th ed.). Oxford, UK: Oxford University Press.

Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). New York and London: Routledge.

Carlucci, D., Mura, M., & Schiuma, G. (2020). FOSTERING EMPLOYEES' INNOVATIVE WORK BEHAVIOUR IN HEALTHCARE ORGANISATIONS. *International Journal of Innovation Management, 24*(2), 2050014. doi:10.1142/S1363919620500140

Clinton, L., & Whisnant, R. (2014). Model Behavior-20 Business Model Innovations for Sustainability SustainAbility. In: London.

Collis, J., & Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students* (4th ed.). Basingstoke, Hampshire, UK: Palgrave Macmillan.

Cooper, D. R., & Schindler, P. S. (2011). *Business research methods* (11th ed.). New York: McGraw-Hill/Irwin.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Los Angeles, London, New Delhi, and Singapore: SAGE, .

Cropley, D., & Cropley, A. (2017). Innovation capacity, organisational culture and gender. *European Journal of Innovation Management, 20*(3), 493-510. doi:10.1108/EJIM-12-2016-0120

de Jong, J. P. J., Parker, S. K., Wennekers, S., & Wu, C.-H. (2015). Entrepreneurial Behavior in Organizations: Does Job Design Matter? *Entrepreneurship theory and practice, 39*(4), 981-995. doi:10.1111/etap.12084

De Spiegelaere, S., Van Gyes, G., & Van Hootegem, G. (2018). Innovative work behaviour and performance-related pay: rewarding the individual or the collective? *The International Journal of Human Resource Management, 29*(12), 1900-1919. doi:10.1080/09585192.2016.1216873

Dedahanov, A. T., Rhee, C., & Yoon, J. (2017). Organizational structure and innovation performance: Is employee innovative behavior a missing link? *Career development international, 22*(4), 334-350. doi:10.1108/CDI-12-2016-0234

Demartini, P. (2018). Innovative Female-Led Startups. Do Women in Business Underperform? *Administrative sciences, 8*(4), 70. doi:10.3390/admsci8040070

Denning, S., July 23). . (2011, July 23). How Do You Change An Organizational Culture? *Forbes*. Retrieved from https://www.forbes.com/sites/stevedenning/2011/07/23/how-do-you-change-an-organizational-culture/#3a97e81a39dc

Devloo, T., Anseel, F., De Beuckelaer, A., & Salanova, M. (2015). Keep the fire burning: Reciprocal gains of basic need satisfaction, intrinsic motivation and innovative work

behaviour. *European Journal of Work and Organizational Psychology, 24*(4), 491-504. doi:10.1080/1359432X.2014.931326

Entrepreneurship and Organizational Innovation. (2020). (1st ed. 2020. ed.). Cham: Springer International Publishing.

Fang, Y.-C., Chen, J.-Y., Wang, M.-J., & Chen, C.-Y. (2019). The Impact of Inclusive Leadership on Employees' Innovative Behaviors: The Mediation of Psychological Capital. *Frontiers in psychology, 10*, 1803. doi:10.3389/fpsyg.2019.01803

Fischer, C., Malycha, C. P., & Schafmann, E. (2019). The Influence of Intrinsic Motivation and Synergistic Extrinsic Motivators on Creativity and Innovation. *Frontiers in psychology, 10*, 137. doi:10.3389/fpsyg.2019.00137

Fisher, E. M., & Wilmoth, M. C. (2018). Do I take the job?: Assessing fit with the organization. *Journal of Professional Nursing, 34*(2), 82-86. doi:10.1016/j.profnurs.2017.08.003

França, C. L., Broman, G., Robèrt, K.-H., Basile, G., & Trygg, L. (2017). An approach to business model innovation and design for strategic sustainable development. *Journal of cleaner production, 140*, 155-166. doi:10.1016/j.jclepro.2016.06.124

Gabutti, I., & Morandi, F. (2019). HRM practices and organizational change: Evidence from Italian clinical directorates. *Health services management research : an official journal of the Association of University Programs in Health Administration, 32*(2), 78-88. doi:10.1177/0951484818790213

Gara Bach Ouerdian, E., Mansour, N., Al-Zahrani, A., & Chaari, A. (2017). Promoting knowledge sharing in Tunisian KIFs through HRM Practices. The mediating role of human capital and learning climate. *International journal of human resource management, 30*(16), 2321-2359. doi:10.1080/09585192.2017.1322117

Gharama, A. N. A., Khalifa, G. S. A., & Al-Shibami, A. H. (2020). UAE Police Administrative Employee Innovative Behavior: The Integration of Knowledge Sharing and Leadership. *International journal of psychosocial rehabilitation, 24*(3), 1930-1948. doi:10.37200/IJPR/V24I3/PR200941

Gray, D. E. (2013). *Doing research in the real world* (3rd ed.). Los Angeles: SAGE.

Gururajan, R., Clark, K., Moller, S., Sankaran, P., Baig, A. H., Wickramasinghe, N., & Gururajan, R. (2016). Reliability of qualitative data using text analysis: a Queensland Health case study. In *Contemporary Consumer Health Informatics* (pp. 1-13): Springer.

Gururajan, R., Hafeez Baig, A., Sturgess, J., Clark, K., & Gururajan, V. (2015). An exploratory qualitative study to identify factors that influence the use of electronic patient journey boards in Queensland health. *Electronic Journal of Health Informatics, 9*(1), 1-17.

Henderson, T. (2017, May 8). Why Innovation Is Crucial To Your Organization's Long-Term Success. *Forbes*.

Henseler, J. o. (2017). *ADANCO user manual*. Germany: Composite Modeling GmbH & Co. KG.

Holden, M. T., & and Lynch, P. (2004). Choosing the Appropriate Methodology:Understanding Research Philosophy. *The Marketing Review, 4*, 397-409.

Horth, D., & Buchner, D. . (2014). Center for Creative Leadership. Retrieved from https://www.ccl.org/wp-content/uploads/2015/04/InnovationLeadership.pdf

Hox, J. J., & Boeije, H. R. (2005). Data collection, primary versus secondary. *Encyclopedia of Social Measurement, 1*(1), 593-599.

Hughes, M., Rigtering, J. P. C., Covin, J. G., Bouncken, R. B., & Kraus, S. (2018). Innovative Behaviour, Trust and Perceived Workplace Performance: Innovative Workplace Behaviour, Trust and Performance. *British journal of management, 29*(4), 750-768. doi:10.1111/1467-8551.12305

Jaskyte, K., & Kisieliene, A. (2006). Determinants of Employee Creativity: A Survey of Lithuanian Nonprofit Organizations. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 17*(2), 128-136. doi:10.1007/s11266-006-9008-2

Keeley, T., Williamson, P., Callery, P., Jones, L., Mathers, J., Jones, J., . . . Calvert, M. (2016). The use of qualitative methods to inform Delphi surveys in core outcome set development. *Trials, 17*(1), 1-9.

Kerr, S. P., Kerr, W. R., & Dalton, M. (2019). Risk attitudes and personality traits of entrepreneurs and venture team members. *Proceedings of the National Academy of Sciences - PNAS, 116*(36), 17712-17716. doi:10.1073/pnas.1908375116

Kim, S., & Yoon, G. (2015). An innovation-driven culture in local government: do senior manager's transformational leadership and the climate for creativity matter? *Public Personnel Management, 44*(2), 147-168.

