An exploration of leadership in complex projects within the UAE in the 21st Century

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An exploration of leadership in complex projects within the UAE in the 21st Century

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ABSTRACT

Leading complex projects requires a high level of understanding of the softer (e.g. people management) and harder (e.g. project management tools) skills of project management (Davis & Hobday, 2006). It also requires operating under the eight characteristics of complex adaptive systems and understanding the broader system the project is operating in. The eight characteristics of complex adaptive systems are: hierarchy, communication, control, emergence, phase transition, non-linearity, adaptiveness, and sensitive dependence on initial conditions. This study was conducted to explore leadership in complex projects within the UAE in the 21st Century.

A qualitative exploratory case study was used to examine leadership, including an exploratory investigation of the impact that structural project complexities have on leadership in the UAE. A total of 33 interviews were conducted with project managers of complex projects in the UAE. All interviews were conducted in person and transcribed verbatim by the researcher.

The results revealed that structural complexities do affect the leadership of complex projects, as does diversity and gender differences. However, managers reported this diversity as both a challenge and an opportunity, which adds to the complexity of the workplace relationships seen. Gender, experience and cultural complexities were further explored and the study found that ex-patriate women could be effective leaders of complex projects in the UAE; however, they use differing styles to male leaders. This was the first study of its kind to acknowledge these differences in the UAE and adds to the growing body of literature acknowledging the impact that structural complexities have on leadership behaviours in a Middle Eastern context.

STATEMENT OF ORIGINALITY

I declare that the PhD thesis entitled, *An exploration of leadership of complex projects in the UAE in the 21st Century* is no more than 100,000 words in length, exclusive of tables, figures, appendices, references and footnotes.

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Name: Date:

Signature:

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TABLE OF CONTENTS

ABSTRACT....2
STATEMENT OF ORIGINALITY....3
ACKNOWLEDGEMENTS....4
TABLE OF CONTENTS....5
LIST OF TABLES....9
LIST OF FIGURES....10
LIST OF ABBREVIATIONS....11
LIST OF PUBLICATIONS....12
CHAPTER 1: INTRODUCTION....13
1.1 Introduction....13
1.2 Research background....13
1.3 Research aims and objectives....16
1.4 Research questions....17
1.5 Significance of the study....18
1.6 Methodology....19
1.7 Research limitations....20
1.8 Theoretical and practical contributions....21
1.9 Outline of thesis....28
1.10 Chapter summary....29
CHAPTER 2: LITERATURE REVIEW....31
2.1 Introduction....31
2.2 Project management....31
2.3 What is a project and what do we mean by project management?....35
2.4 Complex project management....42
2.5 Complexity theory....45
2.6 Complex adaptive systems....48

2.6.1 Structural complexity 52
2.6.2 Directional complexity 54
2.6.3 Technical complexity 55
2.6.4 Temporal (or environmental) complexity 56
2.7 The place of leadership in complex adaptive systems 58
2.8 Project Management in the UAE 59
2.9 Leadership and complex projects in the UAE 66
2.9.1 Cross culture issues 70
2.9.2 Labour market context 72
2.10 Diversity Management 74
2.10.1 Definition and justification for diversity management 74
2.10.2 Approaches and strategies for diversity management 76
2.10.3 Effect of diversity management on organisational performance 80
CHAPTER THREE: THEORETICAL FRAMEWORK 85
3.1 Complexity leadership 85
3.2 Leader member exchange 89
3.3 Bringing it together 93
3.4 Chapter conclusions, research gaps and research questions 96
CHAPTER 4: METHODOLOGY 98
4.1 Methodology 98
4.2 Philosophical foundation for the study: Ontology and Epistemology 98
4.3 Paradigm 99
4.4 Method 100
4.5 Case Study 104
4.6 Procedure and measures 107
4.7 Ethical considerations 109
4.8 Validation techniques used 109
4.9 Case and participant selection 111

4.10 Fieldwork 112

4.11 Data analysis and participant characteristics 113

4.12 Chapter summary 115

CHAPTER 5: RESULTS 116

5.1 Introduction 116

5.2 General information about respondents 117

5.3 How project managers lead in complex projects within the UAE 120

5.3.1 Nature of project complexity 120

5.3.2 Composition of project teams 126

5.3.3 Diversity management 129

5.3.4 Risk management 132

5.3.5 Project performance 134

5.4 How structural complexities impact on the leadership style use 135

5.4.1 Transformational leadership style 136

5.4.1.1 Popularity with leadership style 136

5.4.1.2 Features/characteristics that made it suitable for complex projects 137

5.4.1.3 Trends with use of leadership style 140

5.4.2 Transactional leadership style 141

5.4.2.1 Popularity with leadership style 141

5.4.2.2 Features/characteristics that made it suitable for complex projects 142

5.4.2.3 Trends with preference for transactional leadership style 143

5.5 An exploration of how structural complexities, gender, cultural background and maturity level of the manager impact leadership styles used 145

5.5.1 Do the leadership approaches differ by gender? 145

5.5.2 Do leadership styles differ by cultural background? 150

5.5.3 Do the leadership styles differ by experience levels? 154

5.6 Chapter summary 157

CHAPTER 6: DISCUSSION 159

6.1 Introduction..159
6.2 How project managers lead in complex projects within the UAE..............................159
6.2.1 Description of complex project...159
6.2.2 Nature of project team 161
6.2.3 Approaches to managing diversity..164
6.2.4 Attitude towards risk management 166
6.2.5 GAPPS Score 168
6.3 How structural complexities impact the leadership style used 170
6.3.1 Transformational leadership style...170
6.3.2 Transactional leadership style...173
6.4 How gender, cultural background and maturity level of the manager impacted leadership approach used 175
6.4.1 Gender...176
6.4.2 Cultural background...179
6.4.3 Maturity level..182
CHAPTER 7: SUMMARY AND CONCLUSIONS..184
7.1 Summary of major findings 184
7.2 Conclusions...187
7.3 Recommendations for practice 190
7.4 Theoretical and practical contributions...192
7.5 Limitations of the study..,,,,,,,,,,,,,193
7.6. Suggestions for future research..193
REFERENCES 194
APPENDIX A: INTERVIEW QUESTIONS 218
APPENDIX B: PARTICIPANT CHARACTERISTICS...227
APPENDIX C: COMPARISON OF LABOUR LAW……………………………………..231

LIST OF TABLES

Table 1: Complex project dimensions and team composition 22

Table 2: Comparison of method characteristics..101

Table 3: Summary of different methods 103

Table 4: Researchers approach to data preparation 112

LIST OF FIGURES

Figure 1: Project scope as determinant of project complexity 35

Figure 2: The traditional linear approach to project management. 43

Figure 3: The non-linear nature of complex projects. 44

Figure 4: The theoretical lens for this study 94

LIST OF ABBREVIATIONS

APFPM	Asia Pacific Federation for Project Management
BARS	Behavioural Anchored Rating Scale
IPMA	International Project Management Association
LDQ	Leadership Development Questionnaire
PMBoK	Project Management Body of Knowledge
PMI	Project Management Institute
PMP	Project Management Professional

KEY TERMS

Projects

Complex projects

Leadership

Management

Risk management

Diversity management

Project performance

LIST OF PUBLICATIONS

Aldhaheri, H. Rahman, A. and Mohamed, S. (2015). Project Management in a Complex Environment: A call to think differently? - International Conference on Emerging Trends in Multidisciplinary Research (ETMR-2015) - Istanbul, Turkey.

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Aldhaheri, H. Radford, K., Ross, P. Tullarum, A. (2017) Examining the factors influencing intentions to stay for employees in the UAE. (ICBEMCONF 2017) – Saint Petersburg, Russia.

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter presents an introduction to this thesis. First, it addresses the research problem that underpins the study, before discussing the aims and objectives, methodology, limitations, de-limitations, scope considerations and finally, the contributions this study makes to the broader theoretical and practical spaces. It concludes with an overview of the structure of this thesis.

1.2 Research background

Project management, as a theoretical framework, has been used within organisations for decades. Organizations commence projects to address complex tasks using a focused approach (Frinsdorft, Zuo & Xia, 2014). This approach ensures that the resource allocations are agreed upon within a timely manner (PMI, 2009). The use of a project approach also allows for the most appropriate resources to be commissioned for the duration of the project from different departments. The changing dynamics of work and the changing expectations of organisations and society caused projects to become more complex. Complex projects call for an adaptation of techniques used to maximize the impact and success of the project. In these projects, the leadership strategies used have to be adapted to cater to the complexity of the system surrounding the project. Consequently, the complexity theory provides one theoretical lens that researchers can use to explore project management concerns in depth.

The complexity theory is a system made up of multidisciplinary knowledge including physics, biology, philosophy, economics, management, and psychology. As a multidisciplinary system, it also aims to describe how the whole universe is made up of more than just the sum of its parts (Coveney & Highfield, 1995). As such, it is guided by seven key principles: self organisation, edge of chaos, hologrammatic, impossibility of prediction, powers of connections, circular causality and, the try and learn principle.

The complexity theory is adaptive, administrative, and enabling (Battiston et al., 2016).

The adaptive leadership function refers to the adaptive, creative and learning actions that emerge from the system in order to adjust tensions in an informal capacity. The administrative leadership function refers to the tasks, planning, vision and resource allocation functions performed by leaders. The enabling leadership function aims to untangle the bureaucratic (administrative leadership) and emergent (adaptive leadership) functions of an organisation. In doing so, the complexity leadership theory argues for an enablement of these functions in order to lead effectively within an organisation, managing the nonlinear effects that certain interactions within the social network have on outcomes (Lichtenstein et al. 2006; Lichtenstein & Plowman, 2009).

The complexity theory acknowledges that humans live together within an open system (Byrne, 1998). As such, delegating tasks to individuals and empowering employees to behave in a way that supports the greater good of society is one way of managing the complex world (Curlee & Gordon, 2014). Interestingly, an emergent body of literature is forming regarding the influence that complexity theory can bring to complex project management. This includes acknowledging that complex projects are part complex adaptive systems, where complex adaptive systems are unstable collections of elements and connections, which are self-organized to ensure adaptation.

This is an important development in the project management literature, as historically, project management has been viewed in a linear fashion (Remington & Pollack, 2010). Yet as projects become interdependent, large, and as they last several years, these linear approaches become problematic. Thus, the emergence of complex project management as an acknowledged discipline within the project management literature.

Understanding complex leadership styles in the UAE is important as they currently face a potential problem in leadership in government and organisations. The UAE is made up of 9 million people (World Bank 2015). However only 16% of these are Emiratis, with the remainder population being foreigners. Relying only on the 16% Emiratis may leave the UAE without enough talent to fulfil roles, and within the construction industry, in the immediate future, this may mean that there may not be enough qualified leaders to manage the number of projects that are underway and those being planned in the future (Faried, Saad, & Almarri, 2017). To make up for the deficit, the country has opened itself up to foreigners who come to work as both skilled and unskilled labourers in various sectors of the economy. The immigration has resulted in many foreigners residing in the UAE, making it one of the most multicultural and diverse countries in the world (Faried et al., 2017; World Bank, 2015). Consequently, investigating leadership and followership behaviour in more depth is needed in this region, with a focus on how diversity management practices can influence training and support for upcoming managers (Antunes & Gonzalez, 2015).

The UAE government owns 47 public bodies and requires its leaders to be Emiratis. However, as Emiratis only make up 16% of the total population living in the UAE, there are not enough leaders to manage these public bodies (UN, 2015). As Mathias (2017) noted in her review of leadership development in governments of the UAE, this has resulted in a number of younger Emiratis demanding accelerated career growth and higher earnings (Mathias, 2017). A similar situation is also happening in the construction industry as an industry which relies more on foreign workers, and there are not enough Emiratis managing these projects, including the complex projects now assigned to this industry. The World Expo 2020 is one of these complex construction industry projects underway in the UAE. Thus, as the number of construction investments are seen to increase (MEED Insight, 2015), the need for more investigation into successful leadership strategies in this industry are also seen to increase.

Most projects exhibit some characteristic of complexity, whether that comes in the form of diversity, complex content, or organizational behavioural challenges that impact the success of the project (Remington & Pollack, 2010). Yet research that highlights the impact that this has on project manager's leadership style is still emerging. This is even more important to investigate in the UAE as there is only an emerging body of evidence that examines leadership styles in the United Arab Emirates (UAE) (Randeree & Ninan, 2010; Yousif, Hossan, & McNeil, 2015). Thus, this study investigates the impact that structural project complexities have on leadership styles in the UAE. In addition, the impact that diversity (cultural and gender) and experience plays in this relationship will be investigated.

1.3 Research aims and objectives

This study aims to explore the impact that structural project complexities have on leadership style, with a sub-aim of exploring how gender, cultural background of the manager and the experience level of the manager impacts this relationship. This is important to address as projects are increasingly becoming more complex. This is particularly true in the UAE where there are government, semi-government and private enterprises operating projects of varying complexities to achieve the common aim of the UAE government. Yet no research has explored these relationships within the UAE. Instead, there are only two current studies examining leadership in the UAE, each focusing on either the IT or construction industries (Randeree & Ninan, 2010; Yousif et al., 2015). Consequently, this research begins to fill these gaps in the literature by exploring how structural project complexities impact the leadership style used and how diversity (cultural and gender) as well as the experience level of the manager impacts this relationship. In doing so, the research aim is to provide further insight into how people can best lead complex projects within the UAE to ensure that employees are satisfied, that work is completed in an effective and efficient manner, and to ensure that the strategic objectives of the project are met. The following section outlines the research questions that supported the research objectives.

1.4 Research questions

Research on how to lead complex organisations resulted in the emergence of the *complexity leadership theory*. Building on the premise of complex adaptive systems, this framework enables the learning, creative analysis, adaptive capacity in knowledge, producing organisations or units but also enabling appropriate controls to ensure that outcomes are met (Uhl-Bien, Marion, & McKelvey, 2007). Complexity leadership theory includes three leadership functions: adaptive, administrative and enabling. While this theory has been proposed for organisational management (Lichtenstein & Plowman, 2009), limited evidence exists to explore this leadership style in project management. In addition, no study has explored the impact that gender, cultural diversity of manager and experience has on this complex leadership theory.

Therefore, this study seeks to fill this gap in the literature by exploring the research questions:

1. How do project managers lead in complex projects within the UAE?
2. How do structural complexities impact the leadership style used?
3. How is the leadership style used impacted by gender, cultural background and maturity level of the manager?

1.5 Significance of the research

There have been a number of projects looking at complexity project management in the UAE. The vast majority have focused on risk management (Motaleb & Kishk, 2014), knowledge management (Cader et al., 2013), project delivery factors for success (Blismas, Sher, Thorpe, & Baldwin 2004), contractors views of project management (Abbassi & Alnahhal, 2011), cross cultural project management (Jaeger & Adair, 2013), and the impact of culture on project management (Naoum, Alyousif, & Atkinson, 2014). There are only two studies focused on leadership in the UAE. The first, by Yousif et al. (2015), examined leadership in UAE projects and found that transactional leadership styles were more evident in the UAE than the United States and Europe. In addition, younger leaders were found to use more transactional styles than older leaders, and local leaders were found to use more transactional styles over expatriates. The second study by Randeree and Ninan (2010), found transactional leadership styles were also used by informational technology managers working more broadly within the UAE.

These studies reveal that an emerging body of research has started to examine leadership behaviour in complex projects within the UAE (Randeree & Ninan, 2010; Yousif et al., 2015). This study seeks to add to this emerging body of literature while also exploring the impact that gender, cultural background and experience has on the leadership strategy used as well as on their perceptions of structural complexities. This research is also relevant because softer skills of management are increasingly being found important in the success of complex projects (Cavaleri & Reed, 2008).

Turner and Muller (2011) highlighted the need for additional research on leadership in complex projects in their study, which found that leadership competence had a significant influence on overall project success. In addition, previous research by Muller and Turner (2010) found that managers of successful medium complexity projects had strong critical thinking skills, were able to manage resources well, empowered and developed their team, were self-aware, conscientious and sensitively influenced their followers (Muller & Turner, 2010). However, both gender (Hogue & Lord, 2007) and age (Yousif et al., 2015) were important influences of the type of leadership style used.

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1.6 Methodology

This study uses a qualitative approach supported by a short survey that was provided to the managers interviewed. A total of 33 face-to-face interviews were conducted in this study. Managers came from the construction industry as this is the fastest growing industry in the UAE. All managers investigated scored high on the CIFTER scale for complex projects, meaning they were all in charge of leading at least one complex project and had at least one staff underneath them. Thirty of the managers also reported to at least one person, with one manager reporting to eight people.

Interviews lasted between 45-60 minutes and were conducted over a 3-month period (July-September 2017). Data gathering ceased when data saturation was reached. Interviews were conducted in both Arabic and English languages, then translated back to English by the researcher, who is fluent in both languages. The majority of interviews (32) were conducted in English, with only one being conducted in Arabic as it was her native language. All interview transcripts were sent back to the participant for verification post interviews. This resulted in most (29) participants responding they had been accurately captured, two participants added more detail to questions asked and the remaining two did not respond to the email.

Due to the potential differences in languages, interview questions were structured due to the potential language barriers that may have existed between the researcher and participant. The questions asked centred around the, “who, what, when, where and how” questions of relational and structural complexities in leadership and complex project management within the UAE in line with the descriptive case study methodology. Demographic data was also collected to analyse the cultural and gender diversity as well as how the experience level of managers impacts their leadership styles.

Data were analysed using systematic combining and are presented as a descriptive case study of complex project management in the UAE.

1.7 Research Limitations

This study was limited in scope due to the nature of the degree and timeframe for data collection. Specifically, this study only collected data from complex project managers within the construction industry in the UAE. While there were strong justifications for this selection, generalizability of this study beyond this context is not possible. Further, while some transferability may be applied, care should be taken to review this work beyond the scope of the study. Additionally, this data was collected over a 3-month period in 2017, due to ethical limitations and practical considerations. Therefore, while there were no known events that would have impacted the data collection during this time, to the knowledge of the researcher, this should be considered when reading the results of this study.

A core limitation of this study was the assumption that language differences would impact the data collected and as such this study was framed around structured interviews. While this was important for the context of this study, a key restraint of this was the depth of the data gathered. While some managers would elaborate on some questions, others would keep their answers short. Future research would benefit from semi-structured questions, using a multi- lingual team to combat any language challenges that may exist in future studies.

1.8 Theoretical and practical contributions

This study advances the literature in three core areas. First, it is the third study to explore leadership practices in complex project managers in the UAE. This is important as it extends the knowledge of leadership practices from the West to the Middle East, which is enclosed in its own challenges that are unique to this area.

Contributing to knowledge in complex project leadership in the Middle East in general, and the UAE more specifically, is a very important theoretical and practical contribution of this study. Theoretically, Adeleke, Bahaudin and Kamaruddeen (2016a) identified a relationship between the complexity of projects and project success. While the extent of complexity does not generally suggest that project success will be difficult to achieve, Arditi, Nayak and Damci (2017) assert that the composition of more complex projects always require more inputs to meet project characteristics, signifying the need for project managers and other team members to put in extra effort, to exhibit greater knowledge, and to use more advanced project methodologies in order to succeed. One major contribution that this study will make while exploring the different types of complex projects in the UAE will be to determine if these exact dimensions apply to it as a country. Knowing if these exact dimensions of complex projects apply in UAE is critical in applying the right project team composition, methodology, contracts, and contractor performance in handling them. To achieve positive outcomes therefore, the right complexity dimensions must be determined so as to know which team compositions to use. Table 1 summarises the main team compositions that Haas (2016) associated with each project complexity dimension.

Table 1: Complex project dimensions and team composition

Complexity dimension	Team composition
Moderately complex project	**PM**: Competent **Team**: Internal and external, worked together in past **Methodology**: Defined, unproven **Contracts**: Straightforward **Contractor past performance**: Good
Highly complex projects	**PM**: Competent **Team**: Internal and external, have not worked together in past **Methodology**: Somewhat defined, diverse **Contracts**: Complex **Contractor past performance**: Good
Mega projects	**PM**: Competent **Team**: Complex structure of varying competencies and performance record (e.g. culturally diverse) **Methodology**: Undefined, diverse **Contracts**: Highly complex **Contractor past performance**: Excellent

Source: Haas (2016)

A careful assessment of Table 1 shows that dealing with the team composition of the various complexity dimensions all comes down to leadership practices. In terms of contracts, leadership is required in knowing how to deliver the different tasks that make up the contract implementation and where past performance of the contractor is good, they need to have the requisite experience in handling complex projects effectively and efficiently (Battiston et al. 2016). Only two studies have been identified so far that explores leadership styles in the UAE. As a third study, this research will serve as guideline not only for the leadership of project management in UAE, but also for future researchers who would like to conduct similar studies on how leadership practices are affected by project complexities in the UAE.

Second, this study advances the literature by being the first of its kind to explore gender and cultural influences of the manager on these leadership practices. Previous research in this area on UAE has focused purely on the leadership practice itself, without considering cultural and gender research. Therefore, this study advances diversity research and applies this to the Middle East. From the broader context of the literature, particularly studies on Western countries, there are several studies on the influence of gender on project management (Ofori, 2018).

While studying the influence of female leadership on project management, there are specific questions that the research will be answering in the context of UAE and through the collection of data from project managers. The questions will address whether males and females are equal in complex project management outcomes. There will be an exploration of whether female leaders bring new characteristics that males do not offer to complex project management. The study will also contribute to the possible effects of attempting to make female project leaders use leadership practices and characteristics in the exact same way as their male counterparts. Naoum (2016) related the gender approach to complex project leadership with leadership, using Hofstede's cultural theory. In Hofstede's cultural theory, there is a masculinity dimension, which determines the extent to which it is acceptable for females to exhibit male values, as well as the extent to which it is acceptable for females to perform roles traditionally considered as male (Ajayi et al., 2016). Countries with low masculinity do not easily embrace females exhibiting male values and roles. As this is the situation with UAE, this study will make a contribution to the gender discussions by investigating how the outcomes of complex projects are affected when females find themselves in situations where they have to lead with similar values and characteristic as males.

Referring back to the Hofstede cultural theory, there is a dimension on the power distance index (PDI) that deals with the way power is distributed and used in an organisational context (Popat et al., 2018). Mehran (2016) noted that the cultural dimension of employees, whether low or high, directly impacts on the leadership practices that leaders ought to use in order to succeed. Hofstede determined that the reason for this was that in societies with high PDI, followers do not question authority as they appreciate that hierarchies must be established to determine the use and flow of power within the organisation (Ofori, 2018). But where there is low PDI, followers generally question authority and the distribution of power. While the UAE has a high PDI, it is important to determine how the appreciation of authority impacts on the level of experience that leaders managing complex projects should have, since such leaders will be issuing many orders in terms of what needs to be done to deliver various aspects of the project tasks. Finally, this study advances the literature as it explores the role that experience can have on leadership strategies used. While previous research in the West has found that the maturity of managers' impact leadership strategies, no research has qualified this for the UAE (AlShamsi & Ajmal, 2018). This study therefore advances our knowledge in this area by focusing on how leadership strategies mature as managers do. This is important to practitioners when recruiting as, while not useful on its own, it does provide some insight into how managers may lead their teams, which may be used in organisational fit considerations and in conceiving appropriate interview questions for managers.

Referring back to Table 1, one of the main team compositions that affect the outcome of projects is contractor past performance. This alone is an indication of the important place of leadership experience in project management. But as mentioned above, almost all available studies on leadership experience have been conducted in Western settings. It is for this reason that the current study will attempt to contribute to the literature regarding the place of leadership experience on the outcome of complex projects in the UAE, which is located in a Middle-

Eastern Asian setting. With reference to available literature, this present study will be making contributions in three main areas that relate to leadership experience. These are in terms of age of project managers or leaders, previous working experience of leaders, and educational qualification of project managers or leaders. One growing trend in Western literature has been to study the influence that the age of project managers or leaders has on their leadership practice. Asif (2016) posited that age influences the level of charisma, approach to innovation, and working relationship between leaders and their followers. Similarly, Al-Emad, and Rahman (2017) emphasised that age influences the selection of leadership style, as younger leaders are said to prefer transformational leadership styles to transactional ones. Testing the applicability of these findings in the UAE is very important.

In terms of previous working experience, majority of available studies have found that project managers who take up complex projects with previous experience of having done so before are more likely to succeed based on the approaches to leadership they adopt (Ajayi et al., 2016; Battiston et al., 2016). For example, Faried et al. (2017) stated that previous experiences are necessary for project managers to determine what works well and what does not work well in terms of leadership practices. While the employees or other team members that the leader will be working with may not be exactly the same as those used previously, Athapaththu and Karunasena (2018) asserted that the impact of most leadership practices on followers are the same or differ only slightly, making it possible to benefit from the transfer of leadership experience from one project to another. While this may be the case, the researcher of the current study perceives that such things as cultural background of followers can influence the outlook of leadership experience.

Finally, the influence of educational level, particularly leaders' master's degrees, on leadership practice has been extensively studied in the body of literature. Gamil and Abdul Rahman (2018) elucidated that the academic knowledge that leaders acquire while in institutions of higher learning directly impacts on their leadership competence as well as overall cognitive competence on project management. Because such leaders gain higher skills and competencies on various methodologies and approaches to managing complex projects, it translates into somewhat similar manner as people with previous working experience (AlShamsi & Ajmal, 2018). Because the educational curriculum in UAE is not same as those used in other parts of the world, it is important that this study focuses very specifically and directly on educational levels of project managers in the UAE and the impact this has on their leadership practice.

1.8 Outline of thesis

This thesis has seven chapters. Chapter one presents an introduction to this thesis including the main background to the study, the purpose of the study, the aims and objectives, a summary of the methodology, as well as the limitations and delimitations of the study. The introduction chapter will also feature the justification for the study, while highlighting the gaps in the literature that this doctoral study seeks to fill.

Chapter two presents the literature review for this study. The literature review is conducted using the research questions and specific objectives as guidelines in creating themes that the review should focus around. Through the literature review, initial idea of what others have found similar to the study's aim are detected.

Chapter three presents the theoretical background for this study. The theoretical background is a continuation of the literature review with the only exception that it will not review existing works of research but theories relating to the research topic. As this is a topic with premise in complex projects, leadership, culture and gender, these will be the four main areas around which theories will be identified and reviewed. Chapter four presents the methodology and methods used. This includes the methods, procedures, processes, and approaches used in collecting, analysing and presenting data for the study are described. It will also include the design, population and sample, data collection instrument, data collection method, and data analysis plan.

Chapters five and six present the results and discussion of the study, respectively. The results chapter focuses on the structural relationships noted within this study, as well as the leadership strategy used by managers, and diversity (culture and gender) and experience considerations. The discussion helps in situating the current study within the premise of the larger body of literature. Since the emphasis of this study is on the UAE, the discussion will seek to compare and contrast findings relating to the UAE to what has already been studied in Western settings.

Chapter seven presents the concluding statements for this study. It also provides suggestions for expanding this research topic, as well as recommendations for future practice.

1.9 Chapter summary

This chapter presented the introduction to this thesis. It provided a background, rationale, objectives and aims of the study, introduced the research questions and methodology frame for the study. Finally, it presented the overview of the thesis. By presenting the background and identifying the gaps in the literature, the importance of this study is highlighted. While studies on complex project management are not new in the literature, the relationship between such complex project management and leadership in the context of the UAE and the Middle East in general is lacking. The UAE is fast becoming a global destination for complex projects particularly those in the oil and gas industry and construction sectors. Consequently, this study will therefore collect primary data specific to the UAE to determine the impact that structural project complexities have on leadership style, with a sub-aim of exploring how gender, cultural background of the manager and the experience level of the manager impacts this relationship.

Current studies on leadership and project leadership featuring the UAE are confined to two studies. These studies do not provide enough input and information on how the complexity of projects impact on project leadership. These studies also do not study how gender and culture can impact on project leadership and on the delivery of complex projects. As noted above, gender and culture are factors affecting project leadership and impacting on the management of complex projects. There is a need to explore such qualities and leadership contexts better, specifically in the context of the UAE where numerous construction projects, including large and major construction projects are underway or are being planned within the next few years. The fact that the country only has about 16% native Emiratis is a major factor affecting possible leadership of major projects especially as the government has set forth policies on prioritizing native Emiratis for management roles and positions. There are not enough Emirati leaders to manage Emirati construction projects, complex or otherwise. This is the current reality being presented by the data presented above.

This study seeks to understand project leadership in the UAE in the context of complex projects. The aims and objectives of this study relate to improvements on leadership which can be made by managers in order to ensure the success of complex projects in the UAE. The methodology chosen is that of a qualitative study covering about 33 managers from the construction industry. The chapter following will feature the studies related and relevant to this study. These studies will provide a context to the rest of the study and will also help establish gaps in current literature which this study will seek to fill.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive literature review of project management and the place that complex project management has in the current management of projects within the UAE. The literature review was conducted using a narrative approach and all databases, and google scholar sources were reviewed to explore the literature bases widely. Both white papers, grey papers and academic sources were reviewed in this thesis in order to provide a a discussion of the project management concept, complex projects, complexity theory, complex adaptive systems, types of leadership, and the cross-cultural as well as the diversity issues in management. The chapter concludes with a section detailing research questions, research gaps to be addressed, and a summary of the chapter.

2.2 Project management

Project management has held a rational place in professional society since the 1930s. However, it was not until the 1960s that professional associations and management tools shaped the discipline. Since the 1980s, project management has become a recognised practice in managing projects, although there is limited literature describing the historical development of project management as a discipline (Garel, 2013). To aid the development of project management methodology, the Project Management Institute (PMI) was developed in 1969 by five volunteers. The PMI also developed a standardised practice in project management, one reaching more than 200,000 professions across 100 countries. This practice has also resulted in the development of an internationally accepted body of knowledge in project management (commonly known as the Project Management Body of Knowledge, or PMBOK guide).

Asif (2016) noted that the guide outlines the process of conducting project management for the successful completion of projects. The PMI has also developed an internationally recognised certification program in project management, which follows their ethics charter to encourage project managers who are certified through the PMI to abide by this charter. In doing so, the PMI institute has developed a formalised, professional model that is standardised based on a North American model (PMI, 2015). Since 1961, the PMI model has been globally recognised for its association with multiple project management institutes. For example, the PMI body of knowledge served as reference for the IPMA Competence Baseline. Additionally, in 1976, the Australian Institute of Project Management was formed, and this institute became central in the formation of the Asia Pacific Federation for Project Management (APFPM) in 2002.

Similarly, Japan established a Project Management Forum in 1998 as a division of the Engineering Advancement Association (ENAA). This was sponsored by the Japanese government which resulted in the development of their own guidebook in project management. They called the guidebook P2M: Project and Program Management for Enterprise Innovation. With this guidebook and the PMI, a global movement towards project management initiatives was initiated. While project management has become an international initiative, their professional associations are still predominately nationally based (Tahir & Naeem, 2017). That is, instead of having an international body, each national association has been primarily active in establishing their own body of knowledge and creating certified programs for their members. That being said, the Global Project Management Forum was initiated in 1994 in an effort to gravitate towards a more international environment. However, the political interests of each national association have hampered these efforts to date (Crawford, 2004).

The most influential standards in project management, however, have been developed within the Anglo-American world. There is the project management standard of the US-American, called the Project Management Body of Knowledge (PMBOK) (PMI, 2013), comprised of ten broad project management knowledge areas. In contrast, the European standardized Body of Knowledge (BoK) is comprised of seven project management knowledge areas. In the context of international project management, the American project management body of knowledge is more appropriate due to its inclusion of context, stakeholder management, and more detailed people-related areas. Therefore, this model is referred to in this study.

Apart from the institutional and academic aspects of project management based on PMBOK and PMI material, there are also practical aspects. These practical aspects describe exactly what needs to be done in the management of projects (Adeleke et al., 2017). According to the Association for Project Management, APM (2018, p. 1), “project management is the application of processes, methods, knowledge, skills and experience to achieve the project objectives”. What this indicates is that project management is a multifaceted concept that involves several acts and practices, all of which come together to ensure that the objectives set for a project are achieved. To achieve these objectives, there are also a number requirements needed in the form of knowledge, skills, and experience. As a multifaceted concept, there are a number of core components that various researchers and writers have used to determine what an effective project management entails. Naoum (2016) asserted that clearly defined core components are necessary for ensuring global standards and metrics on whether a particular set of practices constitute project management or not. Some of these core components include components very much relevant to this study. These components include: identifying project requirements, deliverables, timescales, and estimated resources; forming and leading project teams; managing risks and any other related issues on the project; and managing project budget as well as closing the project in a well-controlled manner.

Al-Emad and Rahman (2017) also identified five core components of project management, which are used to form the basis for defining project management. The five components are initiating, planning, executing, controlling, and closing of projects. Based on these five core components, any work of a team that is initiated, planned, executed, controlled, and closed within a specified time frame to achieve specific goals or success criteria is said to be project management (AlShamsi & Ajmal, 2018). The core components of project management identify the unique characteristics that should come with every project. Elaborating on why such core components are important, Jabeen and Isakovic (2018) asserted that they help in distinguishing projects from businesses or operations. That is, projects are temporary and implemented to produce unique products, services, or changes that add value or bring benefits to its owners. Even though projects are temporary, their resulting outcomes could be permanent or semi-permanent, meaning that the core components of project management are specifically directed at the processes that go into bringing the said product, service, or change into being (Ya'acob, Rahim, & Zainon, 2018).

One of the most important characteristics of project management is that it is directed at a project that is set with specific goals to achieve. For this reason, developing technical skills and management strategies that are distinct is always a requirement for succeeding with project management (Hamouda & Abu-Shaaban, 2015). Hasan, Baroudi, Elmualim and Rameezdeen (2018) note that technical skills and management strategies are both subjective and qualitative, meaning that it is difficult to measure them or have a common standard for how many of them is enough. This is what leads to the idea of project types and the impact that the type of project has on its management. Asif (2016) argued that different projects require different levels of technical skills and management strategies in making project management effective. The more complex the project, the higher the level of technical skills and management strategies needed. Even though there is no common agreement in the body of literature about what constitutes complex projects, the technical requirements, cost of project, and time frame for delivering the project are mostly used to determine project complexity (AlShamsi & Ajmal, 2018; Tahir & Naeem, 2017). As depicted in Figure 1, the APM (2018) also used the concept of project scope, which is determined on the basis of time, quality and cost to measure the complexity of projects.

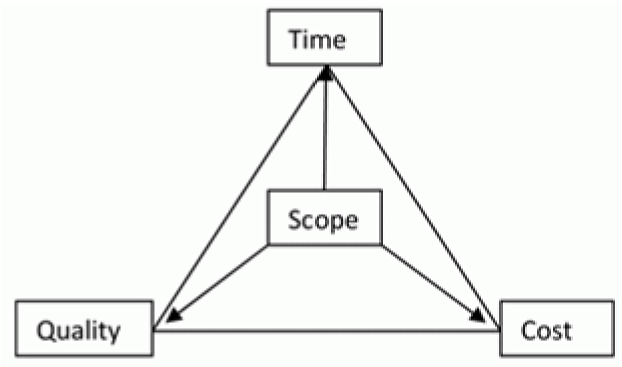

Figure 1: Project scope as determinant of project complexity (Source: APM, 2018, p. 1)

2.3 Definition of project and project management?

The Project Management Institute (PMI) defines a project as a temporary endeavour, which is undertaken in order to create a unique product, service or result (PMI, 2013). Due to the temporary nature of this event, a different approach is needed to manage and control a project than what is used in the day-to-day operation of a business by an operations manager, whose work is oriented towards continuous improvement of existing processes over a long period of time (Miller, Fields, Kumar, & Ortiz, 2000). This means that project managers need a different set of skills to lead, define and execute temporary projects successfully. They must be able to manage both the start-up of activities as well as the closeout activities, including developing teams, organising work and establishing priorities for a defined set of time.

The second characteristic of a project, the delivery of a unique product, service or result, changes the management approach to the work. That is, the project manager must take the time to understand the deliverables of a project and develop a plan for producing these deliverables within the agreed time. To do this, project managers must split the project into a series of activities that are sequenced logically and prioritised accordingly (PMI, 2013).

In recent years, project management has received an increased amount of attention. This may be because many tasks have become too complex to be handled by individual departments and departmental managers. Instead, they require expertise and various resources from several different functions or departments and thus, a project is defined and the required resources and people are assembled under the direction of a project manager (PMI, 2009). The project manager’s responsibility then is to complete their project in a manner that will optimise the projects worth to the parent organisation. In functional terms, the project manager is responsible for planning, organising, executing, evaluating and controlling the project.

