Project Managers' Competencies in Managing the People Elements of Change within the United Arab Emirates

كفاءة مدراء المشاريع في إدارة العنصر البشري من التغيير
في دولة الإمارات العربية المتحدة

By

Saoud Saif Ateeq Al Falasi, Ms HRM

A thesis submitted in fulfilment
of the requirements for the PhD in Project Management
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ملخص الدراسة

هذا البحث يدرس قدرات مدراء المشاريع في التركيز على إدارة العنصر البشري في نطاق دولة الإمارات العربية المتحدة. بعض الدراسات لا تروج لمدراء المشاريع كعناصر فعالة في التغيير. وبعض الدراسات الأخرى تتطرق بأن مدراء المشاريع يلعبون دوراً رئيسياً في إدارة التغيير، بما في ذلك الأشخاص الذين شاركوا في التغيير. المناقشات السابقة تقدم وجهة نظر غير واضحة للدور الفعلي الذي يلعبه مدراء المشاريع والتي تشكل أساسات هذا البحث. لفهم المزيد عن هذا الموضوع، يدرس هذا البحث دور مدراء المشاريع في إدارة التغيير والعنصر البشري. تسعى هذه الدراسة وتهدف إلى التركيز على الفرص والسلطة التي تمنح لمدراء المشاريع للانضمام في عملية التغيير.

تم استخدام طريقة بحث مدموجة في تحليل هذا البحث. حيث تم جمع معطيات صحيحة من خلال مقابلات واستبيان مدراء المشاريع محترفين ومدراء اقسام يعملون لدى جهات محلية في دولة الإمارات ممن مروا بتجربة التغيير في الأعوام السابقة.

الدراسة تبحث بالخصوص دور مدراء المشاريع في تعزيز التزام الافراد، مشاركاتهم، ودوافعهم في عملية التغيير. بالإضافة لذلك، ونظراً لأهمية القيادة وإدارة المعلومات في إدارة التغيير، تم بحث دور مدراء المشاريع كقيادين و محاورين. الدراسة أيضاً تبحث في دور مدراء المشاريع في إدارة الشركاء الاستراتيجيين. هذه الدراسة تؤكد على أنه لا يوجد اختلاف بين المستجيبين في تقدير الكفاءات المطلوبة ومبادرة إدارة التغيير. وجدت الدراسة أيضاً ان التخطيط للكفاءات المتغيرة مرتبط مع أهداف مدراء المشاريع. الدراسة وجدت أيضاً ان تقييم الأداء للمشاريع المتغيرة مرتبط بأهداف مدراء المشاريع. الدراسة وجدت أيضاً بأن قياس عناصر نجاح الكفاءات مرتبط مع أهداف مدراء المشاريع. نتائج البحث وجدت بأن أداء مدراء المشاريع وتحقيق الأهداف المرجوة منهم تعتمد على الكفاءات التالية: تخطيط التغيير، تقييم أداء كفاءات مشاريع التغيير، إدارة كفاءات مشاريع التغيير ونجاح عناصر الكفاءات (العنصر البشري).

واعتماداً على نتائج البحث، من المنطق تضمين مدراء المشاريع في التخطيط للأنشطة والممارسات التي تؤدي إلى تقليل المقاومة نحو التغيير. ردود مدراء المشاريع ومدراء الإدارات كشفت عن نشاطات مختلفة ضمن ممارسات إدارة المشاريع اليومية. ومن الممكن للدراسات المستقبلية الكشف عن منافع أكثر لمدراء المشاريع وعن الأنشطة التي سينتج عنها إبراز إضافات للتقارير المرتبطة بإدارة الأفراد.

ABSTRACT

The aim of this research is to investigate the roles and competencies of project managers in managing change in the United Arab Emirates (UAE). The study focuses on people management. While some of the previous research argues that project managers are not effective managers of change, other studies, emphasize that they, in fact, are key players in managing change. These differing views are the main motivators for this research which aims to fill the gaps, clarify the issue and focus on its relevance in the UAE. In doing so, this research also aims to generate a better understanding of the role of project managers in managing change and the people involved in change. The objectives are also to shade some light the roles that project managers could play in promoting effective and successful change.

In pursuing this research, we endorsed and adopted a research approach that is both qualitative and quantitative. The reason for using both approaches is because neither of these, alone, is sufficient to capture the key issues and provide answers to the main research questions being investigated. Hence data was collected using both interviews and survey questionnaires. We targeted project managers, including professionals and department managers serving a selected number of UAE organisations that have experienced major change in recent years. The main focus was to examine project managers' roles in enhancing people's commitment, participation, and motivation in the change process. In addition to this, and due to the importance of leadership and information management in change management, the project managers' roles as leaders and as communicators was also considered. The study also looks at the role of project managers in managing stakeholders. To this end, we developed and explored two main research questions which translate into eight main hypotheses.

The main findings of the study confirmed our hypotheses and revealed that there is no difference between the respondents' ratings of the competencies needed for managing change initiatives. The findings also revealed that planning change competencies (PC1, PC2, PC5, EC1, EC2, MC1, MC2 and CC1) are associated with achieving the PM objectives. The study also found that evaluating the performance of change projects competencies (EPC2 and EPC7) is associated with achieving the PM objectives. The study also found that managing change projects competencies (MP1, MP2, MP3, MP5 and MP9) is significantly associated with achieving PM objectives. In addition, we also found that measuring the success factors competencies (PQC1,

PQC2 and PQC5) is strongly associated with achieving the PM objectives. Regression analysis revealed that project managers' performance in terms of achieving objectives is highly dependent on PC2, IC1, EC2, EPC1, EPC5, EPC6, EPC7, MP3, MP5 and PQC2.

The above findings have significant practical implications. Based on these, and in order to minimize resistance to change, it is strongly recommended project managers are fully involved in planning activities right from the start. The responses of the project managers and the department managers revealed several activities embedded in the daily project management practices. Future study in this area would reveal more benefits of project managers' reporting activity and would result in the highlighting of additions to reports related to people management. A future study may also investigate the reporting activity as part of the communication process.

ACKNOWLEDGEMENTS

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1 Introduction

Chapter 1 provides a background of the research problem and the aims and objectives of the research. The research questions are defined, and the hypotheses are stated to translate the research questions into a prediction of the expected outcomes. Based on what is already published in the literature, the rationale of the research is identified. The significance of the research is also outlined to explain how the research contributes to the competencies of project managers in managing the people element of change.

1.1 Background to the Research Problem

The involvement of project managers in managing projects effectively has been the subject of many debates, both in academia and in practice. Even though evidence on competencies of project managers and their contributions is supported by many, some research seems to undermine the role of project managers. For example, Taylor (1998) argues that neither the functional control of a project nor the authority over the team is part of the responsibilities of project managers. Similarly, Clarke (1999) believes that the obligatory procedures and practices of project management create resistance to change, reduce motivation and lead to employees' lack of self-confidence. Based on Clarke's assertions, the standards as well as the incapacity of project managers to provide structures and engage in effective planning are seen as some of the main causes of project failures.

Managing projects needs efficient project managers. According to Bredillet et al.(2015) describe a project manager as capable depends on his/her skills, personality and ability to perform. On the other hand, Iacob (2013) describes the project manager as the person responsible for attaining project objectives and the "engine" of a project. Other scholars consider the project manager as one of the most important personnel in a company due to his/her contribution to the project success (Ahsan, Ho and Khan, 2013). The PMBOK (2013) defines the project manager as the connection between the organization's strategy and the project team..

In contrast, Munns and Bjeirmi (1996) provide a detailed definition of the positive and wide-ranging role of project managers. They state that the project manager is responsible for managing the project all through its life cycle. The project manager's main goal is to monitor and control

work to achieve the final stage of a project, which is considered successful by internal and external stakeholders. Munns and Bjeirmi (1996) state that project managers specify the tasks, generate the work schedule, allocate resources, monitor and assess the progression against the plan, do adjustments and ensure that the project is completed per the agreed budget. In addition, project managers manage the project team and the overall communication process to ensure that information is conveyed to the project team and its stakeholders effectively (Munns & Bjeirmi 1996).

Kendrick (2012) agrees with Munns and Bjeirmi's statements and states that project managers are stereotyped as being an influence to the internal and external individuals and teams working on the project. The people they influence include the sponsors, seniors, line managers, industry partners, contractors and project clients (Kendrick 2012).

Correspondingly, Kuruppaurachchi, Mandal and Smith (2001) describe project managers as the 'leaders of change'. Kim and Wilemon (2002) agree with this concept and complement their view with a statement that project managers provide a psychologically secure work environment as part of their responsibilities during the implementation of change. In addition, project managers protect employees from what they term as 'fuzzy front end', which usually occurs with organisational change.

PM remains a highly problematical endeavor. Projects still fail to live up to the stakeholders' expectations as they continue being disappointed by projects' results (Asad, 2014). Commonly cited reasons include the different motivations and objectives of the organizations involved Casey, variable level of commitment (Harris,2007) failure to establish trust (Davenport et al,1999), unclear requirements (Barnes,2002) and poor planning and progress monitoring (Chin,2011)These factors have also been widely recognized as affecting negatively conventional projects (Chin,2011).

Therefore this research focuses on the leadership, team development and communication as the basis of the interview questions. The survey questions focused on change project performance. The questions aimed to investigate the role of project managers throughout the project phases. The questions also included the evaluation of the performance of change effort, management of people and the management of the organizational side of a project.

In terms of the involvement of project managers in managing change initiatives, Pollack and Algeo (2016) argue that projects involve change elements. Therefore, project management and change management together can contribute to the management of change initiatives. They also refer to lack of clarity in the literature related to the relationship between the two disciplines.

Pollack and Algeo (2016) suggest that even though both project management and change management are involved in managing change, change managers place less importance on controlling the delivery than project managers. On the other hand, change managers put more emphasis on developing and sharing the vision, arranging the project in line with the strategy and engaging leaders and employees in the process. Lehmann (2010) argues that project managers focus on techniques and methods, while change managers tend to examine the dynamics of the organisational change. Garfein and Sankaran (2011) suggest that project managers manage stakeholders as part of the project management process, while change managers focus on managing awareness and commitment and reducing employees' resistance.

On the other hand, the PMBOK (2014) states that project managers play a contributory role in facilitating the acceptance of project outputs and deliverables as they facilitate the organisation's acceptance of change. Project managers ensure that the essential elements of people, governance and organisational change management elements are entwined into the standards of project management. They also ensure that these elements are integrated and utilised in the planning and execution phases of the project.

Moreover, the PMBOK (2014) states that albeit the effective practice of integrating the project management planning within the change management activities, a lot of project managers do not quite understand the role they play in change management. This may be due to variable definitions and inconsistent understanding of change management as various people perceive change management to be psychological and do not take into consideration the project management aspect. The PMBOK (2014) argues that projects are the structured application of change. As project management relies on people, organizational change needs to adhere to project management standards and consistency in order to succeed. The PMBOK (2014) also states that change management is usually stereotyped as 'focusing on the people side'. Per the PMBOK (2014), it is somewhat confirmed that project managers are able to manage the technical and the human sides of organisational change. it is stated that there is also doubt

whether all project managers understand the critical role they play in change management (PMBOK 2014).

It seems that even though the literature puts emphasis on the technical competencies of project managers, there is also a growing emphasis on topics related to people, such as leadership, project teams and motivation (Kloppenborg & Opfer 2002). Stakeholder management has been discussed in detail as a knowledge area in the fifth edition of the Project Management Institute's Guide to the Project Management Body of Knowledge (PMI 2013b). On the other hand, Lehmann (2010) and Pádár et al. (2011) argue that the separation of the project management literature and the change management literature is decreasing. Both researchers have found resemblances of how subjects such as communication and stakeholders' management have been treated by the two disciplines.

Summarising the above discussion, not all studies promote project managers as effective managers of change. In contrast, it is suggested that project managers play the main role in managing change, including the people element of change. The above dispute creates an indistinct view of the actual role played by project managers and forms the foundation of this research. For a better understanding of the subject, the role of project managers in managing change and the people element of change is investigated. The aims and objectives of the research focus on the opportunity and authority given to project managers to take part in the change process. The details are discussed in the following sections.

1.2 Research Aims and Objectives

The UAE has undergone rapid change in the last few years. Therefore, managing people is a major issue that would make a difference in the outcomes of change initiatives. As strategic partners, project managers take a major role in the different phases of projects to meet the strategic goals of change initiatives. In addition to project managers' ability to manage systems and processes, they have the experience and competence to be agents of change. As competent agents of change, project managers should be able to manage the human factors of change. Thus, this study aims to expand the literature on project managers' role in managing people in change initiatives in the UAE context. The following objectives are used to drive the research agenda:

- *Review the role of project managers in managing change initiatives.*

- *Review and extract project management competencies for managing change initiatives.*
- *Investigate the role of project managers in managing the people element of change and their contribution to relevant success factors of change.*

1.3 Research Questions

Based on the justification of the research problem provided in the previous section, this study sought to answer the following main questions:

- *Do/should project managers in the UAE contribute to the people element in managing change initiatives?*
- *How do the competencies of project managers contribute to the success factors in managing change initiatives as they related to the people element?*

1.4 Research hypotheses

To investigate the above questions, interview questions were developed to guide the study towards specific evidence related to the thesis questions and hypotheses.

Because the current literature is unclear on the above questions, we sought to investigate these by formulating a number of hypotheses. These are based on the assumption that the role of project managers in managing change (through people) is crucial. To this end, we developed a series of questions (in the format of a survey questionnaire) aimed at investigating our main assumptions which can be translated into the following hypotheses.

- H1 There is no statistically significant difference in the ranking of planning change variables based on the respondents' position.
- H1 There is no statistically significant difference in the ranking of evaluating the performance of change effort variables based on respondents' position
- H1 There is no statistically significant difference in the ranking of managing people variables based on respondents' position.
- H1 There is no statistically significant difference in the ranking of managing the organisational side of project change variables based on respondents' position.

1.5 **Rationale and Significance of the Study**

The rationale of the research relies on the importance of its subject matter and geographical location. According to Adler (1991), majority of the theories and models of organisational behaviour have been developed in American and Western research. This argument also applies to project management theories that rely mainly on research and experience in North America (Chapman 2004). On the other hand, Turner (1993) cited in Muriithi and Crawford (2003) that techniques of project management implemented in the West should not be taken for granted as they have clear procedures that everyone should learn and apply. Turner (1993) argues that there are substantial cross-cultural issues in using the same approach in other countries. Muriithi and Crawford (2003) explain that because of the cultural differences between countries or even within countries, differences occur in the values at work and in social practices.. In addition, the available literature is criticised because project management is still seen as an 'execution oriented' discipline (Morris, 2013). The focus of the project management literature is on closing projects on time based on a budget within its scope. Morris (2013) claims that this is a narrow view because it focuses on the means, thus disregarding the front-end features of the project, and lacks a connection to the improvement of the organisation's performance.

Therefore, project management studies in the UAE context are seen as important to fill the gaps in the literature (Morris,2013)Moreover, Baddah (2016) argues that there is a lack of research in the UAE particularly in the change management discipline and this has its implications on the government, business, and decision making process. In addition, there are calls to encourage academics, practitioners, and researchers in the UAE to carry out more research on change management (Alameri, 2013; Bin Taher et al., 2015)

As all of the above researchers, among others, have suggested, additional research is needed to fill the gaps in the literature to investigate project managers' role in various environments. Research discussed the role of project managers in relation to the competencies outlined in the PMBOK and compared these roles with those of change managers (Nahmias 2009). However, the literature does not provide clear contributions to the role of project managers in terms of managing people in organisational change. More specifically, the literature does not provide any data in relation to the role of project managers working for UAE organisations. Therefore, this

study is conducted with a focus on the importance of investigating the role of project managers in change management within the UAE context.

The significance of the study is also based on the importance of the people element in organisational change. Hiatt and Creasey (2003, p. 39) explain that 'success is achieved when a business change is introduced and employees have the awareness and desire to implement the change, the knowledge and ability to make it happen and reinforcement to keep the change in place'. Hiatt and Creasey (2003) perceive that inability to focus on both people and business change will lead to failure of the project. They justify that focusing on business change and ignoring people will cost the organisation either loss of valued staff, reduced productivity or failure to meet deadlines. In contrast, if the organisation focuses on people and fails to maintain a balance between people and business change, then the change objectives will not be met.

Guler (2010) agrees with the above quote and explicates that organisational change involves a change in both the technical element and the people element. When an organisation undergoes change, both people and systems go through some stages. Thus, these two elements complement each other, and both sides must be managed effectively to accomplish the required results. Guler (2010) further clarifies that tasks required by change cannot be accomplished without skilled and capable employees and identifies some of the key change success factors related to people. In particular, this study is concerned with communication, motivation, participation, commitment, training and leadership.

Based on the above, this research investigates whether project managers do manage the people element of change management as part of their assignments within the UAE context. The focus on the UAE in particular is due to the rapid nature of change, which required a special concern for human resources. Ibrahim and Al Falasi (2014) state, that because of globalisation, the UAE's public sector has undergone substantial change during the last decade. The UAE is deemed to be one of the fastest-developing countries in the Middle East, the Gulf region and North Africa. Change is an integral part of the strategy to position the UAE as a service-oriented economy (Suliman & Alkathairi 2013).

A clear example of change initiatives in the UAE is the change experience of the Emirate of Abu Dhabi. Therefore, the focus of the study is on government and semi-government organisations that are based in Abu Dhabi and have branches and projects in other emirates. Organisations

operating in Abu Dhabi went through a thorough change as a result of the Abu Dhabi Economic Vision 2030 released in 2007. The vision is a reform policy developed by the Abu Dhabi Council for Economic Development, in cooperation with the Department of Economic Development and the General Secretariat of the Executive Council. The vision is the product of an intense enterprise and contribution of several public-sector and public-private-sector bodies. In building a constructive and globally integrated business environment, the 2030 vision identifies the UAE government's instantaneous economic primacies. It is a process that directs towards diversifying the UAE economy from being an oil-dependent country to an environmentally sustainable economy and a knowledge-driven country. Through Abu Dhabi Economic Vision 2030, the government aims to adopt a controlled financial policy and to establish a strong economic market environment with regulated levels of inflation. The government aims to enable the financial markets to be the central financiers of the economic sectors and developing projects. Additionally, the 2030 vision aims to establish a strong infrastructure to support the country's strategic economic growth (Government of Abu Dhabi 2012). Unquestionably, the accomplishment of numerous projects influenced by the vision depends on effective management of people. This factual statement gives this study its value as it uncovers the competencies of project managers that would contribute to meeting the objectives of change.

1.6   Scope and Limitations of Research

The UAE experienced substantial change in the last few years because of the impact of globalisation. The occurring change led to ranking the UAE as the fastest growing market in the region and is considered as the most innovation-driven economy in the Arab world

As a result, the country has been going through major changes in education, health, welfare, income, and employment (Al-Jably, 2009).This change involved a restructure in the traditional public administration. To compete in the market, UAE organisations had to implement change to enhance the standards of services and products to international levels. Therefore, the same as other countries around the world, the public and private sectors in the UAE experienced change in scope, management and administration. Hence, this change has put organisations operating within the UAE under pressure to provide high-quality and customer-oriented services (Turkyilmaz Akman, Ozkan &Pastuszak 2011).

Moreover, the Abu Dhabi Economic Vision 2030 is planned with the aim of improving the capability of the labour market and developing experienced and productive human resources (Government of Abu Dhabi 2012). To achieve these emerging changes, strategic plans and significant changes in people's perceptions are required. "The UAE Government 2011-2013 strategy lays the foundations to achieve the UAE vision 2021" (AlKhouri,2012). The strategy forms the foundation of the UAE Federal entities strategic and operational plans, It consists of seven general principles, seven strategic priorities, and seven strategic enablers (UAE strategy 2011-2013).

Enhancing the capabilities of the workforce is considered a critical factor for achieving the goals of change and for reducing employees' resistance to change (Maurer 2010). With awareness of the importance of the people element of change, this research focuses on the role of project managers in change management with an emphasis on the management of people in times of change.

The study has its limitations in terms of content and research methodology. Observation was not selected as a research methodology because of the confidentiality restrictions of the case studies.

Another limitation is that although the study covers a wide range of topics related to the role of project management in change management, it does not cover them all. For instance, the study does not include a discussion of the obstacles that preclude project managers from performing a key role in the entire change management process. In addition, while the research is concerned with the role of project managers within the UAE context, covering the change in all the emirates is difficult. Because of work and personal commitments, the study is conducted in organisations that have an office in Abu Dhabi, thus excluding any organisation operating in other emirates only.

Another limitation is that the study looks at the subject within the UAE context in general without considering the internal and external circumstances of the sites and how they impact the participation of project managers. The samples have been selected from governmental and semi-governmental UAE organisations, where change is more evident than in the private sector. Nevertheless, the study does not aim to include a comparison between the roles of project management in change management within business sectors. The interviewees and the survey respondents are interviewed as part of the UAE context rather than being part of their

organisation's context. Therefore, the focus is on the role of project managers with little information about the impact of the business sector. The limitations of this study are suggestions for follow-up research using the outcomes of this study as a foundation for further studies.

1.7 **Structure of the Thesis**

This thesis is divided into ten chapters. The first chapter gives an overview about the research problem, aims and objectives and questions this study will address. The chapter explains the scope, significance and rationale of the study.

Chapter twoprovides a theoretical background where theories related to the research subject are outlined. This chapter sets the foundation of the research.

Chapter three is a literature review of the main topics related to the role of project managers in managing change within the UAE context. The literature review provides an overview of project managers' role in managing change initiatives and the integration of project management and change management. The success factors are reviewed in relation to the project management competencies.

The fourth chapter provides details about the competencies of change management. The chapter includes information about the differences and similarities of the roles of change managers and project managers. The focus of the chapter is on the role of project managers in managing the people element of change.

The fifth chapter is the theoretical framework based on the literature review and the theoretical background related to the research topic. The research hypotheses are outlined, and measures are justified.

The sixth chapter presents an insight on the research methodology and design applied to meet the objectives of this study.

The seventh chapter presents the research qualitative data analysis and includes a discussion of the research findings. On the other hand, the eighth chapter is dedicated for the quantitative data analysis and includes a discussion of the research findings.

The ninth chapter is the discussion chapter. The chapter presented the discussion of the qualitative and quantitative research findings.

The tenth chapter is the conclusion and recommendation part of the research. The limitations of the research are presented, and suggestions for future research are provided.

Chapter 1 Intoduction	• This gives an overview of the research problem, aims and objectives and the questions this study will address. • It explains the significance and the rationale of the study. • The scope and the limitation of this research are discussed, and the limitations of the study are outlined.
Chapter 2 Theoretical Background	• The theoretical background is where theories related to the research subject are outlined. • This chapter sets the foundation of the research.
Chapter 3 Change Management Dimension	• This is the literature review of the main topics related to the role of project managers in managing change within the UAE context. • It provides an overview of project managers' role in managing change initiatives and the integration of project management and change management. • The success factors are reviewed in relation to the project management competencies.
Chapter 4 Change Management Competencies	• This provides details about the competencies of change management. • It includes information about the differences and similarities of the roles of change managers and project managers. • The focus is on the role of project managers in managing the people element of change.
Chapter 5 Theoretical Research Framework	• The theoretical framework is based on the literature review and the theoretical background related to the research topic. • The research hypotheses are outlined and measures are justified.
Chapter 6 Research Methodology and Design	• This provides an insight on the research methodology and design applied to meet the objectives of this study.
Chapter 7 Analysis of findings	• This is dedicated to the research qualitative data analysis and includes a discussion of the research findings.
Chapter 8 Findings from the survey	• This is dedicated to the quantitative data analysis and includes the discussion of the research findings.
Chapter 9 Discussion	• This is dedicated to the discusion of the qualitative and quantitaive research findings
Chapter 10 Conclusion and Recommendations	• This is the conclusion and recommendation part of the research. The limitations of the research are presented and suggestions for future research are provided.

Figure 1: Structure of the Thesis

1.8   Chapter Summary

Chapter one provided an overview of the research problem and the aims and objectives of the research. The research questions and hypotheses are identified, and the significance and the rationale of the research are stated. The scope of the research is outlined, and the structure of the research is presented. The next chapter presents the theoretical background related to the research topic.

2 Theoretical Background

2.1 Introduction

This chapter presents the theoretical foundation of project management and change management. The theories discussed are related and highlight project managers' role in managing change initiatives with a focus on management of the human element of change.

2.2 Theoretical Foundation of Project Management

A theoretical framework refers to the empirical or quasi-empirical theories of psychological or social progressions available at a variation of different stages and is relevant to the apprehending of a phenomenon (Anfara and Mertz, 2006). This chapter provides a theoretical framework related to change management with a focus on the theories relevant to people management. Other than the contribution of the Project Management Body of Knowledge (PMBOK), there is a lack of theories on the role of project managers in managing the human element of change.

Koskela and Howell (2002) argue that explicit and precise theories of project management functions cannot be found. Therefore they use the project managers' knowledge areas and skills explained in the PMBOK to measure the capabilities of project managers. (Koskela & Howell 2002).

Similarly, this research applies the knowledge areas and the skills discussed in the PMBOK Guide as a foundation of this research. In addition, the theory of project and the theory of management will be discussed and related to the management of the human element of change. Moreover, to highlight the effectiveness of the project managers' role, the success factors related to people management are explained in the following section.

2.3 Organisational Development Concept

In relation to the area of organisational change & development, Salminen (2000) suggested two main types of concepts: *organisational change* and *operational change*. Despite the differences between the two concepts, when theory is in practice, they are strongly enter twined and cannot be separated easily. Salminen (2000) suggests that the boundaries between research traditions and academic

disciplines result in the artificial split of different types of changes. When social scientists study organisational change, they are people oriented, while operational change is studied from the perspectives of industrial engineering or operations research. The following discussion will show how project managers are involved in both concepts.

Goodstein and Burke (1997) divide the types of change into three levels.

1. Change related to people, including empowering employees by developing their knowledge, skills, attitudes, behaviour and values. This is the level of change this study is concerned with.
2. Organisational systems and structures such as work designs, reporting hierarchy and rewarding systems.
3. Organisational culture or relational style.

Research has emphasized and advocated the importance of the people element in change management. For example, Cumming and Woley (2014) introduced the organisational development concept as a planned change discipline slanted towards relating behavioural science knowledge and practices to assist organisations in accomplishing change objectives. Meeting these objectives requires the effort of managers and employees, while the organisational development concept helps them establish successful relationships with others. Moreover, organisational development can help organisations and their workforce cope with the consequences of change. In organisational development, project managers play a critical role, as stated by Cumming and Woley (2014). They argue that project managers successfully connect groups who have different goals, systems and behaviour patterns for the benefit of a project.

2.4 Theoretical Foundations for Change

This section introduces three central theoretical foundations of change: the individual perspective school, the group dynamics school and the open system school. These three schools make up three levels of change: (1) the individual level, (2) the group level and (3) the structural level (Coghlan & Rashford 2006).

1. The individual perspective school: Directed by the economic force, this school marginalises the emotional factors (Coghlan & Rashford 2006). Following Burnes

(2004), advocates of the individual perspective are divided into two categories: the behaviourist and the Gestalt-field. Followers of the behaviourist school see individuals as students of behaviour who are conditioned by anticipated consequences. Change of individuals is achieved through manipulation of stimuli. Conversely, followers of the Gestalt school consider learning as a process in which individuals obtain and change awareness. In other words, the Gestalt school considers behaviour as a product of external stimuli and as a process of understanding and an intentional will to accept change (e.g., Skinner 1974; French & Bell 1984). This approach to change is the foundation of the culture-excellence school, which recommends both strong individual incentive and internal reflection. For the proponents of culture-excellence, the world is essentially an ambiguous place where detailed plans are not possible and flexibility is essential. Instead of having close supervision and strict rules, organisational objectives need to be promoted by loose controls, based on shared values and culture, and pursued through empowered employees using their own initiative (Burnes 2004). Before leaving this perspective, it must be noted that a combination of external stimuli and the promotion of dialogue has been influential in change management. This perspective has been advocated by the human relation movement, which also stresses the importance of groups in meeting the objectives of change. All of the above concepts confirm the importance of people management in the success of projects and change initiatives. Ignoring the critical role of managing the people element of change would affect the execution and correspondingly the outcome of a project.

2. Group dynamics school: According to Burnes (2004), change is a group process and not a process that is done individually. Kurt Lewin's work, as explained in Burnes (2004), is interested in the attributes and characteristics of working groups that lead to their response to certain influences. Burnes (2004) suggests that these influences may be adjusted to reiterate employees' desirable behaviour. Lewin (1997) argues that group behaviour is a complicated set of symbolic connections and interactions that have influence on an individual. Lewin's argument reveals that the behaviour of an individual is the outcome of a group's environment or 'fields, as termed by Lewin (Burnes, 2004a). As a result of his findings, Lewin (1997) introduced the unfreezing, freezing and refreezing three-step change model. First is the unfreezing step, which occurs when the

old behaviour is unlearnt before applying the new behaviour. This step would involve different difficulties in different cases. At this stage, employees are motivated to learn, but the change direction is not predicted. The second step involves the actual change. At this step, options are identified and evaluated, and all the workforces are required to adopt the new behaviour. The third and last step is the refreezing step, when the new workforce's behaviour associated with change is stabilised (Sarayreh et al. 2013).

3. Open system school: Scott (2003) suggests that organisations are conceptualised under three continuums: the rational system, the natural system and the open system. The systems are defined as follows:

   A. The rational system refers to organisations which are purposeful collectivists following precise and clear business goals. In these organisations, role relationships are separate from personal characteristics (Scott 2003; Ali 2008). The rational system of organisation sees organisations to 'exhibit a relatively high degree of formalization' (Scott 2007, p. 29) and involves people who have a sole interest in achieving common goals (Ali 2008).

   B. The natural system refers to organisations which are collectivists where everyone shares interest in the endurance of the organisation's system. To meet the goals, individuals are involved in planned communal activities that involve natural, ethical and non-rational teamwork (Scott 2007; Ali 2008).

   C. The open system refers to collectivist organisations with interdependent activities and constantly shifting employee alliances. These organisations are developed by diverse individuals with various loyalties. They depend on the flow of resources, information and people and are supported by external elements (Scott 2003; Ali 2008).