Kondratenko, N. O., & Zaporozhets, H. V. (2018). Features of Innovative Corporate Culture in Organization Management. *Problemi ekonomìki, 4*(38), 149-154. doi:10.32983/2222-0712-2018-4-149-154

Koranteng, F. A. (2014). *Assessing talent management as a tool for employee retention-A case study of Procredit Savings and Loans Limited Kumasi.* (Master of business adminstration (HRM option) master(human resource management)). Kwame Nkrumah University of Science and Technology, Ashanti, Ghana.

Korde, R., & Paulus, P. B. (2017). Alternating individual and group idea generation: Finding the elusive synergy. *Journal of Experimental Social Psychology, 70*, 177-190.

Kornish, L. J., & Hutchison-Krupat, J. (2017). Research on idea generation and selection: Implications for management of technology. *Production and Operations Management, 26*(4), 633-651.

Kothari, C. R. (2004). *Research methodology: Methods and techniques* (3rd ed.). New Delhi, India: New Age International Limited.

Kurucz, E. C., Colbert, B. A., Luedeke-Freund, F., Upward, A., & Willard, B. (2017). Relational leadership for strategic sustainability: Practices and capabilities to advance the design and assessment of sustainable business models. *Journal of cleaner production, 140*, 189-204.

Lambrecht, E., Crivits, M., Lauwers, L., & Gellynck, X. (2018). Identifying key network characteristics for agricultural innovation: A multisectoral case study approach. *Outlook on Agriculture, 47*(1), 19-26. doi:10.1177/0030727018760604

Leavy, P. (2017). *Research design: Quanitative , qualitative, mixed methods, arts-based, and community-based participatory research approaches*. New York: Guilford Publications.

Lefika, P. T., & Mearns, M. A. (2015). Adding knowledge cafés to the repertoire of knowledge sharing techniques. *International Journal of Information Management, 35*(1), 26-32.

Li, L., Li, G., & Chan, S. F. (2019). Corporate responsibility for employees and service innovation performance in manufacturing transformation: The mediation role of employee innovative behavior. *Career development international, 24*(6), 580-595. doi:10.1108/CDI-04-2018-0109

Liu, F., Chow, I. H.-S., Gong, Y., & Wang, H. (2016). Mediating links between HRM bundle and individual innovative behavior. *Journal of management & organization, 25*(1), 157-172. doi:10.1017/jmo.2016.47

Lukes, M., & Stephan, U. (2017). Measuring employee innovation: A review of existing scales and the development of the innovative behavior and innovation support inventories across cultures. *International journal of entrepreneurial behaviour & research, 23*(1), 136-158. doi:10.1108/IJEBR-11-2015-0262

Masadeh, M., Al-Ababneh, M., Al-Sabi, S., & Maaiah, B. (2016). Focus groups in hospitality research why are they not used in Jordan? *European Scientific Journal, 12*(20), 348-373. Retrieved from http://dx.doi.org/10.19044/esj.2016.v12n20p348

McMahon, K., Ruggeri, A., Kämmer, J. E., & Katsikopoulos, K. V. (2016). Beyond idea generation: The power of groups in developing ideas. *Creativity Research Journal, 28*(3), 247-257.

Megheirkouni, M., & Mejheirkouni, A. (2020). Leadership development trends and challenges in the twenty-first century: rethinking the priorities. *The Journal of management development, 39*(1), 97-124. doi:10.1108/jmd-04-2019-0114

Mertler, C. A., & Reinhart, R. V. (2017). *Advanced and multivariate statistical methods: Practical application and interpretation* (6th ed.). New York: Routledge.

Miao, Q., Newman, A., Schwarz, G., & Cooper, B. (2018). How Leadership and Public Service Motivation Enhance Innovative Behavior. *Public administration review, 78*(1), 71-81. doi:10.1111/puar.12839

Mielniczuk, E., & Laguna, M. (2018). Positive Affect Mediates the Relationship Between Self-efficacy and Innovative Behavior in Entrepreneurs. *The Journal of creative behavior, 54*(2), 267-278. doi:10.1002/jocb.364

Moon, K.-K., & Christensen, R. K. (2019). Realizing the Performance Benefits of Workforce Diversity in the U.S. Federal Government: The Moderating Role of Diversity Climate. *Public Personnel Management, 49*(1), 141-165. doi:10.1177/0091026019848458

Moussa, M., McMurray, A., & Muenjohn, N. (2018). Innovation in public sector organisations. *Cogent Business & Management, 5*(1). doi:10.1080/23311975.2018.1475047

Muhammad Anwar ul, H. (2017). Enhancing Employee Innovative Behavior: The Moderating Effects of Organizational Tenure. *Pakistan journal of commerce and social sciences, 11*(3), 814-832.

Newman, A., Tse, H. H. M., Schwarz, G., & Nielsen, I. (2018). The effects of employees' creative self-efficacy on innovative behavior: The role of entrepreneurial leadership. *Journal of business research, 89*, 1-9. doi:10.1016/j.jbusres.2018.04.001

O'Dwyer, L. M., & Bernauer, J. A. (2014). *Quantitative research for the qualitative researcher*. Thousand Oaks, California, USA: Sage Publications.

Opoku, M. A., Choi, S. B., & Kang, S.-W. (2019). Servant Leadership and Innovative Behaviour: An Empirical Analysis of Ghana's Manufacturing Sector. *Sustainability (Basel, Switzerland), 11*(22), 6273. doi:10.3390/su11226273

Osborne, S., Brandsen, T., Mele, V., Nemec, J., van Genugten, M., & Flemig, S. (2019). Risking innovation. Understanding risk and public service innovation—evidence from a four nation study. *Public money & management, 40*(1), 52-62. doi:10.1080/09540962.2019.1621051

Park, S., & Liang, J. (2019). Merit, Diversity, and Performance: Does Diversity Management Moderate the Effect of Merit Principles on Governmental Performance? *Public Personnel Management, 49*(1), 83-110. doi:10.1177/0091026019848459

Pei-Li, Y. (2017). Innovative culture and professional skills: The use of supportive leadership and individual power distance orientation in IT industry. *International journal of manpower, 38*(2), 198-214. doi:10.1108/IJM-10-2014-0214

Phan, H. P., Ngu, B. H., Wang, H.-W., Shih, J.-H., Shi, S.-Y., & Lin, R.-Y. (2018). Understanding levels of best practice: An empirical validation. *PloS one, 13*(6), e0198888. doi:10.1371/journal.pone.0198888

Pilotti, M., Anderson, S., Hardy, P., Murphy, P., & Vincent, P. (2017). Factors Related to Cognitive, Emotional, and Behavioral Engagement in the Online Asynchronous Classroom. *International Journal of Teaching & Learning in Higher Education, 29*(1).