Techniques for efficient and effective project management have been identified from the body of literature. Some of these techniques include integration, scope, time, cost, quality, procurement, human resources, communications, risk management, and stakeholder management (Ajayi et al., 2016; Chan & Mohamed, 2017). Effective project management contains a number of approaches, however a recent factor analysis by Ajmal, Malik and Saber (2017) found that risk management, organisational culture, stakeholder approach, management approach and project leadership were key factors in overall project success (Ajmal et al., 2017). Integration as knowledge area refers to the ability to link up and coordinate different roles, tasks, and components of the project into one unit of deliverable product, service or change

(AlShamsi & Ajmal, 2018). Adeleke et al. (2016a) found integration to be an important project management knowledge area, necessary to bring together different aspects of a project that make up the scope or deliverables to achieve. A study by Naoum (2016) confirmed that the extent to which the project manager is able to integrate different roles, tasks, and schedules of the project influences both efficiency and effectiveness. That is, the manner in which integration is done can lead to efficient use of resources including time and money, and can also affect the quality of work input and thus project effectiveness.

Project management knowledge on the scope of projects is also very important in terms of establishing efficient and effective project management techniques. Al-Emad and Rahman (2017) observed that the scope of the project always determines what goes into the project by way of resources and personnel. In the same way, the scope determines the project management techniques that can best be used to deliver on expected goals. In a study by Asif (2016), it was found that the main relationship between knowledge on scope and the use of efficient and effective project management techniques is that it helps project managers in estimating accurately such that they do not use more or less resources and personnel than expected. The situation of either overestimating or underestimating has always cost project managers a lot, since it has negative influences on the resulting value of projects (Alaghbari, Al-Sakkaf & Sultan, 2019).

Directly related to the project management knowledge of scope is the issue of time management (Hamouda & Abu-Shaaban, 2015). Athapaththu and Karunasena (2018) identify time management as a very important knowledge area and skill, requiring project managers to plan and allocate time efficiently for different roles and tasks within the project. As mentioned earlier, one of the main features of projects that make them temporary is the fact that they are delivered within specified time frames (AlShamsi & Ajmal, 2018). For this reason, project managers cannot compromise on the need to complete projects on time, particularly as most projects are only useful if they can be finished within a specified time frame (Tahir & Naeem, 2017). Another unique feature about time is that when not used efficiently, it can impact negatively on the quality and thus effectiveness of projects, as project managers may be forced to rush through the work when they fall behind schedule (Alaghbari et al., 2019).

When projects are managed in such a way that they use the right allocation of funds, it is said to have been efficiently managed (Ya'acob et al., 2018). Project management knowledge of cost has similar effects as time, as the cost of projects need to be managed in such a manner that too much money will not be spent where only little is needed and vice versa. Already, cost has been mentioned as one of the main determinants of complex projects (Chan & Mohamed, 2017). Therefore, there is a need to focus on allocating resources efficiently in projects. While estimating costs, some excesses or deficiencies are usually allowed. Gharzeldeen and Beheiry (2015) found that overspending that arises from poor cost management can have several negative impacts on the success of the project, including the fact that it could cause delays when additional cash is not ready before existing resources are consumed.

In the study by Kerr (2015), the UAE construction industry is an industry which is made up of numerous projects and personnel. These projects range from the simple to the complex. The complex projects include infrastructure projects set to serve the industrialization needs of the Emirati population. The personnel for the construction industry in the UAE are limited in terms of Emirati natives as majority of their workers are foreigners (Kerr, 2015). Most Emiratis have opted out of the construction industry with only managerial positions mostly reserved for them. The construction industry sector is therefore a very diverse industry in the UAE, and with the economic success of UAE as a country, more infrastructure projects are likely to unfold in the years following (Kerr, 2015).

Naoum (2016) purported that quality management is the basis for determining the effectiveness of project management. That is, quality management ought to be carried out in a manner where the resulting project can be considered as high quality. There are several actions and factors that go into the use of quality management techniques during project management. Asif (2016) identified some of these to include determining quality policy, creating quality plans, implementing quality plans, ensuring quality assurance, performing quality control, and achieving quality improvement. This list shows that quality management is such an extensive process that must be a continuous part of the project management (Ajayi et al., 2016). A study by Gamil and Abdul Rahman (2018) revealed that quality management is prioritised so much in project management that it has become a common practice for most project managers to outsource third party companies to carry it out for them.

Procurement is another project management knowledge area that influences the use of effective and efficient techniques in project management. Jabeen and Isakovic (2018) also mention that it is fast gaining prominence with general private projects due to the benefits that the procurement process offers. Hitherto, project managers were only involved in purchasing instead of procurement. But as a way of ensuring both effectiveness and efficiency in project management, procurement has become a more preferred practice (Chan & Mohamed, 2017). Adeleke et al. (2016b) explained that a major difference between procurement and purchase is that procurement is a more extensive process that involves vetting several vendors, selecting a suitable vendor from among many, negotiating for contract terms, establishing payment terms with the vendor, and undertaking actual purchase. Purchasing is however a more straightforward practice of buying from a preferred vendor. The processes involved in procurement thus ensures value for money and quality of goods purchased, since the processes entails due diligence (Ya'acob et al., 2018).

Human resource management and stakeholder management are also two project management knowledge areas required for effective and efficient outcomes of project management. The human resources mostly refers to the team of workers with whom the project manager delivers the project, while stakeholders include a larger group of people who may have direct or indirect interest in the project (Tahir & Naeem, 2017). Naoum (2016) found that the effective management of human resources and other stakeholders is directly related to project management in general. The basis for this claim is that the stakeholders, and human resources in particular, act as the pivot around which all the work conducted as part of the project revolves. If the human resources are not managed well, chances are that they will not give their best in performing their roles and these have direct negative impacts on the project. Likewise, Elgayar, Beheiry, Jabbar and Al Ansari (2016) found that because some stakeholders have the power to influence the flow of work, poor relations with them could lead to possible sabotage in project management. Related to human resource and stakeholder management is communication knowledge, which is needed in effectively exchanging messages and ideas with the stakeholders (Alaghbari et al., 2019).

One possible reason for this similarity could be that in public leadership, managers have to manage multiple stakeholder demands while also leading a team that may not have been selected by them. Consequently, understanding how to work with a diverse skill set, and getting the most out of employees is a critical skill set that needs to be enhanced in this region. This finding also highlights that the current push to investigate specific demands under complex project leadership, and the need for a complex leadership theory may in fact be null and void, if future research also finds similarities between public leadership and complex project leadership strategies (Ya'acob et al., 2018). This is therefore an important area for future research to explore.

Finally, risk management is an important project management knowledge area that determines the use of effective and efficient techniques in project management. Asif (2016) posits that there are several uncertain events and conditions that arise during project management. Moore, Payne, Autry and Griffis (2016) warned that risks come in different forms and magnitude, some of which could have very damaging effects on the success of projects. It is for this reason that risk management is very important as part of project management. Project risk management is also a process rather than an event, as it entails a continuous practice of identifying risk and mitigating their effects on the project (He, Luo, Hu, & Chan, 2015). In project management, when risks are not managed effectively, they impact negatively on the outcome of the project and possibly cause things such as delays, increased cost, and poor quality (Guo, You, & González, 2015). More recently, however, it is recognised that complex projects may require a more adaptive approach and as such the next section presents an overview of project complexity management and what that means for management projects in today's climate.

Based on the above points, it can be understood that projects are generally specific activities which call for specific actions, skills, expertise, and personnel. While these projects are being undertaken, there are numerous qualities and elements which need to be fulfilled in order to ensure the efficient management of these projects. These qualities and defining points for projects provide a clear context upon which UAE projects can be understood and analyzed.

2.4 Complex project management

Complex projects are defined as those with many varied, interrelated parts (Baccarini, 1996). Consequently, understanding the way complex systems interact in both direct and indirect patterns is important for working in complex systems and managing complex projects. Aitken and Crawford (2007) found various definitions of project complexities used in the literature. That is, in some organisations, complexity is defined by the technical complexity and in others it is defined by the project management complexity.

Alternatively, it also means that public leadership could learn from project management strategies (Antunes & Gonzalez, 2015). Drawing on the complexity theory, this approach suggests that project managers must draw on a wide range of tools and new ways of thinking freely, and independently from the tools that are provided in the methodology they use (Remington & Pollack, 2010). This is important across a variety of leadership contexts, and in particular, for the UAE setting.

Technical complexities are characterised by the type of technology, processes or products used within projects, whereas project management complexities are defined by how difficult the project is to manage due to the context, organisation and cohesion of stakeholders (Aitken, 2007). Regardless of the definition used, the traditional views of project management conceptualize and manage projects in a linear way as evident in Figure 2 (Remington & Pollack, 2010). Yet as projects become interdependent, large, and last several years, these linear approaches become problematic, as many iterations of each stage may exist, as suggested in Figure 3.

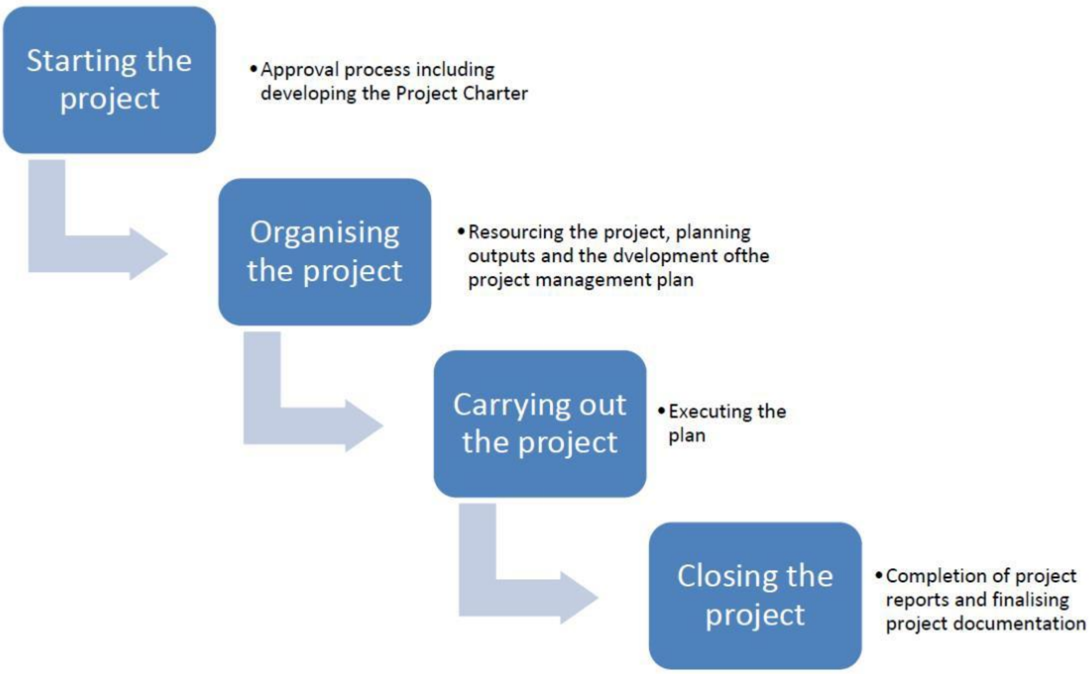

Figure 2: The traditional linear approach to project management. Adapted from PMI (2013)

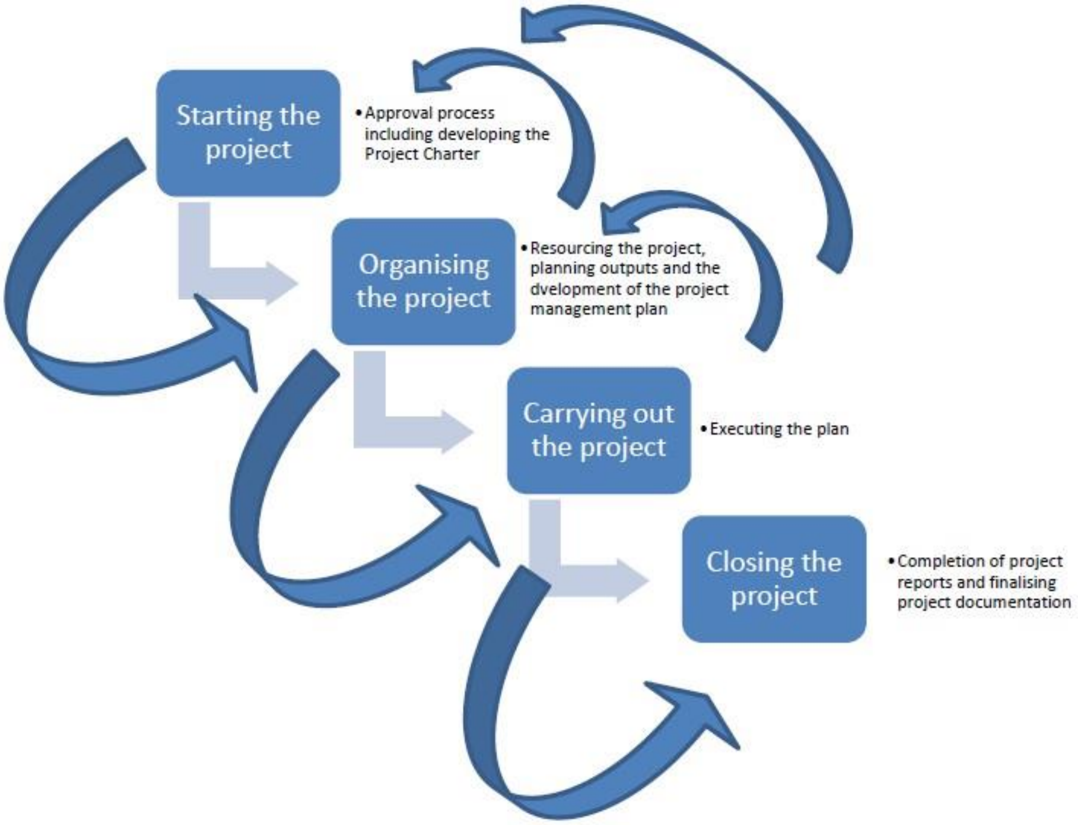

Figure 3**: The non-linear nature of complex projects. Adapted from PMI (2013)**

Figure 3 highlights that the nature of project management in contemporary projects is more complex, with the addition of many more iterations and movement between stages in a more circular manner than in the traditional view of project management. Consequently, there is a need to manage complex projects differently to more linear projects.

To manage complex projects, research has proposed the need to consider a 'systematic pluralistic' approach, which conceptualizes projects as part of the system of an organization (Remington & Pollack, 2010). Drawing on complexity theory, this approach to project management sees projects as unique and requiring multiple perspectives to deliver them effectively. To understand this further, an understanding of the characteristics of complexity theory and complex adaptive systems is needed.

The literature above provides essential information to define complex projects and how these projects are and can be efficiently managed. These studies also point out that complex projects require numerous complex and dynamic resources including qualities from leaders and workers alike. In considering the UAE context, complex projects in UAE are abundant in most sectors of their economy. The UAE population is diverse and multicultural and may actually have the necessary personnel to efficiently manage complex projects. More studies are however needed to establish clear linkages between complexity of projects, the diversity of personnel in the UAE and leadership development.

2.5 Complexity theory

Complexity theory is a system made up of multidisciplinary knowledge including physics, biology, philosophy, economics, management, and psychology. In doing so, it aims to describe how the whole universe is made up of more than just the sum of its parts (Coveney & Highfield, 1995). Battram (1998, p. 2) defined complexity as "the condition of the universe which is integrated and yet too rich and varied for us to understand in simple common mechanistic or linear ways". Antunes and Gonzalez (2015) found that complexity theory is guided by seven key principles: self-organisation, edge of chaos, hologrammatic, impossibility of prediction, powers of connections, circular causality and try and learn. Tosey (2002) reduced the key principles of complexity theory to four, self-organization, paradox, emergence, and the edge of chaos. Complexity theory is founded on the belief that there is a complex world where everything that is managed within it needs some form of complexity to achieve desirable outcomes (Antunes & Gonzalez, 2015). When discussed in relation to project management, complexity theory explains the way in which projects must be managed as a whole rather than just the sum of tasks and activities (He et al., 2015).

Tosey (2002) explained that the key principle of self-organization answers the question of who controls the eco-system. When translated into project management, this could refer to how projects "have a self-organising capability and can change spontaneously into other forms" if they are not managed well (Tosey, 2002, p. 7). The self-organising principle, however, does not refer to the physical transformation of projects from one type to another such as from a bridge to a hospital. Rather, it refers to changes in “patterned behaviour arising from agent interactions” (Tosey, 2002, p. 7). Qazi, Quigley, Dickson and Kirytopoulos (2016) confirmed that there are patterned behaviours associated with complex projects. These patterned behaviours are influenced by the principles, needs and intentions of project stakeholders, as well as society as a whole. In the course of a project, these patterned behaviours have a self-organising capability of changing, based on the dynamics of society. A typical example of this is a contractor responsible for constructing a sports stadium for an upcoming sports event. As the date of the sports event draws near, the expectations of stakeholders, as well as the euphoria of the public towards the construction will spontaneously change, mostly putting the contractor under pressure if progress has not been made to desirable level. When project managers are guided by the self-organising principle of complexity theory, they will prioritise the need to understand the patterned behaviour around the project and manage changes associated with the behaviour.

The second principle of paradox refers to the extent to which entities appear to be irrational and unpredictable (Tosey, 2002). Qazi et al. (2016) asserted that the best way to relate the key principle of paradox to project management is to appreciate that risks within complex projects are difficult to predict. Because complexity theory explains how things exist as a whole rather than in isolation, the paradoxical nature of risk can be said to arise not just from within the project itself but from the larger external environment within which the project is situated (Antunes & Gonzalez, 2015). Used in the context of project management, this could mean that project managers of complex projects should also have what it takes to take radical risk management actions that focus on preventing rather than treating risks (Guo et al., 2015).

The third key principle of complexity theory is emergence. Emergence explains the way in which the behaviour and qualities of systems emerge from local interactions. Typical with complex projects, Qazi et al. (2016) observed that the roles of different workers and subcontractors may not be co-ordinated during the execution phase but the overall completion of the project emerges from the collective impact of the different roles and tasks. For example, when constructing an auditorium, there may be different and contrasting tasks involved such as concrete works and interior furnishing. Even though the work of the interior furnishing does not directly affect the contractor responsible for laying the foundation, the completeness of the project will be determined by how the final deliverable of each task is executed. When project managers understand the principle of emergence well, they will have an appreciation of the need to use the right leadership to coordinate and interact with all participants, regardless of how their roles may be seen as unrelated to the works of others (He et al., 2015). Such project managers will take interest in how each piece of work emerges, including works like signposts and inscriptions on projects such as building construction. Qazi et al. (2016) posited that one of the best ways by which project managers can effectively control the emergence of roles in complex projects is to have some knowledge about every piece of work associated with the completeness of the project.

Lastly, there is the principle of edge of chaos, which “refers to the dynamics between stability and instability; turbulence and disequilibrium” (Tosey, 2002, p. 17). The edge of chaos has been described as a leeway where systems operate at their best because they benefit from the avoidance of chaos and the temptation of thinking that everything is tranquil (Andersen, 2018). In effect, the edge of chaos is that point between chaos and tranquillity. In the context of project management, the edge of chaos can best be likened to a point of balance “where the components of a system never quite lock into place, and yet never quite dissolve into turbulence, either” (Waldrop, 1992, p. 12). Consequently, they refer to moments within the complex project lifestyle where project managers may detect that things do not fit together as desirably as they prefer but are still not too bad to be corrected. In order to identify such balance points when managing complex projects, it will be important for project managers to adopt the practice of continuous evaluation or assessment of the project. Through such continuous evaluation, they can detect defects needing corrections before they reach the state of chaos

(Guo et al., 2015).

Upon applying complexity theory to projects, it is evident that there is a need to consider the system the project is operating in and then, map the communication channels to explore these connections further (Qazi et al., 2016). In doing so, project managers can map out the scope of communications, leadership, risk management and other project management elements that are needed to navigate the project outcomes (Okwir et al., 2018). Thus, the project manager needs to have a good understanding of complex adaptive systems that they operate in. The next section discusses complex adaptive systems in more detail. In the UAE context, there is a need to understand how project managers apply the complexity theory in dealing with complex projects. These studies also highlight how the UAE's project managers have to be reviewed in their actions on matters related to adaptability as well as the use of channels of communication in instances where projects are complex.

2.6 Complex adaptive systems

Complex adaptive systems can be defined by breaking down the three words that make up the term. Tosey (2002) defined complex as a detailed state of interaction in which agents make choices about their individual actions, and their behaviour can be considered as both patterned and unpredictable. Andersen (2018) defines adaptive as the situation where a system influences its environment and it influenced by its environment. A system on the other hand is a collection of different entities that must be fitted together to produce a common function (Okwir et al., 2018). Based on these three definitions, a complex adaptive system can be said to comprise of "a large number of agents, each of which behaves according to its own principles of local interactions. No individual agent, or group of agents, determines the patterns of behaviour that the system as a whole displays, or how these patterns evolve, and neither does anything outside the system" (Stacey, Griffin, & Shaw, 2000, p. 106). Essentially, complex adaptive systems depict a system that is complex in adaptation, where the complexity in adaptation is determined by the fact that the individual agents or entities that make up the system cannot independently influence the outcome, pattern of behaviour or outlook of the system. With this understanding, there are several real life concepts that can be likened as being complex adaptive systems.

Faried et al. (2017) noted that complex adaptive systems help in differentiating between an ordinary project and a complex project. That is, ordinary projects cannot have most of the definitions and characteristics that make up complex adaptive systems but complex projects do. For example, in a simple or ordinary project such as putting up a 3 bedroom house, some of the characteristics of complex adaptive systems may be met such as the presence of agents and units of work that make up a system. However, due to the simplicity of the project, the system's entire behaviour can be patterned and predictable based on a carefully delivered scope of work (Cannon & Hillebrandt, 2016). Also, in such simple projects, the agents, such as carpenters, electricians, masons and plumbers, may behave according to their own principles but it is possible for some group of agents to determine the patterns of behaviour of the project, contrary to the provision of complex adaptive systems. In most such simple project also, how the patterns of behaviour evolve is mostly dependent on the masonry work, as the other agents must fit their work within the frame of block work constructed (Okwir et al., 2018). In contrast to this, complex projects exhibit the full characteristics of complex adaptive systems, as the projects may be so huge and complex that certain agents may never interact or come across each other during the project lifespan. As such, no agent or group of agents determines the pattern of behaviour in the complex project.

While most authors, such as those whose definitions have been considered above, define complex adaptive systems from the perspective of how systems are created or come about, Chan (2001) also viewed the concept from the perspective of how systems function. In doing this, such natural systems as "brains, immune systems, ecologies, societies" (p. 1) are all cited as examples of complex adaptive systems, based on the complexities and adaptive nature of their existence. At the same time, some artificial systems that include "parallel and distributed computing systems, artificial intelligence systems, artificial neural networks, evolutionary programs" (Chan, 2001, p. 1) are also named as examples of complex adaptive systems. Chan opines that the way in which these systems function makes them complex adaptive systems because they "are characterized by apparently complex behaviours that emerge as a result of often nonlinear spatio-temporal interactions among a large number of component systems at different levels of organization" (Chan, 2000, p. 1). This line of argument by Chan can be said to form a second school of thought in explaining complex adaptive systems but it is well supported in the body of literature. For example, Cannon and Hillebrandt (2016) explained that limiting complex adaptive systems to the creation of systems implies once those systems are created, they cease to be complex adaptive systems. When the definition is extended to the functioning of systems however, it makes such systems as airports have identities as complex adaptive systems not only when they are under construction but also when they have been completed and functioning.

Complex adaptive systems have eight characteristics: hierarchy, communication, control, emergence, phase transition, non-linearity, adaptiveness, and sensitive dependence on initial conditions (Okwir et al., 2018). In doing so, these projects are part of larger systems, with information flowing between all elements of these systems through both formal and informal communication means. They maintain a sense of control through the stability of relationships, and experience different elements emerging that are not known at an earlier phase. In doing so, transitioning between phases can be immediate and require new ways of thinking throughout the project (Cannon & Hillebrandt, 2016). This is why complex adaptive systems follow a non-linear pattern as evident in Figure 3, which develops based on the inter-relationships it shares with other systems. This means that there is a need for adaptation and tolerance for the changes that occur in each project (Okwir et al., 2018). Finally, in complex systems, projects are particularly sensitive to decisions and actions that occur at the beginning of the project as those actions have long-winded consequences throughout the project lifecycle (Remington & Pollack, 2010).

This is particularly important to note as different management methods are required to adapt to an ever-changing project to avoid late delivery, exceeded budgets, reduced functionality and questionable quality that has been claimed to exist in contemporary project management (Dalcher, 1993). This is because complexity exists with unknown characteristics (Williams et al., 2012). Furthermore, even with a known goal, the process of achieving this goal can be messy and uncertain and as such, the project becomes complex (Williams et al., 2012). Research examining the most effective way to manage and lead complex projects is still emerging. Of the available research, proponents argue that the successful management of complex projects requires particular attention to relationships, leadership, integration, and resources used. This is because there are four types of project complexities including: structural complexities; directional complexities; technical complexities; and temporal (or environmental) complexities.

Understanding each of these types of complexity is critical for understanding how to best respond to them in project management (Remington & Pollack, 2007). It also helps in selecting the right tools to manage projects based on the type of complexity they may exhibit. The points below provide details on the nature of complexity in project management.

2.6.1 Structural complexity

Vidal et al. (2011, p. 719) define project complexity as "the property of a project which makes it difficult to understand, foresee and keep under control its overall behaviour, even when given reasonably complete information about the project system." Understanding project complexities and interdependencies within the project is critical for understanding and managing complex projects (Qureshi & Kang, 2015). Structural complexities refer to the non-linear interactions between project activities (Remington, Zolin, & Turner, 2009). This means that these complexities span multiple dimensions such as organisation, environmental and technological factors (Remington et al., 2009).

Structural complexities relate to the number of elements and their interdependence, for example, who are involved, how many people are involved in the project, how do departments or teams interact and how do suppliers fit into the equation (Cannon & Hillebrandt, 2016). Under these conditions, the organisational structure of the project or the number of subsystems involved in the creating the product is of interest here (Azinm, Gale, Lawlor-Wright, Khan, & Mehmood, 2010). The more complex the interdependency between dynamics, the more complex the projects are (Williams, 1999).

While structural complexity based on the number of parts or units helps in determining the vastness of project complexity, Andersen (2018) anticipated that for most project managers who handle everyday complex projects, it is difficult for them to know the exact number of parts involved in the project. The reason for this is that they are mostly aware of the parts relating to their areas of expertise or other closely related areas they can influence either directly or indirectly. The justification of project owners in only disclosing parts of projects to those responsible for them is in the definition of complex adaptive systems given above, where it was said that no agent or group of agents determines the patterns of behaviour of the system. Another aspect of structural complexity is that it represents the interrelationships between the parts in a project (Guo et al., 2015). Moore et al. (2016) observed that whereas the agents within a complex adaptive system cannot determine patterns of behaviour within the system, they are free to relate with each other.

The more parts there are within the complex system, the higher the number of interrelationships between those parts that will emerge (Andersen, 2018). It is tempting to disregard the interrelationships formed through structural complexity since the relationships do not determine patterns of behaviour. However, He et al. (2015) opined that there are unit-level interrelationships between certain units are dormant, as they exist but do not have any influence on decision making either internally or externally. When studying the complex projects or attempting to manage some of these complex projects therefore, it is always prudent to emphasise those interrelationships that have direct or indirect influences on each other in terms of decision making processes (Guo et al., 2015). This can be explored further in relation to UAE project leaders and how they are likely to use interrelationships to influence their decision-making processes.

2.6.2 Directional complexity

In addition to structural complexities, virtually all projects have multiple objectives with conflicting goals and have multiple stakeholders. This complexity has been proposed as "directional complexity" Remington and Pollack (2007) identify directional complexity as another type of complexity that derives its name from the direction within which to take a project. Most researchers describe directional complexity with uncertainty and ambiguity, which focus on disagreement among stakeholders on the direction to take projects. While this is a realistic school of thought, Woodside (2016) argued that directional complexity does not always arise from such external influences as lack of agreement among stakeholders. Rather, it could also be caused by such inherent factors as lack of understanding of the best course of action. Remington and Pollack (2007) noted that typical example of directional complexity arise with change projects, "when it is clear that something must be done to improve a problematic situation, but it is unclear what this 'something' should be" (p. 51).

With the example cited by Remington and Pollack, it is clear that directional complexities could be very common with projects where the agents responsible for them were not those that started but were brought in to fix critical problems or to continue from certain points. Meanwhile, He et al. (2015) clarified that directional complexities do not signify failure or lack of competence on the part of project managers or leaders. Directional complexity can therefore be viewed as a temporal form of complexity meant to be fixed or corrected. Because directional complexities are mostly temporary, Woodside (2016) asserted that it is not a very good indicator for measuring or comparing projects for their complexities. In this study however, directional complexity in projects is very important since it will help the researcher in understanding how project managers apply leadership in solving the problems that cause ambiguity, uncertainty and lack of understanding of project directions. Directional complexity is linked to the UAE because projects in the UAE are complex in terms of the direction the project takes. The complexity in direction is seen in terms of disagreement among stakeholders on how the projects can proceed which can happen sometimes when there are different nationalities involved in the conduct of projects.

2.6.3 Technical complexity

Technical complexities relate to the technical or design problems that arise with the production of new products, services or innovations with an emphasis on the uncertainty of particular methods used (Turner & Cochrane 1993; Williams, 1999). For example, using newer products increases the technical complexities of the project as not all the bugs in the system may have been worked out. Jones and Deckro (1993) define technical complexity as a three-fold concept with consideration to the variety of tasks to be performed, the degree of interdependencies and the instability of the assumptions that the tasks are based on. On their part, Remington and Pollack (2007, p. 106) explained that “technical complexity is found in projects which have design characteristics or technical aspects that are unknown or untried”. This definition is not very different from those given earlier, as it also highlights the point that technical complexities are common with new projects.

Remington and Pollack (2007) added a new perspective to technical complexity, as they explained that the cause of this situation could be the fact that there are several possible technical or design solutions to projects. This explains that existing or old types of projects could also be faced with technical complexities when agents handling the projects have so many possible design or technical solutions at hand that it leads to uncertainty about the outcome of some of the design solutions. Based on the factor of severity of design solutions, Ameen and Jacob (2009, p. 15) mentioned that “typically, architectural, industrial design and R&D projects are faced with this type of complexity”. The justification behind the claim by Ameen and Jacob is that these three areas of projects often have several sides of design solutions that can fit into a common problem to be solved. For example, in order to address the issue of the growing collective nature of society, architects could have several design solutions to choose from, so many that it could lead to technical complexity. But like directional complexity, using good leadership and decision making skills can help reduce technical complexity (Woodside, 2016). In relation to the UAE setting, directional complexity is a possible consideration in terms of understanding how problems which emerge during the implementation of a project can be resolved. There are old and new projects in the UAE, it would be interesting to establish how these projects relate with each other in terms of complex projects and in terms of project management by leaders.

2.6.4 Temporal (or environmental) complexity

Temporal complexities refer to the dynamic and shifting environmental demands which are outside the control of the project team (Azinm et al., 2010). This includes contextual factors such as culture, governance, systems and structures, which influence the project outcomes. To manage within a complex adaptive system, project managers must gain a deep understanding of these complexities (Uhl-Bien et al., 2007). This is because complex adaptive systems consist of multiple agents, who adjust their behaviour according to the environment in unpredictable ways (Plowman et al., 2007). In addition, complex adaptive systems are sensitive to the changes within the internal environment and oscillate between stability and instability (Plowman et al., 2007). Consequently, complex adaptive systems emerge from within a social system to solve problems creatively and leaders must consider these interactions and respond

accordingly to be successful. Thus, an emergent self-organising behaviour is needed to lead in this situation. This means that leaders must embrace uncertainty, pay attention to interactions, use language effectively, guide their followers clearly and provide meaning to the changes that are happening to be successful in a complex environment (Plowman et al., 2007). Consequently, understanding the structural, directional, technical and temporal complexities that exist within the context of the project is critical for effective leadership.

One framework that has been proposed recently to assist project managers lead within a complex environment is *complexity leadership theory*. Building on the premises of complex adaptive systems, this framework enables the learning, creative and adaptive capacity in knowledge producing organisations or units but also enables appropriate controls to ensure outcomes are met (Uhl-Bien et al., 2007).

Complexity leadership theory includes three leadership functions: adaptive, administrative and enabling. The adaptive leadership function refers to the adaptive, creative and learning actions that emerge from the system in order to adjust tensions in an informal capacity (Moore et al., 2016). The administrative leadership function refers to the tasks, planning, vision and resource allocation functions performed by leaders. The enabling leadership function aims to entangle the bureaucratic (administrative leadership) and emergent (adaptive leadership) functions of an organisation (Woodside, 2016). In doing so, complexity leadership theory argues for an enablement of these functions in order to lead effectively within an organisation, due to the nonlinear effects that certain interactions within the social network have on outcomes (Lichtenstein et al., 2006). While this theory has been proposed for organisational management (Lichtenstein & Plowman, 2009), limited evidence exists to explore this leadership style in project management. Therefore, this study begins to fill this gap in the literature.

2.7 Leadership in complex projects

The explicit study of complexities in projects began in the 1990s and has since evolved to examine the leadership, risk management, team dynamics, and project outcome variables. However, only a few studies have explored the leadership style used complex projects, particularly in the UAE (Faried et al., 2017). The study of this issue within the UAE is important because the practice of project management has to fit the context in order to provide value (Thomas & Mullaly, 2008). Thus, this study begins to fill this gap in the literature by exploring the structural complexities that impact the leadership behaviour exhibited in the UAE by project managers leading complex projects. However, to better understand how this applies to the UAE, an overview of the context is needed before discussing the elements that require further consideration. This is because the use of project management tools and techniques in developing countries, such as the UAE, is still developing (Abbasi & Al-Mharmah, 2000).

From the broader body of literature, several studies have identified the place of leadership in dealing with complex adaptive systems such as complex projects. Just as noted in some of the sections above, most types of project complexities have specific causes, whereby it is possible to deal with them with the right forms of leadership in place. Battiston et al. (2016) asserted that complexities are generally challenges that exemplify the need for deep-thinking and competent leaders that have the knowhow to make complex things simple. Moore et al. (2016) stated that complex projects have unique characteristics of exhibiting chaos and uncertainty in their formation and function but leadership is also an example of such a complex adaptive system that should be used to manage such projects successfully. From a practical perspective, there are several ways that leadership is useful in dealing with complex projects.

Grill, Pousette, Nielsen, Grytnes and Törner (2017) mentioned that the fundamental approach is selecting the right form of leadership that maximises the potential of all agents within the organisation or project.

When leaders prioritize the maximisation of the potential of agents, they take a strong step towards simplifying complexity because they move the responsibility of dealing with the problems from just themselves into collective responsibility of all people within the organisation. Apart from selecting and using the right leadership style, Woodside (2016) also found that leaders can take personal responsibility in training and developing their workforce to become effective contributors in simplifying complexities by effectively performing their roles associated with the complex adaptive system. What is more, Battiston et al. (2016) expected leaders to show personal competence in dealing with most aspects of complex projects. However, because of the complexity in such projects, reference to leadership competence is largely limited to a decentralised system where leaders responsible for specific units of the projects are expected to show high levels of skills, knowledge and expertise over what their subordinates do (Battiston et al., 2016). Putting these points together, it can be inferred that whether they do it directly or indirectly; personally or assigned, project leaders, including those managing complex projects in the UAE have a mandate of simplifying complex projects to make them executable within time frames set for them, and according to all other forms of specifications involved. The execution of such mandate is a condition yet to be established by literature.

2.8 Project Management in the UAE

The UAE is a federation that consists of seven emirates covering 83,600 square kilometres (Foley, 1999). The federation was established in 1971 following the withdrawal of the United Kingdom from the area, and as a strategic partnership between the emirates upon becoming independent (al-Suwaidi, 2011). The seven emirates in the UAE are: Abu Dhabi, Dubai, Sharjah, Ras al Khaimah, Arjman, Fujairuh and Umm al-Qaiwan (al-Suwaidi, 2011). Of these, Abu Dhabi is the largest and richest emirate, however, combined the UAE produces

10% of the world’s oil supply and has the fourth-largest natural gas reserves in the world (Foley, 1999). While the UAE consists of seven emirates, Abu Dhabi, Dubai and Sharjah collectively govern 85% of the population (Foley, 1999). This has important implications for policy and political control in the emirates.