2.5 Dichotomy of Organisational Change

Van de Ven and Poole (1995) refer to the superfluousness and multiplicity of theoretical applications that have resulted in a state they call 'theoretical pluralism'. To shade some light on the confusions, they propose four main theories of change. The four theories are based on the justifications provided in initiating organisational change, this being either immediate (of radical) or gradual (or incremental):

1. Teleological theory: Suggests that change is being directed by a shared vision and a common goal. Per this theory, the steps of change are planned and pursued to achieve the required change.

2. Evolution theory: Adopts the changing system concept with sustainable reaction to change in environmental management.

3. Life cycle theory: Explains that change is instigated to achieve long-term maturing and development.

4. Dialectical theory: States that change is initiated as a response to inconsistency brought by different forces and demands.

According to Burnes (2005), organisational change is described as either transformational (radical) or incremental (continuous). The transformational type of change is considered a strategic change and is therefore highly significant, while incremental change is isolated and has less significance. On the other hand, Kanter et al. (1992) argue that when a major organisational transformation is implemented, one of two approaches is usually followed. The first approach is when an organisation exercises brave hits (radical change) to maintain market-competitive advantage. In this case, imperative strategic decisions are made. The second change approach is when an organisation takes the long pathway (continuous change) and implements gradual adjustments right through the organisation.

A comparable approach is presented by Kanter et al. and Beer and Nohria (2000), who discuss two models of organisational change that are mostly applicable for market-driven organisations. The first model is theory E (radical), which calls for maximum shareholder value with successive practical adaptation measures. The second model is theory O, (continuous change) whose focus is on culture and the workforce.

2.5.1 Theory E (Radical Change)

Radical change modifies perceptions and demands for extensive deployment. It needs to be performed with full collaboration that is beyond simple compliance with change. Radical change requires a paradigm shift that affects the identity of the employees and the organisation at large and results in a redistribution of power and resources. Because employees' identity is challenged, radical change evokes their defence mechanisms and results in resignations and resistance to change (Beer & Nohria 2000).

Theory E, as explained in the literature, is a formal system-driven radical change with a top-down process-focused strategy. The main goal of radical change is an increase in profit and a rapid growth in shareholder value. The mechanisms applied for change are meant to increase short-term profit and raise the price of shares. With the financial goal in mind, the concepts of human resources' participation are not as important. Lifetime contracts with employees are cancelled, and financial incentives are offered to encourage employees' maximum profit. Moreover, business units are reordered, and departments with no tangible value creation and return on investment become vulnerable and are sometimes replaced by external consultants (Beer & Nohria 2000).

2.5.2 Theory O (Continuous Change)

Rather than being system driven, theory O is a person-driven change approach. Leaders initiating continuous change rely on effective human resources' participation with no intention to solely drive success. Therefore, in theory O, the structure is flat with emphasis on people's learning, development, commitment and motivation to maintain successful outcome change (Beer & Nohria 2000).

The purpose of theory O is to develop the capabilities of the employees working for the organisation so that they will be able to implement change effectively. Change, per theory O, is evolving, continuous and implemented by the organisation's human resources rather than external consultants and incentives (Beer & Nohria 2000). When the environment is affected by change, theory O dictates incremental adjustments and small-scale adaptation steps to hinder employees' incompetence through continuous learning and experience. This continuous change is distinguished by steered guidance to achieve long-term goals, rather than a planned end point or alteration in business operations (Scott 2005, 2007). From the perspective of theory O, change models should be established on the basis of an organisation's learning and development in addition to competencies and human and cultural resources. Theory O focuses on developing the organisation's human capacity and applying a strategy and lessons learned about the efficacy of the executed changes. The theory emphasises the significance of recourses with less emphasis on management imposing the change and its implementation. The theory implies that change must be not only on the process but also on its influence on the human resources. If the employees are not given the right attention, the organisation will experience a turndown in its people motivation

and performance. To mitigate the negative consequences of change, the practice of organisational change management requires the participation and acceptance of the organisation's people. By focusing on people, an organisation would boost employee morale and job satisfaction and reduce employee turnover and resistance to change (Crawford & Nahmias 2010). Therefore, regardless of the form of organisational change, people determine the success or failure of change initiatives. Leaders and managers are key drivers of staff response and change results, according to Fugate (2012).

All of the above theories show that managing the people element of change is critical to the success of change initiatives. This research investigates the role of project managers in managing people as part of their role in managing change initiatives. Therefore, highlighting people's contribution to the success factors of change is important. The role of project managers in managing project human resources is detailed in the following chapter.

2.6 Project Management Theories

The PMBOK Guide (2004) clarifies that projects comprise two kinds of processes: project management processes and product-oriented processes (which identify and create the project product). The project management processes are further divided into the initiating, planning, execution, controlling and closing processes, which will be explained in detail in the following chapter.
Below, the theory of project is explained; then the theory of management is outlined to explain the processes of planning, execution and controlling (Koskela & Howell 2002).

2.6.1 Theory of Project
In the following, we take the contribution of Turner (1993) as a basis for a reconstruction of the theory of project. Turner states that scope management is the purpose of the existence of project management, which results in the following:

(1) Adequate amount of work is performed.

(2) Pointless work is not done.

(3) Work that is done produces the specified business objectives.

Per Turner (1993), the scope of a project is defined by the work breakdown structure (WBS).

From a theoretical perspective, Turner suggests that project management is the action of managing work. This is the conceptualisation. He then argues that in managing work, it should be fragmented into smaller activities and work tasks as it is later presented in the PMBOK Guides. For Turner, this concept serves the purposes of project management. In the next chapter, the activities, tasks and their management presented in the PMBOK Guide will be explained in further detail.

Turner's concept of WBS is also supported by Morris's (1994) description of the classic, and still valid, project management approach as he states, 'First, what needs to be done; second, who is going to do what; third, when actions are to be performed; fourth, how much is required to be spent in total, how much has been spent so far, and how much has still to be spent'.

When the above project management theory is compared with the theories of operations management, we would concede that it relies on the transformation theory of production. For instance, Starr (1966) states, 'Any production process can be viewed as an input-output system. In other words, there is a set of resources which we call inputs. A transformation process operates on this set and releases it in a modified form which we call outputs.'

Then, from the transformation outlook, production is theorised as the conversion of inputs to outputs (Koskela & Howell 2002). The transformation theory has been embedded in theories and practice, thus forming the foundation of an unseen and unspoken model that shapes behaviour. The role of human resources has not been explicitly discussed in the above theories. However, the PMBOK Guide has referred to the project theory and has explicitly highlighted the behaviour of project managers, including people management. This will be discussed in detail in the following chapter.

2.6.2   Theory of Management

The PMBOK Guide divides the project management processes into initiating, planning, execution, controlling and closing. The concept is that the core processes of planning, execution and controlling, which are illustrated in figure 2, form a closed loop. The planning processes develop the plan that is carried out throughout the execution processes. Modification from the baseline results in adjustments in execution processes or changes in project plans.
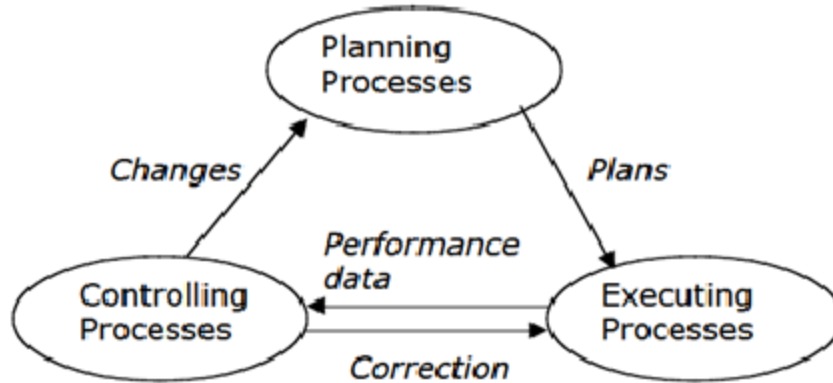
Figure 2: The closed loop of managerial processes in project management according to the PMBOK Guide (Koskela & Howell 2002). page 4

The above figure illustrates the role of project managers throughout the project cycle. The work to be completed requires the contribution of the project teams. The project teams would not be able to do their work without effective project management. The theories of planning, execution and controlling below explain the involvement of project managers in all the project activities performed by project teams, including the change which usually occurs in one or more parts of the project. As seen in the above figure, project managers' plan executes and controls the project and the corrections and changes across the project life cycle.

2.6.2.1 **Theory of Planning**

The planning of projects is thoroughly described from the point of view of different knowledge areas in the PMBOK Guide. The planning processes are structured into core processes and facilitating processes.

There are ten core processes: scope planning, scope definition, activity definition, resource planning, activity sequencing, activity duration estimating, cost estimating, schedule development, cost budgeting and project plan development. The output from these processes and the project plans make up an input to the executing processes. By assuming that translating a plan into action is the simple process of issuing 'orders', it takes plan production to be essentially synonymous with action.

2.6.2.2 Theory of Execution

The only direct reference to the tangible line between the project plan and work is linked to the work authorisation system (Koskela & Howell 2002).

The work authorisation system is a formal process for permitting project work. The authorisation guarantees that work is completed in the proper order and at the right time.

The underlying theory of execution is assigning tasks to machines or work teams and communicating tasks (PMI 2002). Therefore, proper authorisation managed and monitored by the project managers contribute to a successful execution of the project (Koskela & Howell 2002).

2.6.2.3 Theory of Controlling

According to the PMBOK Guide, the core process of controlling is divided into two sub-processes: performance reporting and change control. Based on performance reporting, amendments are recommended for the executing processes. Based on change control, changes are recommended for the planning processes.

As suggested in the controlling theory, project managers report the performance and control the changes. Management of people is an integral part of performance analysis during the execution process. The workforces are the drivers, and the implementers of change cannot be separated from the project managers' activities. De Furia (2008) states that defining and recording the change of project scope is the main part of control. The change will create schedule and cost variances, and with each scope change, resources are diverted to new activities that were not considered in the initial project scope. This change leads to additional pressure on the project schedule. Therefore, the project manager considers the impact of change on the project and makes adjustments accordingly. Project managers also adjust the budget to the occurring changes, which helps avoid financial problems, improving the decision-making process and enhancing the quality of project deliverables.

2.7 Summary of the Chapter

The models of organisational change are many. To give a broader insight into the critical role of managing human resources in organisational change, few organisational change theories are selected and outlined. The study will not go through the theories in detail as they do not

completely fall within its scope. However, the main concept of the study has been built around their concepts. Theory O, in specific, is highlighted because of its relevance to the management of the people element of change. The project theory and the management theory have been outlined with reference to the contribution of the PMBOK in terms of the activities and tasks of project managers. The following chapter will provide a literature review of the research subject to highlight the role of project managers in managing the people element of change.

3 Change Management Dimensions

3.1 Introduction

In this chapter, we review the literature relating to project managers' role in organisational change management. The chapter is divided into four parts::

Part 1 focuses on project managers' role in organisational change management.

Part 2 focuses on the contribution of project managers to project effectiveness.

Part 3 focuses on project managers' experience in managing projects.

Part 4 focuses on project managers' role in meeting change management project objectives

3.2 Definitions

Kerzner defines a project as "any series of activities and tasks that have a specific objective to be completed within certain specifications, has defined start and end dates, has funding limits (if applicable), consume human and nonhuman resources (i.e. money, people, equipment), and they are multifunctional (i.e., cut across several functional lines) " (Kerzner 2013)

Project management is defined by the Chartered Institute of Public Finance and Accountancy (CIPFA) as the discipline and process of planning, ordering, attaining and managing resources to meet a project's specific objectives. A project is defined as a temporary endeavour that has a beginning and an end, managed to accomplish specific benefits and objectives identified in the proposed business case (CIPFA). On the other hand, Cicmil and Hodgson (2006) argue that project management is known as being self-evident, natural and indispensable.

The Project Management Body of Knowledge Guide (2004) defines project management as 'the application of knowledge, skills, tools and techniques' to achieve the purposes and objectives of a project. Project management is achieved through the integration of the project steps of 'initiating, planning, executing, monitoring and controlling, and closing' (PMBOK 2004).
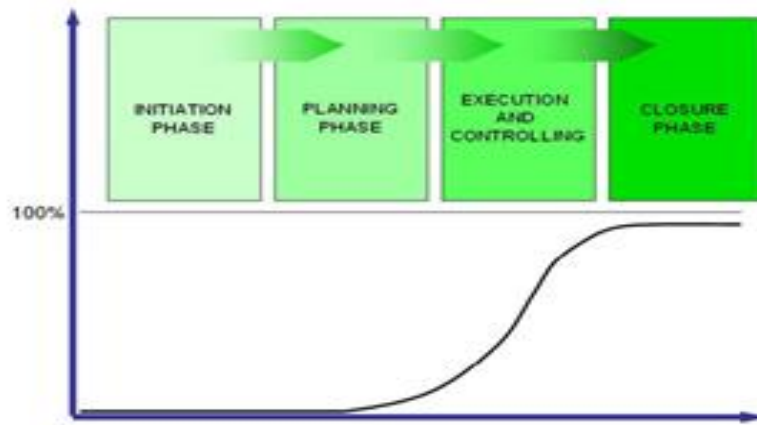
Figure 3: Project Curve, Source: http://www.visitask.com/s-curve.asp in BSC (2012).Page 12

Cleland (1997) defines project management as a set of useful tools used for managing change. It involves a set of effective procedures and an innovative model for managing projects. Project management puts together strategic objectives to enhance competitiveness through the best possible application of restricted resources and useful intra-organisational integration (Cleland 1997).

Change management is the discipline of proactively managing and implementing the changes that people experience within an organisation. A person responsible for change is called a change manager. The change manager is an individual responsible for managing the people side of the project's change component, which is, ensuring that the people are aware of the changes and know what to expect and what they need to do differently (Van der Voet 2014). Mohan, Xu and Ramesh (2008) define change management as a series of processes, policies, and procedures for dealing with organisational changes. Project managers have to effectively communicate the change to all the employees affected by this change. Contradicted or delayed communications can lead to distrust, uncertainty, lack of motivation and failure to meet the deadlines and abide by the budget to meet project objectives (Mohan, Xu & Ramesh 2008). Other researchers see change management as the process of change that includes planning, organising, guiding and managing the processes applied to manage change. On the other hand, influencing and motivating the employees is argued to refer to leadership rather than change management (Gill 2002; Spicker 2012).

Change management is reflected in a wide range of terms, such as restructuring, reengineering, rightsizing, business turnaround, cultural change and total quality management. Regardless of the term used to label change management, the core purpose is to have major development in the business. The importance of change relies on the need of organisations to meet the challenges of new market environments (Kotter 2007). Moran and Brightman (2001) define the concept of change management as a process of constantly renovating an organisation's course of action, structure, and capacities to operate the continually changing requirements of both internal and external customers (Moran & Brightman 2001). This understanding of the discipline of change management is common in most of the available models applied in modern organisations. Change management is mainly identified as either a set of steps or a process applied to achieve the required change. However, it has been argued that the structure of change actions applied by an organisation might be quite intangible and difficult to employ (Bridges 1991).

On the other hand, the PMI Body of Knowledge (Project Management Institute 2013) and the Association for Project Management (2006) use the change management term in the sense of 'the formal process through which changes to the project plan are approved and introduced' (Association for Project Management 2006, p. 130). This suggests that there appears to be little appreciation that project implementation success is about more than the mechanics provided in various professional guides. In this study, change management is defined as the process of developing the organisation's activities, structure and workforce through the combined efforts of individuals and teams involved and affected by the change.

3.3 Project Managers' Role in Organisational Change Management

The literature has outlined the value of project management in maintaining organisations' information sharing and knowledge management (De Fillippi 2001). Project management has been described as an influential and broadly applicable vehicle for integrating different functions in a way that facilitates meeting organisations' goals (Sahlin-Andersson & Söderholm 2002). Therefore, because of the importance of being in control of the business environment during organisational change, numerous companies have shifted from being operations focused to being project focused (Jarocki 2011). Similarly, Turner (2009) states that the current organisational continuous change needs project management. The earlier monitoring and controlling model does not serve the business competitive framework anymore. To ensure a stable environment for

their operations, organisations look for tools that allow them to maintain the flexibility and adaptability required for effective response to market change and volatility.

Recently, the Project Management Institute started to formally acknowledge the importance of organisational change management to the success of s project. In the 2014 PMI Research and Education Conference, a change management track was included in the conference agenda. On the other hand, a study by Kuipers et al. (2013) found that majority of studies stress the content and context of organisational change rather than emphasising the process in the implementation phase. Moreover, Kuipers et al. (2013) infer that several studies did not tackle the anticipated results or the successful attainment of organisational change intervention. Other studies present considerable evidence that the execution of organisational changes is frequently unsuccessful (Kotter 1996; Beer & Nohria 2000; Burke 2010). Oppositely, little evidence is available in relation to the effective management of organisational change in the public sector (Fernandez & Pitts 2007; Kickert 2010). In the project management field, organisational change is recognised as a distinct type of program or project (Partington 1996). Likewise, in the change management field, organisational change initiatives are known as a program or project with relevance to project management techniques and skills (Oswick & Robertson 2009). Usually, senior managers working for the organisation initiating change are considered change owners. These senior managers involve project managers in the change management process (Pellegrinelli, Partington, Hemingway, Mohdzain & Shah 2007). On the other hand, in the project management discipline, project managers are considered change agents (Turner, Grude & Thurloway 1996).

Organisational change has been explored through different categories. For example, revolutionary and evolutionary change management have been investigated by De Wit and Meyer (2005) and Burke (2002), while transactional and transformational change management have been studied by Burke and Litwin (1992), and incremental and transformative change management have been investigated by Dunphy and Stace (1988). Revolutionary change is known as radical change. When this type of change occurs, the organisation is disconnected from its past (Burke 2002; De Wit & Meyer 2005). Revolutionary change is unavoidable in cases of instability or when changes in the surrounding environment create a necessity for organisational reformation (Dunphy & Stace 1988).

In contrast, evolutionary change entails small changes applied through a long period of time. In this case, the organisation going through evolutionary change does not abandon its current system (De Wit & Meyer 2005, p. 83). It is noted that evolutionary change is more applied than revolutionary change, while organisations going through revolutionary change experience higher employee resistance (Burke 2002). It is also argued that evolutionary change is associated with transactional change (Bruke 2002), related to incremental change (Dunphy & Stace 1988) and first-order change (Krovi 1993). Oppositely, revolutionary change is correlated with transformational change (Bruke 2002), associated with transformative change (Dunphy & Stace 1988) and second-order change (Krovi 1993). The complexity and colossal efforts needed to manage change are only recognised when the organisation passes the halfway mark of the implementation process (Guler 2010).

In all the aforementioned definitions, it is clear that change requires a transferal from an acquainted state to a new situation, which normally affects the working standards, systems and people. When change occurs, the managing process is usually difficult and resistance to change would probably occur. Therefore the management of the people element is a key factor that contributes to the success of any project

3.3.1   Integration of Project Management and Change Management

Project management and change management may appear as two different disciplines; however, they are integrated in practice (BCS 2012).
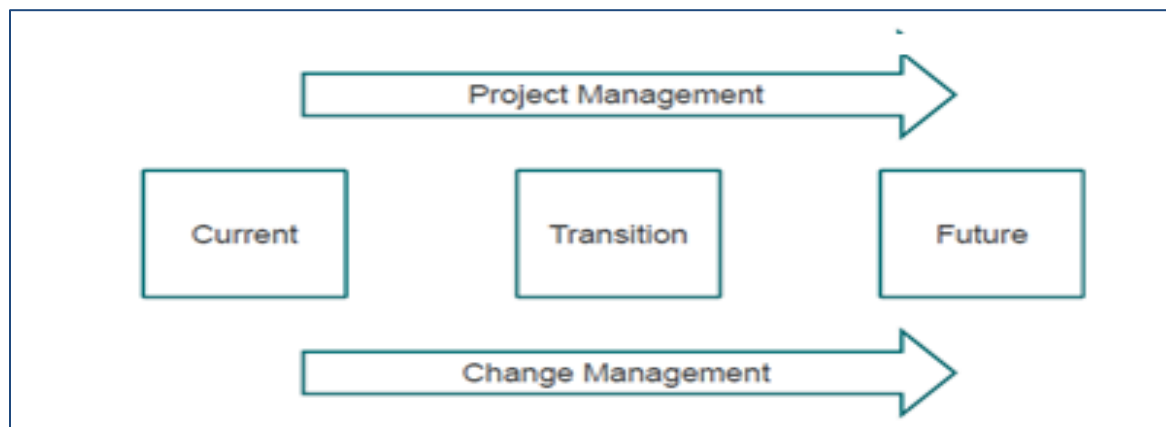
Figure 4: Project management and change management integration, Source: http://www.change-management.com/tutorial-definition-2009.htm in BCS (2012). P.29

The disciplines of project management and change management have been identified in a range of studies, stating that they represent a potential effective amalgamation of change management techniques (PMI 2013a; Pádár et al. 2011; Winch et al. 2012; Levasseur 2010; Boddy & Macbeth 2000; Leybourne 2006. However, there is minor agreement about how the two disciplines should work together on the projects (Crawford & Nahmais 2010; Jarocki 2011).

Hornstein (2015) emphasizes on the importance of the integration of project management and organizational change management. He argues that the management of change initiatives goes beyond the technical process to involve effective leadership. However research conducted on project success the emphasis is usually more on the technical side of the project such as time, budget, scope and quality but less on the human factor. The human factor, as defined by Hornstein (2015) is the employees' adoption or resistance of change and customer satisfaction.

Although change management activities have been embedded within PMI standards for a long time already, many project managers do not understand their role in change management. This might be because of the variable definitions of change management. Another reason may be that many of the project managers look beyond the standards for guidance, which can entail many risks (PMI 2014).

Also, many people view change management as a distinct discipline from project management. This means that they believe that when change is initiated, the structure and practices of project management are not required. On the other hand, a more accurate view is that change efforts executed without project management thoroughness or structure is expected to deliver commotion rather than constructive organisational change. This would lead to mischaracterising change management as 'focusing on the people side'. Therefore, project managers receive a risky message that their focus should be limited to technical issues.

Per PMI (2014), many project managers abandon their change management duties, hindering the benefits of project management and change management integration. Too often, a separate change plan is developed by project managers, so the success of a change project relies on the execution of two detached plans rather than one. This approach results in obliging the project sponsor to procure two sets of resources and to manage two teams.

The integrated change management activities performed by project management throughout the project cycle involve nine main activities:

1- Project scope management
2- Project time management
3- Project cost management
4- Project quality management
5- Project human resource management
6- Project communication management
7- Project risk management
8- Project procurement management
9- Project stakeholder management

The figure below illustrates the above activities:
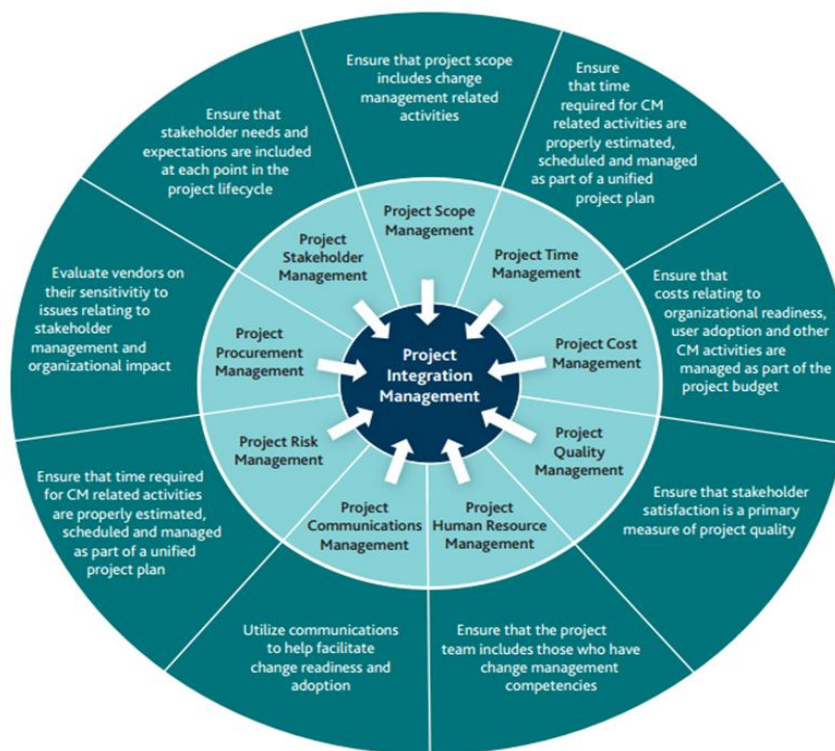
Figure 5: Integrated change management in the PMBOK Guide (PMI 2014) in Jarocki, (2014),page 12

1- Project Scope Management

The scope of work is usually decided at an early stage of the project planning phase. The scope identifies a line and gives a direction to be followed by project managers and stakeholders, Fageha and Aibinu (2013) argue that when the scope is undefined or incomplete at an early

stage, the project will encounter difficulties in the implementation process and affect the project deliverables. Karl (2014) states that the scope, when it is well-defined, identifies the external boundaries between the system and the project activities. In fact, the scope statement defines the interface of project managers' responsibilities.

Moreover, the project scope management includes further processes that have substantial change management elements, such as collecting requirements, alternative generation technique and change requests.

- Collecting requirements

Collecting requirements is a process of defining, recording and managing the needs and interests of stakeholders to accomplish project objectives. The PMBOK Guide (PMI 2013a) states, 'Requirements include the quantified and documented needs and expectations of the sponsor, customer and other stakeholders' (p. 112). Stakeholders' needs and expectations include but are not limited to the following:

- Receiving sufficient and well-timed information
- Understanding their roles and responsibilities
- Being engaged in the change and participating in the process
- Ensuring that change is supported by senior management
- Reactive support when undergoing stress as a result of change
- The organisation with incentive and acknowledgment systems

- Alternative generation technique

This technique is used to develop a number of possible options to identify different approaches for executing and performing project tasks. This is usually used in big and complex projects. Sometimes, this approach may be a separate project phase within a project life cycle. Change management concerns should play a big role in alternative generation and selection. In this case, the influence on stakeholders should be a key criterion for identifying the best option.

- Change requests

The request for change can be initiated by any stakeholder involved in or affected by the project. In many cases, most employees are aware that change will occur. However, whether or not they expect change to take place, the organisational change must be managed as a key part of scope management.

2- Project Time Management

Heldman (2005) states that the knowledge area of project time management is focused on setting the time limit of project activities, developing the project schedule, and monitoring and controlling deviance from the plan schedule. Heldman (2011) sees the project time management knowledge area as concerned with keeping the project on track and closing the project on time.

The PMBOK Guide (PMI 2013a) states that effective processes of managing time results in the timely completion of a project. The following are the outputs of this knowledge area:

- Schedule management plan

The main outcome of this knowledge area is a schedule management plan. However, the schedule is usually affected by the organisational culture and work mentality. Some projects require employees to operate from several locations or time zones. Therefore, the organisational culture must be assessed to manage project expectations and to be able to create a realistic schedule management plan.

- Setting milestones

Milestones are substantial details in a project, and they frequently produce certain change management activities. Without defining the project milestones, it is hard to schedule and control change management events.

- Determining project task dependencies

Many fundamental project activities depend on the organisation's readiness to accommodate change. Therefore, in constructing a precise project schedule, project task dependencies should be determined first.

- Establishing activity resources and duration

This approach facilitates the identification of the quantities and sorts of resources needed for each work activity. This includes the resources and time frames of training and development activities.

3- Project Cost Management

The PMBOK Guide (PMI 2013a) states, 'Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing and controlling costs so that the project can be complete within the approved budget' (p. 193). The main activities related with this knowledge area include the following:

- Estimating project costs

Cost estimation leads to taking a decision on the budget. This process should consider expenses linked to organisational acceptance and readiness to change activities. There are some activities that support organisational readiness, such as training plans that may need a substantial percentage of the budget.

- Control costs

Initiating separate change activities that are not in the project planning and execution activities would result in 'cost trade-off' decisions. For example, in case more resources are needed to meet the deadline funding, then such a change will cause a problem.

4- Project Quality Management

Heldman (2011) suggests that the process of project quality management is concerned with measuring the entire performance and monitoring project deliverables compared with the quality standards defined in the planning phase. Project quality management is the process of ensuring the delivery of products and services commissioned by the customers.

On the other hand, the PMBOK Guide (PMI 2013a) states that project quality management involves the following:

- Developing quality metrics

Developing quality metrics are used to depict and measure project quality. Yet with the integration of project management and change management, the matrices would include stakeholders' satisfaction in the following areas:

- Stakeholders' satisfaction with the extent of information communicated about the project
- The level of senior management support for the project
- User adoption rates
- The effectiveness of the training and development plan
- The level of stakeholders' self-sufficiency

The collected data will assist in assessing and enhancing the project training plan, communication plan and stakeholders' adoption plan. In other words, they will eventually enhance the overall project management plan.

5- Project Human Resource Management

Based on Buser et al. (2014), when change occurs, it leads to project delays, more work and more cost. Change also leads to poor project team morale, which would cause the project to fail. Nicholas and Steyn (2012) agree with this statement and suggest that change is a key cause of low employee morale and leads to a poor relationship between beneficiaries and the project team. Therefore, the project team morale must be considered to avoid project failure.

On the other hand, the PMBOK Guide (PMI 2013a) identifies project human resources management as one of the main project management knowledge areas. The activities required for project managers include the following:

- Recruiting the project team

To ensure a strong human resource management plan, the following questions should be asked:

- Is the human resource well aware of change management connotations?
- Does this human resource work in a team, or is he or she more independently focused?
- Does this human resource have the ability to take the role of a change agent? Do you see him or her as a driver of change?
- Can this person contribute to integrating change into the business?
- Is the human resource aware of project management processes?
- Can this resource consistently perform the required activities using a structured approach?

- Developing and managing project teams

Obstacles that hinder high standard performance may result from issues associated with change management. These issues may be one or more of the following:

- Project human resources may be removed from operations, and they are incapable of dealing with change. This would be issues especially when processes and expectations are not the same.
- Some projects require working in virtual environments. This would entail communication and cooperation between team members.
- Some human resources may not understand the importance and value of change management. They may not be able to use change management inputs in a timely manner to improve their performance.

Effective project human resource management enhances the awareness and proficiency of the project team. The impact of proper use of change management activities helps eliminate several obstacles to high performance. On the other hand, utilising project management principles would help stakeholders make sounder decisions.