Purc, E., & Laguna, M. (2019). Factorial Structure and Measurement Invariance of the Innovative Behavior Questionnaire. *The Journal of creative behavior, 53*(3), 404-410. doi:10.1002/jocb.215

Quratulain, S., Al-Hawari, M., apos, Ahmad, D., & Bani-Melhem, S. (2020). Perceived organizational customer orientation and frontline employees' innovative behaviors: exploring the role of empowerment and supervisory fairness. *European Journal of Innovation Management, ahead-of-print*(ahead-of-print). doi:10.1108/EJIM-08-2019-0233

Rarenko, A. A. (2020). CONDITIONS FOR SUCCESSFUL MANAGEMENT OF THE CULTURE OF INNOVATIVE ORGANIZATIONS. *SOCIAL SCIENCES AND HUMANITIES. DOMESTIC AND FOREIGN LITERATURE. SERIES 11: SOCIOLOGY*(1), 102-106. doi:10.31249/rsoc/2020.01.04

Remenyi, D., Williams, B., Money, A., & Swartz, E. (1998). *Doing research in business and management: An introduction to process and method* (1st ed.). London: Sage.

Reuvers, M., van Engen, M. L., Vinkenburg, C. J., & Wilson-Evered, E. (2008). Transformational Leadership and Innovative Work Behaviour: Exploring the Relevance of Gender Differences. *Creativity and innovation management, 17*(3), 227-244. doi:10.1111/j.1467-8691.2008.00487.x

Rozenblat, V., Ong, D., Fuller-Tyszkiewicz, M., Akkermann, K., Collier, D., Engels, R. C., . . . Karwautz, A. (2017). A systematic review and secondary data analysis of the interactions between the serotonin transporter 5-HTTLPR polymorphism and environmental and psychological factors in eating disorders. *Journal of Psychiatric Research, 84*, 62-72.

Saether, E. A. (2019). Motivational antecedents to high-tech R&D employees' innovative work behavior: Self-determined motivation, person-organization fit, organization support of creativity, and pay justice. *Journal of high technology management research, 30*(2), 100350. doi:10.1016/j.hitech.2019.100350

Sarantakos, S. (2013). *Social research* (4th ed.). Routledge, London: Palgrave Macmillan.

Saunders, M., Lewis, P., & Thornhill, A. (2015). *Research methods for business students* (7th ed.). New York; Harlow, England;: Tran-Atlantic Publications.

Seeck, H., & Diehl, M.-R. (2016). A literature review on HRM and innovation – taking stock and future directions. *International journal of human resource management, 28*(6), 913-944. doi:10.1080/09585192.2016.1143862

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach* (7th ed.). West Sussex, UK: John Wiley & Sons Ltd.

Sekhar, S. C., & Lidiya, K. (2012). Brainstorming. *Management, 2*(4), 113-117.

Silverman, D. (2014). *Interpreting qualitative data* (5th ed.). London: Sage.

Singh, S., Simpson, R., Mordi, C., & Okafor, C. (2011). Motivation to become an entrepreneur: a study of Nigerian women's decisions. *African Journal of Economic and Management Studies, 2*(2), 202-219. doi:10.1108/20400701111165641

Skålén, P., Karlsson, J., Engen, M., & Magnusson, P. R. (2018). Understanding Public Service Innovation as Resource Integration and Creation of Value Propositions: Understanding Public Service Innovation. *Australian journal of public administration, 77*(4), 700-714. doi:10.1111/1467-8500.12308

Stewart, G. L., Courtright, S. H., & Manz, C. C. (2019). Self-Leadership: A Paradoxical Core of Organizational Behavior. *Annual review of organizational psychology and organizational behavior, 6*(1), 47-67. doi:10.1146/annurev-orgpsych-012218-015130

Steyn, R., & De Bruin, G. (2018). Investigating the validity of the Human Resource Practices Scale in South Africa: Measurement invariance across gender. *SA Journal of Human Resource Management, 16*(1), e1-e10. doi:10.4102/sajhrm.v16i0.1038

Suseno, Y., Standing, C., Gengatharen, D., & Nguyen, D. (2019). Innovative work behaviour in the public sector: The roles of task characteristics, social support, and proactivity. *Australian journal of public administration, 79*(1), 41-59. doi:10.1111/1467-8500.12378

Taalbi, J. (2017). Development blocks in innovation networks: The Swedish manufacturing industry, 1970–2007. *Journal of Evolutionary Economics, 27*(3), 461-501. doi:10.1007/s00191-017-0491-y

Tharenou, P., Donohue, R., & Cooper, B. (2007). *Management research methods*. Port Melbourne, Australia: Cambridge University Press.

van der Zwan, P., Thurik, R., Verheul, I., & Hessels, J. (2016). Factors influencing the entrepreneurial engagement of opportunity and necessity entrepreneurs. *Eurasian business review, 6*(3), 273-295. doi:10.1007/s40821-016-0065-1

Vandavasi, R. K. K., McConville, D. C., Uen, J.-F., & Yepuru, P. (2020). Knowledge sharing, shared leadership and innovative behaviour: a cross-level analysis. *International journal of manpower, ahead-of-print*(ahead-of-print). doi:10.1108/IJM-04-2019-0180

Vanderschuere, M., & Birdsall, C. (2018). Can Diversity Management Improve Job Satisfaction for Military Veterans in the Federal Government? *American review of public administration, 49*(1), 116-127. doi:10.1177/0275074018783005

Walliman, N. (2011). *Research methods: The basics* (1st ed.). New York, USA: Routledge.

Wang, X.-H., Fang, Y., Qureshi, I., & Janssen, O. (2015). Understanding employee innovative behavior: Integrating the social network and leader-member exchange perspectives. *Journal of organizational behavior, 36*(3), 403-420. doi:10.1002/job.1994

Wood, S., & Ogbonnaya, C. (2018). High-Involvement Management, Economic Recession, Well-Being, and Organizational Performance. *Journal of Management, 44*(8), 3070-3095. doi:10.1177/0149206316659111

Wynen, J., Boon, J., Kleizen, B., & Verhoest, K. (2019). How multiple organizational changes shape managerial support for innovative work behavior: Evidence from the Australian Public Service. *Review of public personnel administration, 40*(3), 491-515. doi:10.1177/0734371X18824388

Yan, M.-R., Chi, H.-L., Yang, J.-Y., & Chien, K.-M. (2019). Towards a City-Based Cultural Ecosystem Service Innovation Framework as Improved Public-Private-Partnership Model—A Case Study of Kaohsiung Dome. *Journal of open innovation, 5*(4), 85. doi:10.3390/joitmc5040085

Yi, L., Uddin, M. A., Das, A. K., Mahmood, M., & Sohel, S. M. (2019). Do Transformational Leaders Engage Employees in Sustainable Innovative Work Behaviour? Perspective from a Developing Country. *Sustainability (Basel, Switzerland), 11*(9), 2485. doi:10.3390/su11092485

Yidong, T., & Xinxin, L. (2012). How Ethical Leadership Influence Employees' Innovative Work Behavior: A Perspective of Intrinsic Motivation. *Journal of business ethics, 116*(2), 441-455. doi:10.1007/s10551-012-1455-7

Yuan, F., & Woodman, R. W. (2010). Innovative Behavior in the Workplace: The Role of Performance and Image Outcome Expectations. *Academy of Management journal, 53*(2), 323-342. doi:10.5465/amj.2010.49388995

Ziaei Nafchi, M., & Mohelská, H. (2020). Organizational Culture as an Indication of Readiness to Implement Industry 4.0. *Information (Basel), 11*(3), 174. doi:10.3390/info11030174

Zikmund, W. G., Babin, B. J., & Griffin, M. (2013). *Business research methods* (9th ed.). Mason, OH: South-Western.