By 2010, there were 8,264,070 people living in the UAE (UAE National Bureau of Statistics, 2011). Of these, UAE, 7,316,073 were of a non-national background (88.5%) (UAE

National Bureau of Statistics, 2011). While no updated statistics on the current population exist with the bureau, it is reasonable to assume the population has increased and the number of non-nationals still exceeds the nationals. This indicates that a diverse workforce exists in the UAE. This is important to note because while diversity can spark increased creativity, innovation, efficiency and productivity gains (Greer & Virick, 2012; Petroff, 2006), in some cases, it also creates conflict amongst members, which adds to the complexity of projects.

As stated previously, the use of project management tools and techniques in the UAE by the public sector is still developing (Abbasi & Al-Mharmah, 2000). However, the strategy for the implementation of project management techniques needs to consider the cultural characteristics of the society, as well as the economic, political and administrative systems (Abbasi & Al-Mharmah, 2000).

Research on the use of project management techniques in Jordan by El-Sayegh and Mansour (2015) found that project management is generally an efficient approach helping effectively complete projects and attain the goals of the development. Yet the use of project management tools and techniques is limited to the core and more simple tools and techniques such as Gantt charts. This was found to be largely due to the lack of knowledge about the technique, change in authority and difficulties estimating costs of the activities of each project (Abbasi & Al-Mharmah, 2000). Consequently, research suggests that the maturity of project management knowledge in the public sector requires more research and investment, as using the tools correctly may improve the overall economy (Abbasi & Al-Mharmah, 2000). This finding was also supported by a study of the issues, difficulties and recommendations for future project management in Kuwait (Kartam, Al-Daihani, & Al-Bahar, 2000).

Both of these studies were broad reviews of project management without a view on specific project industries, such as transport or construction. Yet recent evidence suggests that due to the nature of construction and transport, these projects are becoming particularly more complex, especially in developing countries (El-Savegh & Mansour, 2015; Fernadez-Dengo, Naderpajouh, & Hastak, 2013; Issa, 2015). Consequently, there is a need to examine the tools and techniques that need to be managed differently in complex projects in developing countries. This is even more relevant for countries with a higher number of non-nationals to nationals, such as the UAE because the project tools and techniques used may vary significantly depending on the background of the organization and/or project manager in charge and the relative makeup of the work force (Grill et al., 2017).

Another area of research related to project tools and techniques that has been conducted in the context of UAE has to do with the role of project management information systems (PMIS) in project performance. Obeidat and Aldulaimi (2016) conducted one such case study in the UAE using the construction industry. Their study revealed that PMIS is fast taking its place in project management within the construction sector of UAE. Interaction with project managers by the researchers saw that using PMIS provided several advantages in terms of minimising losses, delays and disappointments that come with redundancy in construction projects. From the larger body of literature, the place of PMIS in ensuring the advantages and benefits revealed by Obeidat and Aldulaimi has been supported and justified. Writing on PMIS, Emere, Aigbavboa and Thwala (2018a) explained that it is the use of modern information system tools to organize information in a coherent way needed to execute projects. Using PMIS requires a form of software that is programmed with a methodical process for information collection, processing and usage (Grill et al., 2017). When project managers in the construction sector use PMIS, they are basically using automated systems that not only collect data necessary for project execution but also process the data collected and offer insights on the best ways to use the data to achieve desired outcomes.

Writing in the context of the UAE, Obeidat and Aldulaimi (2016) further found that adopting the use of PMIS in the country is fast becoming a necessity rather than a privilege because of the need for project managers in the UAE to deliver their projects according to global standards of practice. Tabassi et al. (2016) confirmed that using PMIS in project management ensures that project managers can have access to standardised information that serve as global benchmarks for delivering high quality projects. Gharzeldeen and Beheiry (2015) also touted PMIS as helping project managers through almost all stages and phases of projects, including the planning, execution and closure of projects. It is not surprising that data collected from project managers in the UAE on the use of PMIS showed positive correlations between the use of PMIS and project performance (Obeidat & Aldulaimi, 2016). What is of particular interest is that Grill et al. (2017) confirmed that project management based on the use of PMIS offers particular advantages in completing complex projects. The reason behind this is that the PMIS, as a set of electronic systems, functions by simplifying the complexities within the various stages, tasks and technicalities within the project to make it easier to execute. In the current context of UAE, Obeidat and Aldulaimi (2016) confirm that project managers are indeed taking advantage of the use of PMIS in simplifying complex projects and therefore recording high performance outputs with their projects.

A study by Ajmal et al. (2017) analysed general success factors pertaining to project management practices in the UAE. To do this, several key performance indicators (KPI) and critical success factors (CSF) were examined at various project sites in the UAE. The results of the study found four main success factors in project management practices: proactive organisational management, active stakeholder engagement, strong leadership, and structural risk management process. Further research shows that each of these success factors has been confirmed by other researchers for their positive effect on project management outcomes. For example, Tabassi et al. (2016) noted that proactive organisational culture management is necessary in ensuring that the right values and principles that employees and other stakeholders must follow to achieve success are created and enforced within the organisation and among project teams. Grill et al. (2017) linked the issue of proactive organisational culture management with the factor of strong leadership and asserted that leaders need to be strong in commanding the type of organisational culture they believe is necessary for successful projects. Ajmal et al. (2017) found that leaders of various complex projects in UAE have often showed the type of competency, experience and strength to take full charge of their organisations in delivering desirable outcomes with their projects.

On the issue of active stakeholder engagement, Hasan et al. (2018) mentioned that in complex project management in the UAE, stakeholders are very important in determining the direction of projects, their cost, as well as the duration of project implementation. This is because most complex projects are either owned by government or other powerful organisations with strong influence to demand specific deliverables with the projects. As a result, it is always important for project managers to manage stakeholders in a way that wins their cooperation and total support for the project. The unique trend that Ajmal et al. (2017) found with projects in UAE was that project managers include both internal and external stakeholders in the organisation used on project sites. This way, the needs of stakeholders are directly captured as part of project management. Finally, on structural risk management, Tabassi et al. (2016) admonished that project managers must have the ability to forecast risks within their projects and identify the best approaches and methodologies in mitigating those risks. Hubbard, Ison, Yeomans and Bryer (2018) admit that while every complex project has one form of risk or another, the extent to which these risks are managed directly impacts on the project outcomes, whether they will be successful or fail.

While studies such as Obeidat and Aldulaimi (2016) have focused on factors that lead to successful project management outcomes in UAE, other researchers have also focused on factors that lead to undesirable project outcomes in UAE, such as project failure. Zhao, Hwang and Lee (2016) identified studies of this nature that examine causes of project failures as very necessary in understanding what to avoid and what to prioritise in project management. One aspect of project failure that has been of particular emphasis and importance in the context of the UAE is project delay. El-Sayegh and Mansour (2015) found that project delay is one of the worse forms of undesirable project outcomes in the UAE. A project is said to have been delayed when it is finished several days after its original date of completion. Mpofu, Ochieng, Moobela, & Pretorius (2017) researched the specific context of UAE by profiling causative factors that lead to construction project delays. The research was a quantitative study involving a survey of three main stakeholders of project management in UAE, including clients, contractors and consultants. Findings from the survey by Mpofu et al. (2017) found two main causes of project delays in the UAE, unrealistic contract durations and poor labour productivity. The problem of unrealistic contract duration was found to occur when project owners or clients tend to demand too much from contractors by way of project schedules than can ideally be delivered, and contractors also become over ambitious in accepting such challenges.

The issue of unrealistic contract durations has been researched in the larger body of literature, with Tabassi et al. (2016) explaining that this is a very common phenomenon especially in countries where the construction sector can be considered as highly competitive. In the UAE for example, modern economic development is largely focused on the construction sector, making the industry very competitive among industry players, particularly contractors. El-Sayegh and Mansour (2015) found a situation where most local construction companies find themselves competing with foreign ones for mega projects and other forms of construction projects in the UAE. As a way of gaining competitive advantage, most construction companies tend to promise project durations that are unrealistic and therefore leading to delays (Mpofu et al., 2017). This situation has been described as a poor project management practice, as good project managers are expected to estimate the duration of projects correctly to avoid delays (Hubbard et al., 2018). On the issue of poor labour productivity, Mpofu et al. (2017) found a country-specific problem with UAE, where most construction companies over rely on cheap labour from expatriates who do not have the requisite competence and experience to deliver projects according to acceptable standards. The effect of this situation is the type of poor labour productivity, which leads to delays in projects, especially those that can be considered as complex projects (Zhao et al., 2016).

In a related study that looked at project failures in UAE, Cantarelli, Kojadinovic, Le and Salem. (2017) looked specifically at the oil and gas industry, which also has one of the highest forms of demand when it comes to complex projects. In their study, Cantarelli et al. (2017) found the problem of invisible lost time as a major issue in onshore field projects in UAE. Using data collected from three onshore wells in UAE, the researchers found that there is high level of drilling inefficiency due to high invisible lost time. Invisible lost time in this context refers to the difference in duration between actual operation time and best practice target (Larsson, Eriksson, Olofsson, & Simonsson, 2015). Particularly for rig drilling, invisible lost time is an important phenomenon since best practice targets have been found to increase productivity or levels of drilling made (Zhao et al., 2016). This is to say that the lower the invisible lost time, the higher the chances of producing more and making better returns. In the specific context of the UAE, Cantarelli et al. (2017) found that the main cause of high invisible time lost was poor risk management. In effect, risk management is seen as a very important aspect or component of project management, necessary in preventing project failure, particularly those relating to invisible lost time.

The association between risk management and invisible lost time was linked with the fact that project managers often opt for high risk wells with the hope of getting more returns. However, the need to address the various risk factors within such project or wells leads to invisible time lost as the risk management exercise denies project managers of several days and weeks of actual drilling work (Tabassi et al., 2016). As a way of addressing invisible time lost associated with risk management, Cantarelli et al. (2017) prescribed a modality to onshore drilling that is based on comprehensive digitised surveillance that gives accurate information relating to risks inherent within particular wells. When the right levels of risks are correctly predicted, project managers go on site with the right equipment and technology necessary to overcome drilling impediments and obstacles (Hubbard et al., 2018). This way, it becomes possible to drill high risk wells and still prevent invisible time lost since preventive and mitigation measures are taken ahead of time (Cantarelli et al., 2017).

2.9 Leadership and complex projects in the UAE

Human resource management refers to the appropriate management of people who are invested in the project in some way (Zhao et al., 2016). This may be directly by being on the team or by having an influence on the team in some way. In the traditional view of project management, human resource management referred to the processes required to effectively manage and use the people involved in the project (PMI, 2013). However, this definition is in need of re-conceptualizing given the impact that stakeholders play in a complex system. In particular, the traditional view relied on the assumption that the team was developed based on a temporary arrangement of people designed to carry out a temporary assignment (Belout & Gauvreau, 2004). However, with an increasing number of projects lasting several years and rolling over to new projects, this assumption may be outdated or no longer applicable to some complex projects, particularly, if the project, by nature of its complexity, is part of a complex system such as a government. To manage in this way, complex projects require effective leadership and team development to be effective. This is also important to ensure project management techniques become a source of competitive advantage for a firm (Harrison & Lock, 2017).

Research emphasizing the importance of leadership argues that the project leader brings ‘a clear sense of the future and an understanding of how to get there’ in a project (Schermerhorn et al., 2012). In doing so, the leader clearly establishes and directs the communication, motivation, interpersonal relations, teamwork, job design, change and organizational vision for the project (Schermerhorn et al., 2012). Consequently, assigning the right leader in a project is critical for its success, as these leaders need a combination of soft and hard skills (Caverleri & Reed, 2008; Kotter, 2008). Soft skills include communication, negotiation, change management, political astuteness, emotional intelligence and problem-solving skills (Frame, 1999). In contrast, hard skills include the ability to plan, budget, organize, staff, control and deliver projects on time, within budget and scope and to the satisfaction of stakeholders (Opfer, Kloppenborg, & Shriberg, 2002)

The use of effective leadership in complex projects is important to maximize employee and project outcomes. This is particularly the case for complex projects in diverse organizations because leaders are required to manage both the various stakeholders related to the project, as well as maintain effective relationships with their own team members to complete a project on time (Hubbard et al., 2018). Consequently, the effective use of personnel files, notes and performance management systems are critical in order to develop employees from one state to the next. While this occurred in the traditional view of project management, in complex projects, it may become necessary to engage, disengage and reengage team members in more cyclical fashion along the way (Harrison & Lock, 2017). Maintaining effective working relationships with both current and past team members and stakeholders is an important factor in project success. Thus, the softer skills of management become more important for the successful completion of a project in the long term, however, further research is needed to quantify and qualify this proposition (Harrison & Lock, 2017).

In addition to the overall leadership aspect of human resource management, leadership includes the effectiveness of team relationships and dynamics. Projects by nature are temporary, which suggests that while the team members themselves may not develop the same relationship as an organizational team, they may in fact still be affected by the disruptions that occur through the planned and unplanned exists of their team members (Arnold, 2005). Moreover, in long-term projects these relationships may be more important to employees then in short term projects. However, no research has investigated this proposition. It is likely though, that in a complex system, the relationships between the team members may not be as clear as it is with 'traditional' project (Hubbard et al., 2018). For example, Harrison and Lock (2017) found that in traditional projects, people come together for a defined period of time to complete a definite scope of work defined output. This means that the strategies imposed by management may need to be more supportive and sympathetic to team disruptions. This also means that project managers may need to invest more time and money into team development to improve productivity and employee outcomes (Jones & Gates, 2007). This also supports the need for management to rely on the softer skills of management over the harder skills to improve productivity and promote healthy working relationships between team members (Jones & Gates, 2007).

In doing so, research has emerged which examined the leadership skills necessary for effective management in complex projects. Specifically, Muller and Turner (2010) investigated the leadership competency profiles of successful project managers in the USA, where successful project managers were measured by a composite measure of project type and attribute and leadership was measured looking at the leadership development questionnaire (LDQ). They found that managers of medium complexity projects exhibited high scores on characteristics such as critical thinking skills, managing resources, empowering, developing, self–awareness, sensitivity influence and conscientiousness. In a similar study, Larsson et al. (2015) found that managers of high complexity projects scored higher on vision (an IQ competence), influence, motivation (emotional intelligence competency), and other soft skills. However, this study was completed using a western sample, and few studies have explored the leadership competencies exhibited by project managers in the UAE context. This is important because a follow up study by Turner and Miller (2011) found that project manager's competence, including leadership, significantly influences the outcomes of the project. While competence is one measure, research has found leadership styles to be influenced by both the gender and age of the project manager even in the Middle East context (Hogue & Lord, 2007; Yousif et al., 2015).

In summary, while there have been a number of projects looking at aspects of complex project management in the UAE, the vast majority of these projects have focused on risk management (Motaleb & Kishk, 2014), knowledge management (Cader et al., 2013), project delivery factors for success (Blismas et al., 2004), contractors views of project management (Abbassi & Alnahhal, 2011), cross cultural project management (Jaeger & Adair, 2013), and impact of culture on project management (Naoum et al., 2014). Only two studies focused on leadership in the UAE. The first by, Yousif et al. (2015), examined leadership in the UAE projects and found transactional leadership styles were more apparent in the UAE than the United States and Europe. Younger leaders were found to use transactional styles more than older ones. Local leaders were also found to use more transactional styles over expatriates. The second study by Randeree and Ninan (2010) examined leadership and teams of Information Technology (IT) workers in the UAE. They found that managers predominately used transactional leadership styles in practice. However, no study has explored the use of *complexity leadership theory* to analyse complex project management in the UAE (El-Sayegh & Mansour, 2015). Thus, this study extends the literature in this area.

2.9.1 Cross culture issues

When addressing leadership concerns in complex projects, it is also important to consider national cultural implications, particularly in the Middle East. National culture plays an important role in project management. This is because the style of management and the speed of processes is impacted by the political, institutional and social culture, which interacts with the cooperation and coordinating processes (Bony, 2010). Consequently, the success of a project may be impacted by the national culture of the host country the organisation is operating in. This was identified in a recent research study, which investigated the impact that culture played on the successful use of project management techniques in two different cultures - Dutch and French (El-Sayegh & Mansour, 2015). This study highlighted that the political processes in France prevented the methodology of project management from being successful. As such, national politics are proposed to play a role in the success of a project management strategy (Bony, 2010). The full influence that national culture has on project management outcomes is still under-researched in the literature to date in the Middle Eastern context. This is particularly important in the UAE because there are more expat employees working as project managers than UAE nationals. However, the influence that the backgrounds of these managers have on the success of their leadership style and overall project management in the UAE is largely unknown and needs further investigation. What is known is that the UAE, as a nation, operates within a culture of higher power distance, low individualism, high uncertainty avoidance and average masculinity (Hofstede, 2015).

Operating within the environment of high-power distance (Hofstede, 1973, 2015) means that because project managers are higher up on the hierarchical order, they are respected and followed by their team members with minimal questioning. Yet in complex projects, this hierarchy may be blurred across organizations and team members, depending upon the systems they operate in. Moreover, the location in the hierarchy changes depending on whether they are a government, semi-government or private organisation. Consequently, an understanding of these systems is needed to achieve greater success outcome of a project in the UAE.

Government officials are seen higher on the list of hierarchy followed by semi-government and private organisational members. As such, when a project manager employed by a private organisation takes orders from the government officials or semi-government officials, then they are expected to respect those orders, regardless of the likely outcome (El-Sayegh & Mansour, 2015). This also means that managers who report to government and private organisations, will prioritise orders from these officials accordingly (Mehran, 2016).

The low individualism score achieved for the UAE means that the society is rather collectivist (Hofstede, 1973, 2015). This means that there is a close long-term connection and commitment to the wider group and loyalty is paramount, over social rules and regulations. In the context of complex project management, this highlights the need to invest in team dynamics even more so as these team members are likely to work together in the future. This is particularly the case in government and semi-government organisations, however, private organisations are likely to still enforce rules embedded within their organisations for ex-patriate employees but not for local employees. This is because there are strict employment rules for local employees that need to be followed, and it is encouraged to continue employing local employees over expatriates within the UAE (UAE Ministry of Human Resource and Emirates, 2018d).

In addition to these characteristics, the UAE scored an average score in masculinity (Hofstede, 1973, 2015), which means it is neither masculine nor feminine. In practical terms this means that when managing people and relationships within the UAE there is a need to identify the individual motivations of teams, originations and individuals towards working together – whether these are to be the best or to like what you are doing. The answer to this motivation, has substantial implications for project recruitment and retention of staff members, particularly in complex projects across government, semi-government and private organisations (Harrison & Lock, 2017). Consequently, further work is needed here to identify these complexities in more detail.

Finally, the UAE has a high preference for avoiding uncertainty (Hofstede, 1973, 2015). This suggests that more attention is needed to the risk management processes complex project management, particularly because of the uncertainty and challenges mentioned earlier that complex project management brings. While this study will not be measuring national culture specifically, it will consider the implications of the findings within the context of the UAE and as such, recognise that the potential impact of culture on leadership is important.

2.9.2 Labour market context

As mentioned throughout this chapter, in the UAE there are government, semi-government and private enterprises operating projects of varying complexities to achieve the common aim of the UAE government (Mehran, 2016). Government organisations are operated by the UAE government to respond to political and society matters, semi-government organisations apply the bureaucratic nature of government entities to private organisations but are 51% owned by the UAE government, and private organisations are owned by private entities (El-Sayegh & Mansour, 2015). This is an important distinction as the labour laws between the government, semi-government and private organisations differ in the UAE and impacts the leadership strategy used. Appendix C illustrates the key differences between the laws.

As evident in Appendix C, there are substantial differences in the employment expectations of employees in government/semi-government vs private organisations that must be understood. For example, the conditions of termination differ substantially between government/semi government and private organisations as highlighted in the table.

In addition to these differences, the UAE government has recently issued a ministerial decree (number 12 of 2018) on the regulation of employing nationals in the private sector. This regulation noted that private organisations are encouraged to employ national employees over non-national workers. In addition, these contracts will be a minimum of 2 years duration, and the ministry will allocate a regulatory unit to ensure the national employee works in an appropriate environment, that they are trained and supported effectively to maintain their employment status, and to ensure insurance is provided to that employee by the organisation (UAE Ministry of Human Resource and Emirates, 2018a). The minimum contract term for a national employee in a private organisation is two years whereas non-national employees have no minimum contract term. Moreover, national employees are considered illegally terminated if the reason for termination is outside those listed in appendix C under reasons for termination, or a non-national employee replaces the national employee at the same rank, if they are terminated for reasons beyond the job or if the organisation fails to conduct an exit interview, or abide by the Ministerial Decree No. 765 of 2015 Concerning the Termination of Labor Relation requirements (UAE Ministry of Human Resource and Emirates, 2018d).

These requirements clearly indicate that the treatment of national vs non-national employees is different within the UAE. It is likely that these laws will contribute to structural complexities experienced by project managers and as such are critical to understand when leading project teams within this environment.

In addition to the difference between national vs non-national employees, the laws also hint to the underlying difference between males and females in UAE. Upon further investigation of gender equity in the UAE, there were no laws found that encouraged gender equity. In fact, the Global Gender Gap Report (2016) from the World Economic Forum, revealed that the UAE was number 124 in overall gender gap scores, and number 130 in the world in terms of gender parity in economic participation and opportunity. Interestingly, the gender gap in the UAE has widened since 2006, falling from number 101 in the overall gender gap score in 2006 to 124 in 2016 and from 109 in economic participation and opportunity in
2006 to 130 in 2016. In fact, it was not until 2006 that females were allowed to vote in the UAE. These figures indicate that the country is still heavily male dominated in work and cultural beliefs (World Economic Forum, 2016). However, while male dominated there are still some female employees working within the UAE. In managerial roles, this ratio was found to be 90% males and 10% females (World Economic Forum, 2016). This is an interesting finding as the ratio is different in government ministerial roles, with 9 out of 31 cabinet ministers being females. This indicates that there may be differences between government and non-government employees, but this is an area that has been largely understudied to date. In fact, no research has explored these gender differences in leadership in depth. Therefore, this study extends research in this area by exploring differences in leadership strategies used by males and females in the UAE.

2.10 Diversity Management

2.10.1 Definition and justification for diversity management

Naoum (2016) explains that diversity management entails a set of organisational actions and activities used to promote the highest level of inclusion among employees who are from different backgrounds. Emere et al. (2018b) further explained that diversity management is generally useful and necessary in ensuring that people from different backgrounds are integrated well into the organisational structure by using policies and programs that are suitable to their interest. Building on this point, one gets the understanding that diversity management is not merely a series of actions taken to ensure that workers from different backgrounds work together over a brief period of time when they have to deliver specific tasks together. Rather, the fact that the diversification must be captured as part of policies and programs of the organisation means diversity management must be seen as an integral component of the organisational culture. In a study by Emere et al. (2018b), it was found that when companies make diversity management part of their organisational culture by institutionalising it with policies and programs, it ensures that acts of inclusion and collectiveness are more binding on employees, especially those that may belong to majority groups. Diversity management has been identified as very crucial to today's working environment in almost every field of work, including the area of project management (Alaghbari et al., 2019). The reason for this is that globalisation has created a new working environment made up of more people of diverse backgrounds than in previous times (Ghoddousi, Poorafshar, Chileshe, & Hosseini, 2015).

In the context of UAE, and the Middle East in general, globalisation has resulted in a situation where more and more companies have become diverse, comprising employees from different parts of the world. On various project sites, the situation is not different, as most projects are awarded without legal restrictions on the country of origin of the company that wins the contract. For this reason, there are now several foreign companies executing construction projects in UAE, particularly in the areas of oil and gas, and real estate (Asif, 2016). What is particularly unique in the case of UAE is that while the government opens its doors to foreign companies as a way of promoting foreign direct investment, it also puts in effort to protect local businesses and citizens by having Local Companies Laws (UAE Law No.

2 of 2015) that require foreign companies to employee locals in certain key positions (Ahmed & Kothari, 2017). This situation creates more diversity based on nationality in several organisations and project sites in the UAE. From a theoretical perspective, Hofstede's cultural dimensions explain that people of different nationalities have different cultural preferences when working in an organisational setting.

The differences in cultural preferences based on nationality highlights the need for diversity management when leading an organisation or project with workers from different countries. What is more, there are laws in the UAE that allow for employment inclusion for people of diverse demographic backgrounds including age, gender, religion and race (Hassan, Bashir, & Abbas, 2017). Laws of this nature also create their own form of diversity in the workplace, all of which come together to necessitate diversity management by leaders of organisations and projects in the UAE. Finally, there is the issue of advancements in technology that also justifies the need for diversity management, given that companies and organisations now engage the services of employees from around the world through virtual working environments. This phenomenon of virtual employment is quite new in the UAE and thus comes with the need for leaders of organisations to have the requisite knowledge and competence to manage the diversities that such global employees bring. El-Sayegh and Mansour (2015) admonished that managing the diversities of virtual employees must be handled with the same level of seriousness and attention that regular in-house employees require.

2.10.2 Approaches and strategies for diversity management

Larsson et al. (2015) posited that as much as diversity may be found in almost every organisation or project team, it takes calculated strategies and approaches to manage diversity if the best outcomes are to be achieved. Gamil and Abdul Rahman (2018) found that the first point of call for most managers in diversity management is the use of the hiring process. That is, in most national laws, Equal Employment Opportunity is compulsory and mandatory. Using such laws, the human resource managers open the organisation up in attracting as many diverse employees as possible. For companies that want to prioritise diversity, they have been found to go over and above the national laws in building diversity by involving cultural organisations who recommend potential applicants that can meet specific diversity goals (Ajayi et al., 2016). Adeleke et al. (2016b) emphasised that when companies use the hiring process as part of diversity management, it gives them maximum control on who comes on board based on their diversity competence exhibited during the recruitment process, and who is left out. Opening the doors of the organisation to only applicants who have showed strong competence and understanding for diversity has been described as an important step for human resource managers, given the advantage it offers in ensuring that the organisation does not deal with personnel on whom a lot of training and nurturing will be needed to make compatible with other employees.

Another strategy for diversity management has been found to be the use of education, training and development (Sekar, Viswanathan, & Sambasivan, 2018). Emere et al. (2018a) cautioned that having some posters around the workplace about diversity is not enough to expect that employees can coexist peacefully and work in harmony towards the achievement of organisational goals. Rather than merely putting up posters, a step must be taken further to give employees education, training and development on how they can manage their differences and also maximise whatever diversities they may have (Tahir & Naeem, 2017). On the issue of managing differences, Jabeen and Isakovic (2018) opined that employees need training and education regarding the types of diversities that their colleagues may exhibit, as well as the best ways to cope with these diversities while working together in a team. For example, most typical UAE firms and project sites have now been diversified in such a manner that it is common to have working teams made up of people from different cultural backgrounds such as Africans, Europeans, Americans, Asians, and Arabs. Meanwhile, the Hofstede's cultural dimensions postulates that people from each of these backgrounds have their own cultural preferences based on seven main dimensions. When there is an educational and training scheme at the workplace, it helps in educating employees about the differences and preferences of their colleagues, as well as the best ways to coexist with them in working towards the common goals of the organisation (Larsson et al., 2015).

Also writing on education, training and development, Williams (2015) elucidated that the diversities that employees bring to the workforce could be strategic enough to serve specific purposes. For example, a UAE company that has special interest in Asian customers could strategically recruit a lot of Asian employees. Once such employees are brought in to serve a specific purpose, it is important to train and educate them on the best ways in which they can maximise their diversity to the collective benefit of the organisation. As far as the use of training, education and development is concerned, Emere et al. (2018b) found that human resource managers have mostly used a combination of formal and informal methods in equipping their employees with the right forms of diversity knowledge and skills needed. The formal methods are generally well structured and delivered over specific periods of time, mostly on a quarterly basis. Williams (2015) found that in most of these formal training programs, external resource personnel knowledgeable in specific areas of diversity for the organisation may be brought in. Another form of formal method of education, training and development is to sponsor employees to take up advanced courses in higher institutions of learning with special focus on diversity. The informal methods are, however, unplanned and takes place on an irregular basis based on events within the organisation, as and when they happen (Ghoddousi et al., 2015).

A third strategy to diversity management, which is very common in the literature, is the use of policy review (Hassan et al., 2017; Larsson et al., 2015). According to Williams (2015), the global business environment is now at a point where diversity is now needed to create competitive advantage. What this infers is that having a diverse workforce is now advantageous for companies in offering unique values that make customers choose them over their rivals or competitors. The reason this is now the case is that the consumer base of most organisations, including those in building and construction, and oil and gas, where most mega projects are carried out, have become highly diversified. The diversification in consumer base means having a workforce that is equally diverse to have better understanding of consumer needs (Chan & Mohamed, 2017). It is in the light of this that most companies are now viewing diversity as a necessity rather than an option. As a necessity, companies now use policy reviews in ensuring that their diversity views, norms and culture becomes binding on all employees. Elgayar et al. (2016) found that companies that are now using policy reviews to make diversity rules compulsory for their workforce have the backing of labour laws and national statues that promote diversity and make discrimination illegal.

Another perspective from which Dayan, Ozer and Almazrouei (2017) viewed the use of policy review is when companies review their rules to make diversity binding on the organisation as an entity and not just the employees. For example, for an organisation that has religious diversity, it could review its policies on holidays to ensure that people of all religious groups can have free days to celebrate religious holidays even if such days are not standard holidays. When companies take initiatives of this nature, they get goodwill among their employees that they represent diversity and stand to promote it (Williams, 2015). The effect that this has is that it sends a positive signal for employees to copy and emulate diversity (Sekar et al., 2018). Other ways in which companies may review their policy to embrace diversity includes being flexible with the official language of communication so that employees can sometimes express themselves in other languages that represent their cultural background. Dayan et al. (2017) notes that as employees are allowed to freely express their cultural diversity, it serves as a good model for other employees to appreciate that this freedom is a virtue the company accepts and so they will not stop others from doing same. Meanwhile, Williams (2015) feared that encouraging too much diversity could be breeding ground for division if the differences are not handled well. To deal with this, Gharzeldeen and Beheiry (2015) admonished that policy reviews must encourage collective involvement while allowing diverse groups to exhibit their diversity.

The last form of strategy related to diversity management is the use of leadership. That is, to be effective, Al-Sabek (2015) found that leaders tie their diversity management round their leadership styles. Cropanzano, Dasborough and Weiss (2017) observed that there are several types of leadership styles but it is not all of these that promote diversity. In a more generalised form, Bresnen (2016) claimed that leadership styles that are more focused on the leader and based on instructive interactions between the leader and employees do not promote diversity. Example of such leadership styles are hierarchical and autocratic leadership style. Dayan et al. (2017) also mentioned the transactional leadership style as more focused on the leader instead of employees and so does not promote diversity. Conversely, leadership styles that focus on employees and ensure much engagement with employees have been found to be ideal in promoting diversity (Binder, 2016). The democratic and transformational leadership styles have been mentioned as examples of some of these (Kerzner & Kerzner, 2017). Because of the interactive nature of such leadership styles, leaders opt to use them as strategies for diversity management since they prioritise such concepts as shared responsibility, team work and cross functional teams, all of which are necessary in ensuring that employees get adequate interactivity with each other to work towards diversity. Greater emphasis of this current study will be on how complexities in projects impact on the selection and use of various leadership styles.

2.10.3 Effect of diversity management on organisational performance

Several empirical studies have examined the effectiveness of diversity management and its impact on organisational performance as a whole. Using evidence from the literature, a major consensus is that diversity as an independent concept or strategy only has modest effects on organisational performance (Bresnen, 2016). Rather, the full complement of effects that diversity yields is best linked with both internal and external factors that form the environmental factors affecting the organisation or project in question (Binder, 2016). While studying the specific case of gender diversity, Dwyer et al. (2003) found that “gender diversity's effects at the management level is conditional on, that is, moderated by, the firm's strategic orientation, the organizational culture in which it resides, and/or the multivariate interaction among these variables” (p. 1009). This result confirms the general consensus that the impact of diversity on organisational performance is dependent on other environmental factors. In the instance of Dwyer et al. (2003), the two other organisational factors that influenced diversity are firm’s strategic orientation and organisational culture. The results of their study highlight to present day managers of organisations and projects the need to manage diversity by incorporating their diversity management strategies with the organisation’s orientation and culture.

For example, Dayan et al. (2017) found that there are certain organisational cultures that are very compatible with diversity management, while others defeat the idea of ensuring diversity. Using the learning culture has been cited as particularly useful in promoting the benefits associated with diversity (Kerzner & Kerzner, 2017). A learning culture has been explained to be “a set of organizational values, conventions, processes, and practices that encourage individuals—and the organization as a whole— to increase knowledge, competence, and performance” (Oracle Human Capital Management, 2016, p. 1). As can be deduced from the definition by the Oracle Group, learning culture is an ideal aspect of diversity management that brings out the full benefit of diversity because learning culture is in itself linked with performance. When there is a learning culture, it creates room for employees and all other stakeholders to acquire and increase knowledge about the differences of each other and how these differences can be maximised to yield growth (Wrench, 2016). By inference, in order to have a positive moderating effect of the organisational culture on diversity, managers must ensure diversity management strategies that are tied around the use of a learning culture.

Another study on the impact of diversity on performance was conducted by Schäffner, Gebert, Schöler and Kirch (2006) who focused specifically on age diversity. In the study, the researchers investigated claims of age diversity adding to the innovativeness of organisational teams and transforming directly into the overall performance of the organisation. These results did not differ from previous studies, as it found that the outcome of age diversity is directly tied to the firm's culture and that firms that embraced the normative assumption that diversity is an opportunity were the ones that benefited from age diversity as a predictor for achieving team innovativeness. The results of the study by Schäffner et al. help managers to approach diversity management well, knowing that their perception about diversity has direct influence on the outcome of diversity. The more the managers appreciate diversity as an opportunity for growth, the greater the chances that diversity will lead to growth related to team innovativeness. Dayan et al. (2017) reviewed the possible factors that makes perception of managers and leaders about diversity necessary for the outcome of diversity and made a number of deductions.

The main finding was that the perception of managers about diversity affects their overall approach towards it, including the strategies and mechanisms they put in place in ensuring that the organisation gets the best out of diversity management. Using the findings from the study by Schäffner et al. (2006) as a reference point, it can be speculated that managers that embrace the normative assumption about diversity as an opportunity would go a step further in creating an enabling environment for employees of different age groups to have access to all resources they need to be innovative. Such managers may also approach diversity management by ensuring employee engagement, which opens employees up to try challenging modalities to innovation (Al-Emad & Rahman, 2018). As all these conditions are put in place, they have a long influence on diversity by ensuring that the preferred outcome based on innovativeness is achieved. Conversely, when leaders or managers do not embrace diversity as an opportunity, they are likely to show apathy towards diversity management and would thus not put in as much investment and innovation as is expected to yield positive results (Kerzner & Kerzner, 2017). It is under such circumstance that diversity only provides modest support to organisational performance and growth.

A third study by Kearney and Gebert (2006), focused on several aspects of diversity including age, nationality and job roles of employees. What was particularly outstanding about their study was that they examined the role of leadership in ensuring that diversity leads to innovativeness. The findings from this study showed that when transformational leadership is used in high context, it results in diversity having a positive effect on the innovativeness of the team. This result shows the place of leadership in diversity management, where leaders are expected to take central role in how they manage diversity to ensure their organisation gets the benefits expected from diversity. On their part, Kochan et al. (2003) found that the effect of diversity on the workforce could be either positive or negative and that this effect is largely determined by the way in which diversity is managed. Good diversity management policies and programs translate into positive effects of diversity on teams because the guide become guided on the best ways to coexist, while resolving their differences (Binder, 2016). Conversely, when no strategic diversity management policies and programs are implemented, teams go through many moments of struggle in resolving their differences, most of which result in high levels of conflicts, which also has negative impacts on the performance of roles at the workplace (Wrench, 2016).

2.11 Discussion and Summary

In considering the rich literature above, it can be noted that projects and project management are complex activities. The studies detail the need for projects and project management to be encompassing in terms of the personnel they involve as well as the details they include in their activities (Witt & Stahl, 2016). These studies also note the importance of considering and including cultural, social, as well as cost-related elements in developing these projects and activities. The complexities involved in project management range from the technical, to the structural, and the temporal. These complexities allow for opportunities for leaders within these projects to flex and display their skills and abilities.