- Developing and managing project sponsorship

Effective sponsorship is a key success factor of a change initiative. As stated by PMI (2013b), the sponsor ensures that resources are available for the change project. In addition, the sponsor is responsible for the project and constructs commitment for change mainly at the upper management level. The integrated human resource management plan should include the sponsors and the performance of their role.

6- **Project Communication Management**

The PMBOK Guide (PMI 2013a) divides the knowledge area of project communication management into internal and external project communication.

- Internal project communications

Internal communication means that communication is made within the organisation among internal stakeholders. These stakeholders may be the project team members, consultants and subject matter experts. Internal communication activities normally involve the following:

- Creating and distributing information about the change project, such as orientation and clear roles and responsibilities
- Effective project information management, which includes collecting, storing and retrieving project documents

- Proper project performance reporting, such as estimations and status reports
- Keeping a risk register and an occurring issue log

• External project communications

External communication means that information is communicated to external stakeholders who are not members of the project team. External communication usually involves creating and distributing communications that enhance awareness and knowledge about the project and boost self-motivation.

- Providing updates about the project to relevant stakeholders
- Arranging and carrying out communication events, such as meetings and gatherings

• Project document updates

Effective updates of project documentation include stakeholders' feedback to use their comments to amend and enhance project performance. To ensure the benefits of both the stakeholders and the project team, messages should be more than the project advantages and two-way communication is required.

• Control communication

According to PMI (2013a), communication should be monitored and controlled all through the project life cycle to make sure that stakeholders receive all the information they need. Communication with all stakeholders is supposed to be transparent and open regardless their work positions. It is also important to use a feedback strategy to maintain interaction with stakeholders and to mitigate obstacles to effective communication. Moreover, messages should be sent to stakeholders at the right time without overloading them with premature information.

7- Project Risk Management

According to the PMBOK Guide (PMI 2013a), the knowledge area of project risk management involves the following activities:

• Identify risks

Risks related to change management earn more visibility and legitimacy when organisation- and people-related risks are included in the formal project risk registry. By identifying organisational and people-related risks, the management of risk will be enhanced because of the contribution of different stakeholders. Always, stakeholders' interests, concerns and needs should be considered

risks. Those stakeholder-related risks may delay the accomplishment of the project objectives and disrupt the attainment of value realisation. Below are examples of change management risks that can negatively affect the achievement of project objectives:

- Absence of middle management support has a negative impact on the stakeholders and the project.
- Accessibility of work-arounds would make it possible for users to avoid the new processes. This would negatively affect the project's return on investment (ROI).
- Absence of effective, evident sponsorship would give the impression that the change initiative is not supported by senior leaders. In this case, it would be difficult to convince the stakeholders of the significance of change.
- Cost-cutting decisions usually lessen or cancel activities that were approved in the main project plan.

- Plan risk responses and control risks

In planning responses to change management risks, it is essential to employ the capabilities of the project team members and make use of experts' advice. To develop risk responses and to be able to control risk effectively, constant stakeholder engagement meetings are required. Once the risk is evaluated, several interferences can be attempted and results may be assessed.

Without the controlling process, a project will be at risk of ignoring one or more of the project success factors. Managing change is a key process of the scope management. To avoid risks, the change must be managed in consideration of the goals and the strategy of the project (Schwalbe 2014).

8- Project Procurement Management

The PMBOK Guide (PMI 2013a) emphasises on the knowledge area of project procurement management and defines the below activities for project managers to attend:

- Plan procurements

Requests for proposal (RFP) processes should be added to the needs of change management. Rather than just focusing on the technical side, the impact of the procurement process on stakeholders and the organisation must be considered. The vendor must be asked some questions, such as the following:

- What impact will the procured item have on the organisation?

- Have other customers experienced resistance or any issues related to end users' adoption?

- Do you have any suggestions on how to deal with these issues if they occur?

- Does your company provide training sessions?

- Control procurements

Controlling the procurement process involves 'managing procurement relationships, monitoring contract performance, and making changes and corrections to contracts as appropriate' (PMI 2013a, p. 379). Yet it is also important to consider that new process, and experiences are often introduced by vendors. In order to benefit from the procurement process, the organisation should be ready to accept and use the change that may be brought by the vendor.

9- Project Stakeholder Management

The PMBOK Guide (PMI 2013a) emphasises the knowledge area of project managers in managing stakeholders. The identified key activities related to stakeholders' management knowledge area are the following:

- Identify stakeholders

To develop an effective management plan, stakeholders must be identified first. A stakeholder is anyone or any group who may have an effect on or may be affected by project decisions, activities or outcomes. Therefore, different types of stakeholders should be identified, and their relationship with the project should be defined.

Project stakeholders are divided into three main types. To accomplish value creation, organisational adoption must first be achieved at each level, starting from the top level down to lower levels.

1. Project decision makers: Their responsibilities include funding and offering physical support for the project. It is important that level 1 stakeholders buy into the project's strategic plan and the associated costs for the change to be initiated.

2. Project contributors/collaborators: Their responsibility is to ensure the availability of the input and support necessary for planning and executing the project proficiently. This category involves project team members and related experts. In addition, this category may include human resources from different departments, such as the help desk

personnel and legal, procurement and human resource departments. These are level 2 stakeholders who have to buy into their roles and be keen to spend their time and energy to achieve the objectives of the project. Otherwise, it is more likely that the project would be at risk of being declined by the organisation.

3. Recipients: These are the level 3 stakeholders who are responsible for using the project and creating value from its output. This category includes the staff, end users and clients. Their expectations and needs must be acknowledged and attended to. If not, the driving force and ability levels will not be pulled off, which will affect the achievement of organisational value.

- Stakeholder analysis

A stakeholder analysis is another term for stakeholders' assessment. This technique is performed before the development of the stakeholder management plan. The analysis involves 'gathering and analysing quantitative and qualitative information to determine whose interests should be taken into account throughout the project' (PMI 2013a, p. 395). The assessment should include the stakeholders who may back up or destabilise the project and the level of their influence on the project. It is also important to identify the stakeholders who will be administered directly as opposed to stakeholders who need to be kept posted. The stakeholders' analysis is important because it gives beneficial information that helps understand the political background. In addition, throughout the project life cycle, the analysis facilitates change adoption and helps sustain support and project funding.

- Plan stakeholder management

An effective stakeholder management plan constitutes the expectations and needs of all stakeholders and categorises their importance at each phase of the project. For example, in the beginning of a project, the focus is on the senior-level sponsors who provide funding and ensure the availability of necessary resources. These sponsors motivate other stakeholders to create value-added solutions and contribute to the organisational change readiness process. This will result in an unproblematic change process and enhance staff and end users' acceptance of change.

Previously, the PMI identified five basic process groups and nine knowledge areas with 42 processes that are typical for all projects (PMI 2013). One of the knowledge areas is the project

human resource management, and it would be reasonable to include organisational change management under this knowledge area. However, managing change initiatives is not mentioned, and what falls under this title are the following:

1. Human resource planning
2. Acquisition of team members
3. Development of the project team
4. Team management

The same applies to the other process groups and knowledge areas recognised by the PMI. On the other hand, the PMBOK referred to the 'integrated change control' in the knowledge area of project integration management. This can be interpreted as an attempt to incorporate the management of change into other knowledge areas. However, integrated change control is limited to dealing with requests to change as part of a project but does not obviously embrace people-related matters (Crawford et al. 2014; Lundy & Morin 2013).

All the aforementioned contributions emphasize on the key role project managers play throughout the project phases. The above literature shows that project managers are involved in the management of the human element of change not only through stakeholders management but also through all the activities that involve the project teams.

3.4 Project Managers' Contribution to Project Change Management Effectiveness

According to the Institute of Change Management (PMI 2012), three key categories of agile change enable organisations to manage change effectively:

- The strategic change leadership represented by the architects and drivers of change
- The business change readiness, which involves the willingness and promptness to change and the beneficiaries of change
- Project change management by the developers and the implementers of change

The three change management categories are illustrated in the figure below:
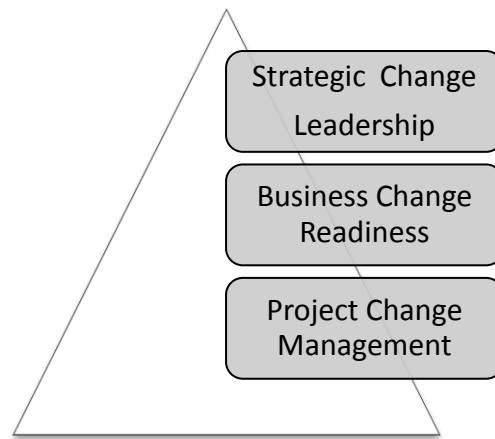
Figure 6: Change management categories. Adapted from The Institute of Change Management, 2012.

The three elements illustrated above delineate the focus expected by organisations that are looking forward to effectively manage change. Change management will differ according the category the organisation is working with.

- Strategic Change Leadership

Strategic change leadership defines the frame of the capability and capacity of the organisation necessary to lead the organisational change. In this category, the maturity of the organisational change calls for the support of all decision makers and leaders of the agile organisation. Also, it is important to have active sponsorship in place to formulate the vision and implement the organisational change. It is also required that the organisation adopt a culture that encourages innovation and enables constant feedback to allow reactions and adjustments.

- Business Change Readiness

Business change readiness defines the capabilities necessary to guarantee that the organisation is able to deal with continual and compound change. Business readiness is crucially imperative to circumvent the risks associated with transitioned, integrated, unmaintainable and poorly planned change. Maturity is achieved when it is recognised that it

is not the project that owns the changes affecting the business. Instead, each capacity is responsible for managing and controlling the emerging change. Therefore, project managers have to be aware of the appropriate ways of managing change; their focus is often on maintaining the status quo, rather than on how to constantly change or adjust their areas of responsibility (PMI 2012).

- Project Change Management

Project change management outlines the ability of the organisation to achieve both the right project design and the transmission of change results into the business. This is seen as the simplest of the three elements to apprehend, and frequently, organisations start from this area to build change capabilities. In change management, the development of the organisation's capabilities starts with the awareness of the importance of addressing the people element of projects with proper communications and training. This then progresses to an amplified situation where the feedback and group effort lead to precisely initiate, appraise, design and guide the approaches of change (PMI 2012).

Project management is becoming more accepted by many industries, and projects are progressively becoming the dominant way of managing operations. Lately, many organisations are identified as 'project based' because approximately all their operations apply organisation-type projects. It is also argued that the stable structures of those organisations continue to fulfil the role of administrative support (Cicmil & Hodgson 2006).

To meet their strategic goals, organisations are extensively using projects as provisional endeavours. Therefore, an approach that leads to effectively managing projects successfully has become a necessity. As a result, practitioners and researchers continuously aim to develop an approach that will lead to successful management of projects (Crawford, Pollack & England 2006). The enthusiasm of researchers for project research extends the analysis levels to a variety of conceptions, such as management by projects and management of projects (Soderlund 2004). Thyssen and Gessler (2012) state that project management is a well-established discipline organisations have previously needed to manage provisional work practices. However, project management has become a strategic approach for the entire organisations. This new approach is termed as project-oriented management (Thyssen & Gessler 2012).

Schlichter (1999) perceives that project management enhances organisations' effectiveness and efficiency in terms of delivered services and products. In addition, organisations have started to have a more accurate project scheduling and better budgeting, resulting in enhanced productivity. However, it is also argued that using project management principles and techniques is an advanced practice used to accomplish organisational planned objectives. Modern organisations are managing their projects within definite costs and time bounds and through optimal usage of resources. Thus, projects have better outcomes because of the application of an integrated planning and control system (Abbasi & Al-Mharmah 2000).

3.4.1 Project Management Applications to Change Management

Usually, project management is widely applied in a number of forms within organisations. Cleland and Ireland (2002) state, 'There has been no identified profession or industry where project management practices will not work'. Furthermore, as suggested by Cleland and Ireland (2002), applying project management improves accountability because of isolated tasks and assigned responsibilities with a focus on certain and important assignments. In general, they discuss that project management can better be used by doing the following:

- Sharing resources among various units
- Giving special attention to and emphasis on more important activities, such as paying attention to a particular customer in a given market
- Amalgamating systems and subsystems in independent divisions
- Managing ad hoc, complicated, unusual, exceptional and/or infrequent activities, opportunities and complications
- Managing work that needs a combination of resources and capabilities from varied sources, such as managing the emergency response process for occurring disasters
- Bringing a comprehensive variety of perspectives and experiences into focus, such as conducting research for developing products and resolving complicated issues
- Managing tasks that need huge involvement of technology, capital, resources and skills
- Having integrated management of a project-based contract to avoid customer work with several functional divisions
- Managing change when there is a need for change

According to the Project Management Institute (PMI), applying project management usually assists in defining project goals and identifying problems and risks, which result in isolating activities and better monitoring outcomes. On the other hand, the PMBOK Guide (PMI 2013a) states, 'The end is reached when the project's objectives have been achieved' (p. 3). Therefore, the work of project managers is evaluated against the value of their projects. Creating value entails successful management of organisational change and effective facilitation of project adoption. This goes beyond delivering the project according to budget, scope and deadline.

3.4.2 Project Management Process Groups

According to the PMBOK Guide (PMI 2013a), the project management process groups are consistent groupings of project management contributions, techniques and tools and outputs. To manage the project and the project teams effectively, the project management process groups involve the following:

Initiating Process Group

The initiating process group includes all the processes, skills and activities required to effectively define the starting point of a project. To ensure a logical progression of the project, permits, authorisations and work orders are set. Effective initiation of a project sets the foundation for success throughout the project life cycle. This process group involves initialising teams. Therefore, to manage the human factors effectively, project managers should consider the following:

- The minute a project is initiated, consideration is given to both the people element and the technical elements.
- All project stakeholders who will affect or will be affected by the project are identified.

Planning Process Group

The planning process group develops the processes required for defining the project scope strategic plans and begins to generate priority lists and plan the needs of project teams. This process group also clarifies project goals and outlooks and sets the project infrastructure needed to achieve business goals according to the deadlines and agreed budget. In this process group, project managers should consider the following:

- In the planning phase, the end of the project is kept in mind. The objective of all projects is creating value for the organisation, which requires organisational adoption as a key prerequisite.
- During the planning process, both value creation and organisational adoption are kept in mind.

Executing Process Group

The executing process group involves effectively managing project teams and at the same time meeting deadlines and achieving project goals. Project managers effectively address human resource concerns by using high standards of organisation and communication skills. In addition, project managers resolve complex situations related to getting the work done within the timeline and allocated budget. At this stage, project managers should consider the following:

- Stakeholders' needs and expectations are considered and managed properly.
- Apply both change agents and subject matter experts throughout the project executing process.

Monitoring and Controlling Process Group

Project managers process change orders, address budget considerations and mitigate unpredicted risks that may affect human resources' ability to achieve project expectations. Project managers drive the project forward by monitoring its progress and using their vision and immediate response to resolve project challenges. Project managers should consider the following:

- Stakeholders' ever-changing needs and expectations are assessed and met.
- Modify the project plans and schemes based on the stakeholders' needs and interests.

Closing Process Group

Driving the project to a successful closing within the allotted time and budget is not an easy task. The closing process group addresses the results of strong project management skills that guide the project throughout the other interrelated processes. The closing involves the submission of the project paperwork on time. This task is as critical as the other project management skills and

processes. With this closure, important reviews are brought up; therefore, project managers should consider the following:

- Projects should not be officially closed till value creation and organisational adoption are achieved.
- Lessons learned from the project should be captured.

The table below demonstrates the change management activities performed in each project management process group.

PM Process Group	Change Management Activities
Initiating process group	Consider the 'people' element of change and the technical elements. Identify all project stakeholders that will be affected by or will affect the project activities and outcomes.
Planning process group	Consider both organisational adoption and value creation. Keep the end result in mind.
Executing process group	Manage the requirements and expectations of stakeholders. Making use of both subject matter experts (SME) and experienced change agents to ensure effective execution of the project.
Monitoring and controlling process group	Measure and meet stakeholders' requirements and expectations. Modify project plans and designs according to stakeholder requirements and apprehensions.
Closing process group	Officially close the project when the organisational adoption and business value creation are achieved. Lessons learned are captured and shared to enhance performance.

Table 1: Change management activities: Based on the PMBOK Guide (PMI 2013a)

As stated by PMI (2013a), if project management practices are static, the project may likely fail. To manage a successful project, the elements of business necessities, organisational culture and environmental change must be deliberated all through the progress of the project activities. In addition, obtaining stakeholders' feedback and constant improvements shows that project management practices are also involved in the change to meet the change objectives.

Some of the fields that can be improved by implementing a more comprehensive change management focus include the following:

- Developing a project charter

The project charter is normally developed from the proposed project business case. The charter should incorporate a case for change, which includes the changes and their consequences.

- Developing a project management plan

A project management plan includes a description of how a project will be executed, monitored and controlled. The plan combines all supplementary plans, including the plans developed for risk management, communication management, stakeholders' management and project sponsorship (PMI 2013).

In relation to the above literature it is obvious that project managers do contribute to the management of projects. As all projects involve change and change is implemented by project teams then it can be said that project managers are able to manage the human factors of change. the effective management is a key for the success of change initiatives thus project managers contribute to the success factors of change. The interviews and the questionnaire investigate the role of project managers to identify the specific areas where project managers contribute to the management of change initiatives.

3.5   Project Managers' Experience in Managing Changes in Projects

The fourth edition of the PMBOK has identified nine core areas of knowledge related to project management: scope, cost, time, quality, risk, communication, human resources, integration management and procurement. Each area of knowledge has its own processes to be followed by project management practitioners to meet the goals and objectives of the specific area. According to the PMBOK, managing projects is achieved through the application of nine areas of knowledge with 44 related processes. It is noted that not all processes are performed consistently for managing projects. Project managers, in accordance with the project team, take the decision of which processes will be used. The project manager and the project teams need to decide which processes to employ and the degree of thoroughness that will be used when a certain process is

applied (PMI 2004). The project management knowledge areas are illustrated in the figure below:

PROJECT MANAGEMENT

Project Integration Management	Project Scope Management	Project Time Management
1. Project Plan Development 2. Project Plan Execution 3. Integrated Change Control	1. Initiation 2. Scope Planning 3. Scope Definition 4. Scope Verification 5. Scope Change Control	1. Activity Definition 2. Activity Sequencing 3. Activity Duration Estimating 4. Schedule Development 5. Schedule Control
Project Cost Management	**Project Quality Management**	**Project Human Resource Management**
1. Resource Planning 2. Cost Estimating 3. Cost Budgeting 4. Cost Control	1. Quality Planning 2. Quality Assurance 3. Quality Control	1. Organizational Planning 2. Staff Acquisition 3. Team Development
Project Communications Management	**Project Risk Management**	**Project Procurement Management**
1. Communication Planning 2. Information Distribution 3. Performance Reporting 4. Administrative Closure	1. Risk Management Planning 2. Risk Identification 3. Qualitative Risk Analysis 4. Quantitative Risk Analysis 5. Risk Response Planning 6. Risk Monitoring and Control	1. Procurement Planning 2. Solicitation Planning 3. Solicitation 4. Source Selection 5. Contract Administration 6. Contract Closeout

Figure 7: Project management knowledge areas. PMI,(2004) 3rd edition, page 11

The knowledge area of project integration management involves all project activities and procedures. Project managers define and link these activities and procedures within the project groups. The knowledge of project scope management involves the procedures of all tasks that will lead to the project's success. Project time management is another knowledge area that

allows project managers to use the right processes to meet project deadlines. As cost is a key element of projects, project cost management is an indispensable knowledge area required to complete the project following an approved budget. This includes the processes of planning, projecting, budgeting, funding and controlling project costs. Moreover, the quality of the project requires proper knowledge in quality management. This area of knowledge involves all activities and processes that ensure the quality of the entire project, including the policies, objectives and project outcomes.

The fifth edition of the PMBOK outlines 10 knowledge areas and 47 processes with the knowledge area of 'stakeholder management' added. The book includes some changes on the relevant processes, such as planning scope management, which is added to project scope management. Plan scope management is defined as the process of developing a scope management plan that records the project's definition, validation and control. The advantage of this process is the direction and guidance provided to the project team to manage the scope of the project throughout the project life cycle.

The fifth edition of the PMBOK also has added planning schedule management to project time management. This is defined as the process of creating policies, procedures and documents for 'planning, developing, managing, executing and controlling the project schedule' (PMBOK 2013). The advantage of this planning schedule management is it provides the project team with direction and guidance on the management of the project schedule throughout the project life cycle.

The fifth edition of the PMBOK has elaborated the communication management knowledge area. The book states that project managers plan communications management and defines planning as the process of forming a suitable approach for project communications based on organisational assets and stakeholder's information necessities and needs. This process helps identify and document an effective approach to communicate with stakeholders and among project stakeholders. Then, the project managers manage the entire communication process as they establish, gather, distribute, store, retrieve and dispose project information based on the agreed management plan. This process is more detailed and specific, and it replaces the stakeholder register and stakeholder management strategy in the fourth edition of the PMBOK. In brief, the communication management plan has replaced the communication requirement

analysis. Documentation of organisational process assets is added, and report performance is moved from being a process to being part of the tools and techniques. In part 2 of managing communication, new outputs have been added; the project management plan updates the organisational assets. In addition, the fifth edition of the PMBOK has emphasised the role of project managers in controlling communication. This process includes the activities of monitoring and controlling communication to achieve continuous information flow among stakeholders throughout the project life cycle.

On the other hand, the fifth edition of the PMBOK emphasises the role of project managers in identifying stakeholders who have an impact or may be influenced by the change management. Project managers analyse and document information related to their involvement in the project, interest and influence on project success. This process helps project managers appropriately focus their attention on each individual stakeholder or group of stakeholders. This process has replaced the older stakeholder management strategy discussion. The book has also emphasised the process of planning stakeholders' management. Project managers have the role of developing management strategies that would assist in engaging the project stakeholders throughout the project life cycle. The strategy is based on the analysis of stakeholders' interests and impact carried out when the change project is initiated. The advantage of this process is that it enhances interaction with project stakeholders to support the project activities and interests. The fifth edition of the book has also added the management of stakeholder engagement as a process of working and communicating with stakeholders in an attempt to meet their expectations and needs. The process also helps resolve occurring issues and enhance the engagement of stakeholders in the different activities all through the project life cycle. The key advantage of this process is it helps the project managers reduce stakeholders' resistance to change. The fifth edition of the book has emphasised controlling stakeholders' engagement as a process for monitoring relationships with stakeholders and modifying strategies and plans for engaging them. The advantage of this process is it enhances stakeholders' engagement and consequently enhances the project environment and the changes in its environment (PMBOK Guide, 5th edition).

In terms of quality management, the PMBOK Guide (PMI 2013a) states, 'Project Quality Management includes the processes and activities of the performing organisation that determine

quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken' (p. 227). Maintaining quality is a key success factor. Therefore, involving stakeholders is important as they are usually more objective than the project team. The attention of the project team is distributed between meeting the project deadline, long work hours and the quickly changing requirements. Hence, project team members may not be able to accurately judge the quality of work they are doing. Stakeholders, who are affected by the change, are seen by PMI (2003a) as the project customers. It is also stated that the quality standards of the International Organization for Standardization focus on the significance of customer satisfaction (ISO 2014). This shows the importance of measuring and addressing the concerns of customers to keep them satisfied. Therefore, satisfying the customers throughout the project life cycle will reduce their resistance to changes driven by the project (PMBOK Guide, PMI 2013a).

The project and project quality are usually defined and measured using quality metrics. Yet considering the integrated approach, the conception of quality metrics may be extended to involve the satisfaction metrics that measure stakeholders' satisfaction in the following:

- Stakeholders' satisfaction with the quantity of information they receive
- The level of support given to stakeholders
- The ratings of users' adoption of the project
- The effectiveness of the training and development plan
- The level of stakeholders' self-reliance

As per the PMBOK Guide, when the above data are collected and assessed, project managers can improve the staff development plan, communication plan and stakeholders' adoption strategies. In other words, the project management plan as a whole can be improved (PMI 2013a).

As projects are performed by people, project managers do have the knowledge area of human resource management to lead and manage project teams. This knowledge area, in particular, is directly related to the objectives of the study and will be explained in more details in the coming chapters. Project communication management is another key element of the study because of its relation to managing people. Communication management involves the processes and strategies that lead to proper disposition and transfer of project information and consequently to project success. In addition, project managers have the knowledge of project risk management. They

have the ability to identify, analyse and control the risks in a project. The last area of knowledge as defined by PMI (2004) is project procurement management. This involves the purchasing process of services and products necessary for the project.

In summary, project management is required throughout all the project steps to improve the productivity of the project people and the outcome. At the same time, project management is a set of tools and techniques for improving the organisation's performance and managing change. In the next chapters, the use of project management in change management is further explained with a focus on people management to meet the objectives of the study.

3.6   Project Managers' Role in Meeting Change Management Project Objectives

According to Clarke and Manton (1997, p. 248), 'many companies tend to focus on the change process rather than the key factors of success behind it. However, it is not just what you do but how well you do it'. Kendra and Taplin (2000) have developed a cultural model for project success. They emphasise the project managers' competencies and the project management culture as main success factors. The Chartered Institute for IT (BCS) has used the model below to explain the change management process within the project management.
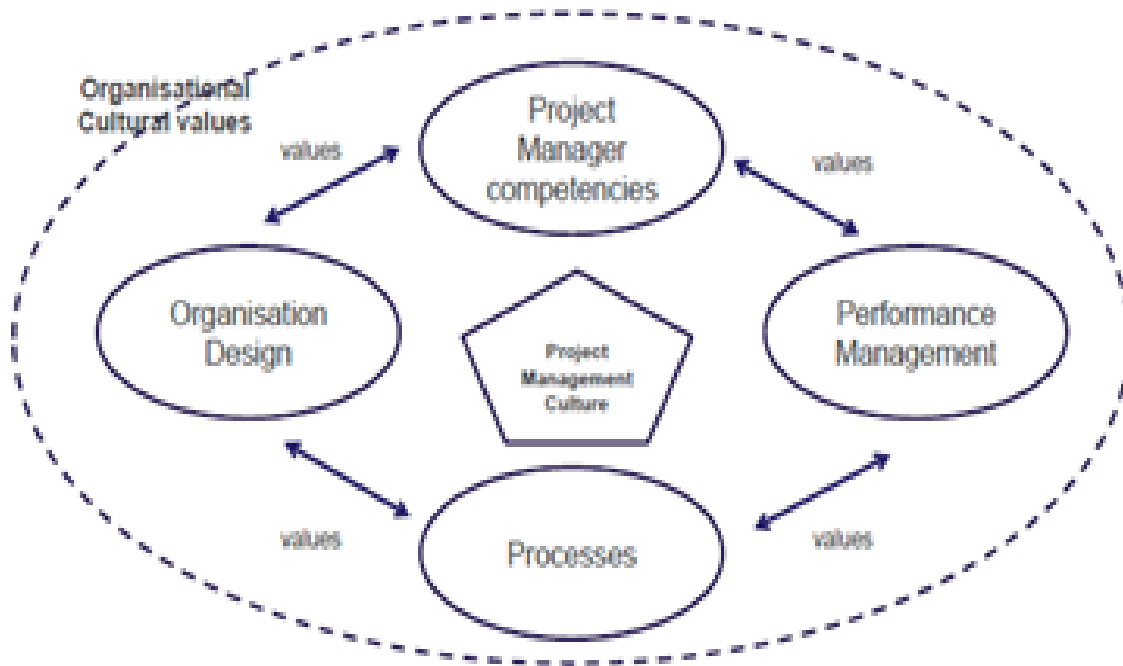
Figure 8: Cultural model for project success, adapted from Kendra and Taplin (2000), cited in BCS (2012),p.20

In a similar contribution, Guler (2010) identifies the main change success factors to be communication, motivation, participation, commitment, training, leadership, trust and a system that is free of technical problems. This research adopts the success factors relevant to the study of project managers' role in managing the people element of change management, which are as follows:

3.6.1 Communication

Communication is seen as a leadership function. Steyn (2012) states that leadership is a function carried out to accomplish tasks through the project team. Van der Walt, Strydom, Marx and Jooste (1996) argue that communication, delegation and coordination are leadership skills. Zulch (2014) suggests that communication is an essential part of leadership; thus, leaders should certainly have effective communication skills. Therefore, per Zulch (2014), communication is a key skill for project managers, and if they are not good communicators, they will not accomplish their objectives. On the other hand, a project manager with communication skills will be an effective performer. Similarly, Clutterbuck and Hirst (2002) argue that it is not enough to be in a

leading position; what is most important is fulfilling one's role. They add that leaders who are not effective communicators are not, by any means, doing any leadership. Belzer, in Stevenson and Starkweather (2009), argues that communication and leadership are both exceptional key criteria for achieving a successful closing of projects. Heldman (2011) agrees with the above contributions and states that projects progress smoothly when the project manager communicates well. Steyn (2008) points to the important role of project managers, stating that they bond the project together. He adds that the selection of a project manager is what affects the success or failure of a project. Miners (1969) argues that many specialists believe that effective communication depends on an efficient coordinator who has the authority, status and aptitude to do whatever is required.

Per Hauptfleisch and Siglé (2004), the project manager, in specific, must have leadership skills rather than just being a manager. At the same time, project managers have to utilise broad management principles to manage a project (Zulch 2014). Researchers have identified several roles that project managers perform: planning, scheduling, budgeting, organising, selecting and managing a project team, motivating the team, controlling project activities, communicating with internal and external stakeholders, problem solving and decision making. In addition, project managers know where to get support. They persuade others, negotiate and understand well the project environment (Baguley 2010; Burke 2003; Knipe, Van der Waldt, Van Niekerk, Burger & Nell 2002; Steyn 2008).

On the other hand, it is stated that change brings about a high intensity of uncertainty (Lines et al. 2005). The level of uncertainty is more intense in radical change (Buchanan & Badham 1999). Carter (2008) suggests that communication is a significant mechanism used by management to reduce uncertainty, lessen employees' resistance and enhance stakeholders' commitment and participation. Communication is easier when the organisational vision and goals are stated explicitly (Buchanan & Badham 1999). The way the message is conveyed has the same importance as the message itself (Galoppin & Caems 2007). In some cases, employees do not understand the message communicated, or they may misinterpret its meaning, so they create false responses that are not as good as the fact (Hiatt & Creasey 2003). According to Carter (2008), an appropriate communication approach using a suitable language is required to transfer the vision to everyone working for the organisation.