APPENDIX 1: SURVEY QUESTIONNAIRE

I am a PhD student at USQ under the supervision of *Professor Raj Gururajan* and *Dr. Eric Kong*. The following questionnaire is intended to *investigate the relationship between talent management processes and employee behaviours in organisations.* Formal ethical approval has been acquired from USQ office of research department (Approval # H17REA044). Your participation is valuable and will contribute to improving the performance of processes associated with the Innovative Behaviours in the UAE Public Service. Your participation in this research is purely voluntary and the research team appreciates your support and time.

Part A: For each of the following statements, **please tick (ü) one box** on the right side of the page that best describes your views.

Variables of Talent Management Processes (TMPs)					
1- Talent attraction: *is primarily aimed to attract talented candidates from either internal or external labour markets.* [SD Þ Strongly Disagree, D Þ Disagree, (N Þ Neutral, DK Þ Don't Know), Agree Þ A, SA Þ Strongly Agree]	SD	D	N/ DK	A	SA
My organisation:					
1 Attracts more talented employees through providing them with social support in difficult times (e.g. maternity, paternity, death, and financial difficulties).	☐	☐	☐	☐	☐
2 Attracts more qualified employees through having a socially progressive work environment (e.g. multicultural).	☐	☐	☐	☐	☐
3 Supports the staff community through involvement in social, cultural, or economic initiatives to attract more talented employees.	☐	☐	☐	☐	☐
4 Provides work-life balance and social networking activities are available to employees.	☐	☐	☐	☐	☐
5 Has a good work-life balance (e.g. socialising with colleagues, proper location and amenities, recreation or lifestyle opportunities) to attract talented individuals.	☐	☐	☐	☐	☐
6 Has effective recruitment strategies for attracting the most suitable and appropriate staff.	☐	☐	☐	☐	☐
7 Has a good reputation through high-quality networks to enable the organisation to attract the most suitable and appropriate staff.	☐	☐	☐	☐	☐
8 A high visibility in the region enables my organization to attract the most suitable and appropriate staff.	☐	☐	☐	☐	☐
9 Has an innovative culture enabling it to attract more talented individuals.	☐	☐	☐	☐	☐
10 Has a desirable organisational climate in order to attract the appropriate talents (e.g. having social friendships at work).	☐	☐	☐	☐	☐
11 Attracts more talented staff through having a high-quality working environment that encourages talented employees to realise creativity and innovation (e.g. physical aspects such as well-equipped workplaces).	☐	☐	☐	☐	☐

12	Facilitates robust discussions at various levels leading to innovation within the organization					
2- Talent Development: *is focused on achieving and maintaining an organisation's* human capital *through learning that changes behaviour in the organisation and in its talented employees* **[SD Þ Strongly Disagree, D Þ Disagree, (N Þ Neutral, DK Þ Don't Know), Agree Þ A, SA Þ Strongly Agree]**	**SD**	**D**	**N/ DK**	**A**	**SA**
My organisation:						
12	Has effective talent development strategies aligned with its organisational strategies.	☐	☐	☐	☐	☐
13	Determines training needs for talented individuals who have desired skills.	☐	☐	☐	☐	☐
14	Facilitates employee performance and development with tailored training plans.					
15	Uses human resource planning to ensure effective skill utilisation and development.	☐	☐	☐	☐	☐
16	Identifies areas needed for employee's personal development (e.g. skills gap analysis).	☐	☐	☐	☐	☐
17	Facilitates internal job rotation to strengthen talented employees' experiences and development in different faculties, departments, and divisions.	☐	☐	☐	☐	☐
18	Develops staff through sessions with training and other workshop activities.	☐	☐	☐	☐	☐
19	Develops mandatory staff with training and mentoring programs.	☐	☐	☐	☐	☐
20	Develops its own online training materials for talented staff to gain required knowledge and skills.	☐	☐	☐	☐	☐
21	Provides staff with career development opportunities (e.g. further education, certifications, scholarships, etc.).	☐	☐	☐	☐	☐
22	Includes leaders' development in the design of all job roles.	☐	☐	☐	☐	☐
23	Develops leaders through managerial level initiatives and succession planning activities.	☐	☐	☐	☐	☐
24	Supports high potential employees to become leaders, in order to build a strong talent pool.	☐	☐	☐	☐	☐
25	Assists leaders to be professionals through career development programs.	☐	☐	☐	☐	☐
26	Develops succession planning, and identifies alternative talented employees for leadership positions.	☐	☐	☐	☐	☐
27	Aligns its vision for innovation with various government initiatives and undertakes feasibility leading to innovation					
3- Talent Retention: *is a process where an organisation is responsible for retaining talent, to have them remain within an organisation* **[SD Þ Strongly Disagree, D Þ Disagree, (N Þ Neutral, DK Þ Don't Know), Agree Þ A, SA Þ Strongly Agree]**	**SD**	**D**	**N/ DK**	**A**	**SA**
My organisation:						
27	Determines the right type of talent retention strategies for organisational innovation to be most effective.	☐	☐	☐	☐	☐
28	Benchmarks with other organisations to evaluate talent retention strategies.	☐	☐	☐	☐	☐

29	Benchmarks with other organisations outside the country to evaluate talent retention strategies.	☐	☐	☐	☐	☐
30	Has a competitive compensation system which is a motivating factor to retain our talented employees.	☐	☐	☐	☐	☐
31	Provides a highly competitive compensation system for long-term to retain talent.	☐	☐	☐	☐	☐
32	Has a supportive learning environment which promotes employee job satisfaction to retain qualified employees.	☐	☐	☐	☐	☐
33	Has high-quality working conditions to retain the high qualified talent.	☐	☐	☐	☐	☐
34	Managers treat employees well through relationship building to retain talent.	☐	☐	☐	☐	☐
35	Promotes equal opportunity to retain its qualified employees.	☐	☐	☐	☐	☐
36	Ensures talented employees are satisfied.	☐	☐	☐	☐	☐
37	Provides assistance with healthcare and safety issues to retain its qualified employees.	☐	☐	☐	☐	☐
38	Accounts for personal factors and life events (e.g. family responsibilities) to encourage its talented staff.	☐	☐	☐	☐	☐
39	Provides fair acknowledgement of employee work efforts and achievements to better keep employees.	☐	☐	☐	☐	☐
40	Provides flexibility for work hours, roles, and tasks (e.g. for care of young children) to retain its qualified employees.	☐	☐	☐	☐	☐
41	Has a good system of financial and other non-financial rewards to retain talented staff.	☐	☐	☐	☐	☐
42	Encourages innovative thinking, and promotes creative ideas from talented employees.	☐	☐	☐	☐	☐
43	Keeps employees engaged and motivated to retain talented staff.	☐	☐	☐	☐	☐
44	Adopts management by participation, and career enrichment programs to increase talented employees' confidence in themselves.	☐	☐	☐	☐	☐
45	Retains its qualified employees through providing them with sufficient freedom to actively perform their jobs.	☐	☐	☐	☐	☐
46	Retains its talented staff through providing them enough authority to complete their work efficiently.	☐	☐	☐	☐	☐
47	Retains its qualified employees through providing them opportunities to develop their careers.	☐	☐	☐	☐	☐
48	Retains its talented staff through financial rewards, high salaries or remuneration.	☐	☐	☐	☐	☐
49	Retains its qualified employees through providing them with individual funding for academic research.	☐	☐	☐	☐	☐
50	Monitors performance and suggests advice regularly (e.g. per semester) in an encouraging manner to retain its talented staff.	☐	☐	☐	☐	☐
51	Utilises an employee growth program for the development of motivation and engagement to retain its qualified employees.	☐	☐	☐	☐	☐