Some gaps in these studies can be noted, especially in terms of how non-Western cultures may impact on project development and management, considering that the materials used by project managers are often based on tools prepared by Western managers (Witt & Stahl, 2016). As noted in the studies, cultural diversity is an important element which needs to be considered by project managers in order to ensure success (Witt & Stahl, 2016). These studies however did not adequately address how Asian, including Middle East Asian cultures, can actually impact on project management. Other gaps can also be noted in these studies in relation to qualities specifically associated with the UAE in relation to project management complex projects. including UAE-specific information such as, the qualities of UAE leaders and associated business and project management practices..

Project leaders deal with these complexities using their skills and other tools at their disposal (Bakhshi, Ireland & Gorod, 2016). These leaders also have to manage diversity including cultural, demographic, and project diversity while working within the context of the set goals for the project (Bakhshi, Ireland & Gorod, 2016). Most of these studies provide details about projects, their types, their tools, as well as their application. The thesis contributes to the literature by providing specific details on the effective leadership tools which are needed in managing complicated projects in a Middle Eastern country. This thesis then provides a Middle Eastern perspective of the tools and requirements for effective leadership in complicated projects. From these studies, it can be noted that cultural diversity cannot be ignored especially where the project is to be implemented in a country with a culture different from the project manager's culture or the company's usual culture (Gobel and Kano, 2017). While the thesis provides some support for previous studies, as discussed in the review including the discussions below in Chapter 3 and 6, it further develops and advances the project management literature. Most notably this includes the place for leadership experience in securing favorable outcomes for complex projects, and the use or application of numerous and often overlapping leadership styles by project managers within a Middle Eastern context.

The sphere of control relates to the use of the personal, interpersonal, and socio-political control. For purposes of this study, personal control was based on the limits which each project manager can make on his answers based on his personal experiences. This means that the answer of each respondent cannot be interpreted beyond his personal experience. For some of the answers where the project manager has relations with other individuals in the course of the project, the sphere of control is between the project manager and the individual with whom he is associating. As for socio-political control, the sphere of control relates to how each project manager applies legal policies, social standards, as well as cultural standards. The responses of the project managers cannot therefore be generalized beyond their personal experiences, interpersonal relations, or socio-political controls. Still, their responses can be associated with the previous and current literature on the subject matter so far as they match such personal, interpersonal, and socio-political controls.

CHAPTER THREE: THEORETICAL FRAMEWORK

The previous chapter provided an overview of the core literature in this area including an overview of complex leadership and complex adaptive systems. It further considered the UAE cultural and labour market context. This chapter uses this literature and further explores the underlying theoretical lens that guides this study. In doing so, it combines two core theories – complexity leadership with leader member exchange theory, to analyze the research questions posed in this study.

The research questions for this study are threefold:

1. How do project managers lead in complex projects within the UAE?
2. How do structural complexities impact the leadership style used?
3. How is the leadership style used impacted by gender, cultural background and maturity level of the manager?

3.1 Complexity leadership

Proposed in 2006, complexity leadership theory was created to shift the leadership theories into the 21st century from top down approaches to cater for the emergent characteristics of leadership in complex adaptive systems (Uhl-Bien et al., 2007). Uhl-Bien et al. (2007) further described the complexity leadership theory as one that shifts from industrial age to the knowledge era. By claiming the theory represents a shift from industrial age, reference is made to the fact that before the popularisation of complexity leadership, leadership had mainly been about the need to achieve organisational goals by following strict and bureaucratic orders that that had the interest of the organisation and assigned projects at heart rather than the employees or project team members that delivered the tasks within the project (Kerzner & Kerzner, 2017). Bresnen (2016) asserts that the complexity theory is a paradigm shift in several ways, since it is a representation of a shift from organisation focused to team focus, where leaders strive to improve the competences and abilities of team members towards the achievement of organisational goals. This theory is based on the assumption that leadership is a dynamic, complex process that exists between people and ideas (Lichtenstein et al., 2006).

While leadership in complex adaptive systems is not new (Plsek & Wilson, 2001), complexity leadership theory differs from previous theories as it argued that leadership can be adaptive, administrative and enabling at the same time. This is particularly useful in organisations that can be bureaucratic and administrative yet operating in a complex environment. This is because complexity leadership theory encourages managers to recognise different styles of leadership are needed at different points. For example, in bureaucratic (administrative) organisations, adaptive leadership styles typically are not seen, yet complexity leadership theory argues that there is a need for adaptive leadership and administrative leadership styles to co-exist in a complex adaptive organisation (Plsek & Wilson 2001; Uhl-Bien et al., 2007). Specifically, managers operating under a complexity leadership style would need to recognise the conditions upon which they are operating at that point in time and adapt their styles accordingly. That is, in times of stability, organisations can emphasise the administrative principles and use rationality to lead employees. However, in times of instability and increased competition, adaptive leadership styles are used to navigate identified complexities (Uhl-Bien et al., 2007).

Because the complexity leadership theory requires leaders to recognise that they may need different leadership styles at different points, it has been used mostly with the situational leadership style, where leaders recognise that leadership must be flexible and based on existing working environment in which the leaders find themselves (Wrench, 2016). Writing on the contingency leadership approach, Wrench (2016) asserted that it is the most appropriate leadership style under a complexity leadership context, since it requires leaders to go through the complex situation of learning and mastering how to apply different leadership styles, particularly those that are commonly regarded as contrasting within the management context. Two such leadership styles that have commonly been used to harness the ideas of contingency approach are transformational and transactional leadership styles. That is, when leaders use contingency leadership style in handling complex situations at the workplace, they are required to have the ability to switch between transformational leadership and transactional leadership, based on the unique conditions presented at a given point in time. Kerzner and Kerzner (2017) also mentioned that the essence of complexity leadership theory in prioritising the abilities and competences of employees and followers in general means leaders cannot always seek to have only their interests met. It is against this backdrop that the contingency leadership comes in as the most appropriate leadership style in ensuring that the leaders can always switch between styles to put the context of situation ahead of their personal principles and philosophies.

In addition, enabling leadership styles allow managers to protect complex adaptive systems from the top down hierarchical nature of the organisation and environment, in order to accommodate and realign the outcome to the organisational strategy (Binder, 2016). This is particularly helpful for project managers of complex projects within the UAE, with multiple reporting relationships to government, semi-government and private organisations. Consequently, this style may be useful to manage these relationships effectively but no research has explored the use of this leadership style in the UAE. Therefore, this study extends research in this area.

One of the main propositions that developers of the complex leadership theory makes is that there is the need to use leadership as a modality for shifting into an advanced deeper knowledge economy. Indeed as far back as 1998, Drucker made the claim that "most of our assumptions about business, technology and organisation are at least 50 years old. They have outlived their time" (Drucker, 1998, p. 162). Given the fact that this claim was made 20 years ago means the assumptions and principles we have been relying on are more than 70 years old now, making it valid to question their applicability for businesses, technology and organisations today. The lesson deduced from this claim by Drucker is that we cannot continue to rely on the old ways and methods of running businesses, using technology and managing organisations. In place of reliance on old systems and methods is the option of knowledge economy, which emphasises the idea of continued learning in finding the right systems, approaches and methods that fix into the complexities of today. When this idea is put in the UAE context, it becomes even more obvious that the shift to knowledge economy will be sought as part of complexity leadership. The reason for this assertion is that the UAE has been experiencing very rapid development in the past two decades, necessitating new forms of knowledge that meet the complex developments taking place in different sectors of the country's economy (Wrench, 2016).

When limited to the organisational context, organisations and projects pursue knowledge by making use of the concept of learning culture. According to the Oracle Human Capital Management (2016, p. 1), "a learning culture is a set of organisational values, conventions, processes, and practices that encourage individuals – and the organisation as a whole – to increase knowledge, competence and performance". The understanding from this definition is that learning culture is not only represented by a set of practices that comes at a particular point in time and goes away afterwards. Rather it is a learning process that is incorporated into the core culture of the organisation as reflected in its values. Binder (2016) therefore emphasised that organisations with learning culture can always be assured that employees and other internal stakeholders including managers can constantly acquire knowledge based on new trends and approaches within the market or business environment. A learning culture can be seen to have direct relation with complexity leadership theory, given that it identifies the role of the leader as a teacher, who must not only teach but also create the right environment for learning and transfer of knowledge to take place. Ones this is done, the knowledge gained helps the organisation as an entity to master the complexities they are faced with, including those relating to project management.

However, in addition to complex leadership theory, this study also draws upon leader-member exchange theory to examine the impact of leadership styles on organisations and their employees (Wrench, 2016). This is because, while the complex leadership presents a lens for analysing the managers leadership style, research has not yet established how this style impacts employee level outcomes. Consequently, there is a need to draw on an established literature base to explore how the quality of the relationship between a leader and follower is predictive of organisational, team and employee outcomes (Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016). Therefore, the following section provides a review of the leader member exchange literature and highlights how this will contribute to the theoretical lens used in this study.

3.2 Leader member exchange

The leader-member exchange theory remains one of the most prominent leadership theories to explain relationships between leaders and their followers to date. While it was originally developed as a dyadic theory of leadership (Dansereau, Graen, & Haga, 1975; Graen & Scandura, 1987) it has evolved significantly since its conception. Leader member exchange theory argues that the quality of the relationship between a leader and a follower impacts the outcome experienced at the individual, group and organisational level of analysis.

According to Graen and Uhl-Bien (1995), leader member exchange theory has evolved over time in four ways. At first, the literature on the leader-member exchange theory focused on work socialisation and vertical dyad links between in-group and out-group members (Choi, Kraimer, & Seibert, 2018). The evidence of using this theory also focuses on the relationships between employees and how their relationship impact on work outcomes. What is more, it also focuses on the quality of relationships and the outcomes of those relationships on employees (Martin et al., 2016). Some literature prescribed an approach for dyadic partnership building before considering leader member exchange theory as a systems approach to work, which argued the theory moved beyond the dyadic approach of relationships to the systems level (Choi et al., 2018). An early meta-analysis of leader member exchange theory by Gerstner and Day (1997) then found that leader member exchanges were correlated with performance related and attitudinal variables such as performance outcomes, performance ratings by leaders, performance ratings by employees, job satisfaction, organisational commitment, positive role perceptions, member competence, role clarity and turnover.

A more recent meta-analysis by Tse, Troth, Ashkanasy and Collins (2018) has uncovered that LMX affects employee, organisational and team level outcomes and as such, more research is needed to further explore this in culturally diverse contexts, such as the UAE. Other recent studies have found that employees report more positive performance ratings when engaging in innovative work behaviour if they have high quality leader member exchange relationships (Schuh, Zhang, Morgeson, Tian, & van Dick, 2018). Yet it is agreed that leaders cannot maintain great relationships with all employees (Yu, Matta & Cornfield 2018). This suggests that structural complexities may hinder some relationships over others. This may be particularly the case in the UAE, however, no research has examined these relationships in depth within this context.

Previous research has also found that leaders develop differentiated relationships with subordinates, and as such, leaders often rank their employees from low-quality transactional relationships to employees with high quality socio-emotional relationships (Dienesch & Liden, 1986; Liden & Maslyn, 1998). Consequently, it is expected that differing relationships exist between leaders and followers, and that these must be considered when researching leader member exchange theory in groups. Moreover, these relationships cannot be considered universally good and bad, but they must be contextualised to the work environment in which it applies according to a recent meta-analysis (Yu et al., 2018). These findings highlight that it is important to explore leader member exchange relationships further as research has also found that the positive impacts of leader member exchanges (such as improved organisational citizenship behaviour and reduced intention to turnover) are weakened if leaders were perceived to have favourites (Hsiung & Bolino, 2018). Yet no research has explored the relationship between complexity leadership theory and leader member exchange. While this research cannot explore this relationship directly, it may provide some initial evidence and grounds for conjecture in relation to this concept.

LMX theory has often been discussed in relation to the two main types of leadership styles, which are transformational and transactional styles. That is, researchers have been concerned about knowing which of the two leadership styles is most suitable and applicable in terms of exhibiting the main characteristics of LMX. In this, Cropanzano et al. (2017) posited that the LMX theory cannot be very effective when applied in the context of transformational leadership. While both the LMX and transformational leadership style seek to build the next generation of leaders to take over the affairs of the company in the absence of the leader, Cropanzano et al. (2017) found that transformational leaders approach their goal by focusing on the workforce and organisation in totality, rather than using the idea of inner and outer circles as is the case with LMX. Choi et al. (2018) asserted that the idea of having an inner circle of employees who enjoy the benefits of closer relationship with their leaders can be translated into a form of reward that employees must exhibit special potential or attitude to benefit from. Meanwhile, the context ensuring performance through reward is an attribute of transactional leadership style.

Another perspective from which the application of LMX to leadership style has been discussed is in terms of approach to risk taking and innovation. Martin et al. (2016) observed that transformational leaders have the ability to take the right risks, based on which reason they make room for employee engagement leading to innovation at the workplace. While LMX theory embraces innovation, it is overly result-oriented and so leaders following the theory only seek innovation from experienced employees from whom the outcome of performance can be guaranteed. In effect, while it can be said that employee engagement happens within the inner circle employees who have the exchange relationship with the leader, the fact that the practice is not generalised for the whole organisation makes it impossible to say that the LMX theory fits exactly into the transformational leadership style. On the other hand, the transactional leadership style which is more result-oriented makes very little room for internally developing employees through innovative reasoning (Choi et al., 2018). Such innovative reasoning that is nurtured in employees as part of employee engagement practices may be seen by transactional leaders as a risk taking practice, which most transactional leaders try to avoid. In the context of risk taking through employee engagement therefore, the LMX theory can also be seen as not suitable for the transformational leadership style because of their contrasting ideologies.

Another perspective from which Cropanzano et al. (2017) viewed the applicability of LMX theory to leadership is in terms of emotional bond that is built between the leader and the inner circle employees. Martin et al. (2016) emphasised that the emotional bond is always important to the leaders because they see the inner circle employees as invaluable group of people whose relationship must not be lost if the leader is to succeed. Indeed, such employees are trusted by the leader as reliable people to help with delivering the organisation’s goals. When interpreted in terms of transformational leadership, as much as the leader has a relationship and connection with employees, this is not based on emotional support and trust for the employees for the leader to deliver. Rather, the relationship is built on charismatic influence of the leader on the employees. That is, the employees rather look to their leader for inspiration (Choi et al., 2018). The transformational leadership style therefore, does not follow the philosophy behind the LMX theory for emotional attachment between leaders and employees. In terms of transactional leadership style, it is common to expect the leader trusting employees for their performance and so agreeing to reward them heavily for meeting certain performance criteria. Bresnen (2016) posited that for employees that can guarantee constant results, it would not be out of place for their leaders to develop strong emotional bonds for them.

3.3 Bringing it together

In the UAE, considering the cultural, gender and maturity of managers, it is likely that differing relationships exist and as such it is important to measure these relationships and contextualize these in the outcomes reported (Mehran, 2016). Moreover, differing relationships may exist based on the type of organisation the manager is a part of and the national vs non-national members of the team. Therefore, to reduce variability in this study, and deepen the understanding of these relationships, this study only examines managers from semi-government and private organisations. In doing so, this research draws on the both complex leadership theory and leader-member exchange theory to examine the leadership styles present in complex project managers in the UAE and how culture, gender and maturity level of managers impact these relationships further, as highlighted in Figure 4.

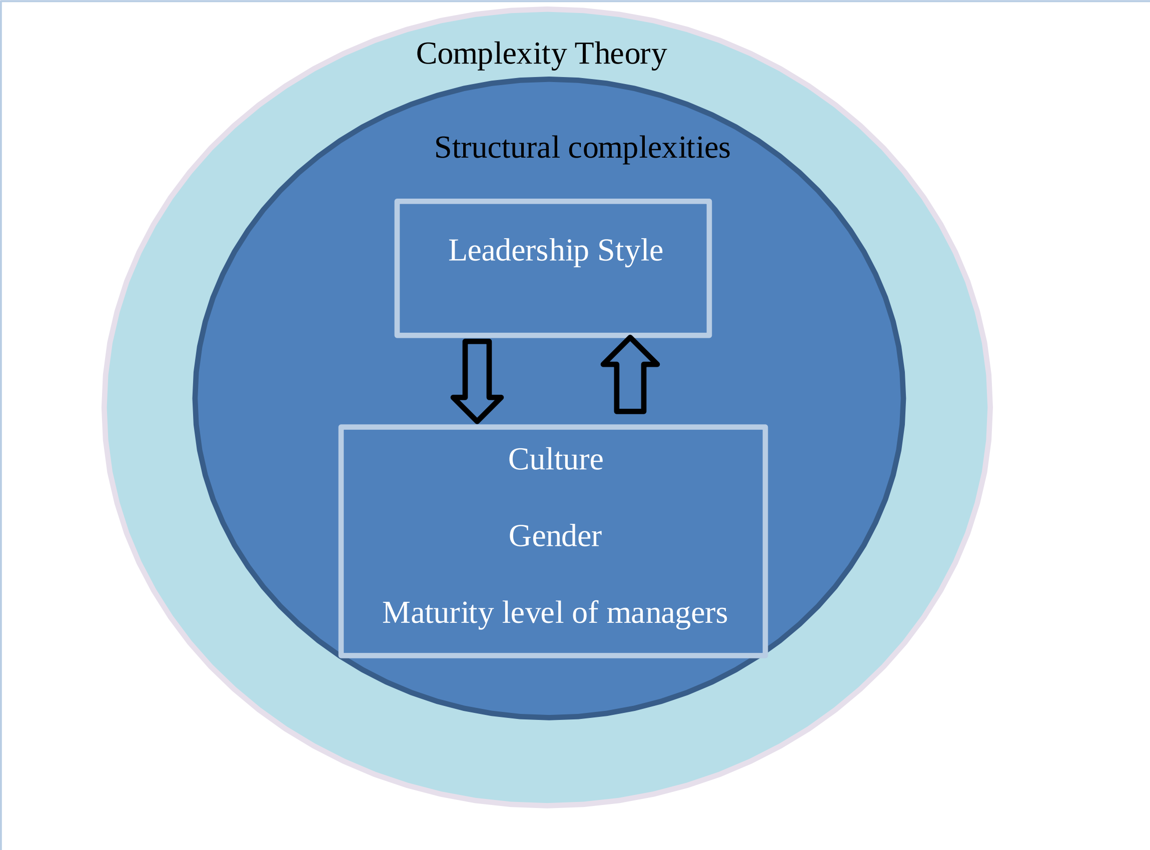

Figure 4: The theoretical lens for this study

Based on the figure above, the variables of culture, gender and maturity level can be used to analyse leadership styles in the context of the UAE. Writing on culture, Mehran (2016) found that the UAE is fast becoming a multicultural country where people from different nationalities migrate to for the economic purpose of finding jobs. Most of the people that move to UAE for jobs head to the oil and gas and real estate industries, where many construction projects take place (Martin et al., 2016). Most leaders, who are project managers, must work with employees from different countries and cultural backgrounds requiring them to adopt the right leadership styles to ensure inclusiveness and harmonious working relationships among all employees (Bresnen, 2016). Reviewing various types of leadership styles, Cropanzano et al. (2017) noted that some leadership styles, particularly those that are focused on the leaders' power and authority do not encourage intercultural relationship and diversity management. Consequently, in subsequent sections where data will be collected from project managers, the researchers will engage them to determine how the leadership styles they adopt affect diversity management based on cultural differences within their project teams.

Gender and its impact on leadership has also been extensively studied in the literature. In terms of gender, most researchers have looked at the preference of leadership style among leaders based on their gender. The transactional leadership style and transformational leadership style are the two most discussed in relation to gender of leaders. In one such study, Mehran (2016) investigated the preference for transformational leadership style and transactional leadership style among male and female leaders. The results showed that as much as transformational leadership and transactional leadership were common among both male and female leaders, it was more likely for females to select transformational leadership style over transactional leadership style. Similarly, Asif (2016) found that males were more likely to prefer transactional leadership style to transformational style. The factors that lead to these preferences have been explained in other studies. For example, Hazy and Uhl-Bien (2015) found that transactional leadership is more authoritative in nature, as leaders using it are highly result-oriented. The leaders are also tough in using rewards and punishment in getting goals met. The characteristics of being authoritative, bossy, commanding, and tough have, however, been described as natural instincts of men, while females are more lenient and open to personality development (Ghoddousi et al., 2015). Such acts of personality development and personal influences on subordinates are associated with the transformational leadership style (Bresnen, 2016).

Finally, Cropanzano et al. (2017) asserted that the maturity level of leaders as measured by their years of experience in charge influences their preference for particular leadership styles. Clarifying the situation, Emere et al. (2018b) asserted that maturity level as used in leadership does not necessarily refer to how old a leader is but how many years of experience they may have in charge of a particular line of work. From this perspective, more experienced leaders have been found to exhibit the characteristic of being teachers, where they prefer to impact their gained experiences to their followers (Hazy & Uhl-Bien, 2015). What is more, experienced leaders have been found to exhibit the characteristic of mentors who want to be examples for their followers to copy their approach and attitude to work. Meanwhile, the characteristics of being a teacher and mentor have been associated with the transformational leadership style, implying that mature leaders are more likely to practice the transformational leadership style. Conversely, when leaders are new to their lines of work, they are more likely to emphasise results due to the need that they have to produce good results to show their competence for their roles (Hamouda & Abu-Shaaban, 2015). The transactional leadership has therefore been found to be more common among new leaders, who among other things want to establish their authority over their followers (Hazy & Uhl-Bien, 2015).

3.4 Chapter conclusions, research gaps and research questions

This chapter provided a literature review of key project management concepts and cross cultural management issues in the context of the UAE labour market. Combined these findings illustrate that leading complex projects in the UAE is highly challenging. This chapter further highlighted the potential implications that poor leadership can have on complex projects, and also alluded to the need to redefine the definition of a complex project. However, more importantly, this chapter highlighted the need to explore the current leadership of complex projects within the UAE in order to improve future practices.

Only a few studies have examined the type of leadership used in complex project management. Therefore, this study aims at addressing this gap in the literature by exploring the impact that structural project complexities have on leadership in the UAE context. In particular, this study conducts an exploratory investigation to answer the research questions:

1. How do project managers lead in complex projects within the UAE?
2. How do structural complexities impact the leadership style used?

3. How is the leadership style used impacted by gender, cultural background and maturity level of the manager?

The next chapter, Chapter 4, details the methodology used in this study.

CHAPTER 4: METHODOLOGY

4.1 Methodology

This study examines three research questions:

1. How do project managers lead in complex projects within the UAE?
2. How do structural complexities impact the leadership style used?
3. How is the leadership style used impacted by gender, cultural background and maturity level of the manager?

To explore these questions, this chapter provides an overview of the methodology that this study will use. Methodology "aims to prescribe what are justifiable methods and procedures that ought to be used in the generation and testing of valid knowledge" (Clough & Nutbrown, 2002, p. vii). This section, therefore, begins with a discussion of the philosophical foundation of the study, followed by a discussion of the method used and the context chosen for this research.

4.2 Philosophical foundation for the study: Ontology and Epistemology

Ontology refers to what the 'social reality' is of an individual (Bryman, 2004; Corbetta, 2003). In other words, ontology refers to an individual's perception of reality (Bryman, 2004; Neuman, 2011). Researchers can adopt either a nominalist or realist ontology depending on their epistemology. Those researchers who adopt a realist ontology argue that the world exists without individuals and therefore the world can be studied through a process of enquiry. On the other hand, researchers who adopt a nominalist ontology argue that the world cannot be independently examined and instead the world is shadowed by the researcher's interpretation of events (Neuman, 2011). This research embraces a nominalist ontology and proposes that individuals only experience the world as they see it and therefore it is necessary to ask participants about their view of reality to ensure we are capturing the world through their eyes (Neuman, 2011).

A researcher’s epistemological view refers to how the researcher interprets and understands the social world that surrounds them, in terms of the principles, procedures and ethos on which they base their research (Bryman, 2004). In practice, epistemology refers to what each researcher considers to be the acceptable knowledge within their discipline (Bryman, 2004), and how that researcher understands and makes claims to the truth about the world surrounding them (Neuman, 2011). Researchers argue that knowledge is created from understanding the “reality” of individual participants (Neuman, 2011). In this study, when conducting interviews with project managers, the researcher aims to understand how participants see their world, and as such, this research uses an abductive approach, which is discussed later in this chapter.

This approach was chosen in preference to other methodological approaches as this study explores leadership in complex project management and is the first of its kind to explore the type of leadership styles that are successful in managing complex projects within the UAE. While other studies have examined leadership in the UAE using quantitative methods, this study extends our knowledge in this area as it aims to improve our understanding of how project managers lead projects and why they lead projects in that way. Thus, it is necessary to spend time with participants to understand their subjective view of the world and engage in a reflexive and exploratory approach to this study (Denzin, 2010). This view is further supported by the abduction approach.

Peirce (1931) discusses that abduction is about studying facts and developing a theory to explain such facts. In deduction, consequences are drawn out from cases or rules and are considered necessary reasoning while induction relates to experimental testing of theory. Peirce (1931) has presented some concerns about abduction leading to contentious discussions about the theory. Some of these challenges relate to interpretive concerns or descriptive problems. The first concern is on how abductive inference can be formalized; another concern is on the boundary between abduction and other inferences; third concern is whether abductive inference considered an efficient form of inference or if it is simply made up; and lastly, if abductive reasoning defines features on actual applications of science, what would the features be?

In this thesis, the relative limitations of abductive reasoning mostly relate to its ability to provide sound inference on the information gathered. There are limitations also on the boundaries which abductive approaches can set in relation to other forms of inferences especially as the inferences which are going to be drawn from this research would be based on the experiences and perspective of leaders (Tolk, 2019). As the data gathering process for this study is based on interviews from participants, abduction can have some limitations in terms of understanding subjective views. There may be a need for researchers to spend time with participants in order to understand their subjective perspectives (Tolk, 2019). This may however be difficult to do as there are time constraints on the length or period of interviews, as well as constraints related to the duration of fieldwork. Under these conditions, the abductive approach can be a difficult approach to observe (Tolk, 2019). With more extended interviews, as well as the added case studies from companies as well as projects, the abductive approach would have had better applications (Tolk, 2019). Still, the thesis did successfully and efficiently apply and engage this approach in the fullest and most extensive way possible, given the research context and limitations.

4.3 Paradigm

To explore participants' reality and world views, this study uses an interpretivist paradigm. An interpretivist paradigm allows the researcher to produce a large amount of data from a small number of participants to create understanding from the participants reality (Crotty, 1998). From its beginnings in the late 1800s, Max Webber and Jean Piaget, recognised the importance of exploring the meanings and motivations behind people's behaviour (Neuman, 2003). This recognition paved the way for social scientists to explore a subjective

enquiry into human behaviour, which was markedly different than the positivist paradigm

(Burrell & Morgan, 1979). This change allowed for qualitative researchers to embark upon a journey to explore the intricacies of participants worldview and the actors within it (Leitch, Hill & Harrison, 2010).

The interpretivist paradigm is appropriate for this study because while critical realism aims to create social change and transformation (Neuman, 2006) and positivism aims to make generalisations about peoples' behaviour using objective methodologies (Neuman, 2006), this study aims to explore the experiences and reality of project managers in the UAE. Furthermore, using an interpretive paradigm to explore the research questions allows the researcher to produce context appropriate knowledge and to explore the meanings behind each participants reality (O'Donoghue, 2007). The ability to analyse the data within the context and delve deeper into the meaning and complexity of this topic, is a strength of the interpretive paradigm (Black, 2006). It is appropriate for this study as previous studies have only explored leadership behaviours using a positivist approaches as they applied a western lens to an eastern context. There are however some limits noted in the use of this interpretivist paradigm, mostly in terms of constraints on the data collection process where the data gathered is mostly subjective as it is largely based on the perspective and values of the participants (Green & Thorogood, 2018). Data gathered using this paradigm cannot therefore be generalized to a larger population (Green & Thorogood, 2018). Nevertheless, this researcher was able to work through these constraints by recruiting as many participants as possible for this study, using the snowball method in the course of three months to recruit the participants (Green & Thorogood, 2018). This researcher also ensured that the chosen participants were experts in their respective fields and able to provide strong expert testimony on the topic.

4.4 Method

Methods are defined as the way in which we collect and analyse data (Tashakkori &

Teddlie, 2003). Each method in research has both advantages and disadvantages. Therefore, when choosing the types of research methods used in this study, the advantages and disadvantage of each method was considered. Table 2 highlights these advantages and disadvantages. In the table, the word ‘high’ means that that methodology allows for a high level of the characteristic listed in the left-hand column.

Table 2: Comparison of method characteristics

Characteristic under Consideration	**In-depth Interview**	**Questionnaire based Survey**	**Documentation analysis**	**Literature Review**
Realism	High	Low	Low	Low
Access to respondents	High	Moderate	Low	Low
Detail	Moderate	Low	Moderate	Moderate
Measurement precision	Moderate	Moderate	Moderate	Low
Control	Low	Moderate	Low	Low
Conclusion validity	Low	High	Low	Low
Generalisability	Low	Moderate	High	High

(Source: Tashakkori & Teddlie, 2003)

While there are no singular approaches that are better than others, careful consideration is needed to match the method to the research question. As shown in Table 3 in-depth interviews and a questionnaire were found appropriate for use in this study to understand how and why leadership styles are used in that way. In addition to the above considerations, the characteristics of the different methods available as outlined in Table 3 were considered when choosing the current methodology (Metcalf, 2005).

Table 3: Summary of different methods

Parameter Method	Time period	Intensive/ Extensive	Intrusive	Theory Flexibility	Quantifiability	Cross-cultural applicability	Replicability	Depth of understanding	Causality	Threat to researcher
Social survey (snapshot)	Once	Extensive	Modestly intrusive	Inflexible	High	Slight	High	Shallow	Very low	Low
Longitudinal survey	Across time in future	Extensive	Fairly intrusive	Inflexible	Very high	Slight	Limited	Fairly shallow	Moderate	Low
Participant observation	Across time in future	Intensive	Very intrusive	Very flexible	Very low	Very high	Low	Very shallow	Very low	Very high
Secondary data analysis	Across, historical	Very extensive	Non-intrusive	Marginally flexible	Very high	Possible but with problems	Very high	Very shallow	Fairly low	Nil
Semi-structured interviews	Once	Intensive	Very intrusive	Fairly flexible	Low	Fairly high	Very low	Fairly deep	Fairly low	High
Focus groups	Once	Intensive-extensive	Fairly intrusive	Fairly flexible	Fairly low	Limited	Moderately high	Fairly deep	Very low	High
Archival/ historical	Across historical	Intensive-extensive	Non-intrusive	Very flexible	Generally low	Possible	Moderate	Very deep	Moderate	High
Oral history/ biography	Across historical	Very intensive	Very intrusive	Very flexible	Nil	Slight	Very low	Very deep	Moderate	High
Case study	Across historical and future	Intensive	Can be intrusive	Flexible	Usually low	Slight	Moderate	Thick	Moderate	Generally low
Content analysis	Once	Intensive	Very intrusive	Inflexible	High	Very slight	Very high	Fairly shallow	Very high	Moderate

Given that this study explores the impact that structural project complexities have on leadership using complexity theory and as leader-member exchange as its theoretical lens, a case study research approach was selected for this study. This ensures that the data gained is intensive, rich and can provide deeper meaning and understanding to the issue at hand.

4.5 Case Study

A case study is a research strategy designed to investigate a phenomenon, which results in a theoretical explanation of the event (Vennesson, 2008). Robert Yin (2003) describes a case study more specifically as a process of enquiry that allows a contemporary phenomenon to be examined within the confines of its real-life context through the use of evidence. It has been defined as, "a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (case) over time through detailed, in depth data collection involving multiple sources of information and reports a cases description and themes" (Cresswell & Poth, 2018, p. 96).

Case studies can be descriptive, exploratory or explanatory in nature. Descriptive case studies aim to describe an event within the context itself. In particular, this type of case study explains the "who, what, when, where and how" of a phenomenon (Woodside, 2010). In this case, the research proposes how an event can be explained descriptively by the theory. An exploratory case study, on the other hand, aims to examine the phenomenon in more detail to investigate what is going on, in order to develop research propositions for the future or to develop a theoretical position or theory about an event. This type of research generally collects primary research data to produce a "theory" about the what, how and why of the event. In contrast, an explanatory case study aims to use a theory to explain what is going on and why (Woodside, 2010).

As this study aims to explore the types of leadership styles used in complex project management, this study will use a descriptive case study methodology to explore the type of leadership style used in the UAE and how this impacts followership behaviour. In addition, this project will create new theoretical knowledge in the area of leadership in complex project management, which is an area that has previously been under-researched.

This methodology has been critiqued heavily in the past due to the inability to generalise findings (Yin, 1994), which makes the findings too specific to the context they were found in to be of any wider value (Weick, 1969). In addition, case study methodology has been critiqued for being too vague about the findings, as well as for being used in a quasi-deductive theory testing approach (Easton, 1995). However, with the addition of systematic combining approaches and recognition of the abductive approach this method uses, the methodology is more widely accepted in recent years and is now used commonly within the social sciences when underpinned with an abductive approach and systematic combining (Dubois & Gadde, 2014; Yin, 2003).

Systematic combining refers to the matching of theory to the findings using an abductive approach (Dubois & Gadde, 2002; Dubois & Gadde, 2014). It is non-linear and the path taken is dependent on how the data, theory, and literature review are combined, with the intent to match theory with reality. In particular, systematic combining allows the researcher to "constantly go back and forth from one type of research activity to another and between empirical observations and theory (Dubois & Gadde, 2002, p. 556). A crucial part of this process is matching, which is the going back between the framework, data sources and analysis to explore the findings of the study (Dubois & Gadde, 2014).

What is also important, however, is the analytical framework used. While a tight and prescribed logic is useful in deductive research, and a loose unstructured logic is useful in inductive research (Miles & Huberman, 1994), in systematic combining, the framework evolves, and concepts should be used only to create a reference point in a systematic way

(Dubois & Gadde, 2002). Thus, in this study, while the framework used was initially loosely guided by theory, the concepts were analysed and the framework emerged from a combination of data gathering techniques and the literature. This diverges from Yin's approach to case studies, which is much more deductive, when he argues the purpose of a case study is to develop or test a theory; and that hypotheses are needed prior to data gathering. It also diverges from Glaser and Strauss's (1967) theory, which argues that the framework to guide the research must be loose and emerging only and that no literature is needed beforehand. Instead, systematic combining sits between these approaches by arguing that a tight and emerging framework be used to guide the research.

What is common across all case study research, however, is the need for a combination of data sources to ensure the findings are triangulated appropriately to draw conclusions from a variety of sources (Dubois & Gadde, 2002). According to Strauss and Corbin (1990), the researcher is constantly moving between asking questions, generating hypotheses and making comparisons using an abductive approach.

Abduction is therefore defined as investigating the relationship between everyday language and concepts, in a similar way to inductive approaches (Dubois & Gadde, 2002). However, while deductive approaches rely on the researcher to develop propositions based on the literature, inductive approaches rely on grounded theory (Glaser & Strauss, 1967) where theory is generated from the evidence collected. Abductive approaches are more reflexive and fluid in their integration of theory and findings. Using a systematic combining approach to case studies allows researchers to further develop theory and reflect on how their findings advance theory. In this way, the literature review is not considered complete until after the empirical conceptualisation from the findings is complete (Dubois & Gadde, 2014). Consequently, this thesis has some guiding literature in the beginning (Chapter 1-3), and an additional review of the literature was performed during the data analysis phase to understand how leadership in complex project management evolves in the UAE. In addition, this study uses in-depth structured interviews with some quantitative data to situate the case within. Examining leadership styles within the UAE in this way allows the researcher to build an authentic case.

Systematic combining as supported by the abductive case study approach was somewhat limited by the lack of access to systematic data on the part of the researcher on the different companies, projects, and associated practices (Tolk, 2019). With the careful analysis of the data gathered during the interview along with the associations made on this data with the literature gathered on project management and leadership, however, significant opportunities for data collection and theoretical assessment of leadership of complex projects in the UAE were made possible.

4.6 Procedure and measures

Ethical approval was obtained from the Griffith University Human Research Ethics committee prior to approaching potential organisations for data collection in the UAE (GU2016/520). Following this, emails were sent to participants which described the purpose of the study and invited them to participate in an interview. Once consent was obtained, interviews were conducted with project managers to explore the relationships and structural complexities that exist within their environments.