Robbins and Judge (2007) explain that communication can move either vertically (downward) or horizontally (upward). Vertical communication flows from managers to their subordinates as a means of sharing information. Horizontal communication is applied when employees' feedback is given to managers. According to Lengel and Daft (1988), the richness of information conveyed differs between communication channels. For example, face-to-face conversations have been seen to be the best communication channel because they facilitate the exchange of a large amount of information. In addition, conversations permit instant feedback on the information discussed by using different 'information cues', such as words, gestures, postures and intonations (Lengel & Daft 1988, p. 382). On the other hand, the PMBOK Guide (PMI 2013a) states, 'Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring and the ultimate disposition of project information' (p. 287). In general, project communications are divided into two categories:

1-   Internal project communications

Internal communication activities target the project team, the subject matter experts and others contributing to the project. These activities normally include the following:

- Creating and distributing work-related information, such as project orientation correspondences, documentations defining staff role and responsibilities and strategic decisions related to the project
- Project information management such as collecting, storing and retrieving project data
- Collection, storage and retrieval of project documentation (also referred to as project information management)
- Reporting of project performance, including project status reports, forecasting reports and project matrices
- Keeping and communicating risk records (PMBOK Guide, PMI 2013a)

2-   External project communications

In external project communications, the constructed information is shared with external stakeholders. The communication activities usually include the following:

- Creating and transferring messages to raise awareness, enhance understanding, pass on knowledge and amplify motivation
- Sharing project updates, based on the relevance of information, with external stakeholders
- Creating and carrying out communication events, such as meetings with external stakeholders to transfer specific knowledge

The main activities linked to the knowledge area include the following:

- Communications management plan

To develop a comprehensive communication management plan, communication teams ensure that the plan is created in a suitable format and includes clear content and details within a proper time frame and frequency. Communication teams also consider the right methods for constantly refining and updating the communications plan. Applying the good practices of communication management helps communication teams create an effective communications management plan.

- Project document updates

Project document updates include the feedback provided by stakeholders, where their concerns about the operations of the project are presented and applied to adjust and enhance the performance of the projects. For this reason, the communication activities must go beyond just communicating project advantages to stakeholders. For the benefit of the project team and the project stakeholders, a two-way communication is required, where consistent feedback loops are considered and utilised.

- Controlling communication

Controlling communication is 'the process of monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met' (PMI 2013a, p. 303).

To achieve a successful controlling communication process, it is vital to maintain open and transparent communication with all stakeholders whatever is their position in the organisational hierarchy. The importance of maintaining feedback loops relies on its necessity to provide indispensable prospects to work together with stakeholders. In addition, these feedback loops help mitigate potential obstacles to accomplishing clear, comprehensive communications.

In majority of large and medium organisations, there may be a number of projects running together. In this case, it is important to make sure that stakeholders are not burdened with premature information. Comprehensive communication means delivering messages based on a well-thought-out plan of when and what information should be communicated to stakeholders.

It is important not to overload organisational stakeholders with premature information. One of the keys to success is providing stakeholders with the right information at the right time.

3.6.2   Participation

Several authors expect participation to have a greater constructive impact on employees' feelings; thus, they are more prepared to accept change (Chalmers 2010). Engagement of staff has gained a great deal of interest from many researchers as well as practitioners. Vance (2006) claims that employees who are engaged in their work and committed to their organisations provide their companies with competitive advantages, which include higher productivity as well as lower employee turnover. The importance of loyalty in the workplace has been acknowledged all over the world because the performance of any organisation depends on the loyalty of its employees; the more loyal are the employees, the better is the performance of the organisation (Mohsan et al. 2011). Participation develops people's commitment (Burke 2002; Lines 2004), creates trust (Lines et al. 2005) and reduces resistance to change (Lines 2004; Hayes 2007; Self & Schraeder 2009). According to Lines (2004), participation is expected to have a better impact when changes do not fully correspond with the organisational culture. He clarifies that employees do care about the level of job variety they normally do. When change affects the multiplicity of their jobs, they are likely to demonstrate negative stance towards change. Therefore, an approach that gives employees the chance to participate in change activities may be useful to mollify their negative reactions. Lines et al. (2005) suggest that applying a participatory approach reveals the trust of managers in the ability of their employees to make sound decisions. Consequently, employees will have trust in management. Hayes (2007) justifies the importance of trust by stating that distrust in management will most likely result in resistance. He clarifies that the participatory approach may be achieved either through the involvement of all group members or through the participation of group representatives. Per Hayes (2007), better productivity is achieved when all group members rather than representatives are allowed to participate. It will be difficult for individuals who are not involved

in the change to apprehend and ratify the new practices. Conversely, Hayes (2007) adds that involving everyone in all the activities may be expensive and time-consuming.

Participation is defined as a process through which stakeholders influence the development of a project and share control over its decisions and resources. Actually, this entails using certain measures to define the stakeholders, convey to them project information, ask for their feedback, involve them in the planning and decision-making processes, support the project team's capacity building and, above all, empower them to have the ability to take the initiative and manage their self-development (World Bank 1994). Participation may differ according to the scope and profundity of the stakeholders' involvement. World bank (1994) defines the following six levels of involvement:

- The first three levels are (1) listening, (2) sharing information and (3) joint assessment. These levels are the consultation part and are deemed the preconditions for participation.
- The next three levels are (1) collaboration, (2) sharing the decision-making process (3) empowerment. These three levels make up profounder and more eloquent participation levels.

By moving from the insubstantial to the profounder participation levels, project stakeholders will have a bigger impact and control on the development of resources, decisions and activities (World Bank 1994).

3.6.3 Motivation

The PMBOK Guide (2004) defines motivation as 'energizing people to achieve high levels of performance and to overcome barriers to change' (p. 27). Based on this definition, it is suggested that motivation is more than just what is right. In the business setting, leadership is about making others, not always by force, do the work that should be done (Lewis 2003). In the organisational setting, project managers have the ability to motivate others by utilising their power or through their different leadership styles. Intrinsic motivation is most effective because the internal stakeholders will be attached to the goal of the project more than being connected to the reward associated to it. Moreover, it is better for project managers to influence motivation with an attempt to enhance it rather than make an effort to maximise it (Schmid & Adams 2008). To influence motivation, project managers may allow autonomy, give feedback and reward the team. However, these suggestions give general guidance to project managers to influence

motivation, but they do not define the techniques that would develop the intrinsic motivation of the project team (Schmid & Adams 2008).

PMI (2004) has stated that there is a difference between project management and general management. Project management is about a temporary project team led by a temporary project manager. The preceding literature review highlights that the project manager and the overall organisation can equally influence motivation. Another factor that makes project management different from general management is that it goes through various project stages, namely, initiating, planning, executing, monitoring and control and closing (PMI 2004). Because project management and team development revolve around stages, different approaches may have to be taken, depending on the current stage a project is in.

Maha Ibrahim and Saoud Al Falasi (2014) quote the contributions of authors who studied the importance of having an engaged and motivated project team. For example, it has been argued that organisations have been investing a significant amount of resources as well as efforts to attract, recruit and retain proactive, engaged and committed employees (Albrecht & Andreetta 2011). Work engagement is another important issue that is considered, an effective-motivational work-related state of employee fulfilment that can be characterised by vigour, dedication and absorption. Engaged employees are known for having high levels of energy and enthusiasm and being fully occupied with their jobs (Xanthopoulou, Bakker, Demerouti & Schaufeli 2009). In other words, as claimed by Kahn (1990), employees who are engaged in the workplace become caught up in their job tasks; they show their thoughts, feelings, creativity, values and personal and strong connections to others. Moreover, engaged employees can help organisations achieve its mission, execute its strategy and generate business results (Vance 2006).

On the other hand, Pugh (2007) argues that motivation is related to the strong personality of individuals, but at the same time, it is very much linked to 'communication', 'information sharing' and 'consultation' (Pugh 2007, p. 185). Del Val and Fuentes's (2003) research outcome shows that misunderstanding can happen when information is not shared or when communication within the organisation is not effective enough. Thus, lack of effective communication will result in low motivation and consequently will create resistance. Also, resistance develops because of ambiguity and uncertainty. Effective communication plays a key role in enhancing motivation in times of uncertainty (Lines et al. 2005). Aladwani (2001) argues

that when employees predict that change will put their jobs at risk, they develop a negative attitude towards this change. Abdinnour-Helm, Lengnick-Hall and Lengnick-Hal (2003) impart that individuals accept change when the details and the process of the project are communicated to them. Trader-Leigh (2002) emphasises that leaders should pay attention to the importance of developing guidelines on how to convey messages, listen to employees and mentor them to ensure that all voices in the organisation are heard. Furthermore, Beer, Eisenstat and Spector (1990a) confirm that employees should be convinced that change is an advantage not only for the business but also for them as individuals. Yet despite all efforts made, some individuals may not be convinced to change. In such cases, it would be wise to change the positions or the role of those individuals who find it difficult to adapt (Beer, Eisenstat & Spector 1990b).

3.6.4   Commitment

As stated by Maha Ibrahim and Saoud Al Falasi (2014), researchers and practitioners, over the years, have believed that loyal, committed employees are likely to be productive; in other words, the level of loyalty is considered a driving force behind an organisation's performance (Suliman & Alkathairi 2013). Researchers in the field have emphasised the importance of commitment in achieving organisational change. Low commitment of employees will result in noticeably slow change, if not a complete rejection of change (Burke 2002; Robbins & Judge 2007). Organisational commitment has been one of the most exciting topics researched since the 1960s. Many studies on loyalty and its impact on employees' work attitudes and behaviours have been conducted (Suliman & Al-Junaibi 2010; Suliman & Iles 2000). The performance of any organisation heavily depends on its employees' commitment. Therefore, organisational commitment is considered a key factor that determines organisations' success (Mohsan et al. 2011; Suliman & Al-Junaibi 2010; Suliman & Iles 2000). Meyer and Allen (1991) claim that organisations have to foster greater commitment and understand the way employees' loyalty is developed if they are willing to reduce turnover and improve employees' on-the-job behaviour. It has been noticed that employees with high levels of affective commitment are more likely to stay with their organisation (Suliman & Al-Junaibi 2010). They add that despite the fact that both affective and continuous commitments are likely to increase the possibility of staying with an organisation, the reasons for doing so are different. Employees who have strong AC stay because they want to do so (Suliman & Al-Junaibi 2010).

Also, earlier research has come to an agreement that the commitment of management is highly important in achieving the successful implementation of change. Aladwani (2001); Krovi (1993) and Aladwani (2001) advocate that leaders who get involved in the implementation of change have the attitude of key decision makers. Hence, convinced leaders demonstrate strong commitment and thereby strive to convince their staff members. In agreement with the previous concept, Pugh (2007) states that before managers ask their employees to accept change they themselves have to be convinced of the process.

PMI (2015) states that organisations need to ensure stakeholders' commitment to change and make sure that they will modify their previous behaviours and habits. A driver of creating commitment to change is the capability to produce eloquent engagement of staff. Organisations that fail to engage its employees will most likely experience either their acceptance or resistance to change but not their commitment, unless additional support is provided. PMI (2015) identifies some key strategies that, if implemented by the project teams, will be able to enhance engagement to the project and commitment to its outputs. Stakeholders' engagement has to be planned, and key players must be identified. A set of activities is put together around conversations with the project key players to measure their commitment. If they are not committed to the change project, a corrective plan has to be developed to enhance their commitment (PMI 2015). As stakeholders' commitment is a critical factor for the success of the project, PMI (2015) identifies a three-step stakeholders' management process, as illustrated in the figure below:

Figure 9: Three-step stakeholders' management process (adapted from PMI, 2015)

PMI (2015) suggests that applying these three steps will help manage the project's stakeholders, and they are as follows:

- In the beginning, a map for stakeholders has to be created. The map should be maintained and referred to throughout the project life cycle.
- The second step is the prioritisation of the project key stakeholders. However, the project manager has to regularly re-examine the stakeholders' level of influence and commitment.
- The third step is developing key stakeholders and encouraging their commitment to organisational change.

On the other hand, PMI (2015) suggests the following four principles that should be applied by project managers to regulate the work of the project team:

- Recipient focused

It is important to understand how people, who need to change more than others, can be engaged and influenced. Therefore, the recipients of change should be identified first rather than identifying the project sponsors first. The principle is to plan from the bottom to the top. In this case, project team members can better understand the recipients.

- Living document

The stakeholders' map is not an exercise that is done once. The map should be revisited and updated while the project is progressing. The update of the stakeholders' map and the related management plan should embrace the changes occurring the in the project's direction. Moreover, it is important to include the unforeseen difficulties that may emerge with change. Another important update is carried out when the key stakeholders of the change project change.

- Engaging process

The engaging process is used by the project teams to ensure the engagement of the project teams, steering committee and project sponsors. Throughout the project life cycle, the project team will work with different stakeholders in each project phase. Their responsibility is to encourage people to effectively participate.

- Use sensitivity

The information generated by the project team must be shared and communicated professionally with logical sensitivity. There should be a balance between maintaining the confidentiality of data and communicating information to people to keep them informed and engaged (PMI 2015).

Moreover, PMI (2015) suggests four strategies that can be used to build the commitment of project stakeholders.

- Engage

Participation leads to engaging stakeholders, and commitment is enhanced when stakeholders are involved in the decision-making process.

- Persuade

When attempts of engaging stakeholders fail, then influencing stakeholders and explaining to them the values, advantages and requirements of the change can be a good method.

- Reward

The next method that can be used, if the abovementioned methods fail, is the reward. Stakeholders may be given financial or any other kind of incentive to enhance their commitment to change.

- Isolate

If the above methods fail, then an action must be taken to make things work. The action can be a decision to change the positions or remove responsibilities from the stakeholders who are resisting change. However, such decision should be approved and applied by the most executive project sponsor (PMI 2015).

3.6.5 Training

Change management brings about concern for how involved individuals and businesses are able to change or can be changed (Caluwé & Vermaak 2006). Change aims to improve the operations of the organisation, and this requires developing the competencies of the people involved in change (Rainey 2009). Although it is a challenge, organisations must create a culture that encourages learning and innovations. The significance of training is emphasised by a rising gap between current competencies and skills and those required to meet the challenges of change.

Furthermore, the commitment of stakeholders to training and development opportunities flags a level of employee enablement and ownership of emerging responsibilities (Senge 2006). Organisational development may need consultants to work with the change agents to improve the decision-making and problem-solving processes, conflict resolution ability, openness and communication (Rainey 2009). Organisational development requires a gap analysis related to the arising problems, asking for the advice of a consultant; creating, obtaining and accepting feedback; implementing an action plan; and modifying the plan based on evaluation and feedback (Rainey 2009). Other methods related to development as a change is the recruitment and selection of staff, training courses, carrying out surveys, team building events and an analysis and identification of emerging roles and responsibilities (Rainey 2009). The stress for development also involves creating a sense of urgency across relevant internal and external stakeholders to maintain commitment and obligation to the development process (Rainey 2009). The development of staff requires the interference of multilevel cadres. Change agents have to involve upper management to provide internal support across various divisions to enhance commitment (Fernandez & Rainey 2006).

On the other hand, training has a great impact on the implementation of new systems and on the reduction of resistance to change. Although training can be costly, it is inevitable when organisational change includes an innovative system simply because the inability of employees to use the system revokes the required benefit of change (Jarrar, Al-Mudimigh & Zairi 2000).

In addition, training employees can enhance their commitment in a short period of time (Beer, Eisenstat & Spector 1990a). According to Self and Schraeder (2009), a barrier to success may be created, and the self-esteem of both managers and subordinates would be negatively affected if managers fail to coordinate effective training. Moreover, a proper approach to successful implementation of change is to train the organisation's leaders. Zeffane (1996) adopts the same view, stating that leadership skills are learnt through training. Similarly, Schraeder (2009) suggests that assuring employees that adequate training will take place to support them through change is another resolution that reduces barriers to change.

The Change Management Institute reveals that developing proficiency in project change management begins with accepting that the people element of change projects has to be empowered with communications and trainings. Then the situation is elevated with feedback and

cooperation to correctly introduce, communicate, construct and guide people throughout the change approaches. Methodologies have been developed to assist projects in achieving the management of the people element of change successfully. Yet methodologies themselves do not ensure successful change. For the change project to be successful, it has to be collaborative, complex and deviating. Effective change projects are usually supported by experienced change practitioners who collaborate with leaders and stakeholders to modify the approach (PMI 2012).

3.6.6 Leadership

According to Steyn (2008), project managers have different tasks to perform within their organisations; therefore, they need skills to be able to do their job. Skills are varied, such as communication, problem solving, presentation, stress management, interpersonal skills, in addition to management leadership skills. Project managers, as leaders, are able to motivate and inspire the project team members and contribute to their development to accomplish the objectives of the project. Project managers are leaders of the project, and at the same time, communication is an integral part of their role. Steyn (2012) makes a differentiation between communication as a leadership skill and leadership as a communication skill. For Steyn (2012), both concepts are important in project management due to the following:

- Leadership as a communication skill: Leadership involves functions to make the project team do the work. These functions include, but are not limited to, communication, delegation, management and communication to all levels (Van der Walt, Strydom, Marx & Jooste 1996). Hence, leadership may be defined as a communication skill.
- Communication as a leadership skill: A leader must be able to make sure that people implement the organisation's decisions, strategies and values. Hence, leaders should be effective communicators, and this why communication is considered a fundamental part of leadership skills.

According to Steyn (2012), all skills are necessary for project managers, but the emphasis is on communication skills as part of the leadership skills. Project managers, even if they have other skills, will not be able to effectively perform without communication skills. Similarly, Belzer, in Stevenson and Starkweather (2009), seconds that both leadership and communication skills are particularly important conditions for the success of any project. A statement by Heldman (2011)

confirms the idea above by agreeing that 'the better the project manager communicating, the smoother the project will go'.

When change is initiated, it cannot be achieved without strong leadership (Beer, Eisenstat & Spector 1990b). To oversee strategies, systems and people in dynamic organisations, leaders with suitable planning and communication skills are needed. Senior managers can implement change by demonstrating their appropriate behaviour and strong leadership traits (Zeffane 1996). The management and leadership of strategic change can only be accomplished in the presence of capable leaders in a setting of trust and reinforcement for organisational learning (Zeffane 1996). According to Senior and Fleming (2006, p. 250), leadership differs from management; however, both leadership and management are required to implement change successfully. While managers are likely more focused on 'strategy, structures and the systems', leaders are more concerned with people, common goals, motivation and communication. The role of leadership, per Senior and Fleming (2006, p. 250), is that 'leadership is about influencing others in pursuit of the achievement of organisational goals'.

On the other hand, Pugh (2007) believes that managers can also construct a motivational environment if they know their staff well and then determine the key factors of motivation. When it comes to leading change, Pugh (2007) suggests that special skills are required to meet the change objectives. The suggested skills include leadership, motivation, communication, construing uncertainty and guide decision behaviour to reduce uncertainty in addition to practical skills to meet organisational goals.

The Institute of Change Management (PMI 2012) states that developing agility enables organisations to continually adjust and implement change to meet economic and competitive challenges. An organisation has the ability to meet market challenges through agile projects that are regularly evaluated and accustomed by experienced and cognisant leadership.

3.7 Summary of the Chapter

Chapter three provided a literature review of the project managers' role in organisational change management and the contribution of project managers to project effectiveness. Project managers' experience in managing projects and their role in meeting change management objectives available in the literature are also reviewed. The success factors used as a basis for this study

have been explained to illustrate their importance when it comes to people management during change initiatives. In specific the success factors that have been explaines are: communication; participation; motivation, commitment; training and leadership.The next chapter explains the change management competencies necessary for the success of a change project .

4   Change Management Competencies

4.1   Introduction

Chapter four provides details about the change management competencies of change managers and project managers. The role of project managers as change agents is discussed, and the role of project managers versus the role of change managers is highlighted.

4.2   Change Management Competencies

Mansfield (2011) argues that change initiative is a deliverable that is normally expected from the "change agent" role in Human Resources. In general the main role of a change agent is the contribution that leads to sustaining the organization's current performance and ensuring its future performance by enabling people to effectively implement change and increase their ability to manage future change.

Studies show that project managers and change managers share nearly the same competencies. For instance, coaching skills, learning and development abilities, developing processes and influencing others are common skills between project managers and the change managers. Furthermore, project managers are known for their decision-making and problem-solving skills, which are key skills required for change management (Nahmias 2009). A statement has been mentioned earlier that both project managers and program managers are able to manage organisational change. Hence, it would be logical to expect them possess a noteworthy amount of change management competencies. In fact, the overlap between project management and program management competencies is greater than the overlap between project management competencies and change management competencies (Nahmias 2009). The following figure demonstrates the change management competencies in comparison with the project management competencies at a later stage:

Figure 10: Change management competencies. Adapted from Nahmias (2009)

Nahmias (2009) states that there is a need to bridge the gap in the literature between the assumption that project managers are efficient change managers and the expectation of their competence as change managers. Nahmias's (2009) contribution is in line with Turner, Grude and Thurloway's (1996) concept that project managers are change agents. It also relates to Turner and Muller's (2006) definition of project managers as agents of change and to their view of project management as the 'management of change'.

4.3 Competencies of Change Agents

In relation to project management competence, Crawford (2005) sees a slim connection between knowledge and the use of tasks performed, appraised against established project management standards and assumed level of performance on the job. Crawford (2001, 2005) makes a differentiation between two types of approach to competency:

(1) Competency model approach: This approach has been initiated by McClelland (1961) and further developed by Boyatzis (1982). This attributes-based model suggests that recognisable personal characteristics are translated into competent performance. Based on this model, competency consists of five core qualities. The first two key competency characteristics are knowledge (qualifications held by an individual) and skills (the ability of an individual to perform work tasks). These competencies can be measured and

developed. The other three competencies are core personalities: motives, behaviours and self-concept. These competencies are inborn in a person's persona, and it is hard to measure or develop (Crawford 2005).

(2) Competency standards approach: This approach presumes that competence can be extrapolated from the performance demonstrated by individuals according to a pregiven acceptable standard (Gonczi, Hager & Athanasou 1993). This approach uses the terms *units* and *elements* to describe the tasks done at work, the profession or the role carried out. The model also uses the term *performance criteria* to describe the performance standard and the term *range indicators* to describe the context individuals perform in (Crawford 2005).

Despite the fact that the competency standards approach is newer and better supported in the literature (Crawford 2005), it has been found that it will not serve the purpose of this study. The use the competency standards approach requires the presence of competency standards for the change management role. While competency standards for the project management role are well developed, equivalent competency standards for change managers are not available (Crawford 2005). Therefore, investigating the competencies of change agents and the comparison between their different roles and attributes will be based on the competency model approach.

4.4 Role of Change Managers

A change manager is the person responsible for change within an organisation and manages employees who are involved in a project going through change. The change manager makes sure that they are all well aware of the change components, what is expected from them and what must be done differently. The outcome of a survey conducted by KPMG (2003) shows that there is a better chance for the goals of change to be achieved when managed by a change expert or by a team of change specialists (KPMG 2003).

Partington (1996) states that change initiatives have different demands compared with other types of projects in terms of content and organisational context. Consequently, the management practices to achieve the goals of change are also different. Human factors are blamed for the unsuccessful projects of the organisation, and the cause usually referred to is poor management (Boddy & Buchanan 1992; Pellegrinelli 2002; Todnem 2005; Luo, Hilty, Maguire & Redman 2007). It is discussed in the literature and observed in real-life situations that managers have a

limited ability to plan, execute and influence changes (Strait 2006; Smid, Hout & Bruger 2006; Kavanagh & Ashkanasy 2006; McCleland 2005; Waldersee, Griffiths & Lai 2003). Executing changes within an organisation is usually the responsibility of a person or a team coming from diverse industries and organisational fields. It is expected that these people come from a project management or technical backgrounds, so they would have project management and technical skills. However, it cannot be taken for granted that they have skills necessary to implement change (Pellegrinelli 2002).

The literature provides information that managing and accomplishing the goals of organisational change across all industries is seen as a difficult task. According to Konnor, Stein and Jick (1992), change management is one of the most distressing and challenging duties for organisations. Pellegrinelli (2002) argues that managers without adequate experience in change management must develop the required skills to meet the goals of change. Not all skills have been learnt, and inexperienced managers may not have practiced these skills in their technical environment. As they are different from technical skills, the development of change management skills will need fostered self-awareness, understanding and interpersonal aptitude; and these types of skills are not obtained through training and development, especially by adults (Pellegrinelli 2002). Other researchers have found that organisations going through organisational transformation and attempting change throughout their projects may use management techniques that cannot be necessarily advantageous to accomplishing the goals of organisational change (Partington 1996; Pellegrinelli 1997; Pellegrinelli 2002; Pellegrinelli & Young 2003; Pellegrinelli & Partington 2006; Pellegrinelli, Partington, Hemingway, Mohdzain, Stenning & Shah 2007).

Even though change cannot occur with only one person attempting to apply it, undoubtedly, one expert or a group of professionals is needed to lead the change project. This individual, or the group, may be from a different place and possess a variety of experiences. Researchers across the literature suggest that the individual or the group experienced in change comes from a project or program management background (Dinsmore 1993; Meredith & Mantel 1995; Pellegrinelli 1997; Frame 1999; Pappas 2006; Thiry 2006; Leybourne 2006). In contrast, Burke (2010) argues that organisational change is usually initiated by senior managers, while lower-level leaders are responsible for implementing the change initiative.

However, as stated by Pollack and Algeo (2014), both project managers and change managers play a key role in planning and executing organisational change projects. Yet they think that there is no clear-cut definition of how the two disciplines are supposed to work together to deliver change projects.

According to Hornstein (2015), change cannot be avoided when a project is implemented however the way the change is managed affects the success of the project. Project managers and change managers contribute to the management of change although they come from different educational backgrounds and the two disciplines use different terminology. They also use different skill sets and competencies (Crawford & Hassner-Nahmias, 2010). However, these skills sets and competencies complement each other and contribute to the success of the change initiative. Project success goes beyond the traditional measures of project performance to extend into other fields such as organizational change management (Crawford et al., 2014).

4.5 Role of Project Managers as Change Agents

The involvement of project managers in managing projects is extensively discussed and disputed in the literature. Even though evidence on competencies of project managers and their contributions is supported by many, some publications marginalise the role of project managers. For example, Taylor (1998) argues that neither the functional control of a project nor the authority over the team is part of the responsibilities of project managers.

In contrast, Munns and Bjeirmi (1996) provide a different and more detailed definition of the positive and wide-ranging role of project managers. They state that the project manager is responsible for managing the project all through its life cycle. The project manager's main goal is to monitor and control work to achieve the final stage of a project that is considered successful by internal and external stakeholders. Project managers specify the tasks, generate the work schedule, allocate resources, monitor and assess the progression of the plan, do adjustments and ensure that the project is completed per the agreed budget. In addition, project managers manage the project team and the overall communication process to ensure that information is conveyed to the project team and its stakeholders (Munns & Bjeirmi 1996).

Moreover, project managers have been described as the individual responsible and accountable for completing the project successfully (Obeng 1994). Similarly, it has been suggested that project managers have a single point of responsibility, which is driving the project to success (Pellegrinelli 1997). They are responsible and accountable for the outcomes of the project and are stereotyped as an influence on the internal and external individuals and teams working on the project. The people they influence include the sponsors, senior manager, line manager, industry partners, contractors and project client (Kendrick 2012).

Therefore, it can be said that project managers play the main role in the different phases of the project. Yet available studies lack a clear description of the authority given to project managers in the organisational change process. Although many studies promote project managers as change agents and believe they have the required skills for managing change, this subject is widely debated. Project managers' knowledge, skills and best practices are strongly evidenced in the literature, thus challenging the opposing views and statements of some researchers who still think otherwise. For example, Clarke (1999) states that many people do not often recognise project management as something of assistance. They perceive it as something enforced on the business yet it serves a purpose. Consequently, Clarke (1999) questions the worth of project management as a tool for organisational change, suggesting that the application of project management techniques is problematic in a number of areas. First, Clarke argues that the standardisation of project management causes cultural conflicts within the organisation. Second, Clarke claims that project management is perceived by many as a supplementary control mechanism or as an additional reporting tool. Clarke (1999) also censures project management for causing inadequate official completion of organisational change projects and criticises the use of project excess patterns. Clarke states that the obligatory procedures and practices of project management create resistance to change, reduces motivation and leads to employees' lack self-confidence. Based on Clarke's discussion, the standards and the effectively planned and structured methodology of project management are seen as causes of project failure.

Conversely, numerous researchers testify that evidence-based practice and project management techniques are value-adding practices (Meredith 2002). Other empirical studies propose that applying project management as an organisational change and innovation methodology is a key element in a project's success or failure (Currie 1994; Thomas 2000; Maylor 2001). In addition, the literature includes a number of studies that support the notion of project managers as efficient

change managers. Nahmias (2009), in his research, refers to project managers, program managers and change managers as drivers of organisational change. Gareis (2009) suggests that second-order change that requires key behavioural and organisational change improves interpersonal skills, personal intelligence and the balanced methodologies used by experienced project managers. Similarly, Nikolaou, Gouras, Vakola and Bourantis (2007) have studied the skills and characteristics of competent change agents. The outcome of their study has shown that the skills of project management positively correlate with the performance of project teams even when employees resist the change. Also, recent studies agree that project managers are responsible for a particular change endeavour the minute they know that change is attempted (Dulewicz & Higgs 2005; Turner & Muller 2006).

Correspondingly, Kuruppaurachchi, Mandal and Smith (2001) describe project managers as 'leaders of change'. Kim and Wilemon (2002) agree with this concept and complement their view with the statement that project managers provide a psychologically secure work environment as part of their responsibilities during the implementation of change. In addition, project managers protect employees from what they term as 'fuzzy front end', which usually occurs with organisational change.

4.6 Project Managers' Role versus Change Managers' Role

Differences have been found between the objectives of project managers and the objectives of change managers. A project manager's main objective may be determined by his or her motive to make people apply a tool or a product that is newly implemented. On the other hand, a change manager could be predominantly more involved in a non-quantifiable and non-measurable behavioural change (Nahmias 2009). Therefore, when an organisation decides to initiate a change in a system or a product, communication of a change initiative can be done by project managers without the help of the change manager (Kotter & Cohen 2002). When the organisation's goal is to initiate behavioural change because of lack of cooperation from the employees, a person who is able to analyse behaviours and influence employees is required. In other words, a change manager is required.