Thank you for your time and effort to complete this survey.
Your cooperation is valued and very much appreciated!
With regards:

APPENDIX 2: APPROVAL LETTER

UNITED ARAB EMIRATES
MINISTRY OF FOREIGN AFFAIRS
& INTERNATIONAL COOPERATION

الإمــارات العـربيـة المتحـدة
وزارة الـــخـــارجـــيـــة
والتـعـــاون الـــدولـــي

To

Professor Raj Gururajan
Professor of Information Systems
School of Management & Enterprise
University of Southern Queensland
Australia

Dear Professor Gururajan

RE: Saeed ALqemzi – PhD Study – Ethics Approval

We have been asked by Mr Saeed ALQemzi whether Ministry of Foreign Affairs and International Cooperation has a formal ethics committee or equivalent so that his data collection activities can be approved by an approved ethics committee.

While Abu Dhabi is a signatory to ethical code of conduct in research, the Ministry has no formal committees as we are not a research institution.

We understand that University of Southern Queensland (USQ) has a formal ethics committee, and that Mr. ALQemzi's ethics application is currently under consideration. We also understand that there was a specific query about collecting data overseas, especially in Abu Dhabi. We are comfortable in endorsing USQ's ethics approval for Mr. AlQemzi research, and will monitor the ethics approval guidelines as approved by USQ.

We are able to provide the following response to you in regard to your specific queries on 'People in other countries':

4.8.4 Researchers should inform ethical review bodies in Australia:

(a) whether, in the country in which they intend to do research, there are ethics approval processes that are relevant to that research, and whether any such processes are mandatory or voluntary in relation to the proposed research: **our response is that this is voluntary in public service ministries, especially with low risk applications.**

(b) how such processes function, the values and principles on which they rely, and whether they require reporting of the Australian review body's approval: **our response is that in this specific case, we are comfortable to report to USQ on the data collection aspects of Mr. ALqemzi, while there is no requirement as this is a low risk application.**

4.8.8 When research is to be conducted overseas by a researcher who is subject to academic supervision, researchers should inform the Australian ethical review body of how that supervision is to be effected so that due respect and protection will be

APPENDIX 3: CONSENT LETTERS

University of Southern Queensland

Consent Form for USQ Research Project
Focus Group

Title of Project:	**The Determinations of Innovative Behaviour in Organisations**
Human Research Ethics Approval Number:	H19REA044

Research Team Contact Details

Principal Investigator Details

Mr Saeed AlQuemzi
PhD Candidate
School of Management & Enterprise
University of Southern Queensland
Sinnathampy Blvd, Springfield
Central, Q 4300

Other Investigator/Supervisor Details

Prof Raj Gururajan
Email: Raj.Gururajan@usq.edu.au
Telephone: (07) 3470 4539

Statement of Consent

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project.

- Have had any questions answered to your satisfaction.

- Understand that if you have any additional questions you can contact the research team.

- Understand that the interview will be audio recorded.

- Understand that you are free to withdraw at any time without comment or penalty, and if you withdrew, your data won't be considered in this study.

- Understand that you can contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au if you do have any concern or complaint about the ethical conduct of this project.

- Are over 18 years of age.

- Agree to participate in the project.

Participant Name	
Participant Signature	
Date	

Please return this sheet to a Research Team member prior to undertaking the interview.

Consent Form for USQ Research Project Interview

Project Details

Title of Project: **The Determinations of Innovative Behavior in Organisations**

Human Research
Ethics Approval   H19REA044
Number:

Research Team Contact Details

Principal Investigator Details

Mr Saeed AlQuemzi
PhD Candidate
School of Management &
Enterprise
University of Southern
Queensland
Sinnathampy Blvd, Springfield
Central, Q 4300

Other Investigator/Supervisor Details

Prof Raj Gururajan
Email:
Raj.Gururajan@usq.edu.au
Telephone: (07) 3470 4539

Statement of Consent

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project.

- Have had any questions answered to your satisfaction.

- Understand that if you have any additional questions you can contact the research team.

- Understand that the interview will be audio recorded.

- Understand that you are free to withdraw at any time without comment or penalty and if you withdrew, your data won't be considered in this study.

- Understand that you can contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au if you do have any concern or complaint about the ethical conduct of this project.

- Are over 18 years of age.

- Agree to participate in the project.

Participant Name	
Participant Signature	
Date	

Please return this sheet to a Research Team member prior to undertaking the interview.

APPENDIX 4 : ADANCO DATA MODELLING

Construct Operationalisation

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			0.8689		
Qualified Employees			0.8476		
Innovative Culture in Organisation		0.6371			
High quality work environment for talented staff		0.6713			
TD-EffTalent				0.6538	
TD-TrgNeeds				0.4974	
TD-HRPlng				0.7279	
TD-EmplNeeds				0.8190	
TD-JobRotatn		0.6513			
TD-StaffTRg				0.7058	
TD-Mentoring				0.7226	
TD-TrgMatl				0.6032	
TD-CareerDevl		0.7412			
TD-LeaderDev		0.6525			
TD-SuccsnPlan		0.7798			
TD-TalentPool				0.7466	
TD-Professional				0.7399	
TD-LeaderPositions				0.7853	
TR-RightTalent		0.8185			
TR-BenchmarkOrg	0.7238				
TR-CompetitiveCompensate	0.8292				
TR-LongTermRetn	0.8240				
TR-LearngEnv					0.7944
TR-WorkCondition					0.8348
TR-EmployeeTreatment		0.7111			
TR-EqualOpp		0.8280			
TR-Satisfaction					0.6463
TR-HalthcareAssistance	0.6981				
TR-LifeEvents	0.8421				
TR-Achievements					0.8700
TR-Flexibility					0.6499
TR-FinancialSupprt					0.8123
TR-EmpEngaged					0.8347
TR-MgtParticipation		0.7903			
TR-RetainQualStaff	0.6816				
TR-ReatainTlntStaff	0.7688				
TR-RetainCareer					0.8217
TR-FinRewards					0.8038
TR-AcadmRsrch					0.7192
TR-PerfmMonitor		0.7915			
TR-EmpGrwthPrg		0.6604			