4.7 Case and participant selection

Accessibility and relevance to the theory are critical components of selecting participants in a case study analysis (Rowley, 2002). This includes considering the research questions and theoretical context that the study is positioned within. Snowball sampling is appropriate as it allows the researcher to gain access to populations they may not have access to otherwise, as it relies on a referral process (Bryman, 2001). Snowball sampling as described by Maxfield and Babbie (2007) begins by identifying a single subject, or small number of subjects, and after their involvement in the project as an interviewee, the researcher asks them to refer others who may be interested in being involved in this study. Within this study, and as mentioned previously, snowball sampling was used in an effort to reach project managers who are responsible for complex project management in the UAE. This resulted in 33 interviews being conducted over a 3-month period of data collection (July-September 2017) and data gathering ceased when data saturation was reached. Data saturation is defined as gaining appropriate depth of the data amongst multiple participants (Burmeister & Aitken, 2012).

In the UAE, the number of complex projects is on the rise, with over 200 projects planned for Dubai alone to prepare itself for the increase in visitors expected to the region as a result of hosting Expo 2020 (MEED Insight, 2015). In construction alone, approximately US$5 billion has been invested in complex projects (Global Competitiveness Report, 2015). In addition, over US$124 billion has been invested in constructing 325 manmade islands in the UAE (MEED Insight, 2015). Consequently, investigating leadership strategies used to oversee complex projects in Dubai is of particular relevance to this study. It is for this reason participant selection began with complex project managers in the Dubai construction industry. On identification of participant 1 at an industry networking evening, they connected the researcher to participant 2, who connected him to participant 3 and so on.

All participants came from the construction industry and had worked in the industry for more than 2 years (max 45 years) and were aged between 28-70 years. Interestingly, just under half of project managers interviewed came from a western country (15/33 were from a western country) and spoke more than 1 language (30/33 participants spoke more than one language). In addition, all participants were from organisations that were identified as private or semi-government using the labour laws as their guiding employment agreement. Appendix B provides an overview of the participants included within this study.

A total of 33 managers participated in the interviews (Table 5). Of these, 26 (78.1%) were male and 7 (21.9%) were female. The common language of respondents was English with most being also able to speak in other languages including Arabic (16), French (15), Spanish (5), Hindu (4), Urdu (4), German (2), Ukrainian (1), Farsi (1), Romanian (1), Japanese (2), Danish (1) and Malaysian (1). Only three participants spoke English only. Interestingly, all but one participant was born outside of the UAE, reflecting the high level of expatriates working in the UAE as discussed in Chapter 2. This included 11 from the UK, six from India, five from Pakistan, four from the USA, two from Saudi Arabia, two from Jordan, and one each from the UAE, Romania, and Bangladesh.

Each manager had an average of 8.9 years of experience (range 1-42 years). The majority of managers had experience outside of the UAE prior to their current role (84.4% - 27 participants), while six had only managed within the UAE.

On average, participants had been at their current organization for 4 years (range 1- 17 years) and had been operating as project managers for an average of 12 years (range 2-42 years). All participants completed the CIFTER scale and were identified as managing projects, which were level 3 or above. As outlined in Chapter Five this meant that they were managing highly complex projects across seven factors: 1) stability of the overall project context; 2) number of distinct disciplines, methods or approaches involved in performing the project; 3) magnitude of legal, social or environmental implications from performing the project; 4) overall expected financial impact on the projects stakeholders; 5) strategic importance of the project to the organisation/s involved; 6) stakeholder cohesion regarding the characteristics of the project's product; and, 7) number and variety of interfaces between the project and other organisational entitles.

Appendix B highlights the wide-ranging project management data elicited from project managers working in the UAE. In contrast to individual case study approaches, this strategy allowed me to gain a broader understanding of complex project management leadership strategies across the UAE.

4.8 Data collection tools

Interviews were semi-structured and centred around asking about the about “who, what, when, where and how” questions of relational and structural complexities in leadership and complex project management within the UAE in line with the descriptive case study methodology. The types of questions that were asked include “Can you tell me about: who you report to? How you report to them (prompt: is this done written, over the phone or email)? How often do you report to them or raise concerns? Where are these meetings held? What else do you discuss in these meetings? How often do your directives change?” The participants were also asked questions which were in line with the three research questions for this dissertation. These research questions were generated based on the following main research questions: how project leaders headed complex projects in the UAE, how structural complexities impact on leadership style, and how gender, cultural background and maturity impacted on their leadership approach. However, interviewees were given every opportunity to expand on topics of interest and/or issues that they thought were important.

During this interview, the project manager was asked to rate their project against the Global Alliance for Project Performance Standards (GAPPS). This involved assessing each potential project on a four point scale against the Crawford-Ishikura Factor Table for Evaluating Roles (CIFTER) scale which highlights seven factors of project complexities. These seven factors include: 1) stability of the overall project context; 2) number of distinct disciplines, methods or approaches involved in performing the project; 3) magnitude of legal, social or environmental implications from performing the project; 4) overall expected financial impact on the projects stakeholders; 5) strategic importance of the project to the organisation/s involved; 6) stakeholder cohesion regarding the characteristics of the project’s product; and, 7) number and variety of interfaces between the project and other organisational entitles. A total complexity score was then created by adding the scores from all scores and categorised either as a Global level 1 (less than 12), Global level 2 (scores 12-17) or Global Level 3 (score 19+). This process has established internal reliability (Chronbach's alpha = 0.688) and validity (Aitken & Crawford, 2007).

Each interview lasted between 45-60 minutes. Interviews were conducted in both Arabic and English languages, then translated back to English by the researcher who is fluent in both languages. The majority of interviews (31) were conducted in English though, with only one being conducted in Arabic due to it being her native language. The interview transcript was then sent back to the participant for verification. Once verification had been completed, the transcript was analysed by the researcher. To assist with the management of data, NVivo version 10.0 was used as a storage and synthesis device.

4.9 Ethical considerations

This study required the approval of the Griffith University Human Research Ethics committee. While the researcher did not intend to create harm for participants, it was noted that some risks may arise from participating in this study. In particular, informed consent, confidentiality, feedback of results, negative impact of employability and security of data were five key ethical issues in this study considered by the researcher.

Informed consent was obtained by participants (both project managers and project team members). At the interview, informed consent was recorded on the tape recorder. Confidentiality was ensured through three mechanisms. First, all interview transcripts were de-identified and as such the completed transcript linked only to a participant code, which is only available to the researcher and his supervisors. Secondly, transcripts were stored securely in a locked electronic file, and will be deleted after five years in accordance with Griffith University's data management policy. Finally, all publications resulting from this study will use accumulated data that is de-identified, and names will be changed at all times to ensure confidentiality of the findings.

4.10 Validation techniques

A core part of systematic combining and qualitative research in general is creating trustworthiness and credibility in the approach and validity in the research findings (Creswell & Poth, 2018). While there are myriad of approaches to validating qualitative research, this study used a variety of approaches from the researcher and participant perspectives to assess the accuracy of the findings (Creswell & Poth, 2018).

Triangulation allows multiple sources of information to be combined in order to add validity to the study (Neuman, 2006). There are four core ways triangulation can be integrated in research. First, the measures used may be triangulated to examine the phenomenon investigated, for example combining interviews with a short questionnaire to measure a construct or having both open and closed questions on a survey. Second, the use of more than one observer to analyse the data can increase validity and reduce bias on the study's findings. This is called triangulation of observers. The third way to triangulate is to use multiple theories to plan or interpret the data obtained. Finally, mixing methods or using multiple data gathering methods can be used to triangulate the results.

4.11 Fieldwork

Neuman (2003) proposes that there are nine key steps in preparing for field research. These are: 1) self-preparation through reading the literature and focusing, 2) selecting field site and seeking access, 3) entering site and establishing social relations, 4) adopting a social role, 5) obtaining data, 6) starting data analysis, 7) focusing on specific aspects of the setting through considering the environment in which interviews are conducted, 8) disengaging and physically leaving the setting and 9) following up with participants to validate findings. By following these guidelines, Neuman (2003) argues that the researcher can maximise the data obtained. It also allows the researcher to generate knowledge through the non-verbal cues and observations that take place within the setting. Table 4 presents an overview of how the researcher followed these steps.

Table 4: Researchers approach to data preparation

Step in data preparation	**Researcher strategy**
1. Self-preparation	The researcher read the literature around leadership and complex project management prior to interviews and developed the interview schedule.
2. Select field sites, seek access	The researcher attended an industry insight event and met participant 1. This led to a follow up email, and interview, followed by recommendations for another interviewee. Upon connection, interview times were scheduled at a location convenient to the participant.
3. Enter site and establish social relations	The researcher met participants at a time and location convenient to them, noting that work and family commitments needed to be considered. This led to most interviews being held off work sites in a quiet space over tea.
4. Adopt a social role	The researcher was accommodating of participants requests for information and sent through his information sheet as soon as he was referred to the participant, along with an email informing them of the project. Follow up information was provided upon

	request and most participants requested a copy of the final thesis which will be distributed upon completion.
5. Obtain data	The researcher asked structured questions of each participant in English slowly, keeping in mind language barriers. One interview was conducted in Arabic to accommodate language barriers.
6. Start data reconstruction	Upon gathering interviews, the data was transcribed and analysed by both student and the principal supervisor. Reflexive practices were used to explore further literature and deeper reading of the concepts raised throughout which are aligned to a systematic combining approach
7. Focus on specific aspects of the setting	Most interviews were conducted away from the workplace (30 out of 33) over tea. Of those that were conducted on work premises, they were when the office was empty and after hours.
8. Disengage and physically leave the site	The researcher expressed his gratitude to the participants for participating in this study.
9. Follow up	As noted, follow up emails were sent to validate the transcript and interpretations of the results.

4.12 Data analysis and participant characteristics

Using an abductive systematic combining method, the data was scanned initially for themes emerging from the data with reference to the initial literature review and then the literature was re-scanned for additional conceptualization of the themes emerging from this data. This chapter will present the results of the themes with reference to the literature throughout.

This study combined in-depth interviews with a short questionnaire of participants and used triangulation of observer techniques. Specifically, the researcher worked closely with his principal supervisor to review the data and research process throughout the project. This involved multiple meetings to discuss the research process as well as independently coding the data before meeting to discuss the codes together to validate the findings. Through these techniques, the researcher aimed to match their interpretation of the findings with the reality of the participants. To further address reliability, the researcher worked closely with their supervisor to ensure intercoder agreement was gained. This process provided an external check on the coding process and allowed the researcher to feel more confident with their overall analysis.

To further validate these findings, the researcher sought participant feedback on their interpretation. This involved sending the transcripts and analysis back to participants to ensure that these accurately captured their intent. Researchers concur that this is one of the most useful strategies used in qualitative research to increase credibility (Lincoln & Guba, 1985). Participants were also invited to provide comments on the draft results chapter of this thesis to provide alternative language of “critical observations or interpretations” (Stake, 1995, p. 115). In this study, this resulted in most (29) participants responding they had been accurately captured, two participants added more detail to questions asked and the remaining two did not respond to the email. The data analysis also included correlations made with the literature review including the objectives and aims as set in the first chapter. These same correlations were also made in relation to the theoretical perspectives. The analysis is nevertheless primarily based on the themes generated from the participant responses contextualized in terms of project leadership as well as complex projects.

Limitations which can be noted from this study include time limitations, access limitations, and the generalizability as well as the reliability of the project leader responses. Interview time limits were apparent in terms of the difficulty in securing longer and fuller interviews with the project leaders, due to their often busy schedules. Access difficulties also included project leaders often being in the field. Further, when they could be reached in their offices, they were not always accessible to this author for interviews. Due to time and access limitations, this also limited the process of data collection from the leaders and the companies. As such, the answers drawn from the interviews may not necessarily reflect the whole project situation, including conditions in the field. Despite these limitations, however, the researcher was still able to collect a good amount of rich detailed interview data for analysis.

4.13 Chapter summary

This chapter presented the methodology, methods and data analysis undertaken for this research, including the philosophical foundation of the study, methods used and the justification for the context chosen for this study. . In this regard, this thesis set out to answer three research questions that consider how project managers lead in complex projects within the UAE; how structural complexities impact on the leadership styles used; and how leadership styles are impacted by gender, cultural background and maturity levels of managers.

The study applied a nominalist ontology, suggesting that individuals must only see the world as they view it and that the participants must be asked how they see reality in order to also allow other parties to view the world as they see it (Easterby-Smith, Thorpe, & Jackson, 2015). The epistemological view has been applied in this thesis, along with the abductive approach (Easterby-Smith, Thorpe, & Jackson, 2015).

This approach further supported to the exploratory, interpretivist paradigm, and abductive approaches used for this thesis, as it allowed the researcher to explore the experiences of project managers in the UAE. In this regard, the abductive approach was chosen for its ability to provide links between daily language and concepts, very much like inductive applications (Glinka & Hensel, 2018).

The interview method and the questionnaire were also chosen as appropriate data gathering tools for this thesis with the case study approach also chosen to forward the goals of this research. The case study method was chosen for its ability to secure exploratory applications for any event (Alvesson & Skoldberg, 2017). Moreover, the descriptive case methodology was also used for this research for its ability to provide opportunities to explore appropriate styles of leadership in the UAE (Alvesson & Skoldberg, 2017).

University ethical approval was gained prior to the research field work stage. In terms of sampling, the snowball method was deemed appropriate, yielding 33 respondents. Data saturation was also used to determine the completion of the data gathering process where data gathering was stopped when data from the respondents were consistent across numerous respondents. The interviews were semi-structured, which supported the exploratory, interpretivist approach outlined above, and lasted for approximately 45 to 60 minutes. While more interview time may have been helpful, the time period was more than adequate to obtain detailed data, including interviewee perspectives, from the participants. The busy nature of the interviewee work roles also did not generally allow for longer interview periods. Nvivo version 10.0 was used to store and synthesize data.

Participants selected came from the construction industry, with work experience in the same industry for at least 2 years. Nine key steps as set forth by Neumann were observed in this research. The abductive systematic combining method was used in the analysis of the data, with themes scanned during the initial data gathering process. In the process of choosing respondents 33 managers, representative of both genders were recruited. An average of 4 years work experience has been noted among the respondents with experience as project managers set to a total average of 12 years. Most of the chosen managers spoke English, but most of them were also of a different nationality. As such their perspectives come from a diverse history of experiences from their home countries. The sample chosen can be considered a good sample because the sample is diverse in terms of culture and gender, including experience of respondents.

The theoretical underpinnings of the methodology are dynamic, meaning they very much meet the objectives and goals of the research. These theories are well utilized in the course of the research especially with a diverse group of respondents who are likely to answer in different ways because of their diverse perspectives and experiences as leaders. On a similar vein, such dynamism can also be noted in the methodology approach chosen for this study, as in abduction and systematic combining The processes applied in relation to abduction and systematic combining cover an extensive and organized project even as the respondents may not exactly come from a standard or homogeneous crowd. Instead, they come from a diverse population culturally and in terms of experience.

As outlined earlier, the chosen research approach does have limitations, including the generalised validity of the data gathered and the associated reliability of the inferences drawn from the information. Therefore caution is needed when interpreting these findings beyond the context in which the data was collected. These findings do however provide insight into the primary elements of leadership in complex projects which have previously not been addressed by the literature. The methods selected and applied also match the author's understanding and comprehension of complexity theory in relation to investigating and understanding leadership processes and issues. The next chapter will present the findings of this research.

CHAPTER 5: RESULTS

5.1 Introduction

In this chapter, the results from the data collection—the interview—are presented. As Emere et al. (2018b) noted, presenting results of qualitative research takes a more narrative format as researchers do not make use of any statistical or mathematical indices. The presentation is mostly a description and narration of what the respondents said in the course of the interview. It is important to stress, however, that the presentation of results is also analytical in nature, as the researcher attempts to explain the meaning of the findings or responses given by the respondents. Where necessary, literature is used to support or back the explanation given to the findings to ensure that the results are not presented based on the subjective and discretional interpretation of the researcher. While this is the case, it is also important to emphasise that the results will be fully discussed by interpreting and evaluating the results in the context of larger body of literature in the discussion chapter (Chapter 6). In this chapter therefore, only some literature is used to briefly explain the findings where applicable.

Following the interview with the respondents, the data collected were classified under three main themes, guided by the research questions. The first section however presents the general information about respondents. Consequently, the chapter is divided into four main sections, (i) general information about respondents, (ii) project managers leading complex projects in the UAE, (iii) Impact of structural complexities on leadership style, and (iv) impact of gender, cultural background and maturity level of managers on leadership approach. Under each of the main sections, there are subsections based on emerging subthemes developed in the course of the interview.

5.2 General information about respondents

Some general information was collected about the respondents to help identify them and their general approach to project management. This was important to help get the context within which specific data collected from them in relation to the research questions could be discussed. This study focuses on the project managers and investigating the key points such as, who are involved, how many people are involved in the project, and how do departments or teams interact? As mentioned previously, there were 33 participants in this study, all of whom were project managers within the UAE. Two managers owned the company and did not report to anyone, however, the remaining 31 participants reported to at least one person, with eight participants reporting to two people, four participants reporting to three people and one participant reporting to eight people.

When enquiring into how managers report to their supervisors, it was found that the majority of participants used a combination of phone, face to face, email, paper written formats (e.g. reports) and/or Skype. The most common method used was face to face meetings, which was used by 90% of participants (29/33). Two participants did not report face to face due to the distance from their manager, but used regular Skype or phone conversations to report in. The final two participants did not report to anyone as they owned the company. The majority of these meetings were done in their own office environment (26/33) or virtually (4/33).

Upon enquiring into how often managers are required to report into their managers, nine managers were required to report in daily, nine were required to report in weekly, five managers reported as needed, three managers seldom reported to their manager, two reported in monthly, one reported in on alternative days, and one reported often but did not elaborate as to how frequently ‘often’ was. The remaining two participants did not report to a manager as they owned the company. When asked what they discussed at these meetings, most managers reported that they discussed strategy (15), focused on project status (8) or discussed staffing (8) or a combination of matters (6). In terms of strategy, the meetings revolved around "*discussing matters that will develop the business*" (male, 33 years, 5 years experience, UK), and "*Governance mechanisms; marketing and business development prospects and strategies,* and substantive service questions" (male, 43 years old, 17 years experience, USA).

Keeping the meetings on point was also reported as critical to managing in a complex environment, and for some managers discussing a variety of matters at once was key to being able to do this. For example, "*A typical meeting includes discussing the progress of the project, budgetary details, manpower, utilisation, material, consumption, deadlines, quality, standards, safety and security concerns, financial administration, advantages and disadvantages and future concerns*" (male, 33 years old, 10 years experience, Jordan). These managers however had weekly discussions with their managers.

For others who reported daily, meetings were kept to the project status and emergent issues, as well as strategic issues. For example, "*We discuss the status of each project we have and its due dates. We also discuss some important emails we receive daily, and sometimes we* send emails together" (male, 33 years old, 10 years experience, India) and we discuss "*ways to better develop our program based on feedback we receive*" (female, 34 years old, 8 years experience, USA). An important topic that was discussed regularly was staffing. This included discussing personal development, staffing matters and general HR matters. This seemed to be a regular occurrence across all participants, who felt discussing "*personnel matters such as staffing, and performance management issues are regular conversations I have with my* manager" (male, 43 years old, 17 years experience, USA).

In complex projects, with multiple reporting relationships, the dynamics and fast pace nature of these relationships often means managers are left overwhelmed with many responsibilities. When asked how often their directives change from management, the majority of managers (25) responded that their directives change too often, daily, very often, and weekly. This was mostly due to the fact the business needs changed regularly due to stakeholders, for example, one manager reported, "*The changes depend on the needs of the business and the status of the project at the time. For example, at the scoping stage, our directives change almost daily, however, when we are further down the track, like now, our* major directives don't change as much, but our minor directives do, so it's always changing, it's just how much it impacts us that is different" (male, 66 years old, 20 years experience, United Kingdom).

Seven managers reported that their directives did not change as much, and instead reported the changes as being seldom (1) rarely (4) or not very often (2). This was mostly because they felt they had clear directives and needs and discussed matters daily with their manager and as such, did not feel the need to change things. For example, "*our strategy and* marketing don't change regularly in our company. Once we know what we are doing, we complete the project as agreed" (male, 47 years old, 25 years experience, USA). Upon enquiring into a typical day for managers, most responded that the day is hectic/busy (19 /33). For example, for one participant, a typical day involves: "*I start at 8.30 and usually finish at about 10 pm - sometimes later. I prepare material, delivery products, work on social media and promotion, and organise with the team what has to be done*" (female, 63 years old, 42 years experience, United Kingdom).

For others, a typical day includes "Morning catch up with team members followed *by email responses. Most of the day is structured around conducting meetings with prospects*" (male, 34 years old, 6 years experience, Pakistan). Whereas, for others they accept their role changes constantly, "*No two days are alike. Usually very busy and there is a lot of communication both internally and externally*." (female, 36 years old, 2 years experience, UAE). Most managers responded that their days are mostly task focused, productive, tiring/laborious, yet exciting and filled with managing staff. For example, "I wake up early, do *a little workout. Then get ready to go to work. I get to work at around 8 am. While having coffee or tea, we all print out or make copies of what we need for work that day. Clients start to come in around 9, and we start interacting with them around 9:30. Then after lunch, which consists of eating and working, then another lot of clients come in to the office to attend to. After work finish at 16:30, I return to my desk to go over work that day, and prep for the next day*" (female, 34 years old, 8 years experience, USA).

In subsequent sections of this chapter, the trends associated with some of these practices on reporting to superiors and what was discussed during meetings will be analysed in context with various diversities inherent in the leaders, including gender, nationality, and maturity level.

5.3 Project managers leading complex projects in the UAE

Under the first research question, the researcher was concerned with knowing how the project managers lead when managing complex projects within the UAE. This means the overall approach to leadership by the project managers was investigated. To do this, a number of areas were assessed pertaining to the complex projects, project teams used, approaches to leadership, and performance in leadership. The subsections below present results for these areas that helped to understand how project managers lead in complex projects within the UAE.

5.3.1 Nature of project complexity

From the literature review, the researcher found that there are four major types of project complexities based on the concept of complex adaptive systems. These are structural, directional, technical, and temporal or environmental project complexities (Hassan, Bashir & Abbas, 2017). Each of these types of complexities could be found in projects, and once they are found, they influence the attitude, strategy and approach of project managers towards leadership (Hazy & Uhl-Bien, 2015). With this in mind, the researcher engaged the project managers to share their views on the extent to which they found each of these types of complexities in the projects they managed in the UAE and their overall attitude or perception towards them. First, the researcher asked about directional complexity, which Hasan et al. (2018) noted arises when the direction of the project is not well understood or agreed upon by the stakeholders. The project managers were asked if they had had experiences of directional complexities arising from lack of understanding and consensus between themselves, and project owners and other stakeholders about the direction that the projects should take. When asked, the main line of response that emerged was that such directional complexities were not very common. Explaining why directional complexities were not common, one respondent mentioned that "*most of the projects we are assigned to have clear blueprints and work breakdown structure, meaning that their directions are already determined*" (male, 43 years old, 17 years experience, USA).

The line of results pertaining to directional complexities gives an important indication of how complex projects are awarded for construction or execution in the UAE. Using a typical project lifecycle which includes project initiation, project planning, project execution, and project closure (Al-Emad & Rahman, 2018), the idea deduced from the results is that the main contracts for complex projects are awarded to start at the execution stage. This is because several respondents emphasised in their answers that their companies were never involved in the initiation and planning of the projects, which means they were not involved in the directional decisions and so directional complexities were not very likely. When the researcher asked the respondents to share their views about the advantages of starting at the execution stage, most of them said they were happy it helped in eliminating directional complexities and other disagreements related to the course of action of the project.

When asked about the disadvantages also, one respondent noted that, "*it sometimes makes it difficult to follow through the project plan and work breakdown structure since the contractor was not part of the planning and design*" (male, 33 years old, 5 years experience, UK). Another person said, "*it was more likely for companies to reject a lot of projects they felt they did not agree with their direction or plan since they were not part of the planning*" (male, 38 years old, 8 years experience, Jordan). The responses point to the issue of co-design as raised in the literature review. The use of co-design in creating projects is very important because when all stakeholders are involved, it helps to minimise directional complexities that arise from project managers not understanding the basis for selecting certain techniques to be executed in projects (Ghoddousi et al., 2015). Future researchers should therefore evaluate the impact of co-design in preventing or minimising directional risks and other forms of risks associated with cost and time in complex projects.

The second type of complexity that was examined was temporal complexity, which has been explained to represent uncertainty about the future constraints that could destabilise projects (Ghoddousi et al., 2015). When the respondents were asked about this, more than half of them were confident that future uncertainty could not cause serious problems for the project. To such people therefore, temporal complexity was not a type of complexity they were concerned about. For the people who did not see temporal complexity as a major issue, their main reason was summarised in the words of one of the respondents, who claimed that "*future uncertainties are part of the risks that every project manager must expect but as long as they are not caused by the contracting company, they cannot take full responsibility when the risks happen*" (female, 34 years old, 8 years experience, USA). The meaning of this is that while the project managers appreciated that existence and possibility of temporal complexity, they did not see themselves as the ones who would take full responsibility for the risks that resulted in the future uncertainty. As such, they were not intimidated by the possibility of such temporal or environment complexities. Writing on temporal complexity, Ameen and Jacob (2009, p. 16) explained that some of the most common causes of this include “unexpected legislative changes, rapid change in technology, and natural disasters”.

Based on the explanation by Ameen and Jacob (2009), it is understood that the risks that give rise to temporal complexities are not within the control of project managers or their companies and so they are not held responsible when they arise. Going into the future, it is important that the UAE will have documented policies and procedures for eventualities and unanticipated risks associated with complex project delivery. Such policies and procedures will go a long way to minimising the current ambiguity associated with temporal risks, where project managers feel they are not bounded by such eventualities and unanticipated risks because they are not captured in their contract documents.

The researcher wanted to be very specific with regards to whether project managers had had any previous experiences with future uncertainties that caused temporal complexities to projects they were handling in the UAE. When asked, only a few of the project managers said they had had such experiences. This shows that when working on complex projects in the UAE, there are high chances of completing without the forms of risks that lead to temporal complexities. There was, however, one respondent who had had an experience where legislative change led to a project that had already started to be cancelled. He explained that under those circumstances, “*our company was awarded full judgment debt because the situation was considered as a breach of contract on the part of government*” (male, 66 years, 20 years experience, United Kingdom). This shows that there are legislations or laws that protect companies from suffering the consequences of temporal complexity. Interestingly, no respondent mentioned fears of corruption or unethical practice in relation to the overall process of running complex projects, although some advised that it was possibly occurring in some areas. This infers that the UAE norms, institutional context and investment laws, as outlined above, reduce this risk.

The third type of complexity that the respondents were interviewed about was technical complexity. Ameen and Jacob (2009) defined technical complexity as relating to unknown, untried, or uncertain design characteristics or technical aspects of a project. When the researcher engaged the project managers about this form of uncertainty, the main line of responses showed that there are two main ways in which technical complexities may arise, and the perception of project managers about technical complexity depended on the type they were faced with. The first form of technical complexity was deduced from the answers from the project managers in regards to when there are several possible design solutions that can be selected from.

One of them stressed that "*technical complexity can arise when there are several design solutions that can be used to deliver a particular project*" (female, 63 years old, 42 years experience, United Kingdom). This particular type of technical complexity was noted to be identified before the project execution stage. Specifically, one respondent mentioned that, "*technical complexity is very common at the project planning stage when the project owner and other consultants are considering the solutions to use to solve particular problems*" (male, 39 years old, 8 years experience, Pakistan). There was almost a consensus among the respondents that they never experienced this type of technical complexity. The reason for this is that they were not part of the initiation and planning of the projects. This issue brings back the literature on co-design and co-creation where coordination between all project stakeholders is necessary to avoid technical complexities (Hannula & Irrmann, 2016).

The second type of technical complexity that the project managers were faced with was the type that arose while executing projects where they had to use complex design solutions that they were not very familiar with, such as when using new software or enterprise resource planning tools. One respondent indicated that "*when delivering certain components of projects, you encounter a situation where you need to implement a very unique technique, such as PACT CLOUD (NB: project management software), that you are either not familiar with, or that is new to you. This situation can give rise to technical complexity*" (male, 34 years old, 6 years experience, Pakistan). What was worth noting about this second type of technical complexity was the fact that majority of the respondents attested to facing it. That is, there had been many times that the project managers found themselves in situations where they had to resort to unfamiliar technical solutions. In fact, the response by one of the respondents was very emphatic, as she mentioned that "*yes, this is a very common situation, and this is what makes you appreciate that you are handling a complex project*" (female, 52 years old, 15 years experience, United Kingdom). Based on this certainty in response, the researcher engaged the respondents to know specifically how they handled or dealt with this form of technical complexity. When asked, two main interventions were found to be used. The first was for the project managers to internally improvise or use their ingenuity to solve the technical complexities. The second was for them to outsource the technical parts to external experts.

The last type of complexity that was investigated was structural complexity. Ameen and Jacob (2009) define structural complexity by the number of interconnected tasks and activities within a simple project, making it complicated and sometimes plagued with debatable issues. The interviews with the project managers showed that such structural complexities were the most common types faced when managing complex projects in the UAE. Clarifying the presence of structural complexities, one of the respondents maintained that "*the structural complexities are very common because almost all the projects we are assigned to deliver are made up of many different units and tasks that must all be connected into one bulky or mega project*" (male, 70 years old, 20 years experience, United Kingdom). With this confirmed, the researcher asked the project managers how the structural complexities affected their attitude towards the projects. Most of the project managers and the companies in general bid for the contracts, knowing they had such structural complexities to handle. For this reason, one of them elaborated that, "*the structural complexities are things we envision before taking up projects*" (female, 34 years old, 8 years experience, USA). Because they envision the structural complexities, another one of the project managers maintained that "*before we bid for projects, we consider all requirements to be sure we have the capacity to deliver them, regardless of the complexities they may have*" (male, 33 years old, 10 years experience, Jordan). This particular line of answer confirms that while structural complexities were the most common, the project managers approached them in a well-prepared manner as much as they could.

5.3.2 Composition of project teams

After examining the types of complexities faced by project managers in the UAE, the next step was to collect data on how project managers composed their project teams and the factors or conditions they considered when forming these teams. The main emphasis of the data collection under the subtheme of composition of project teams was to determine the extent of diversity within the team and how the project managers made provisions to cater for the diversities. For this reason, they were first asked if they had any calculated or special steps in ensuring that any project teams they formed had diversity within it. When asked this question, 31 project managers said they indeed took calculated steps in ensuring that their project teams were as diverse as possible. One of the managers indicated that "*certainly, we put in special efforts to ensure that there is diversity in the project team*" (male, 30 years old, 8 years experience, Saudi Arabia). The response from another respondent made it very clear why there was a near consensus about the need to intentionally plan for diversity within the project teams by stating "*the work environment in UAE is very unique and special, and so it is almost not* *possible to think about how to have a team of workers without diversity*" (male, 53 years old, 11 years experience, India).

The unique and special description refers to the multicultural setting in UAE, as well as the fact that there are several expatriates who come into the country to purposely look for jobs in construction related industries (Sekar et al., 2018). It also refers to the UAE having a well-developed and advanced educational system that has produced experts in several fields necessary for the structural complexities of various projects (Bartlett, Ker-Lindsay, Alexander, & Prelec, 2017). Knowing that there were different areas that the diversity of project teams could focus on, the researcher asked the project managers to name the specific forms of diversity that they prioritised when forming the project teams. The answers that were given regarding the diversities emphasised were many and different with each project manager having a unique form of diversity they focused on. On the whole, the most common type of diversity considered was based on expertise or ability of employees. Explaining this situation, one of the project managers indicated that "I form the teams to ensure that it comprises people *with expertise and ability in different aspects of the work to be delivered*" (female, 51 years old, 22 years experience, UK). This answer represented what most of the other respondents said about ability-based diversity. Hazy and Uhl-Bien (2015) note that when dealing with structural complexities, a project manager would like to have a well-diversified team including workers with competence to deliver in the different areas or units of work forming the complexity.

Apart from the ability-based diversity, nationality was also another aspect of diversity that most of the project managers prioritised. That is, most of the project managers formed their teams by ensuring that it had members of different nationalities. One of the respondents stated that, "*there are several factors that make it almost impossible to overlook nationality. One of these is the fact that as a foreign company working in UAE, we are required by law to employ* *local people*" (female, 28 years, 7 years experience, India). This particular respondent was from a foreign company that had won a contract to work on road construction in the UAE. Several others who were foreign project managers shared this response. The literature reviewed on legal provisions requiring foreign companies to employ locals was also reiterated in her response.

Another respondent also explained why selecting people based on nationality was important by indicating that "*expatriates remain an important group of workers for our company and others in the construction industry because they offer cheap labour that we cannot overlook*" (male, 33 years old, 10 years experience, Jordan). What this response seeks to explain is that the presence of expatriates, most of whom are semi-skilled with low educational backgrounds, affects the nationality based composition of project teams. The companies that were fully owned by UAE nationals also made use of expatriates and in some cases recruited foreign experts when technical complexities arose. An important trend that was synonymous with how all the project managers managed diversity among expatriates was that they paid them according to their expertise, skills, qualification and competence rather than nationality.

Another interesting aspect of diversity was gender. In general, 27 of the respondents placed premium on gender in diversifying their teams. However, it was found that more female project managers wanted to have gender diversity than male project managers (75% females and 60% males). Upon enquiring into the male project managers views about this, while they did not particularly want to exclude females in their teams, but if there were no females, it was not something that bothered them. In the same way, they did not have any special intention of having more males in their teams but they ended up with more males than females. This situation can be explained by the fact that there are far fewer females in the active construction sector than males (Al-Sabek, 2015). The reason can be traced to a national cultural practice where for very long time women were not encouraged to take up roles traditionally believed to be the reserve of men (Hamouda & Abu-Shaaban, 2015). When the female project managers were asked about why they emphasised more on gender diversity, they said they saw it as a way of motivating females to take up roles traditionally thought as male roles. One of the female project managers hinted that "*as a woman myself, I see that I have a responsibility of being role model to young girls. The best way I can do this is to give them practical experience in my project team*" (female, 34 years old, 8 years experience, USA).

5.3.3 Diversity management

After confirmation of the diversities in the project teams, it was necessary to collect data about how the project managers managed these diversities. Using open ended questions, the respondents were asked to describe their overall approach to diversity management. By diversity management, reference was made to the means by which the project managers ensured that members on their teams related well with each other without any form of diversity discrimination or lack of support for people of diverse backgrounds. Diversity management was also used in this context to refer to how the managers themselves ensured that they could harness the potential of people of different diversities to achieve the most out of them. Regarding the first instance of interpersonal relationships between team members of different diversities, the interview revealed that the main approach used by the project managers was to constitute legally binding organisational policies on diversities. Explaining this situation, one of the managers stated that "*we have an organisational policy on diversity that binds all workers*" (male, 30 years old, 5 years experience, United Kingdom). Another respondent clarified that "*our organisational policy on diversity is directly linked to our ethical code of conduct, requiring all employees to respect each other and show the highest levels of decorum*" (female, 63 years old, 42 years experience, UK).

This situation of using legally binding organisational policies to enforce diversity is explained in the literature, where according to Hazy and Uhl-Bien (2015), such action is a step in the right direction, given that there are labour laws on equality and anti-discrimination, which require that organisations and their entities (employees) respect the rights of all people regardless of their differences. By inference, when the project managers use policies to make respect for diversity mandatory for employees, they are only giving meaning to the larger labour laws of the UAE. The project managers also confirmed that their motivation for using legally binding organisational policies was because of the labour laws of the UAE. One of the respondents who was a female from outside UAE stated that the, "*UAE has important labour laws against discrimination, which I respect very highly. I see the use of organisational policies on diversity as very important in fulfilling the national labour laws because the policies are binding and imposing on all employees without compromise*" (female, 51 years old, 22 years experience, UK). This response suggests that the UAE anti-discrimination laws are having a positive impact on the diversity practices of UAE based firms (Iren & Tee, 2017), while on the whole, it can be asserted that the project managers had a strong belief that using organisational policies on diversity were the best way of ensuring that rules on diversity can be enforced and obeyed by all employees.