This disparity in roles contradicts with other studies that define project managers as effective communicators and problem solvers; hence, they can efficiently play the role of a change

manager. The literature has provided evidence to imply that organisational change is a planned project with a deadline to meet a specific goal and must be managed as a project (Zimmerer & Yasin 1998; French & Bell 1999; Paton & McCalman 2000; Cluwe & Vermaak 2003; Pellegrinelli 2002; Smith 2005). Therefore, organisational change needs a project manager to plan and implement appropriate processes explained in the PMBOK Guide (2004). Moreover, Hornstein (2015) suggests that the rivalry between project managers and change managers is counterproductive and represents a barrier to project attainment.

The table below demonstrates the role of project managers and the role of change managers:

What project managers do	What change managers do
*Leadership	*Leadership
Planning risk	Planning/project management skills
Planning cost	NA
Planning time	NA
Planning scope and quality	NA
Monitoring and controlling cost	NA
Monitoring and controlling risk	NA
Monitoring and controlling scope and quality	NA
Monitoring and controlling time	NA
*Team development	*Team development
*Communication	*Communication
*Stakeholder management	*Stakeholder management
Governance	NA
Organisational structure	NA
Project definition	Analysis and assessment
Administration, reporting and documentation	NA
*Decision making and problem solving	*Decision making and problem solving
Team selection	NA
Technical performance	NA
Change control	NA
Contract management	NA
Closing	NA
NA	Cross-cultural skills
NA	Initiative and self-management
NA	Creativity and challenge
NA	Facilitation and presentation
NA	Process design
NA	Learning and development

NA	Action orientation
NA	Strategic thinking
NA	Influencing skills
NA	Coaching skills

Table 2: The role of project managers and change managers. Adapted from Nahmias(2009)

The table shows that the competencies of project managers mostly discussed in the literature consist of 22 most frequently mentioned project management competencies. Based on the table above, only five of the competencies are comparable to change management competencies, namely, leadership, team development, communication, stakeholder management, decision making and problem solving. Nahmias (2009) suggests that when project managers are responsible for managing change, the logic is to anticipate that they would have more skills and competencies with an emphasis on their ability to influence others.

By looking at what project managers do, it can be noted that many of their competencies are related in one way or another to people management. These competencies are leadership, planning risk, planning time, monitoring and controlling risk, monitoring and controlling scope and quality, monitoring and controlling time, team development, team selection communication, decision making and problem solving and stakeholder management. These competencies are considered in the research and investigated in depth to find out whether project managers working for UAE organisations are applying these competencies during change management. Other competencies involve the human element of change, such as governance, organisational structure, administration, reporting and documentation, technical performance, change control and contract management. Looking thoroughly at what project managers do, it can be said that their competencies would make them effective managers of the people element of change.

4.7 Summary of the Chapter

In chapter four, the competencies of project managers in relation to change management and to people management are outlined. A comparison between the role of change managers and that of project managers is carried out to identify the role of project managers in change management. The following chapter is dedicated to the research theoretical framework.

5 Theoretical Research Framework

5.1 Introduction

This chapter presents the research theoretical framework and the relationships between research dependent and independent variables. Moreover, the chapter will be divided into the following sections: the research conceptual framework that highlights the relationship between project manager competencies and the activities related to competencies in change management initiatives, an integrated framework for managing change projects, research hypotheses development and the four main components of the theoretical framework of the research.

5.2 Research Conceptual Framework

The research aims to expand the literature on project managers' role in managing people in change initiatives in the UAE context. Nevertheless, since the research is about the role of project managers in managing change initiatives, then only project management competencies for managing change initiatives would be considered. Also, only the role of project managers in managing the people element of change and their contribution to relevant success factors of change would be considered. Therefore, the research's major questions are the following:

RQ1: Do project managers in the UAE contribute to the people element in managing change initiatives?

RQ2: How do the competencies of project managers contribute to the success factors in management of change initiatives related to the people element?

Additionally, the research questions will be investigated by developing hypotheses related to the following areas:

- Planning the change
- Evaluating the performance of change projects
- Managing change projects
- Measuring the success factors

To validate the qualitative research outcomes, figure 11 below provides a research conceptual framework for the following research hypothesises:
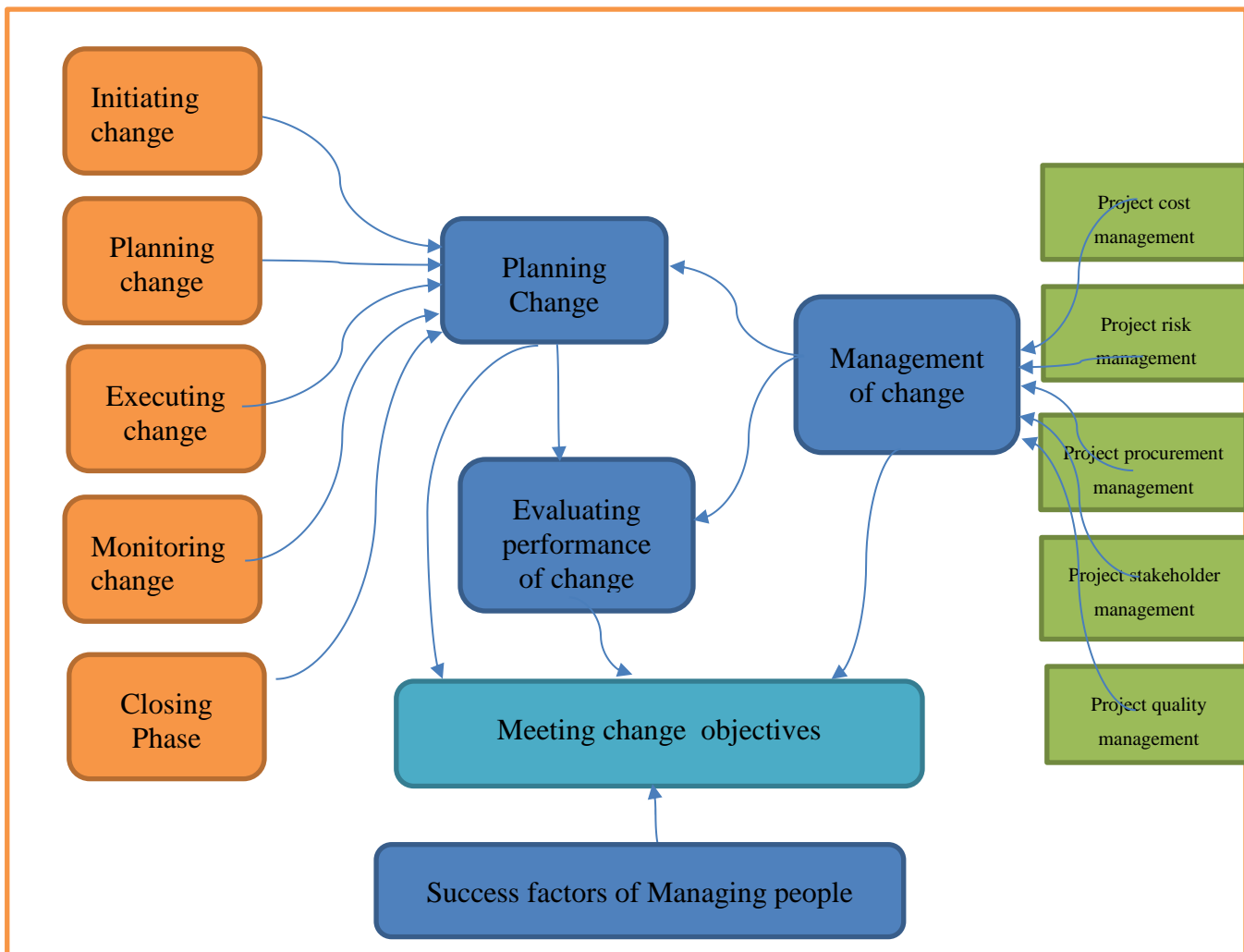
Figure 11: Research conceptual framework of the role of project managers in managing the people element of change

variables: independent and dependent. Independent variables related to planning change are grouped under five clusters: initiating change, planning change, executing change, monitoring change and closing phase. In addition, the independent variables related to management of project change are grouped into five clusters: project cost management, project risk management, project procurement management, project stakeholder management and project quality management. In addition to two more dependent variables which are performance change and success factors of managing people (motivation, rewards, training and human resources). Moreover, the dependent variables is meeting change objectives.

Based on the theoretical background and the literature review, a preliminary framework of project managers' role in change management is developed. The framework considers the success factors of a project that are related to the management of the people element of change. The preliminary framework also considers the knowledge area defined in version 5 of the PMBOK as the basis of the qualitative research.

Different projects need different management approaches (Crawford 2005); therefore, project managers are supposed to have special competencies, skills and personality (Müller & Jugdev 2012; Müller & Turner 2007). As for the management of the different project success factors, project managers pursue challenging projects. Complex projects and the fixed price of contracts require more awareness to the prominence of success factors. Highly experienced project managers focus on team satisfaction as one of the most important and effective success factors. Project managers manage their project with the successful closing in mind. Therefore, when their responsibilities go beyond planning, executing and closing to managing the success factors, then the project is expected to be more successful (Müller & Jugdev 2012; Müller & Turner 2007). Per Müller and Turner (2007), there is a growing confidence that it is the experience of project managers that contributes to the success of the different types of projects.

Project Manager Competencies

- Leadership
- Team Development
- Communication
- Stakeholders' Management

Activities Related to Competencies

- Motivation
- Participation
- Commitment
- Training
- Communicating Change Motives
- Communicating Change Consequences
- Managing Stakeholders
- Reducing Resistance to Change
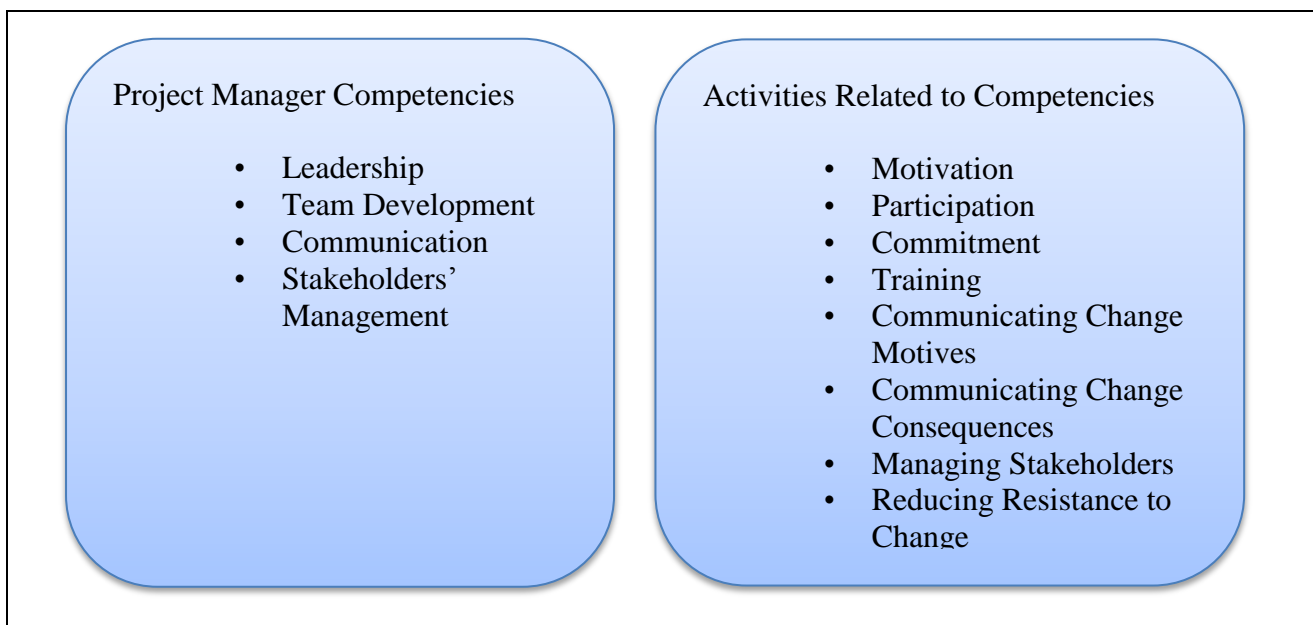
Figure 12: The role of project managers in implementing success factors related to managing the people element of change

5.3 Components of the Framework

The four main components of the theoretical framework of the research are as follows:

5.3.1 Initiating change

According to Melton et al (2008), change maybe initiated at the individual, group or organization level. The change may affect all the organization or only some of its departments. Change can happen as a strategic management plan initiated at board level then the impact will be on the whole organization, on the other hand, the initiated change may be tactical thus the change will affect one or more part of the organisation. The change may be initiated as an operational management decision. In this case the change will have little impact on the whole organisation and affects the business goals of a certain group of employees. Change may be initiated as long-, medium-and short-term change.

Melton et al (2008) argue that organizational change is usually initiated due to the following reasons: 1) management restructuring 2) changes in work practices 3) changes in operating procedures 4) new work patterns 5)skills development 6) operational development. ON the other hand, Kerzner (2005) suggest that senior managers are convinced to initiate change under the influence of certain factors such as: 1) economic crisis 2) declining market share 3) strong competition 4) low profitability 5) low employee morale, which affect the efficiency of work (Kerzner, 2005).

As per PMI (2013a), the Initiating Process Group is carried out to start a new project or a new phase within a running project. When a new project or a phase of a project is initiated, it is important to identify the stakeholders who will impact or be imparted by the change. The project management approach should consider people's requirements as well as organizational needs. This includes understanding the need of the business sponsor (PMI, 2013a).

5.3.2 Planning the Change

According to Pollack and Algeo (2014), both project managers and change managers play a key role in planning organisational change projects. Zakaria et al. (2015) suggest that good project managers possess seven skills: leadership skills, communication skills, problem-solving and

decision-making skills, team building skills, conflict resolution skills, planning and goal-setting skills and sense of responsibility and time management skills. According to Zakaria et al. (2015), the skill in planning construction projects is considered the most critical skill among the seven skills listed above. Moreover, Cocks (2014) states that planning involves planning project change, and the planning process involves managing project teams along with other resources. Pollack and Algeo (2014) argue that both project managers and change managers play a major role in planning change projects.

As mentioned earlier, the PMBOK (2014) states that albeit the effective practice of integrating the project management planning within the change management activities, a lot of project managers do not quite understand the role they play in change management. In addition, change management is usually stereotyped as 'focusing on the people side'. It is somewhat confirmed that project managers are able to manage the technical side of organisational change, but also there is doubt whether all project managers understand the critical role they play in change management (PMBOK 2014).

Therefore, this research aims to investigate the role of project management in managing change initiatives with a focus on people management. The research will reveal the competencies of project managers which contribute to the success factors of change.

H0 There is no statistically significant difference in the ranking of planning change variables based on respondents' position.

H1 There is a statistically significant difference in the ranking of planning change variables based on respondents' position.

H2 The performance of PMs in planning the change is not associated with their skills.

H3 The performance of PMs in planning the change is associated with their skills.

5.3.3 Evaluating the Performance of Change Projects

The success of change projects would be enhanced if in-depth analysis of the organisational performance is conducted. The analysis would help project managers identify alternate solutions for enhancing project performance. Moreover, evaluating the complexity of the project and

understanding the reason behind employee resistance and the selection of the most promising change project initiatives contribute to the success factors of change initiatives (Mu¨ller & Turner 2007).

Evaluation of the performance of change projects depends on the type, size and nature of change. Evaluation is a continuous process that is done at any milestone throughout the project life cycle (Koelmansk 2004).

Murch (2011) states that project managers evaluate projects and their requirements through constant monitoring. Initiating and planning a project is achieved through establishing its setup, path and baselines and measuring variance and then managing change accordingly. Project managers ensure the progress of a project by working towards defined goals, resolving occurring problems, managing uncertainty and mitigating risks. To accomplish the objectives of a project, project managers create a positive environment for the project teams and guide them to deliver the change application.

On the other hand, the fifth addition of the PMBOK states that project managers have the ability to identify, analyse and control the risks in a project. When project managers collect and assess data, they can improve the staff development plan, communication plan and stakeholders' adoption strategies. In addition, project managers' knowledge area of human resource management is seen as a competency that qualifies them to lead and evaluate the performance of change project teams. In addition, the book also emphasises the role of project managers in monitoring, controlling and managing the entire communication of change, including the project management plan updates and the organisational assets updates.

According to the PMBOK Guide (PMI 2013a), the monitoring and controlling phase involves addressing budget considerations and mitigating unpredicted risks that may affect the human resources' ability to achieve project expectations. Project managers drive the project forward by monitoring its progress and using their vision and immediate response to resolve project challenges. Project managers assess the performance of the project and modify the project plans and schemes based on the stakeholders' needs and interests.

This research considers the importance of evaluating the performance of the project and the influence of this activity on the success of change initiatives. Without monitoring and evaluating

the performance of the project and the performance of its working teams, success factors may be ignored, and the value creation and organisational adoption would not be achieved.

H0 There is no statistically significant difference in the ranking of evaluating the performance of change effort variables based on respondents' position.

H1 There is no statistically significant difference in the ranking of evaluating the performance of change effort variables based on respondents' position.

H2 The performance of PMs in evaluating the performance of change is not associated with their skills.

H3 The performance of PMs in evaluating the performance of change is associated with their skills.

5.3.4   Managing Change Projects

Oswick and Robertson (2009) explain that in the change management discipline, a change initiative is defined as a project or a program. This definition has a reference to project management skills and techniques. However, as stated by Pollack and Algeo (2014), both project managers and change managers play a key role in managing organisational change projects. Cicmil et al. (2006) suggest that project managers should engage in activities that go beyond the traditional control agenda and include in their skill set the ability to guide organisational change projects.

There are strong similarities between project managers' and change managers' roles (Crawford 2011). The personal competencies necessary for managing change initiatives have been explained by Crawford and Nahmias (2010). The main change management competencies discussed and quoted by Zadeh et al. (2016) are 'leadership, stakeholder management, team development, planning, communication, decision making, cultural awareness, and problem solving'.

The fifth edition of the PMBOK identifies 10 project management knowledge areas. All these knowledge areas are used in managing projects and consequently are used in managing the change in projects. However, although the ability of project managers to effectively manage change is justified, this subject is still debated. This research sheds light on the change

management competencies of project managers and investigates how these competencies are applied in managing the people element of change within the UAE context.

H0 There is no statistically significant difference in the ranking of managing people variables based on respondents' position.

H1 There is no statistically significant difference in the ranking of managing people variables based on respondents' position.

H2 The performance of PMs in managing change projects is not associated with their skills.

H3 The performance of PMs in managing change projects is associated with their skills.

5.3.5   Measuring the Success Factors

Clarke and Manton (1997) argue that several organisations usually focus on the change process more than the success factors to meet the change objectives. On the other hand, Heldman (2011) states that the process of project quality management is a key task performed by project managers. Quality management is concerned with measuring performance and monitoring project deliverables to ensure that the project meets its objectives. Project managers, to maintain quality, continuously identify risks and plan risk responses and control the risks (PMI 2013a).

The change success factors of communication, motivation, participation, commitment, training and leadership identified by Guler (2010) are used for this research. These competencies, among others, explained in the literature, are performed and assessed by project managers throughout the project life cycle (Zulch 2014; PMBOK Guide 2004; PMI 2015; PMI 2012; Steyn 2008; Steyn 2012). All the success factors are related to managing the people element of change, thus contributing to the aims and objective of this research.

H0 There is no statistically significant difference in the ranking of managing the organisational side of project change variables based on respondents' position.

H1 There is no statistically significant difference in the ranking of managing the organisational side of project change variables based on respondents' position.

H2 The performance of PMs in measuring the success factors is not associated with their skills.

H3 The performance of PMs in measuring the success factors is associated with their skills.

5.4 Summary of the Chapter

Chapter five presents the integrated framework for managing change projects that define the conceptual framework of the research. The hypotheses that are tested are listed, and the components of the research are outlined. The variables that developed the research hypothesis are justified, and the relationships that will be investigated are explained. The next chapter is dedicated to the research methodology and design.

6 Research Methodology and Design

6.1 Introduction

This chapter provides insight into the research methodology and design applied to meet the objectives of this study. Methodology is defined as the arranged techniques used to investigate a particular situation. Methods are specific techniques used for collecting and analysing data (Easterby-smith, Thorpe & Lowe 2002). In another opinion, methods refer to the procedures or the process of collecting data, and methodology describes the types, paradigms and approaches of a research (Cohen & Morrison 2007). Research methods are categorised into quantitative and qualitative (Creswell 2009).

This research uses a mixed methods design (Tashakkori & Teddlie 2003). Both quantitative and qualitative research methods are selected to fully understand the research problem (Creswell 2002). The rationale for selecting the mixed methods is that neither the quantitative method nor the qualitative method alone is adequate to capture the particulars and the trend of the situation. By combining the quantitative and qualitative methods, a more comprehensive analysis is achieved (Tashakkori & Teddlie 1998).

When designing a mixed methods methodology, three issues should be considered: priority, execution and integration (Creswell, Plano Clark, Guttman & Hanson 2003). First, priority means that the researcher has to decide whether to emphasise the qualitative or the quantitative method. Execution is the decision of whether collecting and analysing the quantitative and qualitative data will be done in sequence or in chronological stages. The researcher has to decide whether it is better for the study to collect and analyse data one at a time, one after the other, concurrently or in parallel. On the other hand, integration is the step when the qualitative and the quantitative data are mixed or connected together.

6.2 Research Paradigm

Sekaran (2003) argues that research is a process based on objectivity and consistency rather than instincts and experiences. The research process aims to find responses to questions by following a methodical, systematised and precise method to collect and analyse data and then extract logical and valid conclusions.

To study a particular phenomenon in a systematic way, Easterby-Smith et al. (2002) classify research in key types:

1- Pure type of research: Leads to the development of a theory with or without practical implications and may be divided into three forms:
   - Discovery form: A recent notion or description develops as a result of an empirical research and leads to a revolutionary idea about a specific subject.
   - Invention form: An innovative research idea, method or technique is developed to sort out a specific research problem.
   - Reflection form: A current theory, idea or technique is reassessed in a different context (Easterby-Smith et al. 2002).

2- Applied type of research: Leads to finding a resolution for a specific research problem.

3- Action type of research: An ongoing problem-solving process steered by persons working with teams to enhance the way problems are addressed (Easterby-Smith et al. 2002).

Saunders, Lewis and Thornhill (2007) further describe research as a process based on philosophically grounded suppositions relevant to a researcher's consideration or view of 'reality'. In the literature, this reality is termed as ontology and epistemology.

- Ontology: For Cohen, Manion and Morrison (2007), ontology is how a researcher sees and understands the 'real world' and develops assumptions and investigates nature or the principles of social phenomena. Lancaster (2005) defines ontology as a theory established on a researcher's propositions related to nature or to a social phenomenon.

- Epistemology: Saunders et al. (2007) argue that epistemology is a research concerned with knowledge rather than belief. Cohen et al. (2007) state that epistemology is related to assumptions made based on the foundation, nature and different forms of knowledge and to the way it is obtained and conveyed to people.

Moreover, a research paradigm is a philosophical view of describing reality that has conformity within a particular group of people at a definite time (Saunders et al. 2007). Paradigms are the scientific realisations that provide exemplar problems and resolutions to group of specialists at a certain period of time (Johnson & Duberley 2004). Paradigms are defined as one of two approaches: social constructivist and positivist.

- Positivist: According to Cohen et al. (2007), positivism is based on genuine knowledge advocated through observation, experiment and judgment, leading to understanding and explaining human behaviour by means of a scientific description. Easterby-Smith et al. (2002) argue that the positivist accepts as true that the nature of the world is concrete and exterior. Hence, the exploration of the positivist is based only on observed and attained facts through direct information and data. Creswell (2007) states that the positivist is a logical approach that focuses on cause, empirical data and former theories (Creswell 2007).

- Social constructivist: The constructivist approach opposes the positivist and sees reality as neither external nor objective. The constructivist believes that reality is a social construct deriving its meaning from people (Easterby-Smith et al. 2002). From their experiences, social constructivists form subjective meanings of reality and direct these meanings toward certain matters or objects (Creswell 2007). Because the meanings are numerous and wide-ranging, a researcher would search for complex views rather than limiting the meanings to a few types and ideas (ibid). To achieve the research objectives, the researcher usually depends on the participants' viewpoints of the researched situation (ibid).

On the other hand, Saunders et al. (2007) define deduction and induction as the fundamental building blocks of research (Sekaran 2003), and they are termed as research approaches that are descriptive, explanatory or exploratory. Theories based on these approaches lead to understanding, explaining and predicting a phenomenon (Saunders et al. 2007).

- Deduction: A process applied by a researcher to reach a logical conclusion by reasoned generality of an accepted common fact (Sekaran 2003)
- Induction: A process applied by a researcher to observe a particular phenomenon or fact to reach a general conclusion (ibid)

6.3 Qualitative Research Methodology and Design

Qualitative research is considered by Choy (2014, p. 102) as a 'highly self-aware acknowledgement of social self, or of a researcher's position in society'. The focus of the qualitative approach, in contrast to quantitative research, is not limited to a specific question (Neuman 2006). The qualitative method normally refers to a wide range of data collection and

data analysis methods. It applies semi-structured and open-ended questions in interviews with purposive sampling (Dudwick, Kuehnast, Jones & Woolcock 2006).

The qualitative researcher usually designs the study, collects information, interprets and analyses collected data the same way the quantitative researcher does. In many cases, the researcher attempts to construct a new theory, create new concepts or emphasise a current theory (Neuman 2006). The last phase of the qualitative research is presenting the results through a reporting style that varies according to the research approach (Neuman 2006).

Qualitative research is frequently based on explanatory or critical social science and relies on the positivist approach. Researchers use 'logic in practice' and follow a 'nonlinear research path'. They carry out detailed investigations of cases that occur in the context of social environments.

The qualitative method has its strengths as it helps the researcher obtain detailed information by exploring the opinions and perspectives of particular individuals or diverse groups within a given context (Dudwick, et al, 2006). This approach is important for cultural considerations as it allows the researcher to examine core values, beliefs, suppositions and behaviours (Yauch & Steudel 2003). In the qualitative approach, the investigation is comprehensive and the inquiries are open-ended, allowing the participants to express their views in detail. The qualitative researcher does not normally have defined or limited issues to investigate (Yauch & Steudel 2003).

The qualitative research methodology has its weaknesses also. Its main disadvantage is associated with the nature of the qualitative cultural analysis as the process is time-consuming, and a key issue may be ignored or a problem may be unobserved. Moreover, the researcher's knowledge and the personal and professional experience of the researcher may have an impact on the research observations and/or conclusion. Because the inquiry in the qualitative research method is usually open-ended, the interviewees control the content of the collected information (Yauch & Steudel 2003).

In general, four data collection methods are identified for qualitative research: 'participation, direct observation, interviewing, and first hand analysis of documentation' (Creswell 2007). The research method includes in-depth interviews using open-ended questions. It is appropriate to achieve the objectives of the study and will lead to the following:

1- Answering the research question
2- Exploring the lived experiences

3- Producing new knowledge about the studied phenomenon (Creswell 2009)

4- Respondents revealing information based on their personal experience and level of engagement in the scenario under study (Yin 2003)

Then, the researcher uses qualitative research when the aim of the research is to explore. Thus, open-ended questions are asked by the researcher to obtain detailed information from the participants. The interest of qualitative researchers is mainly related to how people position themselves, the settings of these people and how they make sense of their environments through social rules and structures, as well through symbols and rituals (Berg 2007). Information collected for a qualitative research is not responsive to mathematical measurements (Lancaster 2005).

Saunders et al. (2003) further explain that quantitative research involves statistical data and measurement as hypotheses are tested using numerical and mathematical models. In opposition, quantitative research is related to the positivist paradigm where the objective reality is accessed and tested, which applies to the objectives of this research.

Neill (2007) argues that it is not required to set one approach in opposition to the other. On the other hand, Siegle (2002) suggests that each research approach operates with altered assumptions and states, 'It is unfair to judge qualitative research by a quantitative research paradigm, just as it is unfair to judge quantitative research from the qualitative research paradigm'. Similarly, Gall, Borg and Gall (1996) argue that at an epistemological level, it is difficult to decide whether one of the approaches has a better appeal to truth than the other. Krathwohl (1998) and Howe and Eisenhart (1990) suggest that the selection of an applicable approach is verified by the research question.

6.3.1   Data Collection and Sampling

According to Yin (2009), data collection is the fundamental function of a research. Sources of data are divided into primary and secondary sources. To collect information for a research topic, the researcher acquires primary or, as termed by Sekaran (2003), 'firsthand' information. On the other hand, secondary data is defined as data collected from existing sources (Sekaran 2003). Some of the main types of data collection methods, as explained by Yin (2009), are observations, questionnaires, interviews, documentations and records.

It is noted that the same data collection method can generally be applied to collect either qualitative or quantitative data. For instance, questionnaires may be composed of open-ended questions for qualitative data and numerical scales for quantitative data. Interview questions may contain numerical aspects for investigating frequency and qualitative aspects for answering a WH question. Certainly, numbers are quantitative in the basic defaulting logic of quantitative data. However, numbers can also be representations of content; thus, they have a qualitative aspect (Bayman 2001).

Sekaran (2003) explains that because a researcher cannot collect data form the entire population, samples are selected for the investigation process. Another reason for sampling is the attempt to produce results that are more reliable. The main types of sampling are probability and nonprobability sampling.

- Probability sampling: The population relevant to the research problem has the approximate probability of being nominated as sample subjects (ibid).
- Nonprobability sampling: Investigators do not rely on a probability theory or sample selection. Instead, they either develop a quasi-random sample or have a defined plan for a substantial group or groups as the sample reflecting the research problem (ibid).

Masters et al. (2006) state that in a qualitative approach, the outcomes are merely related to the sample, while outcomes of a quantitative approach may well be generalised to the population. For additional explanation, it can be summarised that small non-random samples are considered one of the qualitative research characteristics. Conversely, large and randomly representative samples are normally selected as participants of quantitative research (Merriam 1988). This view has been supported by other researchers. For example, Hoepfl (1997) suggests that 'in quantitative inquiry, the dominant sampling strategy is probability sampling, which depends on the selection of a random and representative sample from the larger population' (Hoepfl 1997, p. 51).