Construct Reliability

Construct	Dijkstra-Henseler's rho (ρ_A)	Jöreskog's rho (ρ_c)	Cronbach's alpha(α)
Innovative Behaviour	0.8849	0.9098	0.8833
Org Culture	0.9190	0.9280	0.9141
Skill Set	0.7540	0.8413	0.7190
HR Processes	0.8940	0.9071	0.8851
Motivational Factors	0.9340	0.9399	0.9281

Convergent Validity

Construct	Average variance extracted (AVE)
Innovative Behaviour	0.5918
Org Culture	0.5419
Skill Set	0.6414
HR Processes	0.4981
Motivational Factors	0.6120

Discriminant Validity

Discriminnat Validity	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour					
Org Culture	0.9704				
Skill Set	0.9406	0.9459			
HR Processes	0.9439	0.9385	0.7937		
Motivational Factors	0.9625	0.9875	0.8808	0.8960	

Fornell-Larcker Criterion

Construct	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour	0.5918				
Org Culture	0.7743	0.5419			
Skill Set	0.5898	0.6171	0.6414		
HR Processes	0.6984	0.7198	0.4436	0.4981	
Motivational Factors	0.7667	0.8206	0.5367	0.6705	0.6120

Squared correlations; AVE in the diagonal.

Factor Loadings

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			0.8689		
Qualified Employees			0.8476		
Innovative Culture in Organisation		0.6371			
High quality work environment for talented staff			0.6713		
TD-EffTalent				0.6538	
TD-TrgNeeds				0.4974	
TD-HRPlng				0.7279	
TD-EmplNeeds				0.8190	
TD-JobRotatn		0.6513			
TD-StaffTRg				0.7058	
TD-Mentoring				0.7226	
TD-TrgMatl				0.6032	
TD-CareerDevl		0.7412			
TD-LeaderDev		0.6525			
TD-SuccsnPlan		0.7798			
TD-TalentPool				0.7466	
TD-Professional				0.7399	
TD-LeaderPositions				0.7853	
TR-RightTalent		0.8185			
TR-BenchmarkOrg	0.7238				
TR-CompetitiveCompensate	0.8292				
TR-LongTermRetn	0.8240				
TR-LearngEnv					0.7944
TR-WorkCondition					0.8348
TR-EmployeeTreatment		0.7111			
TR-EqualOpp		0.8280			
TR-Satisfaction					0.6463
TR-HalthcareAssistance	0.6981				
TR-LifeEvents	0.8421				
TR-Achievements					0.8700
TR-Flexibility					0.6499
TR-FinancialSupprt					0.8123
TR-EmpEngaged					0.8347
TR-MgtParticipation		0.7903			
TR-RetainQualStaff	0.6816				
TR-ReatainTlntStaff	0.7688				
TR-RetainCareer					0.8217
TR-FinRewards					0.8038
TR-AcadmRsrch					0.7192
TR-PerfmMonitor		0.7915			
TR-EmpGrwthPrg		0.6604			

Indicator Reliability

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			0.7551		
Qualified Employees			0.7184		
Innovative Culture in Organisation		0.4059			
High quality work environment for talented staff			0.4507		
TD-EffTalent				0.4275	
TD-TrgNeeds				0.2474	
TD-HRPlng				0.5298	
TD-EmplNeeds				0.6707	
TD-JobRotatn		0.4241			
TD-StaffTRg				0.4981	
TD-Mentoring				0.5222	
TD-TrgMatl				0.3638	
TD-CareerDevl		0.5493			
TD-LeaderDev		0.4258			
TD-SuccsnPlan		0.6081			
TD-TalentPool				0.5574	
TD-Professional				0.5475	
TD-LeaderPositions				0.6167	
TR-RightTalent		0.6699			
TR-BenchmarkOrg	0.5239				
TR-CompetitiveCompensate	0.6876				
TR-LongTermRetn	0.6791				
TR-LearngEnv					0.6310
TR-WorkCondition					0.6969
TR-EmployeeTreatment		0.5056			
TR-EqualOpp		0.6855			
TR-Satisfaction					0.4178
TR-HalthcareAssistance	0.4873				
TR-LifeEvents	0.7091				
TR-Achievements					0.7569
TR-Flexibility					0.4223
TR-FinancialSupprt					0.6599
TR-EmpEngaged					0.6967
TR-MgtParticipation		0.6245			
TR-RetainQualStaff	0.4646				
TR-ReatainTlntStaff	0.5911				
TR-RetainCareer					0.6752
TR-FinRewards					0.6461
TR-AcadmRsrch					0.5172
TR-PerfmMonitor		0.6265			
TR-EmpGrwthPrg		0.4362			

Factor Cross Loadings

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees	0.5988	0.6549	0.8689	0.5209	0.5950
Qualified Employees	0.7312	0.7455	0.8476	0.7269	0.6994
Innovative Culture in Organisation	0.5926	0.6371	0.6261	0.3918	0.5604
High quality work environment for talented staff	0.4787	0.4403	0.6713	0.2715	0.4239
TD-EffTalent	0.5451	0.4682	0.4831	0.6538	0.4362
TD-TrgNeeds	0.3894	0.3395	0.2969	0.4974	0.3206
TD-HRPlng	0.6118	0.6879	0.3989	0.7279	0.6890
TD-EmplNeeds	0.6901	0.6660	0.5627	0.8190	0.6487
TD-JobRotatn	0.5148	0.6513	0.5043	0.6070	0.6921
TD-StaffTRg	0.5685	0.5519	0.5000	0.7058	0.6012
TD-Mentoring	0.6071	0.6311	0.4768	0.7226	0.6366
TD-TrgMatl	0.5336	0.5551	0.4522	0.6032	0.4955
TD-CareerDevl	0.5645	0.7412	0.5738	0.6536	0.6643
TD-LeaderDev	0.5311	0.6525	0.5367	0.6362	0.6432
TD-SuccsnPlan	0.6561	0.7798	0.5753	0.7241	0.6579
TD-TalentPool	0.5899	0.6668	0.5065	0.7466	0.5875
TD-Professional	0.6502	0.6430	0.4880	0.7399	0.6283
TD-LeaderPositions	0.6541	0.6955	0.4993	0.7853	0.6495
TR-RightTalent	0.7650	0.8185	0.7127	0.6596	0.7912
TR-BenchmarkOrg	0.7238	0.6401	0.5739	0.6334	0.6149
TR-CompetitiveCompensate	0.8292	0.6859	0.6495	0.6557	0.7016
TR-LongTermRetn	0.8240	0.6369	0.5292	0.6791	0.7073
TR-LearngEnv	0.7051	0.7474	0.4382	0.6374	0.7944
TR-WorkCondition	0.8187	0.7875	0.6533	0.6702	0.8348
TR-EmployeeTreatment	0.7204	0.7111	0.6054	0.6342	0.6967
TR-EqualOpp	0.7005	0.8280	0.5261	0.6845	0.6948
TR-Satisfaction	0.5779	0.5782	0.5429	0.4994	0.6463
TR-HalthcareAssistance	0.6981	0.6569	0.4573	0.6272	0.6394
TR-LifeEvents	0.8421	0.6442	0.5897	0.6603	0.6344
TR-Achievements	0.7372	0.7618	0.6109	0.6954	0.8700
TR-Flexibility	0.5657	0.6934	0.5330	0.5472	0.6499
TR-FinancialSupprt	0.6917	0.7038	0.6526	0.6433	0.8123
TR-EmpEngaged	0.6860	0.6628	0.5618	0.6826	0.8347
TR-MgtParticipation	0.6767	0.7903	0.6548	0.4895	0.6619
TR-RetainQualStaff	0.6816	0.6667	0.6000	0.6516	0.6532
TR-ReatainTlntStaff	0.7688	0.7853	0.7049	0.5889	0.7430
TR-RetainCareer	0.7282	0.7135	0.5876	0.6701	0.8217
TR-FinRewards	0.6908	0.7483	0.5628	0.7301	0.8038
TR-AcadmRsrch	0.5988	0.6747	0.5891	0.6049	0.7192
TR-PerfmMonitor	0.6605	0.7915	0.5820	0.6612	0.6368
TR-EmpGrwthPrg	0.6664	0.6604	0.4424	0.7218	0.6245