Another aspect of data collection regarding diversity management was with reference to how the project managers maximised the potential of people based on their diversities. About a third of the project managers noted that they managed diversities within the teams using affirmative action. The practice of affirmation generally refers to setting aside unique roles, responsibilities and tasks that are performed by preferred people based on their unique characteristics or diversities. The respondents gave different indications as to how they used affirmative action to manage diversity. One stressed that "*most of my diversities are based on abilities and so I reserve roles and tasks that I am confident a particular group of persons can* *deliver them best*" (male, 58 years old, 10 years experience, India). By this response, the understanding is that the affirmative action is right when there are technical or specific roles that must be delivered by people with some special qualities. Another one of the respondents explained that, "*I use affirmative action to ensure that minority groups will get fair chance of taking up frontline roles*" (female, 34 years old, 8 years experience, USA). This claim also explains that the affirmative action is effective in cases where equal opportunities must be lobbied for people who due to their minority composition may not have the chance of being in frontline roles. Shurrab and Hussain (2018) confirmed the ideas of the respondents, emphasising that minority groups may easily be intimidated and thus passive in project teams and so there is a need to reserve special roles for them.

Lastly, a section of the project managers noted that they managed diversity by applying various forms of theories, the commonest of them being Hofstede's cultural dimensions. As was identified in the literature review, Hofstede's cultural theory identifies a number of dimensions from which people of different nationals conduct themselves especially in an organisational context (Ghoddousi et al., 2015). The project managers showed that they sometimes use this cultural dimension as a guide to determine and understand the preferences of people based on their nationality. On why it was important to single out a theory that only focused on nationality diversity, one of the respondents noted that "*I believe it is very important to do that because the most dominant form of diversity that I have encountered while working in UAE is nationality diversity*" (male, 33 years old, 5 years experience, United Kingdom). Similarly, another respondent indicated that, "*even though theories like the one by Hofstede is on nationality, it can be seen to go beyond that to include aspects of ethnicity and gender*" (male, 43 years old, 17 years experience, United Kingdom). Emere et al. (2018a) support this last claim that the Hofstede cultural dimensions extend beyond nationality. That is, some dimensions of the theory are on masculinity and long-term orientation, which has a gender and ethnicity background. When the choice of the project managers to use Hofstede's cultural dimensions was examined further, the researcher found justification for their action since several studies specify how people should be managed in an organisational context based on the score of their countries on the Hofstede scale (Emere et al., 2018a; Ghoddousi et al., 2015). In the discussion chapter, there is comprehensive discussion and explanation of how affirmative action fits the context of the UAE given the country's cultural perception about female roles (Iren & Tee, 2017)

5.3.4 Risk management

The fact that complex projects come with high levels of risk has already been confirmed from the data collected so far. The researcher, therefore, perceived that risk management was an important aspect of leadership that could determine whether or not the project managers would succeed. This perception is supported by Adeleke et al. (2016b), who cautioned that succeeding with complex projects can be summarised into the extent to which project leaders can deal with risks. The basis for this assertion is that the entire idea of executing complex projects is seen as a risk, as there are types of complexities specifically linked with both inherent and external risks associated with projects (Kerdngern & Thanitbenjasith, 2017). During the interviews almost all participants confirmed that they appreciated the importance of risks to the success of complex project management. With this clarified, the researcher sought to measure the perception of project managers about risks and how they rated their levels of risk aversion. The reason this measure was undertaken was that Gamil and Abdul Rahman (2018) found that the level of risk aversion of leaders influences their overall attitude towards risk management, whether they will have high uncertainty avoidance index or low uncertainty avoidance index based on Hofstede's cultural dimensions.

Using subjective discretion of the respondents, they were made to state whether they would describe themselves as people with high risk aversion, medium risk aversion or low risk aversion. Using this qualitative metric, 22 respondents indicated that they would describe themselves as having high risk aversion while 8 said they are medium risk averse. Only 3 respondents described themselves as exhibiting low risk aversion. The general indication of this result is that most of the respondents saw themselves as managers who would not entertain practices that exposed them to risk (Hassan et al., 2017). Emere et al. (2018a) also described high risk aversion as being associated with being highly preventive rather than curative when dealing with issues that can pose risks. It was clear that the project managers did not prefer leadership practices that exposed them to uncertainty and outcomes that were not guaranteed. Confirming this, one of the project managers indicated that, "*while it is important to be confident when handling complex projects, one must also understand the effects of entertaining risks, as there are laws that require the contracting company to bear most costs associated with project risk*" (male, 47 years old, 8 years experience, Bangladesh). This particular claim by the project manager highlights an important reason for the decisions of the project managers to be of high risk aversion, knowing that the cost of risks could rest at their doorstep.

Finally, the researcher interacted with the project managers to know the extent to which their high risk aversion levels had been effective in reducing or eliminating risks in the complex projects they manage. To do this they were interviewed about their past experiences pertaining to facing serious risks while handling complex projects. Because this was a qualitative study, it was important to have a means of defining what serious risk was. To this end, the researcher used the description of projects that ended up with project owners terminating the project, suing the contracting company, or projects that they had had to face extra financial incursion. When interrogated, it emerged that only 2 of the project managers that had described themselves as high risk averse had faced any serious risk in their previous experiences with complex projects.

The same was also found among those with medium risk aversion. Even among respondents with low risk aversion, only 2 them said they had faced serious risks. In one specific instance, the project manager explained the circumstances of the risk which resulted in his company losing the contract as one where, "*the situation was not caused directly by our company but due to political reasons. For this reason, it was even our company that was awarded judgment debt*" (male, 39 years old, 8 years experience, Pakistan). These results show that the attitude towards risk management where the managers are preventive in nature is effective in minimising or eliminating risks.

5.3.5 Project performance

In the last set of data collected under this theme, the researcher investigated the effectiveness of the project leadership used by the project managers. To do this, a global benchmark in the form of Global Alliance for Project Performance Standards (GAPPS) was used to measure the project performance of the project managers for their current complex projects. It should be noted that the GAPPS has seven main performance criteria for determining project complexity and the performance of the project leaders or company in executing the project (Aitken & Crawford, 2007). The seven project performance criteria are project stability, project methods or approaches, legal social and environmental implications, financial impact on stakeholders, strategic importance, stakeholder cohesion, and number of project interfaces (Aitken & Crawford, 2007). Under each of these areas, self-reported results were collected to know the level of adherence of project managers to acceptable benchmarks. Using the metrics provided, it was found that all the project managers scored very highly on the GAPPS. This shows that each of them had the experience needed to use the right approaches to leadership to achieve desired outcomes from the complex projects that they were assigned to manage although it was noted they had different approaches to achieving their outcomes.

One other very important trend in the results was that the scores achieved by the respondents were not directly influenced by any differences between them, such as nationality, gender and age. What this shows is that some of these demographic characteristics do not directly impact on leadership outcomes. Rather, what is important is the experiences of the project managers and how they exhibited competence in handling their projects. This situation was confirmed strongly by the respondents. One of the female project managers underscored the fact that "*I have never felt intimidated by their gender or felt that I will not be able to deliver my mandated projects just because I am a woman*" (female, 34 years, 8 years experience, United Kingdom). Another respondent, who was the youngest among the project managers, noted "*age has never been a limitation for me. I believe there can be challenges in delivering complex projects but the challenges are not caused by the fact that I am a young leader*" (female, 28 years old, 7 years experience, India). A project manager from the UAE stated that "*we are in a global society and so you cannot blame companies and the government for wanting to award contracts to foreign companies. However, I am of the strong opinion that UAE has companies and experienced personnel who can deliver any form of project, regardless of its complexity*" (female, 34 years old, 2 years experience, UAE).

5.4 Impact of structural complexities on leadership style

Based on the second research question, data was collected on how structural complexities within projects impacted on the leadership style used by project managers. Based on emerging leadership styles from the literature review and previous data collected above, two main leadership styles were examined in this section: transformational leadership style and transactional leadership. The researcher attempted to understand the main characteristics within each of these leadership styles that made them appropriate choices in handling structural complexities within projects in the UAE.

5.4.1 Transformational leadership style

5.4.1.1 Popularity with leadership style

In the first line of data collected regarding transformational leadership style, the researcher examined the popularity of this leadership style among the project managers, as well as their understanding of it. In terms of popularity, the data collected revealed that transformational leadership was the most popular style among the project managers. Twenty-four (24) of the project managers interviewed attested to using transformational leadership more often than other types of leadership. In responding to such issues, one of the project managers underscored the fact that "*for most of the time, I am using leadership characteristics that can be described as transformational*" (male, 58 years old, 10 years experience, India). It is, however, important to mention that there were very few of the project managers who said they would describe themselves as being exclusively transformational leaders. What this shows is that as much as the leaders used transformational style, there were also moments that they used other forms of leadership.

Even when using other forms of leadership style, it was the transformational style they used most often. Clarifying the issue, one of the respondents indicated that "*I will not necessarily describe myself as a transformational leader as I use several other forms of leadership styles, as and when it becomes necessary*" (male, 41 years old, 17 years experience, USA). Based on the literature, the understanding that is drawn is that most of the project managers were situational leaders, who varied their leadership style based on specific situations at hand (Al-Emad & Rahman, 2018). This shows the use of contingent leadership approaches, which varied the leadership styles based on the appropriateness of a particular style for a given situation (Al-Emad & Rahman, 2018). For example, one indicated that "*the project teams we work with are very diverse and dynamic. The tasks we deliver are also diverse and dynamic.*

For this reason, I vary my leadership very often to suit every situation I am faced with. Compared to other leader styles however, I would say I use the transformational style most often" (female, 63 years old, 20 years experience, UK). Details on the contingency leadership approach is presented in the discussion chapter.

5.4.1.2 Features/characteristics that made it suitable for complex projects

As indicated above, the leaders preferred to vary their leadership styles to suit specific situations they were faced with. For this reason, the researcher asked about specific situations pertaining to the complex projects they handled that made the transformational leadership style suitable. In other words, they were to share their experience on the characteristics and features of transformational leadership that made it suitable for the complex projects they handled. On this subject, three major characteristics or features were deduced from the content analysis of their responses:

i. Intellectual stimulation
ii. Innovativeness, and
iii. Inspirational motivation

The project managers mentioned that working on complex projects requires a lot of intellectual competence, which is not easy to find in employees if no special stimulation is used. The stimulation comes in several forms but more than five of the respondents noted that they achieve it through the use of a learning culture at the workplace. Others also mentioned they use training and development to achieve the intellectual stimulation even though they did not make specific reference to having a learning culture. Narrowing the argument to the transformational leadership style, one of the respondents was emphatic about the fact that "*transformational leadership is very ideal when you want to stimulate your employees intellectually to accomplish objectives set on complex projects*" (female, 63 years old, 42 years experience, UK). The researcher asked about how such intellectual stimulation relates to transformational leadership style and another project manager clarified that "*you know in transformational leadership, you are seeking to build the next generation of leaders who must have the kind of competence, experiences and skills to keep the organisation running*" (male, 46 years old, 13 years experience, Saudi Arabia).

The respondent continued to mention that "*To do this, you need to use a constant learning regime to ensure the employees have the required cognitive abilities to be leaders*" (male, 46 years old, 13 years experience, Saudi Arabia). Shurrab and Hussain (2018) supported the place of transformational leadership in employee training and development, admitting that it is suitable in stimulating the cognitive competences of employees. In effect, the respondents used transformational leadership style because complex projects require complex and critical intellectual abilities that come through constant training, learning and development, which is associated with the transformational leadership style.

Another feature of transformational leadership that encouraged its use by the project managers was the fact that it promoted innovativeness. Jabeen and Isakovic (2018) stated that complex projects require a lot of innovative thinking to come up with solutions to simplifying the complexities within the tasks that make up the project. The project managers agreed with this assertion, as they explained that using transformational leadership helped them to devise a lot of innovative ideas from their employees regarding ways in which they can make otherwise complex tasks very simple. For example, one of the respondents emphasised the point that "*I use transformational leadership when I need to stimulate the creative skills of my employees*" (Female, 34 years old, 8 years experience, USA). In the words of another, "*transformational leadership is very good in ensuring innovativeness, which is something you cannot do without when handling complex projects*" (male, 39 years old, 14 years experience, United Kingdom).

Such innovativeness includes coming up with new simplified ideas and approaches to delivering day-to-day aspects of the complex project (Hannula & Irrmann, 2016).

Once the researcher had confirmed that respondents used transformational leadership to achieve innovativeness in complex projects, data were also collected on the specific ways in which the project managers used transformational leadership to get the innovativeness they required for their organisations. From the content analysis of their responses, one common theme that emerges is employee engagement. That is, transformational leadership allows greater employee engagement, which in turn guarantees employees have a lot of space of try their creative ideas and skills when working on complex tasks. It is important to emphasise that some respondents had opposing views about employee engagement and innovation in handling complex projects, claiming it could cause delays and changes to project scope. Meanwhile, one respondent was quick to clarify that "*because the context of projects is large, the innovativeness is not used at the individual level where each person comes up with what they think is suitable. Rather, the innovativeness is encouraged within the project teams*" (female, 51 years old, 22 years experience, USA).

Lastly, the project managers pointed out that their reason for opting for transformational leadership as part of complex project management was to ensure inspirational motivation among their employees. In their view, the transformational leadership style was very effective in motivating employees to give their very best when handling complex projects. Elgayar et al. (2016) confirmed that the complicated nature of complex projects mostly make them very difficult and herculean to deliver. As a result, employees require special forms of motivations that urge them to put up their best beyond what they would normally dedicate to projects. This claim was also confirmed by the project managers, one of who mentioned that "*complex projects are not like ordinary projects because they need a lot of motivation and encouragement for employees to stick with them*" (male, 53 years old, 11 years experience, India). Having confirmed the importance of motivation to handling complex projects, the researcher then engaged the respondents on the specific ways in which transformational leadership style was used as a tool or medium in inspiring motivation. A significant outcome deduced from the content analysis of responses showed that transformational leadership was effective in inspiring intrinsic motivation in employees.

5.4.1.3 Trends with the use of leadership style

The last aspect of data collected in relation to transformational leadership was to determine the influence of project manager background on their use of the leadership style. In this context, emphasis was put on three main areas as per the scope of the study: nationality/ethnicity, gender, and maturity level. What was very obvious from the data collected was that the transformational leadership style was relatively more common in female project managers (5/8, 63%) when compared to their male counterparts (11/25, 44%). In the discussion chapter, details of why this situation was found and what it means for project management are provided.

It was also found that foreign leaders from Western countries used the transformational leadership style more often than their Eastern counterparts, particularly those from UAE (80% Western vs 70% Eastern). One common reason the leaders from the East cited for not preferring the transformational leadership style was the fact that it was very risky when used among less experienced workforces. Details of the impact of cultural background and nationality on leadership style are in the next section and the discussion chapter. Lastly, the results showed that more mature project managers who had been in charge for ten years or more preferred to use the transformational leadership style than their counterparts with little experience in charge as project managers (90% $\geq$ 10 years experience vs. 65% < 10 years). A major reason is that transformational leadership style is more about imparting knowledge and serving as a role model to nurture the next generation of leaders (Asif, 2016). By inference, when leaders do not have a lot of experience, it becomes difficult for them to impart knowledge to others.

5.4.2 Transactional leadership style

5.4.2.1 Popularity with leadership style

The transactional style was not very common among the project managers (11/33 managers). In general, however, those who confirmed using it at one point in their leadership as project managers were 26. As with the transformational style, those using the transactional style confirmed that they did not use it as their only leadership style throughout their experience with complex projects. As and when it became necessary, they opted for other leadership styles. Most of the data on the transactional leadership style was collected from those who preferred it to the transformational style.

Two common themes from the answers that the respondents gave were performance-based and reward-based. Addressing the question, one of the project managers indicated that "*my understanding of the transactional leadership style is that it is used to help attain specific performance outcomes for the organisation*" (male, 53 years old, 11 years experience, India). Gharzeldeen and Beheiry (2015) alluded that the transactional leadership style is goal-oriented as leaders choose it when they have a specific focus on goals to achieve. Another respondent also claimed that "I know the transactional style is used to establish a transaction between the *leader and follower by assuring followers of specific rewards for attaining specific targets*" (male, 47 years old, 25 years experience, USA). This claim is also supported by Adeleke et al. (2016b), who asserted that transformational leaders use both reward and punishment to get their followers to conduct themselves in certain ways desirable to bring results for the organisation.

5.4.2.2 Features/characteristics that made it suitable for complex projects

Data were collected to know the main features or characteristics of the transactional leadership style that made it ideal for managing complex projects. The interviews revealed that there are two major features about the transactional leadership style that made it a preferable option for the project managers. Most of the project leaders resorted to the transactional style when the need for those two features arose. The two features are:

i. Motivation, and
ii. Specificity with working scope

Speaking on motivation, the respondents noted that when they used the transactional leadership style, it helped them to prioritise the motivation of employees. Examples of rewards used were financial bonuses and intrinsic ones, such as the use of Employee of the Month. Punishments also included fines for noncompliance to rules. Shurrab and Hussain (2018) also agreed with this line of thinking, emphasising that the main characteristic of the transactional leadership style is to use rewards and punishment to get employees to work hard towards achieving their set goals. This was the situation that encouraged the project managers to use transactional leadership style when delivering complex projects. The researcher engaged the project managers further to understand how motivation in particular was necessary in completing complex projects. The project managers explained that due to the complex nature of the projects, team members required extra motivation to stay committed to the projects. In the words of one of the project managers, "*it is very common for some employees to abandon the projects, due to how complex they are. This is why it is important to always motivate them to stay committed to the project*" (male, 33 years old, 5 years experience, United Kingdom).

The project managers outlined the fact that through the transactional leadership, they were able to get their employees and the project team to stick with specific instructions pertaining to the projects. This is because, unlike the transformational leadership style, the transactional leadership style is more focused on the leader and the direction the leader wants the project to take (Lasrado & Uzbeck, 2017). As a result, the leaders said they used the transactional leadership style when the need to ensure project specificity arose. The researcher queried the respondents further to understand why the issue of specificity with working scope was of particular importance when handling complex projects. On this, the project managers shared how the need to stick to project specification was important in avoiding most forms of risks that came with projects. According to the respondents, the complexity of projects meant the need to stick with project instructions was important, given that failure to do so could make the projects more complex. For example, one of them expressed the opinion that "*if care is not taken and you allow everyone to do what they want, the structure of the project could entirely change, making it even more complex to fix than it was to build initially*" (male, 33 years old, 5 years experience, United Kingdom).

5.4.2.3 Trends with preference for transactional leadership style

In the last set of data collected with regards to this theme, the researcher identified the trends associated with the preference for the transactional leadership style among the respondents. This data were to help understand how the decisions of managers to choose the transactional leadership style were informed by their nationality, gender and maturity level. From the data collected through the interviews, it was found that in terms of nationality, more of the project managers from the UAE were among those who preferred the transactional leadership style when compared to their counterparts from Western countries (70% vs 20%). In some of their answers, one project managers from the UAE mentioned that "*I prefer to use the transactional leadership style when handling complex projects because it gives me much room to exercise my authority and identity on how I want the project to proceed*" (female, 36 years old, 2 years experience, UAE). Emere et al. (2018b) explained that the transactional leadership style results in leaders getting the opportunity of using authoritative strategies to prescribe specific rules for their employees, who are rewarded for following these rules. In the discussion chapter, more details will be offered to explain why the transactional leadership style was less popular among Western leaders.

In terms of gender, the common line of response was that a greater percentage of the male project managers preferred and used the transactional leadership style as compared to the female managers. As mentioned earlier, most of those using the transactional leadership style combined them with other leadership styles. But the few that described themselves as exclusively using the transactional style, were all males. The line of responses given by the males showed that they preferred the transactional leadership style because it was more commanding and ensured a well-organised hierarchical and strict working environment. In the words of one of the males, "*the transactional leadership style helps you to feel in charge at the workplace because employees must follow specifically what you tell them*" (male, 46 years old, 13 years experience, Saudi Arabia). Lastly, the transactional leadership style was more dominant among leaders who had only been in charge of project management for few years. Indeed all those that described themselves as being strictly transactional leaders had been in charge for less than 10 years. Among other things, they explained in the words of one of the respondents that "*the transactional style helps me to establish my presence among my followers and helps them to have an identity of leadership they can commonly associate me with*" (male, 38 years old, 2 years experience, Pakistan).

In summary, the transformational style is relatively more common higher in female and expatriate male leaders, as well as experienced managers. Therefore, more training and confidence building activities would help to improve the use of transformational styles in the future. Those who do not currently use a transformational style would be assisted by the provision of more training in this area.

5.5 Impact of structural complexities, gender, cultural background and maturity level of the manager impact leadership styles used

This section presents the results of the last research question, which asked how structural complexities, gender, cultural background and maturity level of project managers impacted on their style and approach to leadership in the UAE.

5.5.1 Do the leadership approaches differ by gender?

This study collected data from both male and female leaders, although the bulk of the interviewees were male. This representation was not surprising and in fact, it is typical for managers within the UAE, where females are still under-represented in management roles particularly in small businesses, pseudo services and hospitality industries as well as government roles (Kemp, Madsen & El-Saidi, 2013). This was also highlighted by a report published by Tahseen Consulting (2015), which found Emirati female participation in work was significantly lower than the OECD average (38% less than their male counterparts). This is in direct opposition to the intent of the UAE government to be a leader in gender balance at work and life, according to a recent cabinet document (UAE Cabinet, 2015).

Based on the above information, a greater focus on female participation in the workforce is needed, consequently research exploring gender differences in styles is critical to add to the discussion at policy level. Faried et al. (2017) attributed the male-dominating nature of project management in UAE to historical cultural trends, where the UAE is known to have a high masculinity score from Hofstede's cultural dimensions. This implies that in the country, certain roles are seen as traditionally male roles, while others are seen as traditionally female roles. Crossing roles based on gender is not culturally supported. Working in the construction and other complex project sectors is seen as an example of male dominated roles (Asif, 2016).

Thus, while some attempts can be made to explore gender differences, the imbalance in the data needs to be taken into account when interpreting these findings.

Upon reviewing the structural complexities and interactions amongst project managers, some noticeable differences were found between the female and male project managers. That is, while participants reported similar structural complexities when it came to performing their role, there were some differences although this may be due to the unequal gender distribution. One example of a difference is that while men reported daily, weekly, seldom/rarely or as needed, women reported daily or as needed to their superiors. One possible reason for this could be cultural trust, where males are seen as superior than females in this culture and as such, could be left to perform more autonomously than females. However, future research is needed to explore this further as no prior studies have examined this in depth. What was interesting was that the content of these discussions were kept to strategy, growth, staffing and daily goal planning activities, which was similar to males in this study.

From the list given, it is clear that most of the things that were discussed during meetings focused very directly on the delivery of projects. The researcher engaged the projects managers to understand why this trend existed and why it was of particular importance to them. Most of the project managers emphasised that this was due to the importance of these issues on the success of the projects due to the complexities and cost involved. On complexities, one of them stressed that "*the project size is very huge and so it is wrong to think that as an individual project manager you can have all the ideas needed to execute it successfully. It is for this reason that it is always prudent to engage other stakeholders to bring their ideas, suggestions, views, and opinions on board*" (male, 53 years old, 11 years experience, India). Asif (2016) made similar observations by claiming that the success of complex projects is partly informed by three C's, which are collaboration, coordination, and cooperation with stakeholders. In the discussion chapter, how gender influences the ability to engage with stakeholders is thoroughly discussed.

The respondents also spoke about the issue of cost and how it affects their decisions to engage stakeholders more closely. A particular trend in the answers was that more females expressed concern about the need to engage their superiors and stakeholders more because of issues of cost. Based on their answers, two main ideas were developed when speaking about cost. The first was the fact that the projects were costly and so it was important to engage stakeholders closely to avoid any risks that could undermine the success of the project. Speaking to this effect, one of the project managers noted that "*in the UAE, there are laws requiring the contracting company to take full responsibility if aspects of the project fails. Because the projects are very costly, you would like to engage with the stakeholders more closely to avoid any risks that will mean incurring cost unto the company delivering the project*" (male, 43 years old, 17 years experience, USA). The second aspect of cost was the fact that constant financial injection into the project was necessary but needed closer engagement with stakeholders to achieve it. One of the female respondents noted that, "*in order to finish the projects on time, you need to ensure that funds will be released on time. Without closer engagement with stakeholders and project owners, you cannot convince them on the need to release funds when it is needed most*" (female, 51 years old, 22 years experience, UK).

When it came to managing staff, some differences did emerge. When asked how they managed their staff, the male interviewees focused on transactional type activities such as rewards, task allocation and communication strategies to get work completed. For example, "*I delegate tasks to them and let them know when the task is due and encourage them to contact me for any doubts*" (male, 63 years old, 12 years experience, India). However, females tended to answer more broadly about their need to communicate and set team objectives. For example, one female reported that "*My strategy is to focus on their individual strengths*" (female, 28 years old, 7 years experience, India) whereas another focused on distributing tasks but focusing on the reason why they are working "*I give objectives to each employee, so they are clear on their task and how it relates to the bigger picture. This way, they know they are contributing and I find this helps in motivating them to complete the task*" (female, 52 years old, 15 years experience, United Kingdom). While these differences may be attributed to cultural differences, they may also be attributed to gender differences in leadership styles. While the literature debates the role that gender plays on leadership styles, the results of this study suggest that females take more of a consultative, transformational approach to leading staff, over men, which is in line with previous work by Sheppard (2018).

Furthermore, when asked about how they manage diversity, female project managers tended to focus on the positives of diversity and responded with comments such as: "*Diversity is the spice of life and it's good to hear different perspectives. We learn from each other that way*" (female, 34 years old, 8 years experience, USA). Another project manager stressed that, "*Diversity is one of strong points. Should any misunderstandings arise, we ask the members out for a coffee meeting to get to know them better*" (female, 36 years old, 2 years experience, UAE). In the words of another one, "*I enjoy the diversity in my team very much*" (female, 30 years old, 2 years experience, Romania).

While male project managers acknowledged the positives, they also focused more on the practicalities of what diversity brings to the workplace. For example, one of the interviewees observed that, "*This is a big problem, because we are pressed to employ cheaper labour, which means we go to India, which means nationality based diversity*" (male, 41 years old, 17 years experience, United Kingdom). In another line of development, one other person said they ensured diversity "*By ensuring tasks and projects are aligned to the team members which will excel their strengths and capabilities*" (male, 58 years old, 10 years experience, India). Another way in which one project manager practically promoted diversity was through

"*Sense check directions. Being open to questions and criticism. Allow extra time to clarify understandings*" (male, 47 years old, 25 years experience, USA). Thus, differences in how managers lead and respond to diversity was also present in this study. However, future research is needed to tease out these differences in more depth given the unequal sample size in this study.

The line of results above shows that both male and female leaders were concerned with diversity with many females showing more enthusiasm in their speeches on diversity and the its relevance when working on complex projects. While detailed discussion will be presented in the next chapter, the researcher engaged the female project managers more closely to know why they saw diversity as such an important thing to achieve when setting project teams. Answering in relation to her gender, one of the project managers expressed the view that, "*as a woman I believe I need to give equal chance to everyone from every background to express themselves and be part of opportunities that will show what they are made of. That is why ensuring diversity in project teams is of great importance to me*" (female, 38 years old, 8 years experience, Jordan).

Building on the results where both male and female leaders appreciate diversity but females are more particular about it, the researcher examined the manager-employee relationship among male and female leaders to determine if there were any differences. The line of responses from the interviews did not show any significant difference in terms of manager-employee relationship based on gender. That is, both males and females gave indications of strong bonds and relationships between themselves as project managers and their team members. One male project manager mentioned that "*I have very good relationship with my team members, and I do not see any reason why this should not be the case because I am a man*" (male, 53 years old, 11 years experience, Jordan). One of the female project managers indicated that, "*I relate to my team members very well, just as I will do in my family setting*" (female, 30 years old, 2 years experience, Romania).

This section suggests that females are more likely to support and enhance diversity and more likely to use the transformational leadership style. Possible reasons for this are discussed Chapter 6.

5.5.2 Do leadership styles differ by cultural background?

This study explored differences in the leadership styles reported by managers that come from different cultural backgrounds or nationality. This study split the sample into two categories "Western" and "Eastern". This split was done for two reasons. First, according to Wang et al. (2018), Western and Eastern cultures have different values and therefore are expected to display different leadership styles, which may or may not be effective in the Middle East. Second, the division of Western and Eastern cultural managers is important as there is a strategic push from the UAE government to recruit from the West over the East, and therefore understanding the impact this may have on leadership strategies is of national interest. When splitting the sample, there were 16 managers from Western countries (United Kingdom, Romania and USA) and 17 managers from Eastern countries (UAE, India, Pakistan, Jordan, Saudi Arabia, Bangladesh).

Upon analysing the differences between the two groups, one main difference in structural complexities appeared. First, the majority of those who originate from the west (13/15) all reported to their manager weekly or as required, with only two managers reporting daily to their manager. Of those that originated from the East, eight managers reported daily or as needed, six managers reported weekly and the remaining two managers did not report in at all as they owned the company. This generally shows that the Western managers reported less often when compared to their Eastern counterparts who reported more often to their superiors, project owners, and other stakeholders who influenced their work. A detailed discussion on why this trend exists is provided in the discussion chapter. Meanwhile the researcher sought the views of the respondents themselves to determine if there was any special reason they would associate with their reporting habits.

When the respondents were asked about their habit towards reporting to superiors, it appeared the situation was influenced by cultural familiarity. What this means is that the project owners and other stakeholders were more familiar with the Eastern project managers, given that the project owners and stakeholders were Easterners themselves. Because of this familiarity the project owners found it easier requesting periodic briefing from the project managers. For example, one of the project managers who was from UAE stated that, "*I report very often to the project owners and supervisors because that is what they expect of me. We are all from the same country and so there is that familiarity*" (female, 36 years old, 2 years experience, UAE). Another respondent from USA indicated that "*well, I believe it is all about what was agreed in the contract concerning when to make progress report. Apart from what is stated in the contract, the project owners hardly ask me to report to them*" (male, 47 years old, 25 years experience, USA). These responses suggest that the attitude of the project managers towards reporting to their superiors was not something they had direct control over but were mostly what was required of them.

Another area of data collection under the subtheme of cultural background was in terms of management style of the project managers. Upon analysing the different management style used, differences began to appear. For example, managers from Western cultures tended to focus on relationship building, seeking input, communication and team work. These deductions were made from their answers to the interview question on their preferred management style. The terms 'relationship building', 'seeking input', 'communication', mentorship', and 'team work' were developed as codes from their interview transcript. For example, one of the Western leaders stated, "*In my management style, I try to be a mentor that the team can look up to and do what I do*" (male, 43 years old, 17 years experience, USA). Another one emphasised that "*my management style is about open communication at the workplace where everyone can express themselves and ideas*" (male, 33 years old, 5 years experience, United Kingdom). Another Western project manager also declared that, "*I prefer to seek inputs from all team members as a way of promoting strong innovative skills among them*" (female, 30 years old, 2 years experience, Romania). The characteristics of the preferred management style of the Western leaders are more aligned with the transformational leadership style (Kashwani & Nielsen, 2017). For example, Gamil and Abdul Rahman (2018) explained that transformational leaders are employee- focused, as they use open communication, employee engagement and mentorship to raise the next generation of leaders within the workforce.

On the other hand, project managers from Eastern cultures tended to focus on motivation, delegation and authoritarianism, with only one reporting empowerment as a strategy. Most of these Eastern managers made statements that either directly contained these keywords or described those keywords. For example, one of the project managers from the UAE stated that "*I prefer management style that shows that I am in charge and have authority to ensure that my instructions are followed according to specifications*" (female, 36years old, 2 years experience, UAE). Another Eastern project manager underscored the fact that "*I prefer to get the best out of my employees by giving out a lot of rewards and punishing where necessary*" (male, 47 years old, 8 years experience, Bangladesh). It is important to mention that from the literature, some of these descriptions of the management style of the leaders from Eastern cultures are directly linked to the transactional leadership style (Kerdngern & Thanitbenjasith, 2017). It can therefore be asserted that the project managers from Eastern cultures prefer the transactional leadership style while those from Western culture prefer the transformational leadership style. In the discussion chapter, the reasons behind these differences, as well as their relationship with and impact on complex projects will be discussed in detail.

One other area of data collection had to do with leadership challenges common to the project managers involved in the study. Interestingly, when asked about their biggest challenge at work, both groups spoke about the same challenges facing them. Specifically, all managers were challenged by cultural diversity in their teams, geography of teams, employee motivation and teamwork. These common issues were expressed by various project managers regardless of their cultural background. In terms of geographic challenges, the project managers had challenges with their social settlement from their countries of origin to the UAE. One of the foreign project managers stressed that "*the distance from my home country to UAE sometimes makes it difficult for me to adjust properly in terms of work-life balance*" (female, 30 years old, 2 years experience, Romania).

On the issue of employee motivation, most of the project managers expressed the concern that the cost of motivating employees both intrinsically and extrinsically was a major challenge for them as complex projects required investing so much in motivation to keep employees committed to the complexities of tasks assigned to them. Lastly, it was found that as much as the project managers appreciated the importance of diversity, they lamented that it not always easy managing workers from diverse backgrounds. One of them emphasised that "*there are several benefits of working with diversified teams but managing such groups can sometimes be challenging. Especially in terms of getting employees to understand each other and work harmoniously*" (female, 28 years, 7 years experience, India). These issues are further discussed in the next chapter.

When asked how they overcome these challenges, providing clear communication, and extrinsic rewards and focusing on tasks were strategies that were found to be used most commonly by managers regardless of their ethnic heritage. However, Western managers were more likely to try persuading staff to perform better, managers who originated from an Eastern culture preferred using punitive measures to stamp their authority at the workplace. This signifies that there may be differences in the approach to people management within the UAE. Combined, these findings reveal that there are slight differences between cultures and management practices used in the United Arab Emirates.

5.5.3 Do the leadership styles differ by experience levels?

A review of leadership process models has found that leadership impacts performance outcomes through cognitive, affective and behavioural factors. However limited research has looked at the impact that time has on leadership behaviour (Fischer, Dietz & Antonakis, 2016). Upon reviewing the experience and time in the job itself, this study found that experience did impact the leadership role presented. For example, those that had been a manager for less than five years tended to be more transactional in their approach, relying on delegation and task based assignments leadership strategies. One manager, who had been in their job for one year, bragged "*I delegate the most*" (male, 30 years old, 1 years experience in their job, UK) whereas another responded with, "*Delegation is probably the best operative direction that explains how I manage*" (male, 47 years, 1 years experience in their job, USA).

The researcher engaged the leaders to express their views on why they preferred the transactional leadership style in relation to their few years of experience with complex projects. The responses that were collected indicated that most of them saw the use of transactional leadership as the most appropriate style that could help them minimise risks in project execution. One of the respondents noted that "*I have not been in charge for very long and I do* *not want to start off my complex projects experience with any risks that will be too much to handle*" (female, 30 years, <1 years experience in their job, Romania). The same respondent continued that "*when I use transactional leadership style, my followers take instructions directly from me on what to do and so we avoid risks associated with trying inexperienced ideas*" (female, 30 years, <1 years experience in their job, Romania). The researcher further engaged the respondent if their experience was not a reason they should open up their leadership for innovation and suggestions from their followers. One respondent rejected this idea, claiming that "innovation is good but when you *are handling complex projects, you want to be highly careful especially when dealing with inexperienced workforce*" (female, 63 years old, 17 years experience, UK). In the discussion chapter, what other researchers have opined on this issue will be discussed further.

For those managers that had been in their role for between 5-10 years, the management strategies relied on were based on communication, teamwork and the transformational leadership style. For example, one of them expressed the thought that "I r*ely on communicating face to face, in emails and phone conversations with my team to provide instructions daily*" (male, 34 years old ,5 years experience in their present role, Saudi Arabia). Another of the respondents also indicated that, "*team work is critical for me to succeed at this organization, and motivate people to perform their jobs*" (male, 39 years old, 14 years experience but only 1 year experience in their present role, United Kingdom). Another respondent also emphasised that "*I will describe myself as a transformational leader and this has been a very effective way of managing my workforce*" (female, 63 years old, 17 years experience in their present role, UK). Hasan et al. (2018) described the transformational leadership style as having other characteristics that include employee engagement, employee development, learning culture, and mentorship. With this in mind, the researcher engaged the respondents to give their opinions and motivations for using the transformational leadership. The main line of response that was deduced was that these leaders with 5 to 10 years of experience saw themselves in a transition, where they needed to raise the next generation of leaders to take over most tasks that they were otherwise instructed to do.