6.3.2   Collecting Qualitative Data

Berg (2004) defines case study as a systematic method of collecting adequate data related to a social context, event, setting or person or group of people with the purpose of effectively understanding how the research subject functions or operates. Similarly, Luck et al. (2006) argue that a case study is a thorough and intensive study carried out in a real-life situation to

understand a certain contextual and bounded phenomenon. According to Yin (2009), a case study is an in-depth empirical investigation of a current phenomenon within its actual context, particularly when the boundaries between a phenomenon and its context are not obvious.

Therefore, this research adopts the multiple case studies approach that is defined by Creswell (1998) as an exploration of a case (or multiple cases) during the course of a definite period of time to gather in-depth data from a number of sources within a rich context. Then, this research is an exploratory study that uses case studies as the appropriate approach to explore the role of project managers in change management within the UAE context. Sekaran (2003) argues that an exploratory study is usually carried out when little information is available about the research problem. On the other hand, Creswell (2009) notes that qualitative research is exploratory and convenient when the key variables to be examined are not in hand. The exploratory case studies approach has been selected because the problem of this research has not been addressed yet and the existing theories do not fully apply to the specific samples under study (Morse 1991). This research is a study of a problem in its natural settings in an attempt to make sense of and interpret a phenomenon to understand the meaning people bring to it in a real-life situation (Creswell 1998). Therefore, this research is categorised under the social constructivist paradigm. According to Easterby-Smith et al. (2002), this type of research follows the interpretive method. To achieve the objectives of the study, broad interviews with several people will take place to understand the phenomenon (Sekaran 2003).

Researcher uses generalisation of theories from prior experiences and literature

Researcher tries to find and select from broad patterns, generalisations or theories

Researcher gathers information through interviews

Researcher asks the subjects open-ended questions and records field notes

Researcher analyses collected data to form categories or themes

Figure 13: The inductive logic of the qualitative research method. Adopted from Creswell, (2009)

6.3.3   Using Case Studies as a Research Tool

Stake (1995) defines case study as a strategy of inquiry in which the researcher explores in depth a program, event, activity or process. Stake (1995) argues that researchers select the case study's method for different purposes and classifies case studies into three types: intrinsic, instrumental and collective.

- Intrinsic case study: Carried out when the purpose is to understand the particular case in query
- Instrumental case study: Conducted when the researcher needs to inspect a specific case to gain awareness of a theory or problem
- Collective case study: Carried out when the researcher aims to inspect groups of individual studies to get a bigger picture of the research problem

Yin (2009) suggests a further division of case studies: descriptive, explanatory and exploratory.

- Descriptive case study: When the researcher provides narrative accounts
- Explanatory case study: When the research is conducted to test theories
- Exploratory case study: May be applied as a pilot research for larger social studies

Case studies are a suitable method for formulating theories. It is also suitable for explanatory studies, where theories are applied as a basis for grasping and explaining certain practices or procedures (Scapens 1990). According to Berg (2004), qualitative investigators use the case study approach as a guide to their research. By concentrating on a single phenomenon, individual, community or institution, the researcher aims to uncover the manifest interaction of significant factors characteristic of this phenomenon, individual, community or institution. In addition, the researcher is able to capture various nuances, patterns and more latent elements that other research approaches may overlook.

The construal of the research phenomena positions this study in the social constructivist paradigm. Yin (2003) suggests that an exploratory case study design is right for a research aiming to investigate and explore a specific phenomenon that has specific activities and time limit. Besides, the exploratory case study approach gives the researcher an opportunity to discern the decision-making process over a period of time. Its suitability relies on the interview ability of gathering broad data elements that occurred in the past as well as in the present (Yin 2003). The

case study investigation has a formal design, illustrated in the figure below, which consists of five components recommended by Yin (2009, p. 27).

Case Study Design
Study questions
Theoretical background
Identification of unit analysis
Logical linking of data to the theoretical background
The criteria for interpreting research findings

Figure 14: The formal designs for case study investigation. Adapted from Yin (2009)

As stated by Yin (2009), the formal design for a case study approach consists of five steps, which begin with selecting questions that are related to the theoretical framework of the study. The unit of analysis is identified; then the data are linked to the theoretical background of the study. The last step is interpreting the findings of the research conducted using the case study approach.

6.3.4 Advantages and Disadvantages of Interviews

Kvale (1983, p. 174) defines an interview conducted specifically for a qualitative research as 'an interview, whose purpose is to gather descriptions of the life-world of the interviewee with respect to interpretation of the meaning of the described phenomena'. The collection of information may be achieved through face-to-face interviews, telephone interviews and interviews using computer-mediated communication (Raymond 2006). This study suggests the face-to-face interview as the appropriate method for collecting the required information.

 Interviews are divided into three main types: structured, semi-structured and unstructured. This research is mainly concerned with semi-structured interviews that will allow the inquiry of detailed data provided by the respondents. The interview is seen as the appropriate method for

collecting data for this research. However, generally speaking, interviews have their advantages and disadvantages.

In an interview, the researcher is able to establish rapport with the participants and can motivate them to respond to the questions. The researcher can elucidate questions and add follow-up questions to obtain clear responses and rich data. In face-to-face interviews, the researcher can read the respondent's gestures and nonverbal messages. In addition, visual aids may be used to explain some points when required (Ali 2010). Face-to-face interviews may be recorded with the consent of the subject, or the interviewer may take notes. However, doing both tape recording and note taking is advised for three main reasons:

- To ensure the interviewee responds to all the questions
- The avoid problems caused by the malfunctioning of the tape-recording device
- To avoid problems that may occur because of the interviewer malfunctioning (Bryman 2001)

One advantage of face-to-face interviews is that the researcher will have the opportunity to create a good atmosphere and can end the meeting by asking the interviewee if he or she has anything to add. This can provide the interviewer with a totally new type of information. It is essential to mention that one main disadvantage of tape-recording an interview is the time spent in transcribing the collected information as one hour of recorded information will take the researcher nearly six hours of transcription work (Bryman 2001).

Another disadvantage of interviews is that they are considered time-consuming and may be costly if the research is carried out in a wide geographical destination. In a one-to-one interview, respondents may not reveal accurate information because of confidentiality issues, or they may end the interview if they are not comfortable. On the other hand, interviews may lead to interviewer bias; that is why training is required (Ali 2010).

6.4 Research Methodology

Per Yin (1994), the correlation between the research methodology and the research questions is a key factor affecting the selection of the research methodology. When using the quantitative research, as stated by Saunders, Lewis and Thornhill (2003), the researcher uses numerical measurement and statistics and the questions asked are precise. For testing mathematical models,

the view of the positivist paradigm is supported as a detached actuality can be accessed and measured (Ali 2010). Conversely, when researchers select the qualitative research method, the researcher tends to ask open-ended questions to acquire more detailed information from interviewees (Lancaster 2005). The main intention is to explore, so researchers are more concerned about human settings and how they make sense of their environments through social rules and structures, as well as through symbols and rituals (Berg 2007). Then the information collected for the qualitative research is not open to numerical measurement (Lancaster 2005). The selection of the methodology of this research is influenced by the scope and depth of the research problem. The objective of this research is to investigate the role of project managers in managing change initiatives. Therefore, this research is categorised as a mixed method exploratory study. Per Sekaran (2003), an exploratory study is selected when little information is available about the research problem or how similar research problems were previously resolved. According to Creswell (2009), exploratory studies are related to the qualitative research method, which is most advantageous when important variables are not accessible for examination. Then the exploratory approach is useful for this research because the topic is new or has not been addressed yet, and the current theories do not relate to the specific sample of the study (Morse 1991).

The aim of this research is to investigate the role of project managers in managing change initiatives; therefore, the case study method is selected as the preferred method for this study. According to Easterby-Smith et al. (2002), this type of research is related to the interpretive methods. Sekaran (2003) explains that the interpretive method requires broad interviews with various people to acquire data and comprehend the phenomena. The respondents were asked semi-structured open-ended questions that are exploratory in nature (Yin, 2009). Structured questions have been asked to all the respondents. However, follow up questions were used to obtain further information when required (Interview questions are available in Appendix 1).

 This type of interview questions provided the respondents with an opportunity to reveal detailed information related to the subject matter of the study based on their experience and level of engagement in the setting under study (Yin 2003). The questions were developed to obtain information related to the research questions. Interviews have been conducted in English language. This has not been an issue as the most of the communication in the UAE business sector in done in English. ,

The selected research method and design are seen as appropriate to achieve the objectives of the study, which will lead to answering the research question. Investigating the lived experiences of project managers during change management would generate new knowledge about this phenomenon (Creswell 2009).

According to Cohen et al. (2007), when the researcher selects the case study method, the interpretive tradition of research is followed. The researcher, in many cases, sees the situation from the participants' perspective (Cohen et al. 2007). Thus, selecting the research information and the subjects is a key factor in qualitative research (Cohen et al. 2007).

Bogdan and Biklen (1992) state that when a research is initiated, the researcher has to determine the surrounding environment of the addressed problem, the subjects of the research, the time needed for each activity, the data to be collected and the analysis method that will be used. Likewise, Goetz and Le Compte (1984) explain that the researcher has to define the relevant questions, the participants who will provide responses to the questions, the contexts associated with the questions and the period of time to which the questions are applicable.

For this study, the data is collected from three governmental or semi-governmental organisations that experience major organisational change. The respondents are project managers and department managers who witnessed and were engaged in the change within their organisation. A letter for data collection has been sent to the organisations, consent forms have also been sent to the respondents and confidentiality of data has been maintained. Objectivity of the researcher and authenticity of data are considered. In general, research ethics are carefully maintained throughout the research life cycle.

For the benefit of this research, to reduce the disadvantages of the interview approach, triangulation has been used to validate the research findings and to collect further information. The quantitative method using a survey is used, and the outcome is analysed and mapped to the interview outcomes. Using the quantitative method to validate the outcomes of the qualitative method has also allowed the capturing of different dimensions of the role of project managers in managing the people element of change in the UAE context.

6.4.1   Validity and Reliability

Gerring (2007) argues that validity and reliability are key factors in any qualitative research. The validity and reliability of a research enhance the assessing and judging of the research quality. Yin (2009) emphasises the importance of constructing a case study, which requires validity, reliability and external validity. Construct validity is defined by Yin (2009) as the identification of the exact operational measurement of the researched concepts. Reliability is defined as the ability to repeat the research operations, such as the data analysis process, and come up with the same results. External validity is related to the field to which the research's outcomes can be generalised. Yin (2009) argues that the validity of a research is enhanced when the researcher clarifies with the participants the draft report and the proper research protocol is used. External validity is attained when the replication of logic in multiple case studies is applied. To ensure the validity, reliability and external validity of this study, other than triangulation, the following steps have been taken:

- The data have been collected from variant sources. For this study, the variant sources are project managers working for different sectors and department managers.
- After the interview, the notes have been shared with the respondents, who were given the opportunity to make any changes that may serve the purpose of the study.
- The replication of logic in the research multiple case studies is applied.
- The protocol of research in general and in case studies in particular is followed. The same processes and activities are followed throughout the investigation.

Moreover, the following criteria for trustworthiness, suggested by Guba (1981), are applied for validation and reliability of this study:

- Adoption of research methods which are well recognised and suitable for the research subject matter and purposes.
- Familiarity with the culture of the case studies. Early visits to the organisations took place to have a clear idea about the organisations' change project and work environment.
- Strategies to ensure the respondents' sincerity and honesty. All the participants knew that their participation would not result in any negative consequences to them as individuals or to their organisations. They were promised confidentiality of their names and their organisations' names.

- Iterative interrogating in data collection conversations. The interviews are semi-structured, and several follow-up questions were asked to confirm some parts of the responses and to obtain more in-depth information.

- Use of 'reflective commentary' to enhance 'progressive subjectivity'. The first impressions of each data collection interview were recorded. The categories emerging in the data collected are revised more than once, and changes are done to select the most relevant to the study purposes.

- Dense description of the phenomenon under study. The phenomenon under study has been described in detail within its context. The subjects are performing within the study-specific environment, and their contributions are based on their professional experience within the same field.

- Consideration of preceding research for structure findings. A thorough literature review of project managers' role in change management is conducted. The findings are mapped to previous research. Conformities and nonconformities with previous contributions are documented.

6.5 Quantitative Research Methodology and Design

6.5.1 Triangulation Concept

Triangulation means using more than one method to collect data on the same topic. This is a way of ensuring the validity of the research through the use of a variety of methods to collect data on the same topic, which involves different types of samples as well as methods of data collection.

However, the purpose of triangulation is not necessarily to cross-validate data but rather to capture different dimensions of the same phenomenon.

In the social sciences, triangle is often used to indicate that two (or more) methods are used in a study to check the results of one and the same subject. 'The concept of triangulation is borrowed from navigational and land surveying techniques that determine a single point in space with the convergence of measurements taken from two other distinct points' (Rothbauer 2008). The idea is that one can be more confident with a result if different methods lead to the same result.

Triangulation is a powerful technique that facilitates validation of data through cross verification from two or more sources. In particular, it refers to the application and combination of several research methods in the study of the same phenomenon (Bogdan and Biklen, 2006).

- It can be used in both quantitative (validation) and qualitative (inquiry) studies.
- It is a method-appropriate strategy of founding the credibility of qualitative analyses.
- It becomes an alternative to traditional criteria such as reliability and validity.
- It is the preferred line in the social sciences.

However, the purpose of triangulation is not necessarily to cross-validate data but rather to capture different dimensions of the same phenomenon. By combining multiple observers, theories, methods and empirical materials, researchers can hope to overcome the weakness or intrinsic biases and the problems that come from single-method, single-observer and single-theory studies (Bogdan & Biklen 2006).

The purpose of triangulation in qualitative research is to increase the credibility and validity of the results. Several scholars have aimed to define triangulation throughout the years.Cohen and Manion (2000) define triangulation as an 'attempt to map out, or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint'.Altrichter et al. (2008) contend that triangulation 'gives a more detailed and balanced picture of the situation'. According to O'Donoghue and Punch (2003), triangulation is a 'method of cross-checking data from multiple sources to search for regularities in the research data'.

As per Erina Audrey (2013), 'triangulation also crosschecks information to produce accurate results for certainty in data collection'.

Denzin (1978) has identified four basic types of triangulation:

- Data triangulation: Involves time, space, and persons
- Investigator triangulation: Involves multiple researchers in an investigation
- Theory triangulation: Involves using more than one theoretical scheme in the interpretation of the phenomenon
- Methodological triangulation: Involves using more than one method to gather data, such as interviews, observations, questionnaires and documents (Denzin 2006)

6.5.2 Collecting Quantitative Data

This study applies the sequential explanatory mixed methods design. This method means that data collection will consist of two distinctive phases (Creswell 2002, 2003). In phase 1 of data collection, the interviews are conducted to collect adequate data to understand and interpret the phenomenon. The collection of the quantitative, numeric data is achieved in phase 2 through a web-based survey. The objective of the quantitative study is to validate the qualitative data and to collect additional information to answer the research questions.

6.5.3 Research Design

The questionnaire mainly aims to reveal project managers' competencies and skills utilised or ignored throughout the change process.. The questionnaire was administered to project management professionals who have been involved in change initiatives within the UAE context. The respondents had access to the questionnaire through was through the Survey Monkey. The link to the survey was emailed to the interview respondents to encourage them to participate in the survey. A number of 50 respondents contributed to the survey. Only 39 project management professionals provided valid and complete responses which are considered in this research. The incomplete and the anonymous responses were disregarded to ensure the validity and the reliability of contributions. Thus, the total percentage of responses is 78%. The questions focus was to collect information on the dependent and independent variables of the research.

The responses were recorded in Microsoft Excel as well as in the statistical analysis software: Statistical Package for the Social Sciences (SPSS) 16.

6.5.4 Questionnaire Distribution

The questionnaire attached as Appendix 1 is broadly divided into five sections.

Section 1: Demographics

The section aims to reveal the respondents' position, gender, age range and job industry.

Section 2: Planning change

The section is subdivided into the initiating, planning, execution, monitoring and control and closing phases.

Section 3: Evaluating the performance of the change effort

Section 4: Managing people (motivation/rewards/training/human resources)

Section 5: Managing the organisational side of project change

The section is subdivided into project communication management, project risk management, project procurement management, project stakeholder management and project quality management.

6.6 Research Design

Research design is defined as the research plan and process that limits the choice or decision from wide-ranging assumptions to comprehensive data collection and analysis methods (Creswell 2009). The research design is described as 'deals with a logical problem and not a logistical problem' (Yin 1989, p. 29). In other words, matters of sampling, selecting the method of data collection and designing questions are all supplementary activities to the researcher's main task of collecting proper evidence.

Cooper and Schindler (2006) identify the research design as the blueprint for answering research questions to achieve the objectives. Additionally, Yin (2009) suggest, 'The design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions' (Cooper and Schindler 2006, p. 24).

The researcher's decision, in general, includes the design that will be used to study a subject based on the nature of the problem addressed, the researcher's experiences and the target audience of the research (ibid). Per Creswell (2009), the framework of the design consists of the association of strategies of inquiry, worldviews and research methods.

The method process for this research is illustrated in the below figure and explained in the following sections:
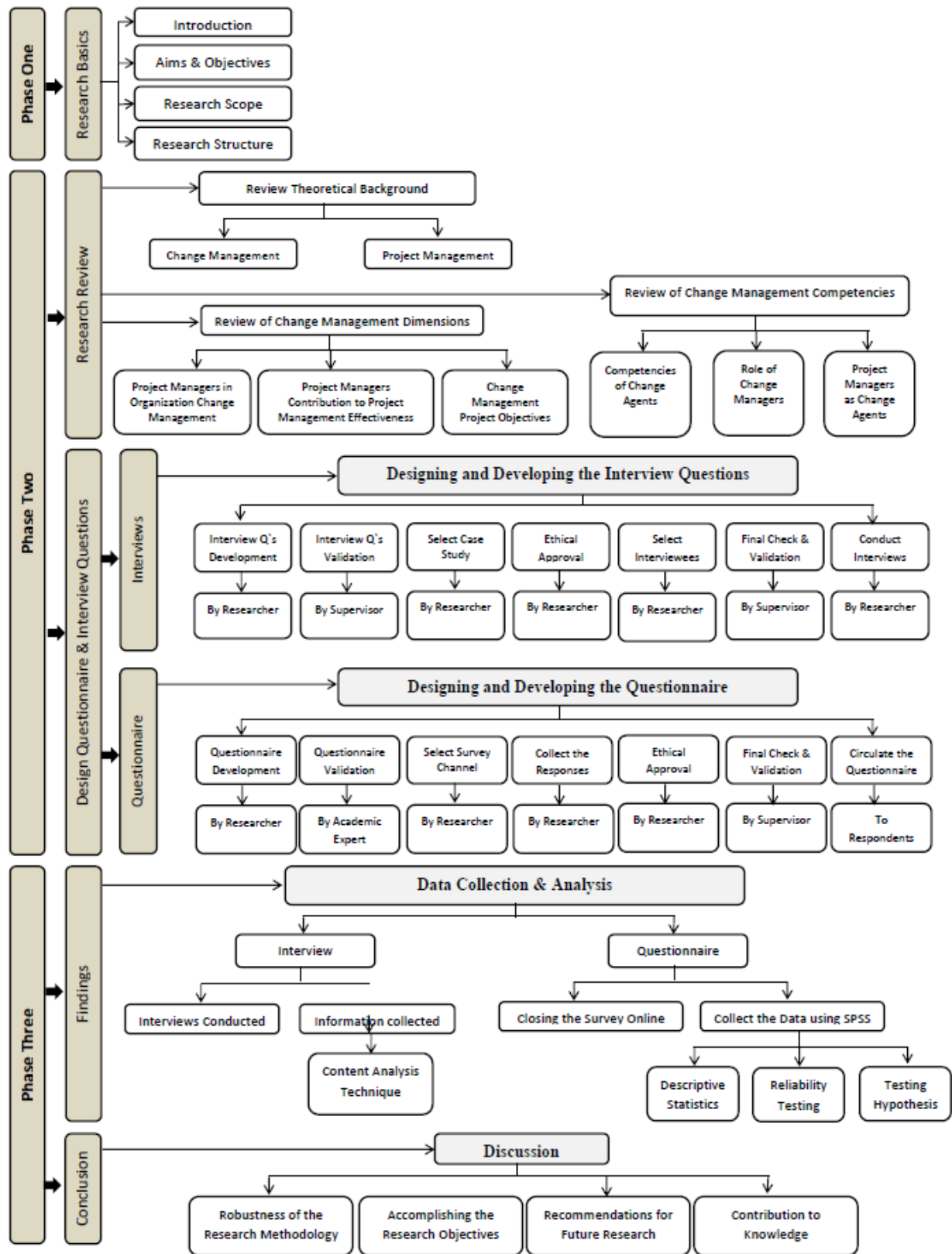
Figure 15 : The Research Methods Process

The research method process design as illustrated in the figure above is a mixed research.. The study adopts the social constructivist philosophical view. Open-ended questions have been used to collect data through interviews with the study subject and analysed using the content analysis method.

Designs are every often associated with qualitative and quantitative research methods. Surveys and experiments are usually considered as relevant patterns of quantitative research. They are assessed against weaknesses and strengths of statistical, quantitative research methods and data analysis. On the other hand, case studies are usually relevant to qualitative research that embraces an interpretive approach to data to conduct a study within a particular context. In such cases, the subjective meaning brought by people to a situation within this context has the research's main consideration (Creswell 1998).

The first step taken for this research is topic selection.. The topic has been selected because of its relevance to the researcher's interest and concerns. Also, the selection is based on the novelty of the research topic and its importance in revealing information related to project management practices within the UAE context. The second step is conducting a literature review to collect information from previous research related to the selected topic. The next step is the selection of the research methodology. The case study approach has been selected as the appropriate method for this research. The data collection comes after selecting the samples of the study. Interviews have been selected as the appropriate method of data collection because of the need of in-depth responses to answer the research questions. At this point, the research method has been determined, and then the data have been analysed.

Following the qualitative research, triangulation is applied to validate the outcomes of the interviews and to capture different dimensions relevant to the studied phenomena. The process involves the availability of different types of samples using a different data collection method; therefore, a survey has been sent to 50 project managers, and the outcome of the survey is analysed and mapped to the interviews' outcome.

6.6.1   Content Analysis Technique

Content analysis is a thorough, comprehensive, systematic analysis and interpretation of certain material in an attempt to identify themes, patterns, meanings and biases (Leedy & Ormrod 2005). According to Berg (2007), when data are analysed, the criteria of selection must be adequately

comprehensive to represent and justify the differences of message content and must be applied strictly and reliably. The analysed data should provide the audience, or the researcher looking for similar information, with the same or equivalent results (ibid).

The researcher can select from three categories for the content analysis process: inductive approach, conductive approach or a combination of the two approaches. Per Bryman (1988), a researcher may select the inductive approach to analyse data for an exploratory study, aiming to create a direction for future research. The other reason may be that the scope of the conducted research is constructed by implementing theoretical propositions that do not reflect the respondents' opinions and experiences.

Berg (2007) further explains that when a researcher needs to communicate the views of others in a straightforward way, it is vital to rely on induction. For him, the development of categories in any content analysis must be driven from inductive reference regarding the pattern emerging from the analysed data. This research has adopted the content analysis technique to analyse the data collected through the one-to-one interviews.

The seven-step model applied for analysing the content of this study is illustrated in the figure below:

| Identify the research question |
| Determine the analytical categories |
| Read through the data and establish the categories |
| Determine systematic criteria of selection for sorting data chunks into categories |
| Begin sorting data into the various categories |
| Review textual materials as sorted into various categories seeking patterns |
| Analyse the findings in light of the relevant literature |

Figure 16: Stage model of qualitative content analysis. Adapted from Berg (2007)

As demonstrated earlier, the phrases and words were given codes unsystematically. In other words, the collected data were read and analysed and the themes that emerged from the data collection were coded. The process of coding included all the responses of the interviewees, and sometimes more than one code was given to the same sentence. The process was repeated and every time some of the codes were changed, until no more alteration was needed.

In the next step, when the coding step was finalised, the comparable codes were clustered to form the categories. Then, the categories were organised in a way that makes sense, which provided better understanding of the collected data. To give an even better insight of the data, all the categories were divided into two groups. Group 1 included all the categories relevant to answering the interview questions. Group 2 included all the other categories, and this group was further divided into general themes and concepts, the competencies of project managers and the proposed success factors, which made up the subject matter of this study. When all the categories were set, further categorisation was done. Few other codes and categories were located, but they were considered trivial and they were deleted. The categories that were used are those that were referred to by most of the interviewees; hence, they constituted the categories that make sense that would be used in the analysis. At the same time, attention was given to the emerging themes. This includes the number of codes in the different categories and the number of categories related to the study theoretical background and objectives. In the last step of the analysis, the final categories were defined. After completing the process of coding, categorisation and observing relationships, the outcome was verified with the actual cases. Therefore, a more accurate justification of the phenomenon under study was formulated, resulting in a better understanding of the collected data based on and grouped according to the patterns that were formed.

The analysis resulted in categories that make sense in relation to the studied phenomenon. The categories made sense as they came aligned to the theoretical background, change success factors and project managers' competencies. Other categories that emerged from the analysis and were irrelevant to the study were disregarded to keep the research focus on its objectives. The analysis process resulted in more understanding of the role of project managers in change management within the UAE context.

6.6.1.1 Example of Data Coding

The following table provides an example of the data coding process. The response of one of the study subjects has been selected as a sample to illustrate the steps of note taking, codes identification, categories classifications and relevant themes. The process has been repeated more than once to ensure that the correct codes are identified and then sorted in categories.

Interview transcript

Part A: Leadership

Question: As a change leader, is one of your job tasks to ensure participation of all staff? If yes, what is your strategy to achieve this objective?

SP1: Before implementing change, the Project Management Department conducts an assessment of the internal personnel of the project. We identify key people who will work on the project, and we define the responsibilities and the level of their participation. We work closely with the selected people to communicate with others and delegate tasks. The analysis includes a study of the stakeholders' current position, and we help them set their change strategy. Usually, training is a major issue so the Project Management Department plays a vital role in organising free workshops as part of the support offered to the sectors' organisations. The training is decided based on a 'training needs analysis' conducted by the HR Department of the organisations and reviewed by department managers. We ask the organisations to report the continuous professional development (CPD) of the staff so that we can monitor the implementation of the strategic plan, which includes qualifying all relevant staff to ensure their satisfaction and their effective participation. As regulator, we also monitor the performance of stakeholders through the audit reports, and we assess the performance of the organisation and report to senior management. In particular, we look at the results of the satisfaction surveys, the performance appraisals, etc. In case there is evidence of poor participation of the staff, we ask the organisation to take immediate corrective action.

Interview notes	Codes	Categories	Themes
Conduct an assessment of internal personnel, identify key people, define the level of participation, communicate, delegate tasks, study stakeholders' position, set a change strategy	Assessment, identify key people, define the level of participation, communicate, delegate tasks, study stakeholders' position, change the strategy	Communication Planning	Change management practices
Training is a major issue, organise free workshops, qualifying staff, satisfaction, participation	Training, workshops, qualifying staff, satisfaction, participation	Training	

CPD, monitor the implementation of the strategic plan, satisfaction, participation, stakeholders, assess the performance, immediate corrective action	CPD, monitor, participation, stakeholders, assess the performance, corrective action	Monitoring	Stakeholders' management
The change starts from within, piloted internally; then it is transferred to other entities. We share the lessons learned with them. In other words, we act as their consultants to enhance staff performance. The stakeholders are required to report the status of the project, including the participation of the staff, and we usually share best practices with all the entities. The Project Management Department keeps the door open for suggestions, and these are taken seriously and discussed in the meetings of different committees. Accordingly, corrective actions are taken, and additional training is decided when required.			

Interview notes	Codes	Categories	Themes
Share lessons learned, act as consultants, enhance performance, report the outcomes, committees, corrective actions	Lessons learned, consultants, enhance performance, report, committees, corrective actions	Quality assurance	Risk assessment and control

6.6.2   Interview Questions

Semi-structured open-ended questions are used to investigate the role of project managers in change management. The questions focus on the management of the people element of change. This type of interview questions is selected to give the respondents the opportunity to disclose, in detail, information relevant to the research topic based on their practical experience and level of involvement in the scenario under study (Yin 2003).

The research method and design of this study is seen as suitable and leads to the achievement of the research objectives and to the answering of the research question. Also investigating the lived experiences of the participants during change would produce new knowledge about the studied phenomenon (Creswell 2009). Abu Dhabi has been selected as the context of this study because of the evident change that took place in the last few years. However, as the objective of this research is to explore the phenomenon within the UAE context, two of the three case studies operate in several emirates, but their headquarters are in Abu Dhabi. As per Easterby-Smith et al.

(2002), open-ended questions may be asked to avoid bias. Similarly, Sekaran (2003) states that the researcher must make an effort to keep the information collected from interviews as free as possible of bias. Bias is referred to as faults or impreciseness in the data collected (ibid). Therefore, the subjects of this research have been asked open-ended questions in an attempt to collect information as well as to eliminate the bias.

The selection of a research strategy for this study is dominated by the nature of the research method, which tends to do an exploratory study. To achieve the purpose of the study, the questionnaire investigates the role of project managers in managing the people element of change. The questions are selected from project managers' competencies (Nahmias 2009) with relevance to the success factors suggested by Guler (2010). The selected project managers' competencies and success factors are illustrated in the table below:

Project Managers' Competencies	Contribution to Success Factors
Leadership	Motivation, participation and commitment
Team development	Define training and development needs
Communication	Communicate change motives and consequences
Stakeholder management	Reduce resistance to change

Table 3: Project managers' competencies and success factors

As mentioned earlier in the literature of employees' resistance to change, these competencies contribute to reducing resistance and enhancing employees' motivation, participation and commitment. It is agreed, as evident in the literature review, that the development of the organisation's human resources enhances the outcomes of change in addition to reducing resistance to change. The same applies to communication as discussed on the literature. Lack of communication has a negative impact on employees' understanding and acceptance of change. Lastly, the competency of stakeholders' management has been selected because of its positive impact on the work environment and on the internal and external stakeholders' satisfaction. The study aims to investigate, in depth, whether project managers who have the competencies apply them in managing others as part of their responsibilities during change management. To ensure the validity and reliability of the collected data, the research is conducted in its context.