Factor Weights

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			0.4097		
Qualified Employees			0.5003		
Innovative Culture in Organisation		0.1138			
High quality work environment for talented staff			0.3276		
TD-EffTalent				0.1311	
TD-TrgNeeds				0.0937	
TD-HRPlng				0.1472	
TD-EmplNeeds				0.1660	
TD-JobRotatn		0.0989			
TD-StaffTRg				0.1367	
TD-Mentoring				0.1460	
TD-TrgMatl				0.1283	
TD-CareerDevl		0.1085			
TD-LeaderDev		0.1020			
TD-SuccsnPlan		0.1260			
TD-TalentPool				0.1419	
TD-Professional				0.1564	
TD-LeaderPositions				0.1573	
TR-RightTalent		0.1470			
TR-BenchmarkOrg	0.1778				
TR-CompetitiveCompensate	0.1944				
TR-LongTermRetn	0.1849				
TR-LearngEnv					0.1319
TR-WorkCondition					0.1532
TR-EmployeeTreatment		0.1384			
TR-EqualOpp		0.1346			
TR-Satisfaction					0.1081
TR-HalthcareAssistance	0.1728				
TR-LifeEvents	0.1826				
TR-Achievements					0.1379
TR-Flexibility					0.1058
TR-FinancialSupprt					0.1294
TR-EmpEngaged					0.1284
TR-MgtParticipation		0.1300			
TR-RetainQualStaff	0.1857				
TR-ReatainTlntStaff	0.2039				
TR-RetainCareer					0.1362
TR-FinRewards					0.1292
TR-AcadmRsrch					0.1120
TR-PerfmMonitor		0.1269			
TR-EmpGrwthPrg		0.1280			

Indicator Multicollinearity

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			1.8614		
Qualified Employees			1.5871		
Innovative Culture in Organisation		2.2618			
High quality work environment for talented staff			1.2888		
TD-EffTalent				2.0989	
TD-TrgNeeds				1.5495	
TD-HRPlng				2.1571	
TD-EmplNeeds				2.5349	
TD-JobRotatn		2.0153			
TD-StaffTRg				2.4802	
TD-Mentoring				2.0354	
TD-TrgMatl				1.5814	
TD-CareerDevl		4.1221			
TD-LeaderDev		2.4506			
TD-SuccsnPlan		3.9400			
TD-TalentPool				3.4387	
TD-Professional				3.3742	
TD-LeaderPositions				3.0290	
TR-RightTalent		3.6252			
TR-BenchmarkOrg	1.8894				
TR-CompetitiveCompensate	4.1845				
TR-LongTermRetn	3.2300				
TR-LearngEnv					3.4231
TR-WorkCondition					2.9291
TR-EmployeeTreatment		2.9944			
TR-EqualOpp		3.4811			
TR-Satisfaction					1.7748
TR-HalthcareAssistance	2.2573				
TR-LifeEvents	2.9009				
TR-Achievements					5.1519
TR-Flexibility					1.8326
TR-FinancialSupprt					4.4157
TR-EmpEngaged					5.0984
TR-MgtParticipation		2.9428			
TR-RetainQualStaff	1.9081				
TR-ReatainTlntStaff	2.5942				
TR-RetainCareer					3.6795
TR-FinRewards					3.2381
TR-AcadmRsrch					2.8122
TR-PerfmMonitor		3.6884			
TR-EmpGrwthPrg		2.3099			

Variance inflation factors (VIF)

R-Squared

Construct	Coefficient of determination (R^2)	Adjusted R^2
Innovative Behaviour	0.8382	0.8250

Path Coefficients

Independent variable	Dependent variable Innovative Behaviour
Org Culture	0.2075
Skill Set	0.1818
HR Processes	0.2565
Motivational Factors	0.3444

Total Effects

Independent variable	Dependent variable Innovative Behaviour
Org Culture	0.2075
Skill Set	0.1818
HR Processes	0.2565
Motivational Factors	0.3444

Effect Overview

Effect	Beta	Indirect effects	Total effect	Cohen's f^2
Org Culture -> Innovative Behaviour	0.2075		0.2075	0.0326
Skill Set -> Innovative Behaviour	0.1818		0.1818	0.0777
HR Processes -> Innovative Behaviour	0.2565		0.2565	0.1082
Motivational Factors -> Innovative Behaviour	0.3444		0.3444	0.1240

Inter-Construct Correlations

Construct	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour	1.0000				
Org Culture	0.8800	1.0000			
Skill Set	0.7680	0.7856	1.0000		
HR Processes	0.8357	0.8484	0.6660	1.0000	
Motivational Factors	0.8756	0.9058	0.7326	0.8189	1.0000

Direct Effect Inference

Effect	Original coefficient	Mean value	Standard error	t-value	p-value (2-sided)	p-value (1-sided)
			Standard bootstrap results			
Org Culture -> Innovative Behaviour	0.2075	0.2233	0.1719	1.2072	0.2276	0.1138
Skill Set -> Innovative Behaviour	0.1818	0.1635	0.1130	1.6094	0.1078	0.0539
HR Processes -> Innovative Behaviour	0.2565	0.2700	0.1340	1.9149	0.0558	0.0279
Motivational Factors -> Innovative Behaviour	0.3444	0.3330	0.1420	2.4258	0.0154	0.0077