Those with over 10 years' experience in the industry used a wider range of leadership strategies, such as communication, encouragement, empowerment, delegation, and involvement in decision making. What this shows is that these older leaders had the competence to combine both transformational and transactional leadership styles. For example, one of the respondents noted that "*I delegate tasks to them and let them know when the task is due and encourage them to contact me for any doubts*" (male, 53 years, 11 years experience in industry but 4 years experience in role, India). When asked about his leadership strategy, another one of the respondents mentioned that "*With a lot of empowerment*" (male, 70 years, 20 years experience, UK). The leadership style of another respondent was dominated with "*Seeking input, open door policy, encouraging ideas, dialogue*" (male, 43 years, 17 years experience, United Kingdom). There was also a respondent who led "*Openly and honestly, giving them as much autonomy as required, and being there to support, guide and coach when needed*" (female, 51 years, 22 years experience and 6 years experience in their role, UK).

One of the project managers who had been in charge for less than five years stated that "*manager-employee relations is very important to me. I use the transactional leadership style but my priority has always been the need to build a positive relationship between myself and my followers*" (female, 28 years, 7 years experience in industry but 5 years experience in role, India). This claim suggests that the leadership style used by a project manager should not be a hindrance for establishing a cordial working relationship with followers. In the discussion chapter, the influence of leadership style on manager-employee relationship will be further explored. Another respondent who had been in charge in their current for seven years noted that "*the need to relate well with my employees is always very important to me. Because of the* *complexity of the projects we are executing, I need to be very close to my team members to ensure they understand the things I instruct them to do*" (male, 35 years, 14 years experience in industry, UK). This was also a leader who used the transactional leadership style, stressing that while transactional leaders may be generally commanding in nature, they see the need to relate well with employees as a requirement in ensuring that employees can understand instructions and ask for clarity where they do not understand anything (Sekar et al., 2018). Another older leader who has been using transformational leadership and been in charge for more than 10 years confirmed the importance of manager-employee relationship, adding that "*it is the ultimate requirement to be an inspiration to your followers*" (male, 58 years, 10 years experience in industry, from India).

5.6 Chapter summary

This chapter presented the results of the three research questions. The results confirm that the UAE has project managers from different cultural backgrounds, gender and experience levels. The differences that exist among the leaders affect their views and approaches to managing complex projects. Most of the project managers, however, saw structural complexity as the commonest form of complexity that they were faced with. They were also likely to do away with directional complexity and were more likely to co-design for complex projects. As for temporal complexity, they were not too concerned about it as they believed that future risks were part of work. In terms of technical complexity, they acknowledged the presence of design issues and complexities while carrying out projects. These respondents believed that the best way to deal with technically complex projects would be to improvise and sometimes to outsource these. Several of the project managers also appreciated the need for working with diverse groups and indicated that they intentionally ensured that there was diversity within the teams they set. They also acknowledge the fact that diversity management calls for risk management and project performance. The fact that corruption and unethical conduct were not supported by the UAE institutional context helped to promote transparency and reduce risks associated with such costs and other legalities. The second research question examined how structural complexities impact the leadership style used by the project managers. The results showed two main forms of leadership styles, transformational and transactional styles. These two leadership styles are common among the 33 respondents but the most dominant one was the transformational style.

The leaders note that in transformational style, there is more intellectual stimulation, innovativeness, and inspirational motivation. Transformational leadership is considered more risky for western leaders. Transactional leadership according to the respondents, is not popular in the UAE among the interviewed leaders. For those who used it or preferred it, they believed that it is a leadership style which helped them prioritize more the benefits of employees. The Emirati leaders preferred transactional leadership because it gave them more flexibility as leaders. Male managers also preferred transactional leadership and is also common among the more experienced leaders.

A number of factors were found to influence the selection of leadership style, including cultural background, gender and experience level. These three variables were also found to affect the overall approach to leadership used by the project managers, whether they were transactional or transformational leaders. Crossing gender boundaries is not culturally supported in the UAE, being a male-dominated culture. Female leaders are often asked to report more than their male counterparts. Women leaders were also more consultative and male leaders were also more practical in how they viewed diversity. Women leaders welcomed diversity. Both male and female leaders acknowledged that diversity in complex projects can present a major challenge in the working conditions and in the successful management of the project. But most of them welcomed diversity. In terms of maturity level, more years of experience for leaders often meant that they were more likely to delegate, to communicate, and to work as a team. The next chapter comprehensively discusses the findings presented in this chapter.

CHAPTER 6: DISCUSSION

6.1 Introduction

The discussion in this chapter situates the current study within the body of literature by comparing and contrasting the results from this study with previous studies. Kashwani and Nielsen (2017) asserted that such discussions are necessary in qualitative studies to ensure the results are not solely based on the subjective interpretation and discretional analysis of the researcher. Collecting qualitative data does not make use of any universally accepted metrics of interpretation such as mean, percentages, correlation and other statistical methods. This chapter is broken down into sections based on the same themes from the methodology and results chapters (Chapter 4 and 5). This is done to ensure the entire study is well organised, and that each section of the discussion can be linked with specific lines of results.

6.2 How project managers lead in complex projects within the UAE

In the first theme, the researcher collected data to examine how project managers lead complex projects within the UAE. This was a very broad theme that focused on several areas of leadership pertaining to complex projects. Data were collected in relation to five main subthemes. Below, the results relating to the five subthemes are discussed in relation to the relevant literature.

6.2.1 Description of complex project

Data was collected to solicit views of respondents, all of who were project managers on how they described a project as complex one and how they measured the extent of complexity of a particular project. Four main types of project complexities were examined, structural complexities, directional complexities, technical complexities, and temporal or environmental complexities. The interview reviewed that the most common means of determining project complexity by the project managers was through the use of structural complexities. Structural complexities refer to the number of elements, parts or units within a project, and the interrelations between these elements, parts and units (Al-Sabek, 2015). From the literature, several other researchers agree with this result especially when they compare structural complexities with other types of complexities including technical, directional and environmental. For example, Shurrab and Hussain (2018) asserted that of the numerous forms of complexities, the one that is directly linked with the scope and composition of the project is structural complexities. What this infers is that at the very moment that projects are assigned, project managers are able to determine whether they are complex or not, based on the number of elements or units they are tasked to deliver, as well as the interrelation between these parts (Al-Sabek, 2015).

With some of the other forms of complexities, however, the project has to start before the project managers can be aware if any such types of complexities exist. For example, directional complexities were found to arise when there was a lack of agreement between stakeholders on the direction that the project should take. Typical projects must reach a certain stage before any such forms of disagreements can arise, implying that most project managers will not realise such directional complexities until the latter stages of the project (Al Dari et al., 2018). This situation explains why directional complexities were not selected by most respondents of this study, given that the project managers might not have encountered this form of complexity at the time of collecting data. In relation to technical complexity, Kashwani and Nielsen (2017) explained that project managers are expected to resolve such complexities before the beginning of their project. The reason for this is that the technical complexity generally arises when there are several design solutions that project managers can choose from in implementing a particular project (Bartlett et al., 2017).

Until the project managers and related stakeholders settle on the design solution to use, it may never be possible for them to begin the project. The fact that technical complexities are resolved ahead of the project implementation is potentially a major reason it was not selected as the main form of complexity that the project managers in this study use in determining or describing complex projects. Finally, temporal or environmental complexity was explained as the complexity that results from high level of uncertainty about the future constraints that could possibly destabilise the project (Kerdngern & Thanitbenjasith, 2017). Al-Emad, and Rahman (2017) noted that temporal complexity is therefore futuristic in nature and largely based on whether project managers are long-term oriented or short-term oriented. Temporal complexity was not selected by the respondents as they did not have any grounds to envision any such futuristic uncertainty with their projects. Moreover, Bhatija, Nithin and Dawood (2017) asserted that if project managers manage their projects and stakeholders effectively, there are high chances they can mitigate the risk of temporal complexity. This could be a reason why most of the respondents did not determine complex projects with temporal complexity.

6.2.2 Nature of project team

The second subtheme the researcher used to examine how project managers lead complex projects within the UAE was to assess the nature of the project teams they used or how they constituted their project teams. This subtheme was set because the project team influences leadership in several ways. For example, the project team determines the type of organisational structure and organisational culture to use (Kashwani & Nielsen, 2017). Adeleke et al. (2016b) noted that the project team influences and determines the level of diversity that the organisation will have. What is more, the level of competence, skill and experience of the project team also affects how project managers lead in complex projects. It was for this reason that this subtheme was considered very important. A major determination that was made from the data was whether or not the project managers intentionally formed their project teams to include diversity. It emerged that almost all the project managers interviewed had made calculated attempts to ensure diversity when forming their project teams. This means that if there was diversity in the project teams with which the project managers delivered complex projects, the diversity existed on purpose rather than by coincidence.

This idea of intentionally establishing diverse project teams has been strongly supported in the literature. Emere et al. (2018a) noted that embracing diversity in projects helps project managers satisfy the needs of as many stakeholders as possible. The UAE has become a very diversified and multicultural society where most projects that are undertaken serve the needs and purposes of many diverse groups of people. Embracing diversity in project teams is thus justifiable in ensuring that several interests groups can be represented to serve the interests of the people they represent (Al-Emad & Rahman, 2018). Jabeen and Isakovic (2018) also analysed project diversity from a legal perspective and observed that the UAE now has several legislations and regulations that prevent discrimination of all forms in the labour sector. This situation somewhat put project managers in a position where the need to embrace diversity was no longer optional but compulsory.

Expanding this point further, it can be claimed that even if the project managers did not intend to diversify their project teams, they were still going to end up with diverse project teams because they were legally bound to accept people of all backgrounds, regardless of their differences. Presently, there are laws in UAE requiring that a quota of the workforce for major projects be Emiratis (Kerr et al., 2013). Another situation that may force managers to deal with diversity is that their work requires high and low skill sets, which need to be derived from a diverse group of workers. What is more, it is common practice to use expatriates who are unskilled to benefit from cheap labour (Kerr et al., 2013). Regardless of the legal aspects of diversity, what the results support most is that not all managers are forced into diversity, as a good number of them accept it on their own. Even those with no choice but to accept it due to legal provisions, stated that accepting and better managing diversity had potential benefits.

Another aspect of the data collected on diversity in the project teams pertained to the type of diversity they prioritised. Diversity exists in many different forms, including nationality/culture, gender, age, ability/speciality, religion, and sexual orientation. Among these, the top two that the project managers focused on were ability and nationality. That is, they formed their project teams in such a way that they had a balanced representation of experts with diverse abilities and specialities. They also formed their project teams to include people of different cultures and nationalities. The need for the project managers to prioritize diverse abilities and speciality has been supported by Kashwani and Nielsen (2017) who explained that complex projects determined by structural complexities are likely to have many different units and elements that require experts from many different fields of operation. When working on such complex projects therefore, the project managers cannot help but to recruit experts whose skills will be needed to complete the project. Shurrab and Hussain (2018) further indicated that as complex projects are made up of different elements, all of which may have their own autonomy, interrelationships and interdependence in complex projects is a very common phenomenon.

Furthermore, while using people from different nationalities allowed firms to access relatively cheap labour, it is important to stress that the relative cost of labour was not necessarily because of where workers come from, but rather because it has become a norm that people from certain parts of the world travel to UAE as unskilled labour to work in the construction industry. For such people, the laws do not require managers to pay them as high as skilled and experienced professionals (Kerr et al., 2013).

There is always the need to have project teams that are structured in the form of cross functional teams to include experts from all interrelated fields of work. On the issue of nationality and cultural diversity, Gharzeldeen and Beheiry (2015) stressed that the increasing multicultural nature of UAE makes this form of diversity unavoidable for project managers. Bhatija et al. (2017) also found that most modern projects that are taking place in the UAE are international contracts awarded to foreign companies. When the foreign companies come on site, they cannot recruit all their labourers externally from their countries of origin, making it necessary to recruit locally. Locally also, there are many expatriates who come to UAE purposely with the goal of looking for work in the oil and gas and construction sectors. Any typical recruitment that an international company does is therefore likely to have people from different national and cultural backgrounds, necessitating the concept of diversity in project teams. This situation therefore explains the results where most project managers confirmed that nationality or cultural diversity is one of the main types of diversity they consider when forming their project teams.

6.2.3 Approaches to managing diversity

Once the researcher collected data on the availability of diversity, it was necessary to further critique the approaches used by the project managers in managing diversity. Managing diversity was found to be the most important subtheme that could help in understanding how project managers lead in complex projects. The interview showed that the project managers use a multiplicity of approaches in managing diversity within their project teams. Among them, the three most dominant ones were legally imposed organisational policies, affirmative action, and Hofstede cultural dimension guide (Lasrado & Uzbeck, 2017). The selection and use of these approaches to managing diversity within project teams has been interpreted and discussed in many previous studies. Writing on the use of legally imposed organisational policies, Kashwani and Nielsen (2017) found them to be a very effective means of managing diversity, as it ensures that the policies become binding to all people within the organisation, including managers and employees alike. Al-Emad and Rahman (2017) also stressed that using legally imposed organisational policies makes leadership easier in managing diversity because the self-rewarding and punitive nature of such policies ensures automatic enforcement. Relating this claim to the data collected, it can be asserted that most of the project managers prefer the use of organisational policies in managing diversity, knowing that the policies come with rewards and punishments, which serve as reinforcement for achieving policy enforcement.

On the other hand, Shurrab and Hussain (2018) lamented that using only documented policies in managing diversity could have several shortfalls including the fact that they may not cater for changing dynamics with the diverse teams. The idea this claim creates is that when policies about how members of the organisation should relate with people of different backgrounds, it does not cater for new events that may happen, that could necessitate new means of relating. With this in mind, most of the respondents in the study stated that they either use organisational policies in addition to other approaches to managing diversity or they frequently revise the policies to meet changing dynamics within and outside the working environment. The other approach to managing diversity that the project managers commonly use is affirmative action. Using affirmative action as a diversity management strategy entails making specific reservations of roles, positions and tasks within the organisation for people based on their diversity (El-Sayegh & Mansour, 2015). Arditi et al. (2017) found that the main reason for using affirmative action as an approach to diversity management is to offer equal opportunity for people from diverse backgrounds. A number of respondents noted that using affirmative action is the surest way they can ensure that all people get fair opportunity and chance, given that the diversities that some people present put them in minority groups where they receive little attention.

Using the Hofstede cultural dimension guide was the other common approach to managing diversity. The respondents explained that the Hofstede dimensions do not present only one modality to managing diversity but gives them multiplicity of guidelines, based on the individual differences of members within the organisation or project team. This claim is strongly supported in the literature, as the Hofstede's model identifies six main perspectives of identifying individual differences based on nationality (Al Dari et al., 2018). The six dimensions are power distance index, individualism vs collectivism, masculinity vs femininity, uncertainty avoidance index, long term orientation vs short term normative orientation, and indulgence vs restraint (Kashwani & Nielsen, 2017). While this was a major advantage for the respondents, Athapaththu and Karunasena (2018) criticised the use of Hofstede's cultural dimension as being limited only national diversities. While this is a fact, the results of the study also confirmed that national diversity was one of the main forms of diversities that the project managers ensured. This line of results justifies why most of the project managers still preferred to use Hofstede's cultural dimensions even though they could use it for only diversities based on nationality. What is more, even for the project managers that confirmed using the Hofstede cultural dimensions, they also indicated that they used other approaches to managing diversity when the dimensions could not fully cater to their needs.

6.2.4 Attitude towards risk management

Another important area in leadership, as far as complex projects are concerned is risk management. Adeleke et al. (2016b) stated that there are inherent risks with every project and that the more complex the project, the more likely it is that the risks will be high. It was based on this that the researcher included leadership approach to risk management as one of the main subthemes to understand how project managers lead in complex projects in the UAE. Because this was a qualitative study, most of the emphasis of the data collected was on the personality and behaviour of the respondents. For this reason, data were collected to understand how the risk aversion nature of the project managers impacted on their overall attitude towards risk management. To this end, respondents were asked to describe their levels of risk aversion, whether they would describe themselves as high, medium or low risk averse people when handling complex projects. From the data collected, it was found that majority of the project managers described themselves as exhibiting high risk aversion when handling complex projects. What this explains is that most of the project managers preferred to avoid risk as much as they could and would not want to take risks when they were uncertain about the outcome of such risks (Sekar et al., 2018).

The result of having high risk aversion attitude when handling complex projects has been reviewed several times in the literature. For example, El-Sayegh and Mansour (2015) found that project managers that are high risk averse prefer to use risk management strategies that eliminate the possibility of risk entirely. This claim was strongly reflective of the data collected, as the results showed that only few of the project managers had experiences of being confronted with serious risks that complicated the complexity of projects they were handling. Athapaththu and Karunasena (2018) also mentioned that when project managers have high risk aversion attitude, they do not prefer to try out new things when they cannot be sure of their outcomes. This claim about not trying out new things can be linked with the type of complexity identified as temporal complexity. Arditi et al. (2017, p. 136) noted that "temporal complexity results in projects where there is a high level of uncertainty regarding future constraints and could destabilise the project completely". Relating this to the high risk aversion attitude of the respondents, one can claim that it affects their decision in accepting to work on particular projects. That is, if they perceive the temporal complexity of the projects to be high, they are likely to turn down offers to work on such projects. This claim could not be independently substantiated during the data collection process, as most of the respondents noted they had previously handled projects they considered as having high risks.

The fact that the project managers are high risk averse but have previously handled high risk projects show that their attitude towards risk only arises when dealing with projects in their hands and not when deciding to take up new projects. By inference, the project managers are likely to take high risk projects but manage these in a way that the risks or their effects are minimised. Several justifications have been given on why it is important or necessary for project managers to be high risk averse when handling complex projects. Particularly in the case of the UAE, Faried et al. (2017) found that most complex projects that are awarded in the UAE come with risk insurance policies that are borne by the contractors in charge rather than the project owners. This means that the firms handling the projects bear any costs for any such risks relating to destruction, delays and non-performance. Also in the UAE, companies could face legal sanctions including prosecution for breach of contract if they fail to deliver according to terms of projects (Mehran, 2016). These are all factors and determinations that could make the project managers justifiable for being high risk averse when handling complex projects in the UAE. Because the cost of complex projects is high it would cost the project managers a lot if they entertain risks and hence the justification for being high risk averse (Kerdngern & Thanitbenjasith, 2017).

6.2.5 GAPPS Score

Many studies support the notion and idea that performance outcome is the best measure of effective leadership (Popat et al., 2018). That is, when the way a leader leads in a project is effective, this is expected to be translated to the overall performance or outcome of the project they deliver. With this thought in mind, the researcher collected data to measure leadership effectiveness by asking the project managers to rate their projects against the Global Alliance for Project Performance Standards (GAPPS). There were seven main performance criteria used in the GAPPS based on global benchmarks. The GAPPS has also been used in determining the level of project complexity, whereby projects that have more of the inherent criteria for assessment are said to have higher complexity. From the scores, it was found that most of the project managers who were interviewed had very high score in all seven areas that were assessed. The areas included project stability, project methods or approaches, legal, social and environmental implications, financial impact on stakeholders, strategic importance, stakeholder cohesion, and number of project interfaces (Aitken, 2007). By inference, the project managers were highly skilled and competent in delivering the complex projects assigned to them in the UAE.

The importance of exhibiting high level of competence in delivering complex projects is well embraced in the literature (Lasrado & Uzbeck, 2017). The various procurement processes that go into selecting contractors for projects in the UAE can be praised as credible and effective, as the results have shown that it leads to high standards of project outcomes based on global benchmarks. Discussing the impact of high performing project outcomes, Bhatija et al. (2017) asserted that this has many economic implications for the country that hosts the projects. The evidence to back this claim is the economic benefits of most of the complex projects that the project managers involved in the study delivered. Some of the projects included airports, bridges, roads, and IT infrastructure. When these projects are successfully delivered and utilised, they yield several economic benefits from their usage by members of the public. Hasan et al. (2018) also posited that countries that have good records of delivering high standards of mega projects have higher probability of attracting foreign investors, as such investors can be confident that their projects will be successfully delivered, regardless of how complex they may be. Relating back to the results of the study, the length of time in which the project managers had served as managers is an important determinant for their success in delivering projects based on their leadership.

6.3 How structural complexities impact the leadership style used

The second theme was how structural complexities impact on the leadership styles selected and used by the project managers in UAE. This theme was limited to structural complexities because this type of complexity was very common within the types of projects that the managers handle. The types of leadership styles that were examined were generalised into two forms, transformational and transactional. These two styles were selected because (i) there is sufficient research on them to aid in the analysis and discussion of findings (El-Sayegh & Mansour, 2015), and (ii) most academic studies describe them as contrasting forms of leadership style, where leaders that do not use one form of them may be using the other (Al Dari et al., 2018). That is, most project leaders have been found to exhibit either transformational leadership characteristics or transactional ones. Qualitative data was therefore collected to determine the extent to which the level of complexities that the project managers identified in their projects affected their selection of either transformational leadership style or transactional leadership style. The main factors relating to the structural complexities that caused the leaders to choose either transformational leadership style or transactional leadership are discussed below.

6.3.1 Transformational leadership style

Transformational leadership has been described as one in which the leaders inspire, encourage and motivate their followers to be innovative in creating change desirable for achieving the growth expected by the organisation to succeed (Kerdngern & Thanitbenjasith, 2017). Transformational leadership is thus a higher collaborative and cooperative form of leadership where the leaders instil in their followers the type of values, skills, characteristics, competencies and energies needed to bring about the transformation required for the growth of the organisation (Lasrado & Uzbeck, 2017). From the interview, transformational leadership was found to be the commonest leadership style used by majority of the project managers.

There are a number of characteristics and elements commonly associated with transformational leadership style. As far as this theme about how structural complexities impact the leadership style used is concerned, the emphasis of data collection was not directly on the elements and characteristics that the transformational leadership style produced. Rather, it was on the reason, features, factors, and elements within the structural complexities of projects that justified the use of transformational leadership style by the project managers. The top three elements identified in the interviews related to structural complexities were intellectual stimulation, innovativeness and inspirational motivation.

The project managers explained that one of their main motivations for selecting transformational leadership to deal with the structural complexities of their projects was the fact that such projects required intellectual stimulation to deliver them. By intellectual stimulation, reference is made to the fact that those who were put in charge of the structurally complex projects needed high levels of cognitive competence to enable them to understand the technical requirements associated with the numerous elements and units within the projects, as well as the interrelations between the elements and units. This reasoning by the respondents that using transformational leadership could help them achieve or render the right intellectual stimulation to their followers is strongly supported in the literature. Al-Emad and Rahman, (2017) explained that intellectual stimulation ensures that leaders fully engage their followers and stimulate their intellectual abilities and competencies. Jabeen and Isakovic (2018) stressed that one of the main ways by which transformational leaders undertake intellectual stimulation is by inculcating a learning culture that ensures that followers are constantly challenged to learn and apply their cognition in coming up with something new. When working on projects in the UAE, leaders have many advantages in creating a learning culture to stimulate the intellectual competencies of followers, including taking opportunities for employee higher educational benefits, which is a legal mandate for most employees in several fields of work (Faried et al., 2017).

Secondly, the results of the study showed that most project managers that selected transformational leadership did so because the complex projects required innovativeness in executing them. This is a position well supported in the literature. Elgayar et al. (2016) elucidated that because of the complex nature of interrelationships that comes with the units and elements of structural complexities, it takes high levels of innovativeness in breaking the complex structures into manageable pieces of tasks that can easily be executed. Meanwhile, Arditi et al. (2017) endorsed the notion that transformational leadership is the best style in promoting innovation among followers. The reason for this is that transformational leaders have a motive of raising the next generation of leaders to take over from them (El-Sayegh & Mansour, 2015). They also have a motive of training their followers to become competent and independent in delivering the tasks needed for the organisation to achieve its goals (Adeleke et al., 2017). In order to do this, however, the transformational leaders must use the strategy of employee engagement, which is founded on innovativeness (Popat et al., 2018).

From the interview with the project managers, it was agreed that using transformational leadership made it possible for the leaders to engage their followers more by allowing them to bring their innovation to bear on how best they could solve complexities within the projects. Since the project teams were formed with competency-based diversities, promoting innovation always yielded a collective pool of ideas to simplify the structural complexities.

Lastly, the project managers pointed to the fact that they select and use transformational leadership style for structural complexities mainly because they want to ensure inspirational motivation for their followers. Leaders are said to inspire motivation in their followers when they encourage and stimulate them to deliver excellence or to stay committed to their roles (Kerdngern & Thanitbenjasith, 2017). From the interview, the project managers noted that complex projects are generally very difficult to deliver. Because of this, they felt that they needed to motivate their followers in very unique and inspiring ways to encourage their continuing commitment to the projects. From both academic and theoretical literature, there is evidence to support this reasoning by the project managers that motivation could urge their followers to stick with the most difficult tasks within the structural complexities of projects they handled. For example, using Maslow's hierarchy of needs, Mehran (2016) found that there are always human needs that must be met. Because meeting these needs does not come easily, providing people with them serves as motivation and gives them justification to continue a course of action that merited those needs. Applying this to the context of complex projects and transformational leadership, it can be inferred that when the leaders, as part of their leadership style motivate their followers by providing them with tangible rewards, it becomes motivation for the followers to repeat actions that earned them the rewards.

6.3.2 Transactional leadership style

Transactional leadership is often tagged as the opposite of transformational leadership (Al-Emad & Rahman, 2018). In this style of leadership, leaders are said to rely on the use of compliance among their followers by promoting both rewards and punishment (Al Dari et al., 2018). Based on the contingency leadership theory, Bhatija et al. (2017) noted that no leadership style can be judged as appropriate or inappropriate without putting it in a specific context of a goal to be achieved. With this idea in mind, the researcher collected data from the respondents to learn the specific aspects of the complex projects they handled that made them choose the transactional leadership style. It is important to emphasise, however, that whereas a sizeable number of the project managers interviewed used the transactional leadership style in addressing structural complexities in their projects, they formed the minority group when compared to those using transformational leadership. Regardless of the fact that those using the transactional leadership style formed a minority, they still had many reasons for selecting this leadership style. From the analysis of their interview responses, two major factors influenced their selection and use of transactional leadership style, motivation and specificity.

The issue of motivation was repeated both for the transformational leadership style and the transactional leadership style. What this generally indicates is that both leadership styles are effective in promoting motivation of employees when delivering projects with structural complexities. Using evidence from the literature, there are a number of sources that have related transactional leadership style to effectiveness in motivating followers. Athapaththu and Karunasena (2018) posited that because transactional leaders focus on compliance by using both rewards and punishments, the rewards and punishments serve as reinforcement or catalysts for motivating followers. Explaining further, Adeleke et al. (2016a) indicated that the ultimate goal for motivating employees is to ensure that they stay committed to their roles and deliver above their usual intent. When employees know they will have a positive reinforcement in the form of reward, they become motivated to work above their usual intent to attract such rewards. In the same way, when employees know they will attract negative reinforcement in the form of punishment or sanctions for not meeting their goals, they will deliver above their intent to avoid the punishment (El-Sayegh & Mansour, 2015). Relative to structural complexities, the respondents confirmed that the presence of rewards and punishment always served as guiding principles in ensuring that employees stuck with tasks and stayed committed to them, regardless of the difficulty and complexities associated with them.

The other factor that made the leaders choose transactional leadership style in response to structural complexities is the need to ensure specificity and compliance with project specifications. In views of the respondents, the higher the levels of structural complexities, the greater the need for workers to deliver according to specifications. Gharzeldeen and Beheiry (2015) agreed with this assertion, noting that sticking with project specifications was necessary in avoiding most forms of risks associated with time, scope and cost. Meanwhile, a careful assessment of the reason of specificity and compliance that made the project managers choose transactional leadership style over transformational leadership can be said to defeat the idea or need to encourage innovativeness. Al-Emad, and Rahman, (2017) supported this claim by stressing that transactional leaders prefer strict compliance, which mostly defeats the notion of employee engagement necessary to yield innovativeness. Reflecting back on the composition of the project teams that most project managers working on complex projects in the UAE used, it would be noted that the teams were mostly made up of expatriates and other foreign nationals that the project managers had not previously worked with. This situation somewhat justifies the intention of the project managers not to give much room to trials by employees when the risk of such trials backfiring was going to be very costly for them. The transactional leadership style can therefore be said to be highly suitable for the risk aversion attitude that most of the project managers indicated to have. In general, the composition of teams is based on what can work for each project as set by the managers. Some managers have chosen to develop diverse teams of different cultures, nationalities, and genders, while other managers chose to develop their teams using homogeneous standards. These project managers admit that there are some adjustments made on the composition of teams based on how well they work with other members of the team in the course of the project.

6.4 How gender, cultural background and maturity level of the manager impacted leadership approach used

The last aspect of data collected was to determine how gender, cultural background and maturity levels of the project managers impacted the leadership approach they used. Earlier, it was found that two main leadership styles were used, transformational and transactional leadership styles. Arditi et al. (2017) stated that whereas each leadership style has specific characteristics that are common with it, they are mostly practically implemented with influences from certain internal and external variables. Gender, cultural background of leaders, and maturity levels of leaders were the three variables investigated for their influence on how various leaders used their leadership styles in managing complex projects in UAE.

6.4.1 Gender

While there are some areas where males and females showed similar leadership characteristics, there were some differences indicating a difference in general leadership shown across genders, which is in line with previous research. For example, Eagly, Johannesen-Schmidt and van Engen (2003) conducted a meta-analysis of 45 leadership studies and found that females were more transformational in nature than male leaders and engaged in more contingent reward behaviours than male leaders. In contrast, male managers were found to engage in more transactional leadership behaviours such as active and passive management by exception (Eagly et al., 2003). These findings are similar to those in the current study and highlight that gender may play a role in successful leadership strategy.

One possible explanation for this was given by Ridgeway (2001), who argued that gender roles provide a form of personal identity for individuals. This means that the social roles that we take on in our private life can spill over to our workplaces (Ridgeway, 2001), possibly because we have internalized this gender role (Cross & Madson 1997; Gabriel & Gardner, 1999). Within the UAE, the gender roles that exist are clearly prescribed and it is likely that the need to communicate and build relationships with staff is much more aligned with female social roles than males in this culture.

Furthermore, previous research by AlDhaheri, Jabeen, Hussain & Abu-Rahma, (2010) found that for female engineering students, emotional stability and social and familial background were important factors determining the career outcomes in female Emirati students in the private sector of UAE. Whereas for business students, the perceived job-skills mismatch was the major reason for not choosing the private sector for female Emirati students (AlDhaheri et al., 2010).

As far as leadership is concerned, the data collected from the interviews showed that there are many differences in the approaches used by male and female leaders in managing complex projects. This was regardless of the fact that in some areas that were studied, similarities were found in terms of how gender impacted on the approach to leadership. The first line of data concerned the relationship between female and male project managers and their superiors. The results from the interview showed that the female project managers had more encounters with their superiors by way of reporting to them on daily basis, while the males generally reported to their superiors less frequently. This situation can be explained in the context of the UAE in a number of ways. Bhatija et al. (2017) asserted that there are cultural and ethical factors within the UAE that require women to be submissive, respectful, and decorous even when they are in leadership positions. This translates directly into how females in leadership positions relate with other superiors above them on the organisational hierarchy. Gamil and Abdul Rahman (2018) meanwhile clarified that the closer link between female leaders, such as the project managers, and their superiors is not related to competence and thus not an indication of incompetence or lack of independence in decision making. This finding has important implications for policy as it suggests gender specific policy is needed to attract females to leadership roles in the private sector.

Gender was also found to impact on the choice of leadership style of the project managers. That is, whereas most male leaders preferred the use of transactional leadership style, the females were more comfortable with the transformational leadership style. Females explained that their main motive was to focus on the individual strengths of their employees and followers and seek the transformation of those strengths. The males on the other hand generalised expectations of the project team members and rewarded those that met set goals. Elgayar et al. (2016) explain why male project managers will be more comfortable with the transactional leadership style, stressing that it is more authoritative, hierarchical and leader-focused. Meanwhile, such characteristics have been linked more to males than females, as males, particularly those in the Arabic culture have natural instincts of being commanding and authoritative even in ordinary leadership positions such as the home (Ofori, 2018). On the other hand, Athapaththu and Karunasena (2018) found that women are more people-oriented, while seeking the collective achievements of the groups they lead rather than satisfying their personal egos about stamping their authority over their followers. One important trend in the data collected was that the preference of males for transactional leadership and females for transformational leadership style cut across different nationalities of the project managers. This is an indication that the characteristics about males and females used to explain the trend of results are not only limited to those with Arabic background.

From the last aspect of data collection relating to the impact of gender on leadership approach, the researcher investigated the perception of the male and female leaders about diversity. From the results obtained through the interviews, it emerged that the females embraced diversity more than their male counterparts. This line of result is well supported in the literature, as Arditi et al. (2017) noted that most males prefer leadership styles that are result-oriented in nature. This claim has already been supported by the results about males preferring transactional leadership to transformational leadership. However, directly related to the preference for result-oriented leadership style, is the fact that the male leaders prefer using teams that can be considered as tried and tested to produce the results desired by the organisation rather than opting to form or change their teams to have an emphasis on diversity. This situation was indeed supported by the data collected as most male project managers who were asked about diversity stressed that they prefer teams that will guarantee results rather than merely having a diversified team. Another trend of discussion that emerges, however, is that if there can be evidence for the male project managers that having diversified teams can guarantee results, they would not turn that option down merely because such teams have diversity within them.

The management of complex projects incorporating diversity and leadership issues as noted in the results starts with the acknowledgement of diversity as an inevitable part of the workplace, including the UAE workplace. The authors have also noted how project managers have learned to manage leadership and diversity issues by using transformative skills in leadership. Some leaders have also chosen to use transactional leadership in order to manage these issues. In the UAE, where the culture is predominantly Asian, project leaders acknowledge that for them to efficiently manage complex projects, they need to also make room for the diverse culture of the employees with participant managers doing what they can to ensure that the diverse set of employees can work as a team.

6.4.2 Cultural background

The impact of cultural background of the leaders on their overall approach to leadership was also investigated in this study. Two main categories of culture were considered, Western and Eastern cultures. The Western culture was represented by project managers from Western countries, particularly the United States and United Kingdom. The Eastern culture was represented by those from Eastern countries, particularly the UAE and India. The first line of results showed that the Western project managers exhibited more independence in their leadership, as they did not liaise and report as often to their superiors as the Eastern project managers did. This line of result may be interpreted in a number of ways and given different meanings. First, Bhatija et al. (2017) asserted that most companies contracted from Western countries to deliver complex projects in the UAE have several years of experience and reputation in their fields of operation. Such experience often justifies why they win bids to travel long distances to the UAE to deliver projects. The level of experience and expertise of these Western companies and their project managers thus make them more independent in exhibiting competence in executing the projects. In direct relation to this, most of the Western companies hire local contractors who serve as project managers for aspects of the complex projects. As such, it is more common that the Easterners will report to the Westerners.

Adeleke et al. (2016a) looked that the possible reason for frequent consultation from a purely cultural perspective by making use of Hofstede's cultural dimensions. That is, according to the Hofstede cultural dimensions, people from the West have low power distance index, while those from the East have high power distance index. The impact of the low power distance index is that supervisors and employees are almost considered as equals, creating a situation where employees prefer to take most decisions relating to work more independently (Al-Sabek, 2015). This can be said to be the situation that the project managers from Western cultures exhibit by scarcely reporting to their superiors or consulting with them when put in charge of aspects of complex projects. The reverse situation is high power distance index, which means employees embrace hierarchies better and have high acceptance and respect for authority (Adeleke et al., 2017). By inference, those from Eastern cultures report more frequently to their superiors because of the high power distance index, whereby they see their superiors as people they are unequal with and thus the need to respect their authority and have their inputs as final say in executing complex projects. The implication of this for UAE is that both government and private companies must realise that local employees rely on their leaders for directions and so there is a need for such leaders to have and exhibit the highest levels of competence in the roles assigned to them.

The researcher also collected data relating to the types of leadership style and overall approaches to leadership preferred by the project managers based on their cultural backgrounds. The results confirmed that those from Western cultures were more comfortable with the transformational leadership style, which had characteristics of relationship building, communication, mentorship and teamwork (Lasrado & Uzbeck, 2017). The project managers from the Eastern cultures meanwhile preferred a task orientated leadership style that clarified performance expectations and outlined specific procedures to be followed. The approach preferred by the Eastern project managers is more aligned with the characteristics of transactional leadership style since it is more about results and rewards (Al-Sabek, 2015). This line of results can also be explained from a purely cultural perspective using the Hofstede cultural dimensions. That is, the cultural dimension of indulgence and restraint has mostly been used to describe the attitude of leaders towards leadership, based on whether they are indulging or restraining. Hasan et al. (2018) found that Western cultures are more indulging, which means they believe in free gratification of people's personal drives. Eastern cultures on the other hand are more restraining, meaning they emphasise suppressing the gratification of people and prefer to regulate their conduct. When translated to leadership style, the transactional style is seen as more imposing with specific orders and roles, which are rewarded when well executed (Popat et al., 2018).