Furthermore, the data are collected from participants who have relevant experience in the field. Aiming to receive clear answers, a point has been made to develop straight-to-point, unambiguous questions. Based on the above statement, questions related to the research topic have been asked in the interviews (see appendix).

6.6.3 Subject and Site Sampling

The process of selecting suitable people and events for research is known as sampling (Sekaran 2003). For this research, the nonprobability judgment sampling technique for selecting the right samples is used. Judgment sampling refers to the purposive sampling of research subjects that involves the researcher's bias based on their experience in the investigated problem. Three organisations were selected for the purpose of this research. A separate case study was conducted on each of the individual organisations to collect authentic, detailed and in-depth information.

The three case studies selected for this research are UAE governmental and semi-governmental organisations from different sectors, all of which were subject to change in the past few years. All the organisations have project managers who were employed before and during the change. Selecting organisations from different sectors is appropriate as the focus of the research is on the role of project managers in the change management within the UAE context. Interviews are conducted with key people working for the project management departments or heading other departments within the organisations. Approvals to interview the respondents are granted as the organisations selected are well-known for promoting research related to the UAE.

The starting point for the selection of the respondents is based on their convenience to the study and their availability and willingness to participate (Creswell 2006). The methodology of sampling encourages the selection of respondents who are information rich (Patton 2002). For the interviews, the participants are selected based on their experience as key positions in organisations that were subject to a major change management following the Abu Dhabi 2030 Vision. These subjects are selected because they have witnessed the change processes and consequences; hence, they can provide the researcher with authentic and rich information. Based on McCracken's (1998) suggestion, a sample of 20 participants is an appropriate number for a research of this type. Therefore, 20 respondents from the three organisations are interviewed. As key people, whether department managers or project managers, they will be able to contribute in-depth information that will lead to answering the research questions.

The official approval of the respondents was obtained through a consent form. The consent form clarified to the potential respondents that they were invited to an interview to share their experiences and opinions about the role of project management in change management within the UAE context. They were informed that the interview is part of a research conducted for a PHD dissertation and that the information collected would be used for academic purposes only. The consent was clear that they would not be required to provide any internal information about their organisation's business as this would not add value to the research. The objective of the research was clearly explained in the consent form. The respondents, before granting approval, knew that their input would contribute to the literature of project management within the UAE context. They were also informed about the value of their contributions. They knew that the outcome of the study would draw the attention of decision makers to the key role of project managers in the change management process. The consent form gave the potential respondents a clear idea about the type of questions they would be asked. They knew beforehand that the questionnaire is about the role of project managers in managing the people element of change. They knew also and approved that the time allotted for each interview was around 40 to 60 minutes at a time of their convenience. Upon approval, the interview would be audiotaped for validation and accuracy purposes. The researcher's contacts were written clearly in the consent form in case they had any questions or decided to withdraw at any time.

As part of the research ethics, the respondents were informed there was no potential risk in participating in the research. It was made clear that they would not be asked to provide any confidential or private information. Confidentiality would be maintained, so neither the respondent name nor the organisation's name would be revealed to the public. The participants and organisations would be presented as anonymous as each participant and organisation would have a code rather than a name, and the research material would be stored in a secure place. The respondents were given the right to review the transcript and cancel any part of the internal information that might have any negative impact on the individual or organisation. As this is an educational research, the respondents were informed that there would be no incentives or personal benefits to the respondent or to the organisation. All the 20 persons who were approached by the researcher signed the consent form, and there were no withdrawal cases after the interviews.

Based on the main objective of the study, the main focus of the selection of the subjects was project managers. Department managers were involved in the study to either emphasise the project managers' responses and/or to gain different perspectives from other personnel involved in the change process. The reason for interviewing only two department managers was to keep a balance between the project management professionals' interviews in each of the sites.

The number of case studies and the number of participants from each site can be justifiably questioned. Yet there is no specific guidance to the required number of cases for a qualitative study, so the decision is to be made by the researcher (Romano 1989).

On the other hand, the selection of the three case studies only was controlled by the following challenging elements:

1- Senior management approvals
2- Organisations operating in more than one emirate yet the headquarters are in Abu Dhabi
3- Organisations with large project management departments
4- Organisations that experienced major changes

In addition, selecting more than three case studies would increase the amount of information and consequently the time required for collecting and analysing data. Therefore, priority was given to the richness of the information collected from the three cases studies rather than increasing the number of study sites and sampling size.

6.7   Summary of the Chapter

In chapter six, the research methodology is introduced, and the validity and reliability and the research ethics are outlined. Details about the qualitative research methodology are explained, including information about the data collection and sampling. In specific, the chapter discussed the collection of quantitative data, case study method, and advantages and disadvantages of the interview method used to collect information for this study. The rest of the chapter provides information about the quantitative research methodology and the triangulation concept used in this research to validate the qualitative research findings.

7 Analysis of Findings

7.1 Introduction

Three approaches to analysing qualitative data are identified by Miles and Huberman (1994): social anthropological approach, collaborative social research approach and interpretative approach. This study follows the interpretative approach of data analysis.

The interpretative approach is defined as a way of understanding human activities and the meanings they give to their surroundings. When a more general interpretative orientation is applied, the researcher usually rearranges the collected data to reveal patterns of people's activities and meanings (Berg 2007). The interpretative analysis approach has been selected because the research aims to offer insights into how project managers in a specific context make sense of the change phenomenon in relation to their own experience in the field.

The specific aspects of research that occur during the analysis of qualitative data and used in this research are as follow:

- Collecting data and presenting them in a text format, such as transcripts and field notes
- Developing codes analytically or identifying them inductively in the collected data
- Transforming codes into categorical themes or labels
- Sorting data in categories; identifying similar patterns, phrases and relationships; and identifying disparities and/or commonalities
- Isolating meaningful patterns and themes after examining the sorted data
- Identifying patterns in relation to preceding research and theories to establish a small set of generalisation (ibid)

7.2 Organisations' Profiles

Case Study 1: Oil and Gas Company

The first case study is a well-established oil and gas company. From a business perspective, oil and gas companies are particularly in need of fast-tracked change management due to evolving business drivers and technological advancements. The company went through major changes in the last decade, which resulted in high employee turnover. With a competent leadership and a

well-structured strategic plan, the organisation was able to implement change based on international standards. The organisational change affected all the functions and departments of the company. The company went through major change in the past few years, especially in its systems and activities, including procurement, transportation and the use of technology. This entailed a change in the organisational structure, and new blood was added to the management team. As stated by a senior manager working for the company, the change was implemented based on a change plan developed by highly competent professionals in the fields. Change did not happen overnight, he stated, but they were able to overcome all the obstacles. As a large size company, he added, the change project took more than expected, but in the end, the objectives of change have been achieved.

The company has four branches in the UAE; however; the headquarters is located in Abu Dhabi. Due to the nature of the work, the workforce is highly diverse not only in terms of nationalities but also in terms of education, qualifications and work positions. Management and administrative positions, including the project management positions, are mainly held by nationals. The case study is a big company with more than 500 employees in total. The majority are field workers in different projects initiated and managed by the company, and less than one quarter of the employees manage the operations from the office. As stated by a senior manager, the project managers played a key role in making the organisational change a success. Because of the geographical aspect and the multiplicity of the projects, one or more project managers are assigned in every location, all of whom report to the project management office in Abu Dhabi.

 Case Study 2: Sector Regulator

As a sector regulator, the second case study relies on project managers to administer the operations of the different companies categorised under the sector. As part of its many responsibilities, the organisation observes the companies' compliance with strategies and systems and conducts studies and plans future goals and targets. Moreover, the organisation follows up on the companies' performance, sets standards, conducts awareness campaigns, receives complaints and resolves conflicts. The project managers, in cooperation with others, work closely with the internal and external stakeholders to ensure that projects are implemented successfully. They act as auditors and consultants in addition to their jobs as project managers.

With over 200 employees, the sector regulator has a high number of projects that need to be managed by qualified and experienced project managers. The sector regulator adopts a strategy of continuous innovation and change and passes its new strategy to the entities operating in the same sector. The organisation itself passed through major changes in the last 10 years, including policies and procedures, technology and organisational structure. Therefore, as stated by a senior manager working for the sector regulator, the project managers are selected based on their experience and skills. The training and development of the project managers is a continuous activity. The project managers have a huge responsibility, especially when change is initiated. Their responsibility goes beyond the daily activities to include being strategic partners to the organisations operating under the sector. The senior manager added that managing stakeholders is a huge task to ensure they comply with the sector regulator's requirements and standards. Therefore, the Project Management Department is well established, and all the project managers proved to be efficient change agents.

Case Study 3: Construction Company

The third case study is a leading construction company operating in the UAE with over 500 staff members. The headquarters are in Abu Dhabi, and its branches are distributed in all the other emirates. The company has built several towers, hotels and residential buildings all around the UAE and in other Arab countries as well. The company gained its reputation from its successful construction projects in addition to its up-to-date governance. This company went through extensive changes in the last 10 years at the organisational level, including management, staff and technology, in addition to major changes at the project level. Most of the changes that occurred were initiated with the purpose of developing the organisation and its services and products. On the other hand, as stated by a senior manager working for the company, some changes occurred because of economic and financial issues. The company had to reduce its costs and downsize the staff, but that was a temporary change. This was very hard to implement and put the project managers under a lot of stress, especially with the aggressive competition in the market. However, as explained by the senior manager, the company was able to overcome the financial barriers and initiated several change projects that added value to the business. As in all construction companies, project managers play a pivotal role throughout the project life cycle.

They work in the field, and they report to the office almost daily. With the large number of projects managed by the company at the same time, the number of project managers is huge compared with other businesses. Even when the company was going through a financial crisis, the project management was not included in the downsizing. They value their project managers, he said, as their efforts are what make their projects special and different.

7.3 Research Findings

Three organisations have been studied and are referred to as case studies. In this chapter, the themes emerging from the interviews conducted in the three case studies are analysed. In the beginning, the background of the three organisations is provided. Information related to the case studies has been collected from the respondents to ensure currency and authenticity of the case studies' experience of change. Then, quotes from interviews are outlined and analysed, and the findings are presented. In the last section, the findings are categorised and demonstrated in a tabular format.

The data are provided from the interviews conducted with the 20 participants to investigate the role of project managers in times of change within the UAE environment. The subjects of the research are mainly project managers. However, two department managers from each case study were selected to provide information from a different perspective. The sectors selected for this study were the oil and gas sector, the construction sector and one Abu Dhabi sector regulator. To maintain confidentiality, the names of the organisations and interviewees will not be revealed. A summary of the sites and the subjects of this research are illustrated in the table below:

	Sector	No. of employees	No. of subjects	Position of participants
1	Oil and gas	+500	7	5 project managers and 2 department managers
2	Sector regulator	+200	6	4 project managers and 2 department managers
3	Construction	+500	7	5 project managers and 2 department managers

Table 4: Sites and subjects of the research

All the targeted subjects participated in the interviews and answered all the questions. However, not all responses were detailed and accurate. Follow-up questions were used to obtain thorough responses from some of the respondents. Different outcomes resulted from analysing the responses of the subjects. It was found that in all the three case studies, the project managers play a role in managing organisational change. Yet it has been noted that the degree of involvement differs from one sector to another. The research does not aim to study the role of project managers in change management based on the case studies' sectors. However, the respondents revealed information based on their personal experience and level of involvement in the scenario under study (Yin 2003). Hence, the differences served the research by producing new knowledge and more understanding of the studied phenomenon (Creswell 2007).

Required information was collected through interview questions that were based on the four main project management competencies mapped to selected success factors. The table below demonstrates the result of the data analysis mapped to the competencies of project managers and the success factors.

Project managers' competencies	Contribution to success factors	Categories of codes
Leadership	Influence others: motivation, participation and commitment	Task focused, communication, stakeholders' management
Team development	Define training and development needs	Quality assurance, risk assessment, communication
Communication	Communicate change motives and consequences	Reporting, communicating change
Stakeholders' management	Reduce resistance to change	Managing stakeholders, reducing resistance to change

Table 5: Result of the data analysis

The results of the case studies are highly informative as the subjects of the study provided a clear picture of the role of project managers in change management within the UAE environment. Information collected from three governmental and semi-governmental organisations shows that project managers are effective agents of change. However, not all the competencies of project managers are utilised. Project managers fulfil the tasks of change managers, in some cases, without being assigned to do so. In other cases, they lead the whole change project, involving internal and external stakeholders in their planning, implementation, monitoring and evaluation of the outcomes. It has also been noted that some of the change management tasks, which have an influence on others, are embedded within the project management activities. Other tasks are in the core of change management activities and critically affect the success of the change project. It has also been noted that the role of project managers in the oil and gas sector is very similar, while that of project managers in the sector regulator is rather different. This section provides a detailed discussion of the research findings based on the interviewees' contributions and responses to the interview questions.

7.3.1 Part 1: Leadership (Motivation, Participation, Communication)

The first part of the interviews focused on the leadership traits of project managers in change management. The responses of all the study subjects reveal that project managers' leadership skills do contribute to the success of change projects. However, it has been noted that, in general, the role of project managers in the construction sector and the oil and gas sector is limited compared with that in the third sector. They do not have the authority to use their leadership competency at the organisational level. However, they have a high level of participation in the change management process through common project management functions. In contrast, project managers working for the sector regulator are given full accountability for the success of their change project. Their role goes beyond the participation level to include leading internal and external stakeholders, and they operate at the organisation level. Below are the detailed findings from the interviews sorted according to the responses of the subjects for each question. Then the categories that emerged from the data collection process are discussed in relation to the theoretical background of the study.

- Motivation

The outcome of the interviews revealed different levels of involvement in terms of motivating employees during organisational change initiatives. It has been found that in the construction and oil and gas sectors, project managers are not assigned to motivate employees. They do not have a say in rewarding or promoting employees, and they do not interfere in the internal planning of departments to motivate the staff. All subjects from the aforementioned organisations revealed that the volume of their responsibilities leaves no time for thinking about individuals. They do not, for the same reasons above, deal with individuals in terms of motivation. However, when deadlines are not met, their reports reflect the lack of motivation of the staff. This is a matter for the line manager to deal with. Only one of the respondents, who is the head of the Project Management Department, noted that he motivates his team as part of his role as a department manager.

OP2: Motivating employees is not in my job description. I look for quality end results, leaving the development of workers and motivation activities to their direct managers and the Human Recourses Department.

CD1: We work with the project manager throughout the phases of the project to manage resources, time, scope and quality of work. We are motivated by the project manager to complete the work in a timely manner.

SD2: As a department manager, I do not involve the project managers in motivating my staff. This is not part of their job description. However, we consider the reports of the project managers, especially when the project is closed.

As suggested by Luecke (2003), leadership has to be identified with a definite purpose to guide and lead the project team towards achieving the change goals. Where motivation is not a written objective, project managers do not consider motivation as part of their planning or monitoring processes, nor is it one of their priorities.

On the other hand, project managers working for the regulatory sector provided a slightly different insight on the subject. They are also not involved in planning or implementing any activities to enhance internal staff motivation during organisational change. However, although motivation is not a task, they have to encourage organisations under the sector to implement change. They also have to monitor and assess motivation as part of the stakeholders' satisfaction survey. Lack of motivation is a sign that the organisation is struggling to implement change. Additional support for the particular organisation is planned, implemented and assessed at a later stage.

SP2: The part of motivation may be embedded in the different activities we do with the organisations registered under the sector. However, we motivate the organisation as a whole rather than working with individuals.

The responses of the department managers came in line with the responses of the project managers. All the department managers showed appreciation to the project managers' support during change projects. The main project managers' competencies referred to by the subjects are communication and reporting.

- Participation

The second part of the leadership questions focused on the role of project managers in enhancing the participation of employees. A notable difference was noticed in the subjects' responses compared with motivation. All the project managers and department managers declared that

participation is part of project managers' planning process. As stated by the project managers working for the construction sector, they contribute by communicating change, then monitoring and reporting the performance of teams. Project managers do not have the authority or time to work with individuals or assess their performance individually. Shortfalls are reflected in their reports, and management takes the needed actions to resolve issues related to participation and competencies.

CP2: Ensuring the participation of all the staff is part of the planning of each and every project. However, because of the big sizes of the projects, the project managers do not interfere in the participation of individuals.

CP1: As a project manager in a construction company, I occasionally participate directly in the motivation of the staff. My main goal is to work on the progress of the project.

Nearly identical responses were provided by the project managers working for the oil and gas organisation. For them, the main concern in organisational change is the performance of teams, which includes the participation of all the staff. As stated by a project manager, in a major organisational change, controlling a big number of staff is not an achievable task. Therefore, they make sure that change requirements are clearly communicated to all department managers. The project manager identifies the roles and responsibilities of the project teams, while the department managers identify the roles of the employees. Through an official reporting process, oil and gas project managers identify concerns related to team contributions. Project managers closely work with the line managers to ensure that all employees accept and implement the new tasks successfully. The participation of the staff is seen by the project managers as a critical requirement, and the department managers are held responsible for it.

OP1: Yes, to some extent. In a change project plan, the people aspect is always considered. As a project manager, I define the roles and responsibilities of the project teams, but I do not interfere in the details.

OD1: In a change project, planning the people aspect is always considered. As a project manager, I define the roles and responsibilities of the project teams, but I do not interfere in the details.

On the other hand, the managers working for the regulatory sector are more involved in terms staff participation in organisational change. The process is controlled by a well-developed plan to ensure the participation of all internal and external stakeholders operating under the sector. The project managers in the regulatory sector are the owners of internal organisational change. As stated by a project manager, the change is piloted internally before it is communicated externally. The project managers are strategic partners to the organisations during organisational change. They assess the capacity of the organisations and delegate tasks to key people. Change is communicated clearly through reports, meetings and trainings. Project managers participate in the training needs analysis process to define the required activities to support the external stakeholders. The tasks of the project managers, in addition to managing all phases of change, involve acting as consultants of change. Unlike in the other two sectors, the project managers in the regulatory sector are concerned with the continuous development plan (CPD) of stakeholders' staff. Participation of the staff is monitored by the project managers as part of the organisation's capacity. They train individuals, especially when the change involves a transformation in the organisation's strategic plan. They, in turn, share lessons learned with the entities and monitor the participation and efficiency of the staff to achieve the target of change. The implementation of the strategic plan of change and the corrective measures applied by the organisations are monitored by the project managers.

SD2: Yes, the project managers in the regulatory sector work closely with the department managers to ensure the participation of all staff. When change is initiated, training the staff is usually part of the plan to reduce the resistance of the staff.

SP1: The stakeholders are required to report the status of the project, including the participation of the staff, and we usually share best practices with all the entities.

CD2: The training and development is very active in this area to ensure that change is well implemented. In our decisions, we rely on the project managers' report, and we conduct a training needs analysis based on their findings.

The responses of the department managers supported the above statements.

SD2: When change is initiated, training the staff is usually part of the plan to reduce the resistance of the staff. Some of the trainings are done internally, but many are done by the regulatory sector, especially for line managers and supervisors.

OD1: The project manager of a change project communicates the plan, and I, as a line manager, am responsible for involving all my staff in the implementation.

OD2: Motivating the staff is my job, and project managers do not interfere in this. Our relationship with the project managers does not include any intangible activities.

According to the responses, the common skills include planning, monitoring, communication, evaluation and reporting. The skills used by the project management working for the regulatory sector include training, sharing lessons learned, managing meetings, stakeholders' management and problem solving.

- Commitment

The third part of the leadership questions focused on enhancing employees' commitment. The responses of the project managers working for the construction company showed that they play a key role in enhancing the commitment of employees during change management. However, it has been noted that all the interviewed project managers were given a specific project and worked with a specific team, but they deal with the manager or the supervisor only.

There was no evidence found that they participate in planning the enhancement of the commitment of the employees at an organisation or department level. The role played by these department managers looked similar to the role of the department managers. This was mostly obvious in the response of CP1, who detailed his strategy for enhancing the commitment of others. The other department managers from the same sectors also referred to the employees as 'my team'. It was mentioned by all the project managers that they are not given the authority to reward or promote committed employees. The skills used in enhancing the commitment of their teams seemed more like the skills used by managers to encourage their teams. These skills include communication, delegation, presentation skills, managing meetings, breaking down data and persuasion skills. In line with the above, all the department managers denied project managers' involvement in enhancing commitment within their departments. They look for results and quality; hence, commitment is measured by the quality outcomes of change project phases.

CP3: Quality of work is a major consideration in addition to the accurate execution of the change plan. This is where I contribute to the commitment of the project teams.

Department managers tend to apply individually planned methods to enhance the commitment of their team members. However, they appreciate the project managers' contributions in terms of planning change and providing clear information about the change project and its consequences. One department manager mentioned that he ensures that everyone in his department is committed to implementing change to avoid negative comments in the project manager's report.

CD1: Project managers include the achievements of the department in their reports to senior management, and this is what concerns me most. This can be the role of project managers that I can think of, but we do not do anything related to commitment together.

This statement was given by an oil and gas project manager, who referred to the strict policies and procedures of the organisation. Teams involved in change projects are assessed against the quality of their work and their commitment to accurately executing the plan. This response gave the impression that commitment is not a choice and that it is managed by regulations rather than by project managers.

OP3: My projects are usually big, and the number of people working on it is big also. I encourage the supervisors to oversee the work of their teams and ensure their commitment to do the work in a timely manner.

OD2: Do I work with project managers on enhancing the commitment of my staff? The answer is no. But if you ask me whether the project managers have an input in the activities brought up with change, then my answer is yes.

The same as in motivation and participation, the responses of the project managers in the regulatory sector were somewhat distinguished. Commitment for those project managers is dealt with as a risk that will affect the business outcomes. The commitment to change of the staff and the managers working for the stakeholders is closely monitored. Satisfaction of employees is measured through surveys, which are analysed by project managers.

SP4: As a project manager in a regulatory sector, I monitor the stakeholders' implementation of the change project I am responsible for. One of the things I do is look at employee-engagement items in the satisfaction survey as they have the strongest correlations with business results.

Project managers develop an action plan and provide support to organisations with a low level of commitment. Resolutions usually include additional training and development events for key

people and act as consultants to help the organisation meet the objectives of licensing. As stated by the two project managers working for the regulatory sector, they play a key role in enhancing the commitment of the internal staff. The project manager of the change project and the department manager cooperate to measure the commitment of the staff.

SP4: I assess the risk, and the commitment of management is one of the major risks that affect the results. We provide support to management based on the issue affecting performance; then unresolved issues in terms of staff commitment are dealt with internally.

SD2: Part of my role is to ensure the commitment of my staff. The project manager working with me on a change project helps in enhancing the commitment of all the staff as I report to him the role and the achievements of each division.

The project manager has the authority to change an employees' responsibilities based on the skills scan and the department managers' reports. The project manager working for the regulatory sector looks at all the details that would reduce internal and external staff's commitment. From all the responses provided by the subjects from the regulatory sector, it can be concluded that project managers are highly accountable for the success of the change project as a whole. The common skills used by project managers in terms of contributing to the commitment of the staff include communication, monitoring quality and reporting. The additional skills applied by the project managers working for the regulatory sector include risk assessment, training, consultancy and stakeholders' management.

In summary, it has been found that all project managers play a role in leading the project teams. However, not all of them are directly involved in leadership with individuals. The result of the interviews is demonstrated in the table below:

Leadership			
Respondent	**A - Motivation**	**B - Participation**	**C - commitment**
Oil and gas project managers	Indirect involvement Contribute through managers and supervisors	Indirect involvement Contribute through managers and supervisors	Indirect involvement Contribute through managers and supervisors
Construction project managers	Indirect involvement Contribute through managers and supervisors	Indirect involvement Contribute through managers and supervisors	Indirect involvement Contribute through managers and supervisors
Regulatory sector project managers	Direct involvement Work closely with individuals Contribute through managers and supervisors	Direct involvement Work closely with individuals Contribute through managers and supervisors	Direct involvement Work closely with individuals Contribute through managers and supervisors

Table 6: Result of the interview questions: project managers' leadership competency
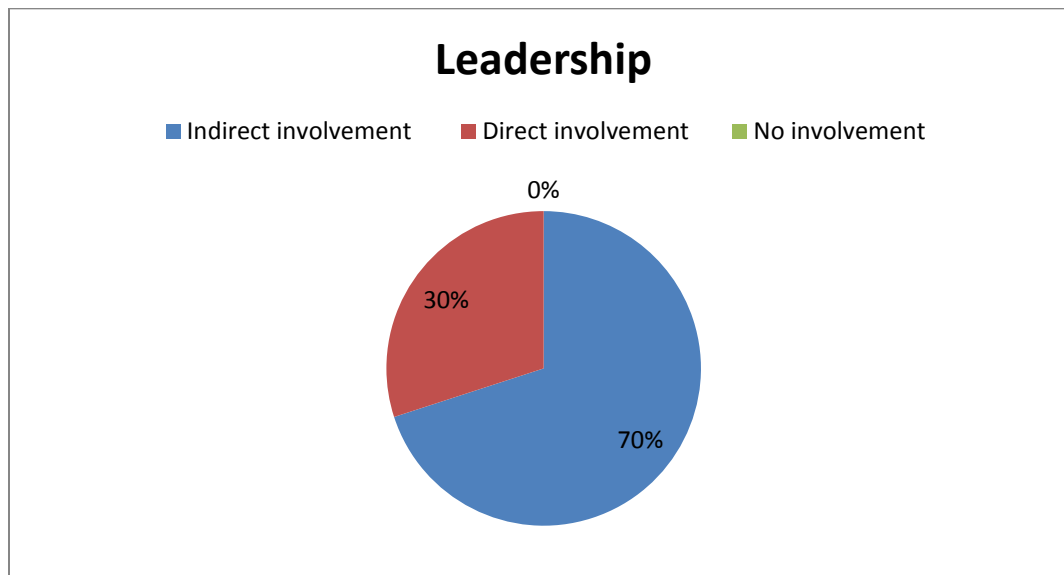
Figure 17: Involvement of project managers in leadership (motivation, participation and commitment)

In summary, all the interviewed samples stated that project managers are involved in the change management leadership. However, the volume of involvement differs between organisations.

7.3.2 Part 2: Team Development

The second part of the questions focused on the role of project managers in developing teams in times of change. The responses of the study subjects revealed that project managers working for the construction and oil and gas companies are not directly involved in the planning of staff development. However, the planning of training and development is based on the work of project managers, and their communication and consultancy skills are what makes the difference. On the other hand, project managers working for the regulatory sector are more involved in the training and development of internal and external stakeholders.

When the construction project managers were asked about their role in developing teams, they stated that they do not directly contribute to the training plan of the staff.

CP5: I do not develop the plan as this is the role of the HR based on the information they receive from the project manager.

However, the contribution of project managers relies on defining the knowledge and skills required to perform tasks emerging from change. The result of the analysis is forwarded to senior management and the Human Recourses Department to take the decision of how to enhance the capability of the staff. By doing so, construction project managers delegate the responsibility of training and development to other managers.

CD1: The training and development of the staff when change is initiated is a teamwork. It starts with the contribution of the change project manager.

At a later stage, they evaluate the performance of teams against the relevant standards. Throughout the change project, managers provide support to the department managers involved in the change process. The support includes effective communication of change requirements and feedback on the performance of teams in relation to the achievement of milestones and quality of work.

The responses of the project managers working for the oil and gas company are similar to the above statement. Project managers feed the department with the necessary information to plan the development of their teams. They monitor and assess the performance of teams against targets and the budget. The respondents also emphasised their role as consultants during organisational change. Their reports point out the drawbacks and the action plan for corrective

actions. Therefore, as mentioned by a project manager working for the oil and gas company, project managers' changes entail extra communication and reporting.

OP2: My role as a project manager is to provide information, and the managers are responsible for managing the training process for their teams. Usually, the Human Resources Department is involved in the planning and execution of the training activities based on the change project requirements.

In contrast, the project managers from the above two case studies stated that they play a major role in the development of their departments. They contribute to the training plan and development activities, such as mentoring and coaching others. Another key method of development, as stated by one of the project managers, is sharing lessons learned.

The same applies to the project managers working for the regulatory sector, who fully contribute to the development of the project management team and the internal staff in general. In addition, they fully contribute to the development of the external stakeholders by conducting free workshops to ensure that they fully understand the objectives of change. They share with the external stakeholders training materials and lessons learned. They also establish a strategy to assess the stakeholders' implementation of change, monitor the compliance of stakeholders and report to senior management. On the other hand, their contribution to the development of stakeholders is evaluated by the companies registered under the sector.

For the Project Management Department of the regulatory sector, transferring knowledge is a key performance indicator (KPI) that must be achieved as part of the change project. The training and development process is budgeted and milestones are set, approved and monitored by senior management. The common skills mentioned by the project managers are many. They nearly include verbal and written communication skills, budgeting, monitoring, IT skills and the use of different project management tools.

SP3: The training and development of stakeholders is one of the KPIs of the Project Management Department.

SP4: I develop the training plan, and I set the evaluation strategy for both internal and external stakeholders. I do help our stakeholders in training their staff through the workshops delivered in our premises.

The responses of the interviewed department managers from the three case studies supported the project managers' statements. It has been noted that there is an emphasis on the role of project managers as consultants and effective communicators. Four of the department managers stated that the communication they receive from project managers creates a sense of urgency for training and development.