Total Effects Inference

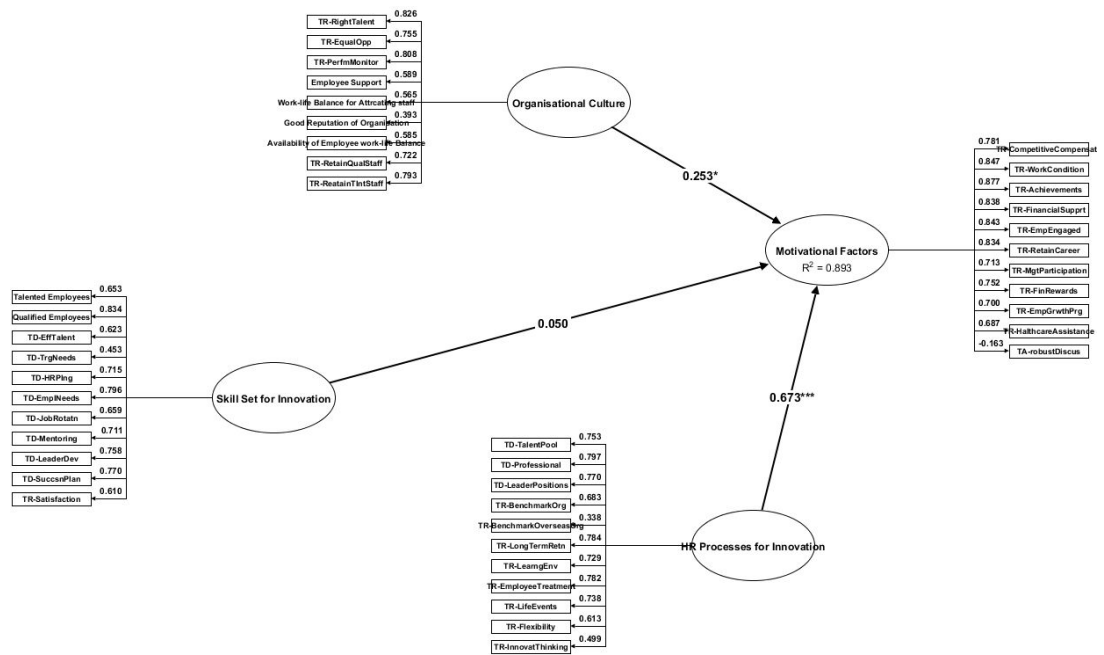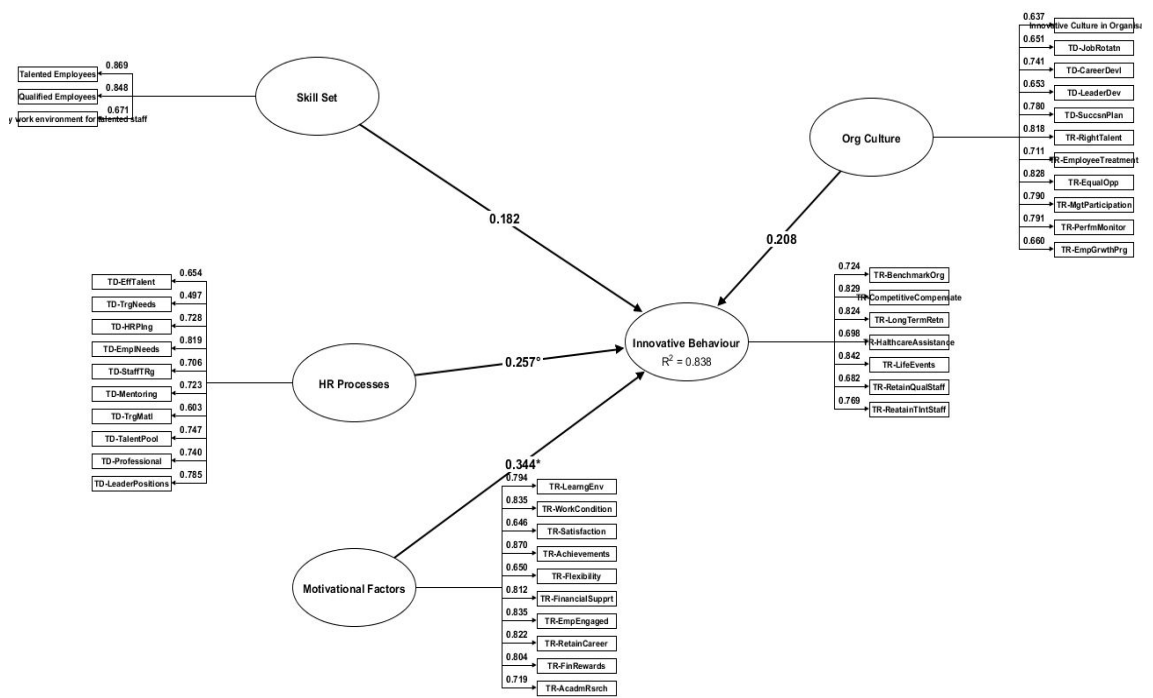| Effect	Original coefficient	Mean value	Standard bootstrap results Standard error	t-value	p-value (2-sided)	p-value (1-sided)
Org Culture -> Innovative Behaviour	0.2075	0.2233	0.1719	1.2072	0.2276	0.1138
Skill Set -> Innovative Behaviour	0.1818	0.1635	0.1130	1.6094	0.1078	0.0539
HR Processes -> Innovative Behaviour	0.2565	0.2700	0.1340	1.9149	0.0558	0.0279
Motivational Factors -> Innovative Behaviour	0.3444	0.3330	0.1420	2.4258	0.0154	0.0077

Weights T-Values

Indicator	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Talented Employees			6.6666		
Qualified Employees			7.6006		
Innovative Culture in Organisation		7.3160			
High quality work environment for talented staff			6.1525		
TD-EffTalent				6.5308	
TD-TrgNeeds				3.9366	
TD-HRPlng				10.1889	
TD-EmplNeeds				10.3280	
TD-JobRotatn		6.3405			
TD-StaffTRg				6.4254	
TD-Mentoring				7.0372	
TD-TrgMatl				4.9080	
TD-CareerDevl		9.2511			
TD-LeaderDev		7.2137			
TD-SuccsnPlan		9.6915			
TD-TalentPool				8.0018	
TD-Professional				7.2474	
TD-LeaderPositions				8.8604	
TR-RightTalent		10.2335			
TR-BenchmarkOrg	8.8220				
TR-CompetitiveCompensate	14.8945				
TR-LongTermRetn	14.9376				
TR-LearngEnv					12.4934
TR-WorkCondition					11.2858
TR-EmployeeTreatment		10.6335			
TR-EqualOpp		9.2562			
TR-Satisfaction					5.1514
TR-HalthcareAssistance	9.9280				
TR-LifeEvents	12.1232				
TR-Achievements					12.2760
TR-Flexibility					7.7011
TR-FinancialSupprt					11.0858
TR-EmpEngaged					14.7784
TR-MgtParticipation		9.1621			
TR-RetainQualStaff	9.8857				
TR-ReatainTlntStaff	10.4978				
TR-RetainCareer					11.3287
TR-FinRewards					13.4043
TR-AcadmRsrch					11.3266
TR-PerfmMonitor		9.8622			
TR-EmpGrwthPrg		9.4375			

HTMT Values

Construct	Innovative Behaviour	Org Culture	Skill Set	HR Processes	Motivational Factors
Innovative Behaviour					
Org Culture	1.0208				
Skill Set	1.1267	1.1098			
HR Processes	1.0149	1.0054	1.0369		
Motivational Factors	1.0091	1.0125	1.0624	0.9703	

APPENDIX 5: FINAL STRUCTURE MODELLING

INSHALLAH

*** END OF THESIS ***