Attribution theories of leadership for international management suggest that isomorphic attributions (the extent to which a person from one culture makes accurate attributions about the behaviour of a person from another culture) are essential for leadership success (Baron, Rouleau, Gregoire & Baron, 2018). This may explain why similar cultured managers are more successful than those from a diverse background with their followers (Cushner & Brislin, 1996). Yet more recent evidence suggests that experience may also derail individuals as they rely on techniques from the past that are no longer current (Lombardo & Eichinger, 2000). Consequently, the evidence pointing to the need for flexibility in leadership styles suggests that there is a need to adopt multiple roles in order to appropriately respond to the contextual demands the manager is placed in. As far as the Eastern leaders and for that matter the UAE context is concerned, it can be seen that the variations in leadership styles relates more to the contingency leadership approach because apart from reporting more frequently to superiors, they also exhibit several aspects of the attribution theory, which promotes flexibility.

The first dimension of the attribution theory is the integration of performance goals and human relationships which have been defined as the ability to pursue productivity while building cohesion and employee morale (self assertive and directive vs collaborative and supportive). The second dimension is the integration of the natural tensions between the tendencies to be directed toward the external context or towards inhouse procedures, which is the ability to introduce and adapt to innovations while promoting stability within the organisation (long term strategy vs short-term execution). Balanced behavioural repertoires are more effective and have greater impact according to studies by Denison et al. (1995), and Kaiser and Overield (2010, 2011). Cognitive skills (Yukl & Mahsud, 2010) and emotional intelligence play a role (Zaccaro et al., 1991). In addition, previous research has found that employees judged managers who are more complex in their social judgements through attributing causes to others behaviour, as being more transformational and better rated (Sun & Anderson, 2011).

Research by Cerimagic (2008) exploring the influence of culture on project practices found that Western expatriates feel unable to adopt to foreign cultures and need additional cross cultural training to reduce expatriate failure. According to Fu et al. (2004) managers cannot be expected to have cultural sensitivity when working internationally, and cultural sensitivity, leadership styles and the desired management style should be part of their onboarding activities.

In addition, a 2009 study by the Centre for Creative Leadership in the US, found that relationship building behaviour was the primary cause of project success and failure, and as such, exploring these behaviours is critical.

Previous research has noted the clear divide between managers and subordinates in an Arab environment, where age and family background play a significant role in the outcomes of a manager. Cerimagic (2008) found that Australian project managers found it challenging to balance the management requirements of diverse staff members where Middle Eastern staff desire more micro-management and Eastern staff members prefer a more hands off approach to management. This result and those of the present study highlight that cultural differences are critical when considering development leadership training and support for staff as well as when leading complex projects (Cerimagic, 2008).

6.4.3 Maturity level

In the last area of data collection, the researcher focused on the impact of maturity level of project managers on their leadership style and overall approach to leadership. With this particular line of data, the main emphasis was to know how the maturity level of project managers informed their decisions about which leadership style to use—transformational or transactional. The findings pointed out that managers who were less experienced and had only been in charge of project management for less than five years preferred the use of transactional leadership, while older ones with more than five years experience preferred to use transformational leadership. Adeleke et al. (2016b) explained that less experienced leaders are more likely to be comfortable with transactional leadership because it is less risky and does not involve a lot of experimentation with things where the leaders cannot be certain of the outcomes.

The risks associated with complex projects are very high and so the less experienced leaders believe they have to be more cautious in their leadership, hence the use of transactional leadership, which is more instructive than experimental (Adeleke et al. 2017). On the other hand, the more experienced leaders have seen a lot with previous complex projects and so are able to better predict outcomes of specific actions that they take. With this advantage, the more experienced leaders see the need to raise the next generation of leaders to take after them.

6.4.4 Chapter Summary

Numerous themes were generated from the interviews of the respondents. These themes were divided into five subthemes. The first subtheme refers to the description of the complex project. The respondents indicated that their most common way of determining or identifying project complexity is through the structural complexity of the projects. This includes the different elements required to complete the structure, from the materials to the personnel, including the stakeholders to be affected by the project. Structural complexity is used over other approaches because it is an approach which potentially covers other elements of the project, including the logistics to the personnel and the technical plans of such project.

Some studies in the literature review also support this approach (Antunez & Gonzales, 2015; Lichtenstein & Plowman, 2009). Other respondents however note that the full range of project complexities can only be identified when the projects actually start. This includes directional complexities (He, et al., 2017). This type of complexity sometimes does not manifest during the data collection process because it usually emerges when the project is underway and the different individuals involved in the project have different ideas on how the project should proceed. As a result, directional complexity did not manifest as a common choice for the respondents as these respondents felt that directional complexity did not help them anticipate and resolve the needs of the project ahead of time. Technical complexities are usually resolved ahead of the project. As such, it was also not identified as a complexity for most of the respondents because these technical complexities were already managed before the project started and were already settled by the parties to the project. As a result, directional complexity did not manifest as a common choice for the respondents. Technical complexities are usually resolved ahead of the project. As such, it was also not identified as a complexity for most of the respondents.

Another subtheme noted from the respondents is the nature of the project team. Most of the respondents indicated that the choice of project was via the organizational culture and structure This meant that the organizational culture and the structure of the organization usually directed the project to be undertaken. These respondents also highlight that project teams often dictate on the extent of diversity in the organization as the teams which were more accepting of diverse members were likely to also have more diverse members (gender, culture, age). These respondents also highlight that project teams often dictate on the extent of diversity in the organization. Moreover, the skill level and experience of the team also impacts on the manner by which project managers lead complicated projects. The respondents also acknowledged how diversity exists in projects in numerous ways including nationality, gender, age, religion, and sexual orientation of personnel. The respondents highlight that their manner of choosing workers for complex projects is to consider the skill and managerial experience of respondents not just in the UAE but in other countries or their home countries (for foreign managers). The respondents also note that the nationality of the workers is also a major consideration for them in terms of managing diversity in the workplace, especially as UAE has many foreign workers who usually do the hard labour, including lower skilled and/or construction work.

Another subtheme derived from the respondent answers is on the approaches to managing diversity. The respondents noted that to manage diversity, they used organizational policies, affirmative action, and Hofstede's cultural dimension guide. These responses are also supported by the literature review, especially in terms of the use of the set organizational policies. Hofstede's cultural guide was also mentioned by the respondents as a tool providing numerous ways by which cultural and other forms of diversity are managed best by project managers in complex projects. This is an interesting response on a number of levels. First, it show that the pervasiveness of the Hofestede literature has stretched beyond the academic and into the practitioner paradigm. Second, the results of this research found that while the Hofestede literature was supported in some areas, its limitations in relation to differing individual responses within similar cultural groups was also apparent.

Attitudes towards risk management was also another subtheme generated from the responses. This theme acknowledges that in every project, there are risks and for the more complex the project, the higher the risks. The majority of the project managers interviewed therefore had a higher tendency for aversion of risks in relation to more complex projects. The respondents also mentioned that they did their best to ensure that risks in complex projects are minimized (anticipating risks, early management of risks, and minimizing risks by averting and avoiding the same). In the UAE, the managers are also aware that they may face legal sanctions for their failure to complete projects and for their failure to manage issues and risks faced in the projects they have been contracted to complete. A foreign based firm therefore needs to ensure that they can comply and work within UAE's legal code, customs and requirements, which may be quite different to other countries or regions in which they have operated.

In terms of GAPPS, most of the project managers scored high in the seven areas they were assessed. This included project stability, project methods, legal, social, and environmental implications, financial impact, strategic value, stakeholder cohesion, and project interfaces. In this context, the project managers can be considered very much skilled in ensuring results related to complex projects in the UAE. This can be noted in the delivery of numerous major projects in the UAE by different project managers. These projects include roads, bridges, airports, as well as IT applications.

In relation to the theme on how structural complexities affect the leadership style applied, most of the respondents answered from transactional and transformational leadership perspectives. Transformational referred to how leaders inspired their workers towards helping advance organizational, in this case, project success. These project leaders were very much aware that they needed to be supportive of their workers, helping to guide them towards innovation which can ultimately spell success for complicated projects. Transactional leadership helped support the ends of transformational leadership by providing a system or means for rewards and punishment within the organization and within the course of the implementation of the project. The two approaches were therefore not mutually exclusive but rather, often worked in tandem.

In terms of gender, maturity level, and culture and their impact on the leadership approach used, the respondents indicated that both transformational and transactional leadership styles have had an impact on gender, maturity level and culture within organizations involved in complex projects. In terms of gender, women were more likely to be required to regularly report to their superiors while male project leaders were less likely to be required to do the same. This seems to be related with the patriarchal nature and Muslim influence in UAE society. Also, women project leaders favoured more the transformational type of leadership while men the transactional type of leadership. The female respondents as compared to their male counterparts were also more likely to welcome or accept more diversity in the workplace. Male project managers also favoured the use of tried and tested combinations in their work or projects instead of considering the use or application of diversity in their projects.

In relation to cultural diversity, both Western and Eastern project leaders were present in the pool of respondents. The western project managers tended to operate more independently than their Eastern counterparts and were also more likely to apply a transformational leadership style. This may in part be attributed to the fact that these western leaders, as compared to the Eastern leaders had gained more complex project management experience and tended to occupy higher level executive roles. Eastern project leaders in contrast tended to favour transactional task-oriented leadership where the expectations of the project are defined and drawn for them. The Eastern leaders and workers however were also usually delegated to lower positions to western project managers and were often reporting to the Western managers. It further suggests the importance of being flexible in terms of the leadership styles applied in managing complex projects in the UAE.

Similarly, the participants' outlined how a manager's level of experience or 'Maturity level', was another major factor in determining the leadership style for project leaders. In this regard, respondents with five years or less in terms of experience seemed to favour the transactional style while those with more years of experience usually applied a more transformational style. Therefore, while the responses of the participants highlighted the importance of considering cultural issues when managing major and complex projects, the transformational/transactional leadership dichotomy was not just linked to cultural backgrounds but also to the role and relative management level of the project managers concerned. Transactional leadership may further be seen as a less risky form of leadership while transformational leadership is favoured by the more experienced leaders because of its potential to provide more innovative options for their complex projects.

The above analysis and discussion further supports the premise that the methodology and its applications were effective in terms of fulfilling or serving the objectives of this research, as they provided original and innovative contributions including information and supporting literature that was analysed for this study. Such methodology also notes efficient data gathering methods and technique which served well the aims of this study. Therefore, despite the limitations outlined above, these methods helped provide valid as well as efficient techniques for the author to apply in generating holistic perspectives and analyses on the topic.

CHAPTER 7: SUMMARY AND CONCLUSIONS

This chapter summarises the major findings from the study and provides conclusions in relation to the three main research questions. It also presents recommendations for practice in complex project management leadership in the specific context of the UAE. The recommendations identify best practices that emerge from the study and relate them to the context of the UAE as a country with a rapidly growing construction industry. The final section discusses the limitations of the study and makes and suggestions for future research.

7.1 Summary of major findings

The study was set with the aim of exploring the impact that structural project complexities has on leadership style with sub-aim of exploring how gender, cultural background of the manager and the experience level of the manager impacts this relationship. Based on this aim, three main research questions were set. In the first research question, the researcher asked how project managers lead in complex projects within the UAE. This research question led to the broadest theme for the study, where a data were collected through the use of an interview. First, data were collected on how project managers described complex projects and the type of project complexity they commonly experienced when working on projects in the UAE. Four main types of project complexities were investigated: structural complexities, directional complexities, technical complexities, and temporal complexities. Among the four, it was found that the most commonly experienced by the project managers was structural complexities. This form of complexity describes a situation where they are several parts or elements involved in a single project. It also involved the level of interrelationships that exist between the different parts of the project.

The second line of data relating to the first theme was the nature of project teams used by the project managers when working on complex projects in the UAE. Findings showed that all the project managers take steps in ensuring that they have project teams comprised of members with various diversities. The main forms of diversities that the project managers considered and used in their teams included culture/nationality, gender, competence, religion and sexual orientation. Of all these types of complexities, the two most common were nationality and competence. This means the project managers had project teams with members from different nationalities, as well as members of different expertise or competencies, handling different aspects and technicalities of work. A third line of related data involved the approaches managers used in managing diversity at the workplace. From the answers they gave in the interview, it was found that the project managers mainly used legally imposed organisational policies, affirmative action, and Hofstede's cultural dimensions in managing diversity.

Data collected under the first theme also revealed that most of the project managers were high risk averse, meaning they did not entertain risks and preferred to prevent risks as much as they could when handling complex projects. A performance score calculated using the GAPPS tool showed that most of the project managers who were interviewed had very high scores in all the seven areas of the tool. Gender and nationality did not have any significant impact on performance score. The variable that had some impact on performance score was maturity level of project managers as measured by how long they had been in charge of complex projects. This suggested that if project managers wanted to succeed, they need to expand their experience and improve their competencies. The conclusion this draws is that leadership style and the overall approach towards it has a much larger effect on complex project success than the demographic background of leaders.

The second research question asked how structural complexities impacted the leadership style of project managers. This research question led to a theme created around two main leadership styles, transformational leadership and transactional leadership. Regarding transformational leadership style, the data collected showed that it is the most preferred leadership style for managing complex projects. Three main factors or reasons influenced the preference of the transformational leadership style when dealing with complex projects. The first was that the transformational leadership style was ideal in stimulating the intellectual abilities of the employees and team members managing various projects. The second was the fact that transformational leadership was ideal in achieving innovativeness necessary to simplify the tasks involved in making complex projects easier to deliver. Thirdly, the project managers saw the transformational leadership style as ideal in inspiring motivation among the employees to give their very best when dealing with the tough tasks associated with complex projects. The transformational leadership style was found to be mostly preferred by female project managers and project managers who had several years of experience in various leadership positions.

The transactional leadership style on the other hand was found to be less preferred than the transformational leadership style by UAE project managers. This notwithstanding, it was used by significant number of project managers, who found it suitable for a number of reasons relating to the management of complex projects. For example, project managers saw the transactional leadership as ideal in motivating employees to stick with the most difficult tasks involved with the complex projects. The basis for this is that leaders using the transactional leadership style emphasise the use of rewards and punishments, both of which act as stimuli to reinforce desirable practices among the employees. Another reason was that using the transactional leadership style helped the leaders to ensure, and guarantee specificity of work. That is, they got the employees to do exactly what the leaders prescribed for them without taking risks of coming up with their own innovative ideas. According to the project managers, because there was high cost associated with the complex projects, they preferred using the transactional leadership style to prevent any risks that could cost the firm a lot of money when employees were not given specific instructions on what to do but they were engaged to freely innovate as is the case with transformational leadership. Transactional leadership was observed more often in male project managers and those with fewer years in charge.

The last research question was set to find the impact of gender, nationality and maturity level of project managers on their overall approach to leadership when handling complex projects. In terms of gender and its impact on leadership, the results from the interview showed that the female project managers had more encounters with their superiors by way of reporting to them on daily basis, while the males did not report to their superiors as often. Also, it was found that whereas most male leaders preferred the use of transactional leadership style, the females were more comfortable with the transformational leadership style. The final area examined how leaders of the two genders embraced diversity. From the results obtained through the interviews, it emerged that the females embraced diversity more than their male counterparts. Data were also collected with reference to cultural background of the project managers. The first line of results showed that the Western project managers exhibited more independence in their leadership, as they did not liaise and report as often to their superiors as the Eastern project managers did. What is more, it was confirmed that those from Western cultures were more comfortable with the transformational leadership style while the project managers from the Eastern cultures preferred more delegating types of leadership, synonymous with transactional leadership. Lastly, it emerged that more matured leaders used transformational leadership more often than those with less experience.

7.2 Conclusions

There are a number of conclusions that can be made from this study. First, the approach by which project managers lead when handling complex projects in UAE varies from person to person. From the results of the study, there is no clear-cut approach or modality to leadership that is common among all the leaders. While this is the case, there are some aspects of leadership that are common among most project managers but these still do not represent a consensus or a strongly confirmed approach to leadership that is replicated by all. For example, while most project managers saw structural complexities as the commonest form of complexity that face them, there were others who had concerns with other forms of complexities such as technical complexities. In the same way, the approaches used in managing diversity and risks were different for each project manager. The indication from this conclusion is that handling complex projects requires dynamic leadership. The dynamism is largely influenced by the specific type of project at hand, the type of project teams a project manager is working with, as well as the personal philosophies and beliefs of the leader.

The second conclusion that can be drawn is that apart from the leadership approaches being different in managing complex projects, so are the leadership styles used in managing complex projects. The study has clearly showed that both the transformational leadership style and the transactional leadership style can be useful in managing complex projects in the UAE, depending on the dynamics available to the project manager in question. The factors that influence the applicability of both the transformational leadership style and the transactional leadership style in handling complex projects vary depending on the circumstances and are related to the choice of leadership style, whether transformational or transactional, and the availability and use of co-design to minimise risks. Because of the applicability of both the transformational leadership style which is more employee-focused and the transactional leadership style which is more leader-focused, it can also be concluded that in managing complex projects in the UAE, both the perspective and context of the leader and the employee are necessary in achieving project success. When dealing with the leader's perspective, most of the leadership is based on the leader's competence and ingenuity in influencing employees to execute the project successfully. The employee's perspective on the other hand looks at how the employees can be motivated and developed to use their innovative skills in helping to simplify the complexity within the projects to make them easily executable.

From the third research question it can be concluded that while different leadership styles and approaches to leadership are applicable in managing complex projects, the actual conditions and factors that make up the leadership in its totality as measured by its approaches and style are influenced by the demographic background of the leader. Three main demographic backgrounds that influence the totality of leadership are gender, nationality and maturity level. Consequently, leadership in the 21st century can be said to be one that is highly influenced by the diversities of not just the team that leaders work with but the diversity of the leaders themselves. That is, depending on the gender or nationality of a leader executing a particular complex project, one can expect that their approach to leadership and preference for a particular leadership style will be different. In the same way, depending on the experience and maturity level of the leaders, one can expect that their approach to leadership and preference for leadership styles will be different. In effect, while leadership as a concept is important in managing 21st century complex projects, the type of diversities that characterise the demographics of the leader can also be expected to influence the overall complexity of leadership. Most importantly, data collected in this study has confirmed that regardless of the leadership style used or approach, complex projects can always be executed well if the leaders show competence in how they lead and manage the projects.

In summary, project management research is increasingly recognizing the importance and impact of leadership with an increasing amount of focus on leadership behaviours in projects (Pretorius, Steyn, Bond-Barnard, 2017). This study explored how managers lead complex projects in the UAE, and how structural complexities impact on the leadership style used.

In addition, this study investigated how gender and cultural background of the manager, as well as how the maturity of the manager's experience, impacted the leadership strategy used. This was the first study of its kind to examine these factors in the UAE and has highlighted that the leadership strategies used may in fact be influenced more heavily by national culture and expectations than previously realised. It has also highlighted that public leadership and complex project leadership have some overlaps. Consequently, in order to lead effectively in complex projects, managers must employ a technique that works effectively for their workforce, which may mean extending their own understanding of leadership to fit the context.

7.3 Recommendations for practice

There are a number of recommendations that can be made with regards to how complex projects should be managed based in the UAE to suit 21st century practices as evidenced in the results of this study. First, it is recommended that project owners and stakeholders in the UAE that award contracts on complex projects appreciate the importance of leadership in ensuring the success of project execution. This study has clearly demonstrated that leadership is central in influencing the outcome of project success especially leadership as determined by the competence of leaders in both leading and managing the projects. Based on this first recommendation, it is further recommended that before awarding complex projects on contract, there should be special agencies or committees tasked with the responsibility of performing due diligence about the previous experiences and success rates of companies that bid for the projects. Such agencies could be placed under UAE government ministries such as Monitoring and Evaluation. The basis for this recommendation is that the study has clearly showed that the maturity level and experience of project managers and their companies directly influence how they will lead, as well as the success of their projects.

Thirdly, it is also recommended that the current practice in the UAE where project charges by bidding companies is the main determinant for awarding contracts be changed. Instead of focusing on how much a company is willing to accept, the UAE government needs a more holistic estimation of their competence and abilities. It would be noted that when the mere fact that a company is making a low offer is considered and such company is not able to execute the project according to specifications or gives a poorly delivered project, that situation will result in some inherent costs which could have been avoided if the project was awarded to the most qualified company based on competence and leadership background. Another important recommendation that will be made is that as the UAE continues to become a highly diversified and multicultural country, it is important that when awarding contracts for complex projects, project owners consider the right demographic and diversity backgrounds that will be suitable for the desired outcomes of the project. For example, the study has showed the relationship between cultural background and the type of working relationship that project managers have with their superiors and owners. These differences in management styles, however, do not preclude female expatriate managers from successfully performing their job at a high level in a Middle Eastern context. Such outcomes should be a guide to select the right people based on specific expectations of how the project owner wants the project manager to relate with them.

While it has been recommended that project owners look at the outcomes they expect before awarding contracts for complex projects, it is also very important that they will not let diversity in its totality or as a concept be a reason to discriminate against certain companies. The reason for this recommendation is that the study has clearly proven that as far as the success of projects is concerned, the demographic background of leaders, leadership approach, and leadership style have little effect. What affects it rather has to do with the competence of the leader. The result of this study should be a strong motivation for the UAE to continue to open itself up to diversity, including an appreciation of its very own. While the country opens up to the world to come on board and work on complex projects, local contractors must also be given the opportunities as far as they have the competence to deliver. Under no circumstance should the origin of a company come before competence. Rather, as far as a company shows competence to deliver a particular project, it should be given the opportunity to.

7.4 Theoretical and practical contributions

This study advances the literature in three core areas. First, it is only the third study to explore leadership practices in complex project managers in the UAE. This is unique as it extends the knowledge of leadership practices from the West to the Middle East, which is enclosed in its own challenges that are unique to this area. For example, attracting talent to the Middle East is challenging as a result of the cultural stereotypes that exist globally about this area of the world. Consequently, building stronger knowledge and support to this region builds its capabilities and enhances the knowledge of leadership in this area.

Second, this study advances the literature by being the first of its kind to explore the gender and cultural influences of the manager on these leadership practices. Previous research in this area has focused purely on the leadership practice itself, without considering cultural and gender research. Therefore, this study advances diversity research and applies this to the Middle East.

The methodology and its applications were effective as they were able to help secure the objectives of this research. They also effectively helped in developing and generating answers to the research questions raised. The methodology also provided answers which were more complete and comprehensive in terms of personal experiences of project managers.

The results of this study also provide original and innovative contributions to research literature especially in terms of providing basis for how complex projects are managed in a culturally diverse setting in the Asian region. It also provides new information on how projects in the rest of the region can best be managed in light of numerous foreign workers and foreign managers. Finally, this study also helps new information on how future managers in the UAE can also effectively manage large projects.

Finally, this study advances the literature as it explores the role that experience has on leadership strategies used. While previous research in the West has found that the maturity of managers impact leadership strategies, no research has qualified this for the UAE. This study therefore advances our knowledge in this area by focusing on how leadership strategies mature as managers do. This is important to practitioners when recruiting as, while not useful on its own, it does provide some insight into how managers may lead their teams, which may be used in organisational fit considerations and in conceiving appropriate interview questions for managers.

7.5 Limitations of the study

This study was limited in scope due to the nature of the degree and timeframe for data collection. Specifically, while all care was taken to ensure trustworthiness and credibility was inherent in this study, this study only collected data from complex project managers within the construction industry in the UAE. While there were strong justifications for this selection, and the use of a descriptive case study was appropriate for this study, generalizability of this study is limited. The data collected can, however, assist in understanding issues related to managing complex projects.

Further, while some transferability may be able to be applied to the Middle East and beyond, care should be taken to review this work beyond the scope of the study. Additionally, this data was collected over a 3-month period in 2017 due to ethical limitations and practical considerations. Therefore, while there were no known events that would have impacted the data collection during this time, to the knowledge of the researcher, this should be considered when reading the results of this study.

The author also acknowledges that the exploration and discussion of management perspectives on the leadership of complex projects was somewhat inhibited by the author's inability to gather or present more data on the companies as well as the projects the leaders have handled. Under these conditions, the beliefs of the managers on matters of leadership could not be fully compared against their actual performance in their companies and in their projects. Rather, the efficiency of their leadership was established by their experience, presence and function as project leaders, including their appointment to senior project management roles It should further be noted that the participants' perspectives in relation to leadership effectiveness issues and strategies were also in part supported by the project management and leadership literature.

7.6 Suggestions for future studies

Due to the limitations associated with transferability, it is suggested that future researchers expand the scope of data collection, such as the development of quantitative survey approaches, to see if the results of this qualitative study reflect the broader context of the UAE.

Future research exploring the nature of leadership-followership practices is needed. While this study has begun to add to the growing literature in this field, it could only look at leadership within the UAE. Future research should explore how followership is affected by these leadership practices and how that impacts organizational and employee outcomes, such as achievement of business objectives, employee turnover and employee satisfaction.

While this study began to explore the impact that diversity has on leadership in this area, and also expanded the literature in this area, further work is needed. Specifically, the literature would benefit from further research which explores the impact of interactions between cultures at three levels (client-employee-manager levels), using stakeholder theory to examine this. This would allow researchers to further analyse how these structural complexities impact the workplace within complex project management. In addition, some comparisons between public leadership and complex project leadership is needed with a critical review of complex leadership theory needed. The evidence in this study suggested similarities between these two types of leadership contexts and as such, future research should compare and contrast the similarities and differences between these sectors.

Contingency based rewards were found to be most effective in motivating employees within the UAE, however, further exploration into the threshold for the effectiveness of the rewards for ex-patriates is needed in future studies within this context. This is because previous studies indicate a U-shaped relationship between extrinsic and intrinsic reward effectiveness in motivating performance (Ma, Pei, & Meng, 2018; van der Schaaf, Mariake, Warmerdam, Crone, & Cools, 2011).

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APPENDIX A: INTERVIEW QUESTIONS

Project Managements Interview and Survey Questions (collected all at interviews)

Can you tell me about: who you report to? How many people do you report to?

How you report to them (prompt: is this done written, over the phone or email)? How often do you report to them or raise concerns?

Where are these meetings held?

What else do you discuss in these meetings? How often do your directives/orders change?

Tell me about your team – how do you manage them? What does a typical day look like for you?

What is your biggest challenge about managing your team? How do you manage this?

How do you manage the diversity in the team?

What strategies do you use to get them to do what you want them to do? What happens if they do not follow your instructions?

How long have you been a project manager for?

Have you always managed projects in the UAE or have you had experience elsewhere?

If elsewhere - What are the challenges of managing a project in the UAE compared to elsewhere?

What strategies do you use to lead your team?

Does this differ from the strategies you used elsewhere? How/ Why. Can you give me an example?

Please get managers to rate their project against the Global Alliance for Project Performance Standards (GAPPS)

Please complete the following in relation to your project.

Project Management Complexity factor	**Descriptor and points**			
1. Stability of the overall project context	Very high (1)	High (2)	Moderate (3)	Low/Very Low (4)
2. Number of distinct disciplines, methods, or approaches involved in performing the project	Very high (4)	High (3)	Moderate (2)	Low/Very Low (1)
3. Magnitude of legal, social or environmental implications from performing the project	Very high (4)	High (3)	Moderate (2)	Low/Very Low (1)

4. Overall expected financial impact (positive of negative) on the project's stakeholders	Very high (4)	High (3)	Moderate (2)	Low/Very Low (1)
5. Strategic importance of the project to the organisation or organisations involved	Very high/ High (4)	Moderate (3)	Low (2)	Very Low (1)
6. Stakeholder cohesion regarding the characteristics of the product of the project	Very high/ High (1)	Moderate (2)	Low (3)	Very Low (4)
7. Number and variety of interfaces between the project and other organisational entities	Very high/ High (4)	Moderate (3)	Low (2)	Very Low (1)

Please also get them to fill in this questionnaire

The following questions ask about **your relationship with your immediate boss**, i.e.

the person you report to. Circle your answer.

1. Do you know where you stand with him/her... do you usually know how satisfied he/she is with what you do?

Rarely	Occasionally	Sometimes	Fairly Often	Very Often

2. How well does he/she understand your job problems and needs?

Not a bit	A little	A fair amount	Quite a bit	A great deal

3. How well does he/she recognize your potential?

Not at all	A little	Moderately	Mostly	Fully

4. Regardless of how much formal authority he/she has built into his/ her position, what are the chances that he/she would use his/ her power to help you solve problems in your work?

None	Small	Moderate	High	Very High

5. Again, regardless of the amount of formal authority he/she has, what are the chances that he/she would “bail you out,” at his/ her expense?

None	Small	Moderate	High	Very High

6. I have enough confidence in him/her that I would defend and justify his/ her decision if he/she were not present to do so?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

7. How would you characterize your working relationship with him/her?

Extremely Ineffective	Worse than average	Average	Netter than average	Extremely effective

Think about **your relationship with your staff (direct reports).** Indicate the extent to which you disagree or agree with each statement using the 1-5 scales below with respect to each of the staff listed. Circle your answer.

____

Item	List Staff member Name	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
Regardless of how much power I have built into my position, I would be personally inclined to use my power to help him/her solve problems in his/her work.	**1.** **2.** **3.** **4.** **5.**					

I would be willing to "bail out" him/her, even at my own expense, if	**1.** **2.** **3.** **4.**					
he/she really needed it.	**5.**					
I think that I recognize his/her potential.	**1.** **2.** **3.** **4.** **5.**					

I have enough confidence in him/her that I would defend and justify his/her decisions if he/she were not present to do so.	**1.** **2.** **3.** **4.** **5.**					

		Not a bit	**A little**	**A fair amount**	**Quite a bit**	**A great deal**
I think that I understand his/her problems and needs.	**1.** **2.** **3.** **4.** **5.**					
		Rarely	**Occasionally**	**Sometimes**	**Fairly often**	**Very often**

I usually let him/her know where he/she stands with me.	**1.** **2.** **3.** **4.** **5.**					
		Extremely ineffective	**Worse than average**	**Average**	**Better than average**	**Extremely effective**
How would you describe your working relationship with him/her?	**1.** **2.** **3.** **4.** **5.**					

Please collect the following demographics from project managers

What is your Year of birth ______________

Length of time at organisation____________

Length of time in industry___________

Country of birth __________

Length of time in UAE__________

Gender (male/female)___________

What language/s do you speak_____________

What organisation do you work at? __________

What is the size of your organisation?

○ Less than 100 employees ○ 100-200 employees ○ 200-400 employees

400-1000 employees 1000+ employees

What type of organisation? – Semi Government Government Private

APPENDIX B: PARTICIPANT CHARACTERISTICS

Participant	Age	Gender	Country of Origin	Number of years in industry	Number of years in job	Number of years in the UAE
1	41	Male	United Kingdom	17	1	1
2	66	Male	United Kingdom	20	6	7
3	28	Female	India	7	5	5
4	33	Male	India	10	2	2
5	63	Female	United Kingdom	42	17	0
6	38	Male	Pakistan	2	2	2
7	34	Female	United States	8	2	0.03
8	30	Male	England	2	1	1

9	36	Female	UAE	2	2	24
10	58	Male	India	10	5	10
11	53	Male	India	11	4	10
12	63	Male	India	12	2	8
13	30	Female	Romanian	2	<1	2
14	39	Male	United Kingdom	14	1	14
15	33	Male	Jordan	10	5	8
16	30	Male	United States	5	3	5
17	30	Male	Saudi Arabia	8	5	6
18	51	Female	United Kingdom	22	6	6
19	47	Male	Bangladesh	8	2	5

20	70	Male	United Kingdom	20	0.9	6
21	43	Male	United States	17	1	1.3
22	48	Male	United Kingdom	23	9	9
23	39	Male	Pakistan	10	8	4
24	28	Male	Pakistan	6	4	5
25	39	Male	United Kingdom	8	6	7
26	34	Male	Pakistan	6	6	6
27	52	Female	United Kingdom	15	4	10
28	28	Male	Pakistan	5	2	5
29	33	Male	United Kingdom	5	3	8
30	38	Female	Jordan	8	4	6

31	35	Male	India	14	7	14
32	47	Male	United States	25	1	13
33	46	Male	Saudi Arabia	13	3	13

APPENDIX C: COMPARISON OF LABOUR LAW DETAILS BETWEEN GOVERNMENT, SEMI-GOVERNMENT AND PRIVATE ORGANISATIONS

Table 5: Comparison of labour laws

	Government	Semi government	Private Sector
Governing body	Federal Authority for the Government Human Resources	Ministry of Labour	Ministry of Labour
Law/s	1. Federal Decree Law No 11., Human resource regulation for the independent federal entities, 2. Cabinet Resolution (1) of 2018 On the Executive regulations of human resources law in the federal government[b]	Federal Law No. 8 of 1980 (Labour Law)[c] OR Human resource law of respective local or the federal entity which owns the company. There is no decreed law	1. Federal Law No. 8 of 1980 (Labour Law)[c] 2. Ministerial decree no. 212 of 2018 on regulation of employing nationals in the private sector[d]

Reason for termination	1) Resignation 2) Age of retirement 3) Death 4) Lack of fitness 5) Functional incompetence 6) Issuance of a Federal Decree 7) Decision for dismissal by the Cabinet 8) Dismissal for violating the decision related to Administrative violation or termination as per a Judicial Judgement 9) Withdrawal of the nationality of State or dropping the same from the employee 10) Non renewal or termination of the Contract prior to its expiry 11) Absence from work without acceptable justification for a period of ten consecutive working days or twenty days separately during one year 12) Restructuring 13) Replacement in accordance with a plan to settle the functions of non UAE nationals to	As per law	1) Should the worker assume false identity or nationality, or submits false certificates or documents. 2) Should the worker be appointed under probation period, and the dismissal occur during or at the end of the probation period. 3) Should the worker commit an error resulting in colossal material losses to the employer, provided that the Labor Department is notified of the incident within 48 hours of the knowledge of the occurrence thereof. 4) Should the worker violate the instructions related to the safety at work or in the work place, provided that such instructions be written and posted in a prominent location. 5) Should the worker fail to perform his main duties in accordance with

	be given to the employee within two months prior to its termination of service		the employment contract, and fail to remedy such failure despite a written investigation on the matter and a warning that he will be dismissed in case of recidivism. 6) Should he disclose any of the secret of the establishment where he works. 7) Should he be convicted in a final manner by the competent court in a crime of honor, honesty or public ethics. 8) Should he be found in a state of drunkenness or under the influence of a narcotic during work hours. 9) Should he assault during the work the employer, responsible manager or co - worker. 10) Should he be absent without valid cause for more than twenty non - consecutive days in one contractual

			year, or for more than seven consecutive days
Maternity leave	2 months		
Appointments	May be appointed by minister directly on special contracts or to fit vacancies as advertised and approved by minister		
Probation	3 months		

Transfers	Employees may be transferred within the ministry to another ministry at any point as long as at the same wage and level	As per law	
Appointment conditions	1. He shall be of a good conduct and behaviour. 2. His age may not be less than eighteen years old. 3. He shall have the scientific qualifications approved and equalized by the competent authority within the state. He shall submit the scientific experience certificates that are approved for occupying the job and such certificates shall be approved by the competent authority. 4. He shall successfully pass all tests and interviews related to the job. 5. He shall be medically fit according to the resolution of the Official Medical Committee to ensure that the employee will perform his job›s tasks and duties. 6. He shall not have been sentenced previously with penalty that restrict the freedom in a	As per law	

	felony or misdemeanour involving moral turpitude, unless he has been pardoned by the competent authorities or he has been rehabilitated based upon the Police Clearance Certificate issued by the competent authorities. 7. He shall not have been dismissed from the service prior to the appointment, due to gross violations related to the works or due to a final or decisive judicial judgment in a crime.		
Working hours	7 hours per day	As per law	8-9 hours per day

[a] UAE Ministry of Human Resource and Emirates, 2018a, [b] UAE Ministry of Human Resource and Emirates, 2018b; [c] UAE Ministry of Human Resource and Emirates, 2018c; [d] UAE Ministry of Human Resource and Emirates, 2018