OD1: *They monitor and appraise quantitatively and qualitatively the progress of the development project and report to upper management. The reports usually have an action plan for managers to implement to comply with the change management plan.*

SD2: *When change is initiated, the project management sends the requirements of change and the deadlines, which create a sense of urgency. The execution of the plan is controlled against measurable objectives based on the specific change objectives.*

In summary, it has been found that all project managers play a role in the team development of a project. However, not all of them are directly or completely involved. The result is demonstrated in the table below:

Respondent	Team Development
Oil and gas project managers	Indirect involvement Contribute to team development through managers and the Human Resources Department
Construction project managers	Indirect involvement Contribute to team development through managers and the Human Resources Department
Regulatory sector project managers	Direct involvement Involved in internal and external stakeholders' development

Table 7: Result of the interview questions: project managers' team development competency

Team Development

■ Indirect involvement   ■ Direct involvement   ■ No involvement

0%

30%

70%
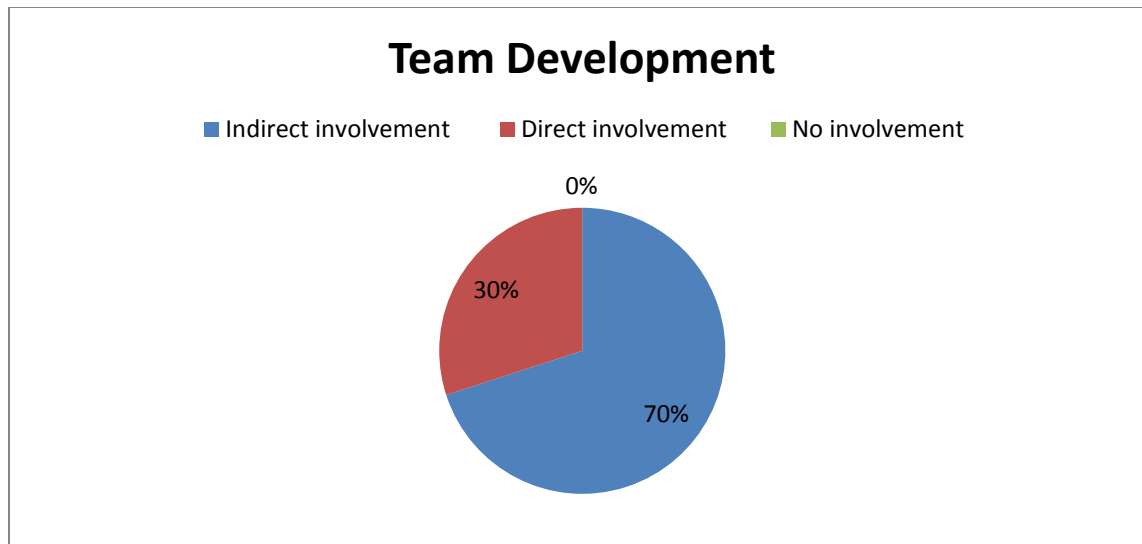
Figure 18: Involvement of project managers in team development.

In summary, all the interviewed samples stated that project managers are involved in team development during change management. However, the volume of involvement differs between organisations.

7.3.3   Part 3: Communication

The third part of the interview questions focused on the communication of the change motives and consequences during change management. The interviewees revealed that communication is a key responsibility of the change project managers. During change, communication is more extensive and includes more informal communication and additional receivers are involved. Different project management tools are used to ensure that communication achieves its purpose. The communication is not limited to the motives and consequences as the process is continuous throughout the organisational change.

The project managers working for the construction sector stated that communication is a key part of the change plan. The communication process starts with communicating the requirements of change. They do both collecting and distributing project information to stakeholders. Reporting is one part of the communication process, including the reports generated when each phase of the

change project is closed. To ensure that the messages are received and understood, communication is achieved through formal and informal means.

CP4: When change is initiated, it is my responsibility to plan the communication based on the information that should be provided to stakeholders.

CD1: Yes, the project manager plays a major role in communicating change.

The responses of the project managers working in the oil and gas sector were not any different. All the project managers ensured that communication during change is a core responsibility that they accomplish based on a communication plan and distribution structure. The difference is that during change, more informal communication takes place and additional receivers are added to the list.

OP4: I use standardised formats and project management tools for formal communication, such as performance reports, status reports and progress reports. E-mails are extensive, especially in times of change.

The responses of the project managers working in the regulatory sector aligned with the above responses. The stakeholders are assessed, and analysis is performed to decide what to communicate, when and to whom. Then a bespoke communication plan is developed to continuously send and receive messages to internal and external stakeholders. Communication is achieved using different means, and reports are generated and shared. The closing report involves obstacles faced, lessons learned and a mapping of project achievements to the KPIs.

SP3: For every project including change, we develop a communications management plan as a guide for communicating with internal and external stakeholders all through the project timeframe.

SD1: Other than the meetings, we exchange daily e-mails and weekly reports. The project manager makes sure we receive up-to-date information and follow up with the progress achieved within the department.

The common official communication means between all project managers included the different types of reports, meetings, daily e-mails and presentations. As stated by the interviewees, different project management tools are used, such as, but not limited to, CPM, WBS, PERT, Gantt chart, RACI chart and power/interest grid.

The responses of the department managers were all aligned with the responses of the project managers. It has been found also that the department managers value the communication skills shown by the project managers. They see the communication they receive from the project managers as significant and useful. Without the communication methods applied by the project managers, they would not be able to communicate change effectively to their staff members.

CD1: Communication during change is more extensive than usual. It is a two-way continuous communication in which formal and informal discussions take place verbally and in writing.

OD1: We had to work with the project managers to resolve issues. We used project management planning templates and presentations to communicate the change required in each department.

Respondent	Communication
Oil and gas project managers	Direct involvement Plan communication Distribute messages to internal and external stakeholders
Construction project managers	Direct involvement Plan communication Distribute messages to internal and external stakeholders
Regulatory sector project managers	Direct involvement Plan communication Distribute messages to internal and external stakeholders

Table 8: Result of the interview questions: project managers' communication competency

Communication

■ Direct involvement   ■ Indirect involvement   ■ No involvement

0%

100%
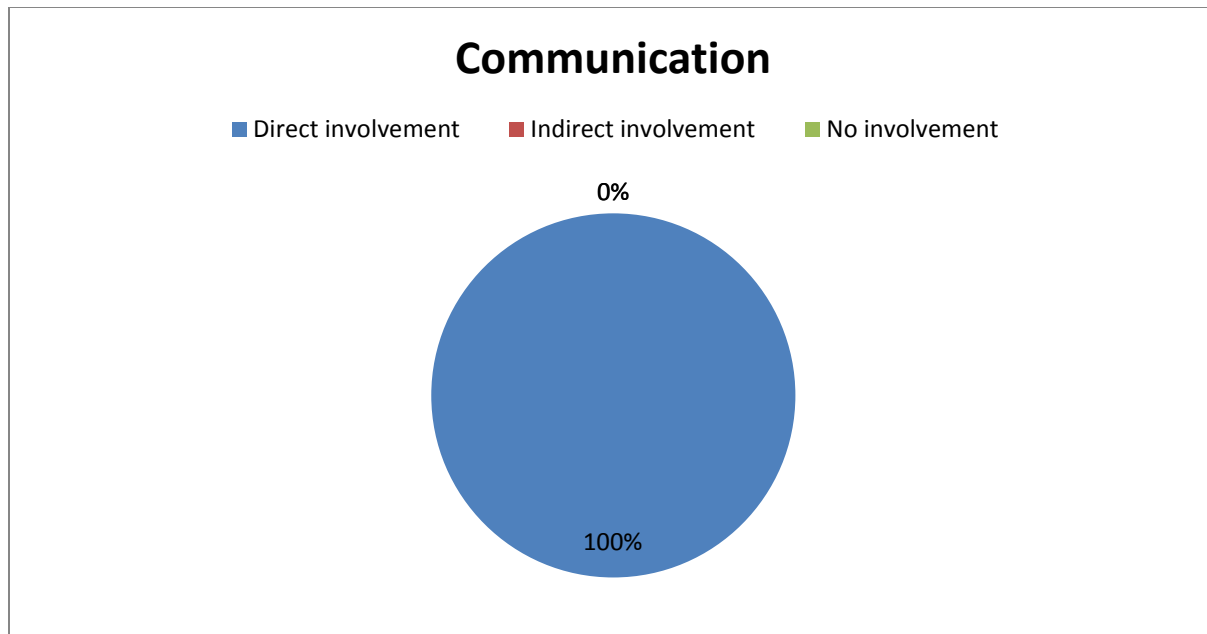
Figure 19: Involvement of the project managers in change management communication

In summary, all the interviewed samples stated that project managers are directly involved in communication during change management.

7.3.4   Part 4: Stakeholders' Management

Part A: Managing stakeholders

The first part of the questions is focused on the role of project managers in stakeholders' management during organisational change. The interviewees revealed that project managers play a major role in managing internal and external stakeholders during organisational change.

Project managers working in the construction sector revealed that stakeholders' management during change is a critical and diverse task. The process is regulated by a plan that starts with identifying internal and external stakeholders affected by change. Support is offered to all stakeholders based on an analysis performed to categorise the potential impact on stakeholders and their reaction to change into high and low impact. Communication is also an important part of stakeholders' management to ensure that they understand the requirements of change and properly deliver during the implementation phase.

CP5: To overcome difficulties and failures of the change project, my job is to identify key stakeholders and departments affected by change. I also define the potential impact on

stakeholders as high and low to decide on the support I should offer to stakeholders. I also assess how stakeholders would react to change by dividing them into high sensitivity and low sensitivity.

In addition, constant communication with stakeholders during change contributes to managing risks, mitigating obstacles and resolving problems emerging from change.

In the oil and gas project, managers see stakeholders are a risk that if not managed properly might affect the outcomes of change negatively. Therefore, the project managers ensure that all stakeholders understand the value and the requirements of change. As stated by an interviewee, a new governance structure is formed during organisational change, and a steering committee is formed to manage change. Project managers monitor the performance and behaviour of stakeholders, and reports are submitted to the committee chairperson. Because of the high number of employees, the management of the stakeholders is done through the department and division managers. The project managers in the oil and gas sector conduct surveys to measure stakeholders' management. They also conduct root-cause analyses and generate corrective actions and preventive actions to ensure that the change project is proceeding according to the change plan.

OP5: I plan my communication based on their level of authority and based on the information they need to know or deliver. I work with internal stakeholders to ensure that they understand the value of change. I work with external stakeholders to make sure they understand why change took place.

The project managers working in the regulatory sector have a major role in managing internal and external stakeholders operating under the sector. The external stakeholders go through major changes that require a lot of support from the project managers. Communication with the stakeholders' staff is achieved through key people in the organisation. However, workshops are conducted to individuals if required. One of the main concerns of project managers during change is the quality of work completed within the project timeline. Moreover, project managers observe performance, resolve problems and define the tasks to be completed in each phase of the change project. One main activity carried out by the project managers in the regulatory sector is conducting surveys and analysing the results. Stakeholders' satisfaction is an objective all project

managers must achieve during change management. All of the above represent parts of the reports submitted to senior management and shared with the stakeholders' management.

SP5: The Project Management Department conducts and analyses several surveys to ensure the acceptance and satisfaction of stakeholders.

In managing stakeholders, project managers manage change risks, monitor performance and behaviour, resolve problems, do presentations, conduct surveys, participate in committees and report to seniors. Managing stakeholders is included in all the phases of organisational change. As stated by the interviewees, project managers use different management tools and forms to communicate change to stakeholders. They adopt and use project management techniques to manage organisational change risks. Project managers also use their interpersonal skills to raise the awareness of others of the need for and the consequences of change.

SP3: I plan preventive actions and corrective actions. I report to key internal and external stakeholders, such as senior managers and department managers involved in the change. Based on observation and correspondence with key stakeholders, I generate my reports.

All responses of the department managers were in line with the responses of the project managers working for their organisations. It has been noted also that the department managers appreciate the support they receive form the project managers in times of change.

CD1: The project manager was involved in managing and communicating the change to all key stakeholders, including me as a department manager.

OD2: As an internal stakeholder, I need the assistance of the project manager of organisational change

Part B: Reducing resistance to change

The second part of the questions related to stakeholders' management focused on the role of project managers in reducing resistance to change. The responses of project managers showed that reducing resistance to change is not a defined responsibility, but it is embedded in their daily activities. Project managers do not plan the reduction of resistance to change. However, their project management activities lead to the reduction of employees' resistance and enhance their involvement in achieving the objectives of change.

A project manager working in the construction sector stated that, according to his job description, managing employees' resistance to change is not his responsibility. However, as revealed by him and obvious in other responses, the role of reducing resistance to change is embedded in their daily duties. The project managers plan change and work with other managers towards achieving the objectives of change. Project managers ensure that the values and necessity of change are understood by department managers, who in turn convey the messages to project teams. Project managers define the knowledge and skills required to implement change successfully. Department managers plan the development of individuals to ensure their teams become competent enough to accept new tasks and emergent duties. Employees are given responsibilities based on the project managers' planning, which creates a sense of ownership that leads to the reduction of resistance to change.

CP2: One main issue that takes time and effort is dealing with employees who resist change. There is nothing in my job description that states that I am responsible for reducing resistance to change. My role in this case is embedded in my daily activities as project manager.

CD2: Project managers do not have a direct role in reducing resistance to change within my department. However, their work helps me convey clear massages to my staff about change activities.

The same as the above contribution, oil and gas project managers consider resistance to change as one of the projects risks. They do not plan or report resistance to change, but they work towards the objective of involving everyone in the process. When problems occur, they conduct a root cause analysis; and if the problem is due to workforce resistance, they report to department managers. They communicate the message, but they do not interfere directly in resolving internal departments' business. The contribution of project managers is within their job description only. In their responses, the project managers emphasised the importance of the planning phase of change in reducing resistance to change. Planning is included in the role and responsibility of all project teams. They see that clearly communicating the requirements and advantages of change is one action that leads to assuring employees that change is positive. Using the project management tools and techniques leads to a clear and detailed description of what needs to be done. Three of the interviewees emphasised the importance of involving individuals in the decision-making process. This is another strategy that leads to the reduction of resistance to

change. Moreover, project managers in the oil and gas sector mentor managers to ensure that they are capable of implementing change successfully. To them, change is a project that must be closed successfully. Therefore, they do beyond their job description to ensure that the work is done effectively and that all individuals are contributing to the success of the project.

OP2: I tell them directly and indirectly that change is a must, so if they succeed in implementing change effectively, they will enjoy job security. I cannot promise them anything else, but I wish I can because this will be the best motivation to make everyone strive to make the change process a success.

The project managers working in the regulatory sector revealed that resistance of stakeholders is a common issue that they deal with during organisational change. Their responses came in line with the responses of the project managers working for the construction and oil and gas companies. Managing resistance to change is not a task, nor is it a defined responsibility. However, project managers contribute directly and indirectly to the reduction of resistance to change through their daily duties and communication with department managers. The interviewees mentioned some additional endeavours, such as inspiring others, sharing lessons learned, transferring knowledge, reducing employee stress, giving presentations and communicating through visual aids.

SP5: Resistance becomes obvious when the organisation passes the deadlines, cancels follow-up meetings and sends complaints to senior management. This is where I have to use all my skills to resolve issues because I have a target to meet. In all cases, my work results in the reduction of resistance to change.

Project managers in all the three sectors use nearly the same aforementioned skills and techniques in their attempt to reduce resistance to change. It has been noted that this is an agreement between the responses of the project managers and those of the department managers in the three sectors.

OD1: The project manager's predictions and planning help me convince my staff that change increases productivity.

SD1: This gives us a clear vision of the future, and we help our teams understand that change will not affect their positions as they perceive.

Although the project managers are not directly involved in reducing resistance to change in other departments, their support is praised by all the department managers.

Respondent	Managing Stakeholders	Reducing Resistance to Change
Oil and gas project managers	Direct involvement Manage internal and external stakeholders	Indirect involvement
Construction project managers	Direct involvement Manage internal and external stakeholders	Indirect involvement
Regulatory sector project managers	Direct involvement Manage internal and external stakeholders	Direct involvement

Table 9: Result of the interview questions: project managers' stakeholders' management
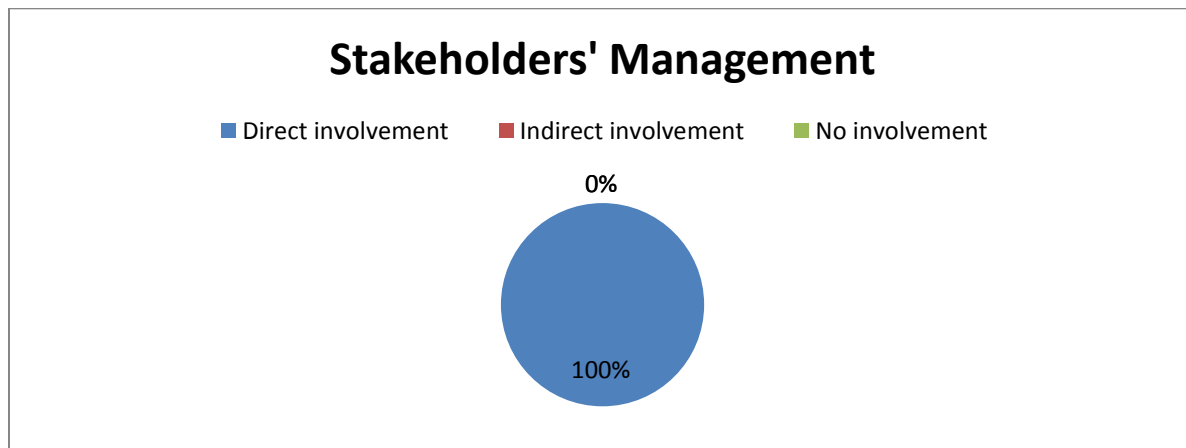
Figure 20: Involvement of project managers in stakeholders' management during change management
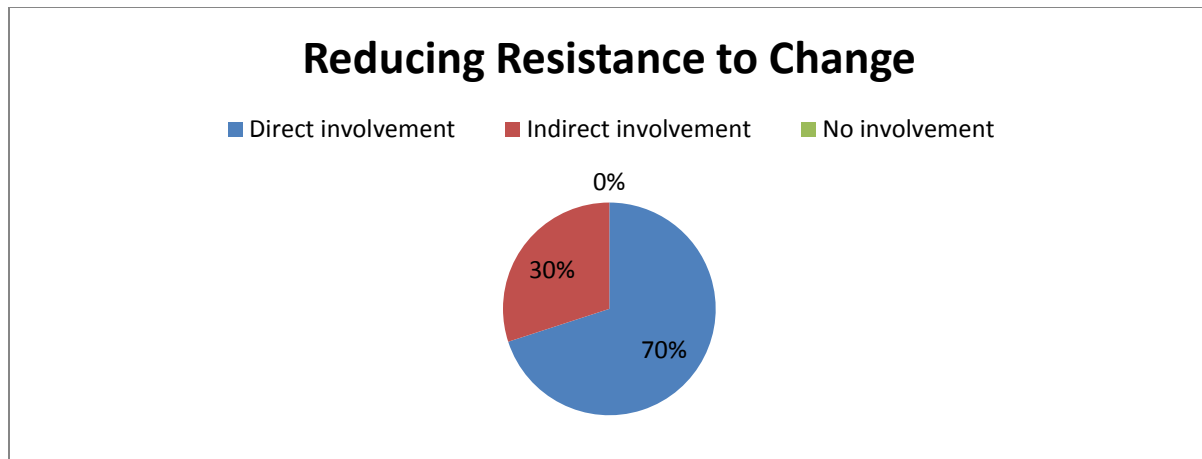
Figure 21: Involvement of project managers in reducing resistance to change

In summary, all the interviewed samples stated that project managers are directly involved in stakeholders' management during change management. However, the volume of involvement in reducing resistance to change differs between organisations.

7.4 Summary of the Chapter

The chapter includes the qualitative data analysis. The content analysis technique, the interview questions and the subject and site sampling of the research are explained. The questions are available in the appendix. Details about the organisations' profiles are given to provide a clear picture of the research context. The last part of the chapter is the qualitative research analysis and the findings.

The next chapter provides a description of the triangulation process used to validate the qualitative research findings. Moreover, the chapter demonstrates the quantitative data analysis process and the research findings.

8   Findings from the Survey

8.1   Introduction

Chapter eight presents the reliability testing of the independent variables. Moreover, the chapter presents the descriptive statistics and the hypotheses testing. The restatement of the research hypotheses is provided in addition to the rationale for the selection of the statistical tests and the analysis of variance between the respondents. The competencies in the initiation stage, the association analysis using the product-moment correlation coefficient test and the stepwise multiple regression analysis are explained.

8.2   Reliability Testing

The purpose here is to make sure that the scale used in the data collection is consistent. The consistency in the scales used to measure the competency statements within each section of the questionnaire is important in making sure that the chosen scales are measuring the underlying constructs of the study. Cronbach's alpha coefficient is used to perform this sort of analysis. It is reported in the literature that a Cronbach's alpha value of 0.7 or higher is considered acceptable.

8.2.1   Planning Change

The planning change competencies consist of 12 competency statements. These are measured using a three-point Likert-type scale. The test results shown in the table below demonstrate that the internal consistency scale for measuring the planning change competencies are reliable. The result indicates that the selected statements do indeed measure the underlying issues with PM necessary competencies to plan change initiatives. Cronbach's alpha was equal to 0.888.

Reliability Statistics

Cronbach's Alpha	N of Items
.888	12

8.2.2 Evaluating the Performance of Change Projects

The competencies for the evaluation of the performance of change initiatives consist of seven competency statements. These are measured using a three-point Likert-type scale. The test results shown in the table below demonstrate that the internal consistency scale for measuring the evaluating performance competencies is reliable. Cronbach's alpha is equal to 0.871.

Reliability Statistics

Cronbach's Alpha	N of Items
.871	7

8.2.3 Managing Change Projects

The managing change projects competencies consist of 12 competency statements. These are measured using a three-point Likert-type scale. The test results shown in the table below demonstrate that the internal consistency scale for measuring the managing change projects competencies are reliable. The result indicates that the selected statements do indeed measure the underlying issues with PM necessary competencies to manage the people element of change. Cronbach's alpha is equal to 0.894.

Reliability Statistics

Cronbach's Alpha	N of Items
.894	12

8.2.4   Measuring the Success Factors

The measuring success factors competencies consist of 21 competency statements. These are measured using a three-point Likert-type scale. The test results shown in the table below demonstrate that the internal consistency scale for measuring the managing change projects competencies are reliable. The result indicates that the selected statements do indeed measure the underlying issues with PM necessary competencies to measure the success factors competencies. Cronbach's alpha is equal to 0.939.

Reliability Statistics

Cronbach's Alpha	N of Items
.939	21

8.3   Descriptive Statistics

This section provides information about the distribution of the participants in terms of demographics. The major findings are highlighted and presented in tables and graphs. Age and gender are highlighted in addition to the position of the respondents and their project sectors. The variables used are the ones that serve the purpose of the study.

8.3.1   Demographics and Career Variables

My current work position is		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Project Director	5	12.8	12.8	12.8
	Project Manager	20	51.3	51.3	64.1
	Project Coordinator	8	20.5	20.5	84.6
	Department Manager	6	15.4	15.4	100.0
	Total	39	100.0	100.0	

Table 10: Work position of the respondents
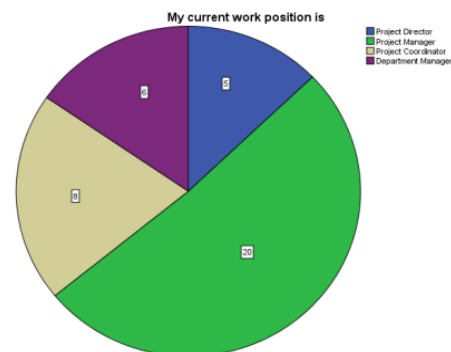
Figure 22: Work position of the respondents

As for the current position, project managers represented the majority with 51% of the respondents, followed by project coordinators, 20.5%; department managers, 15.4%; and project directors, 12.8%.

My gender is					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	20	51.3	51.3	51.3
	Female	19	48.7	48.7	100.0
	Total	39	100.0	100.0	

Table 11: Gender of respondents
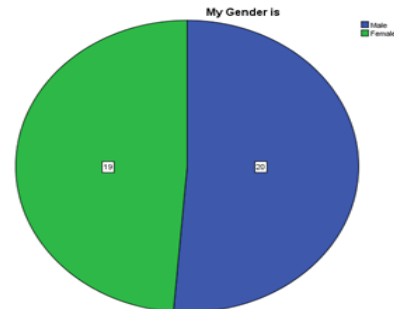
Figure 23: Gender of respondents

In terms of gender, 51% of the respondents are male, while 48.7% are females.

My age range is					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	22–35	18	46.2	46.2	46.2
	36–49	19	48.7	48.7	94.9
	Above 50	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

Table 12: Age range of the respondents
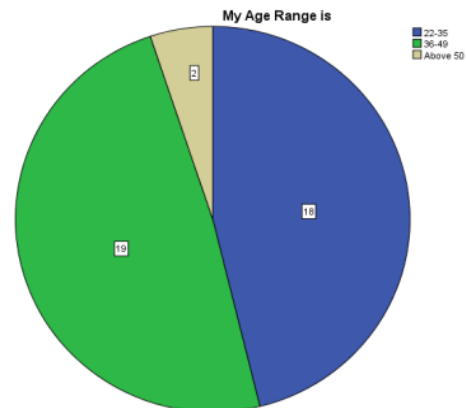
Figure 24: Age range of respondents

As for the age range of the respondents, 48.7% are between the ages of 36 and 49, and 46.2% are between the ages of 22 and 35. Only 5.1% are aged above 50.

The industry of my project is					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Construction	9	23.1	23.1	23.1
	Oil and Gas	6	15.4	15.4	38.5
	Information Technology	1	2.6	2.6	41.0
	Manufacturing	1	2.6	2.6	43.6
	Quality Assurance	2	5.1	5.1	48.7
	Regulatory Sector	6	15.4	15.4	64.1
	Education	6	15.4	15.4	79.5
	Other	8	20.5	20.5	100.0
	Total	39	100.0	100.0	

Table 13: Project industry of the respondents

The Industry of my Project is

Construction
Oil and Gas
Infromation Technology
Manufacturing
Quality Assurance
Regulatory Sector
Education
Other
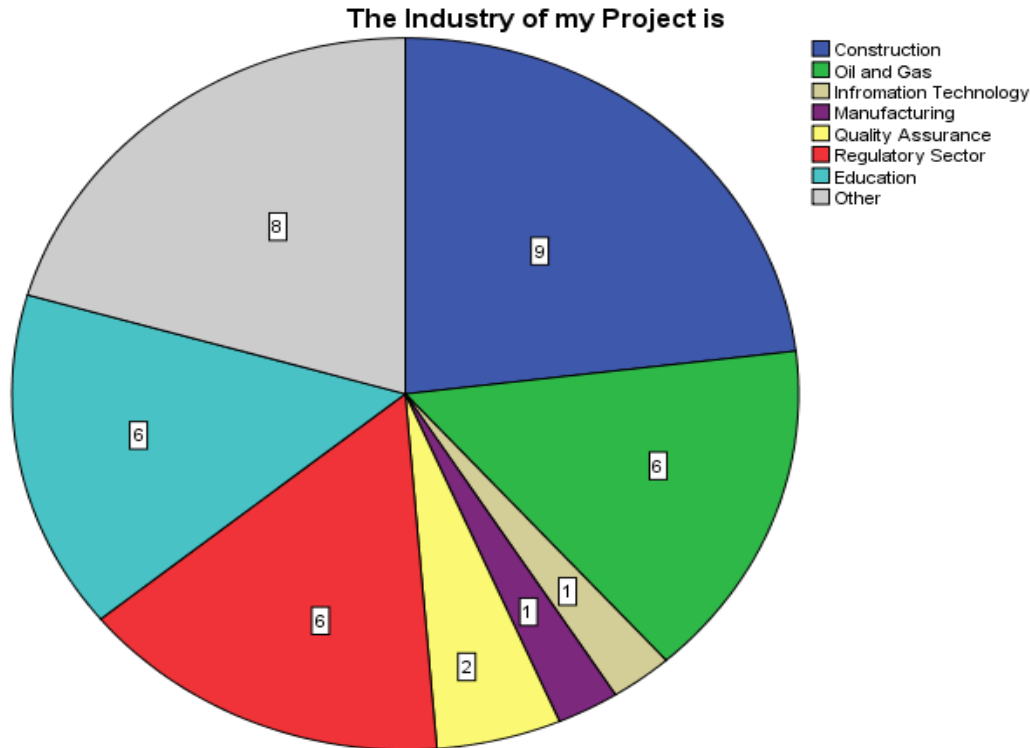
Figure 25: Project industry of the respondents

As for the project industry of the respondents, the construction industry has the highest percentage with 23.1%, followed unidentified (other) industries with 20.0%. The percentage of the respondents from the oil and gas industry, regulatory sector, and education is 15.4%. Only 5.1% of the respondents are from the quality assurance industry, and 2.6% work in information technology and manufacturing industries.

8.3.2   Frequency of PM Skills Related to Change Management

The descriptive statistics that are mostly used for frequency are the mean (the average), the mode (the most frequently occurring score) and the median (the middle score). Statistics is mainly the study of the causes of data variability. Presenting the value that occurs most frequently, the mode is a useful average that leads to identifying the most frequently occurring data value.

The mode value as shown below ranges from 1 (always) to 2 (sometimes) and 3 (never). The mode average in the table below is (1). This shows that the independent variables related to managing the organisational side of the project are the most frequently performed by project managers.

Statistics			
	Mean	Median	Mode
PCC1 - I create and distribute messages to external stakeholders to build awareness, understanding, knowledge and motivation	1.67	2.00	1
PCC2 - I communicate project updates that are relevant to those outside of the immediate project team	1.51	1.00	1
PCC3 - I create and execute communication events for external stakeholders	1.92	2.00	2
PCC4 - I collect feedback from stakeholders regarding project operations, and I ensure their concerns are captured and used to modify or improve project performance	1.46	1.00	1
PCC5 - I am responsible for monitoring and controlling communications throughout the entire project cycle to ensure the information needs of the project stakeholders are met	1.54	1.00	1
PRC1 - I identify risks by making organisation- and people-related risks part of the official project risk registry	1.67	1.00	1
PRC2 - I plan risk responses and control risks and draw on the competencies within the team and utilise the recommendations of expert judgment	1.72	2.00	1
PRC3 - I conduct iterative stakeholder engagement sessions and analyse results	1.85	2.00	1[a]
PPC1 - When generating a request of proposal (RFP), I consider how procurement of resources might impact stakeholders and the organisation	1.64	1.00	1
PPC2 - I consider, accept and am ready to utilise the change that will be introduced by the supplier or vendor	1.85	2.00	1
PPC3 - It is my duty to monitor contractors' performance and make changes and corrections to contracts as appropriate	1.82	2.00	1
PSC1 - I identify stakeholders in an attempt to enhance and unify project and change management	1.46	1.00	1
PSC2 - I clarify the different types of stakeholder groups and their relationship with the project	1.56	1.00	1
PSC3 - I conduct a stakeholder quantitative and qualitative information analysis to determine whose interest should be taken into account throughout the project	1.77	2.00	1
PSC4 - I plan stakeholder management to facilitate change adoption and to maintain project funding and support throughout the project life cycle	1.79	2.00	2
PSC5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project life cycle to ensure organisation value is achieved	1.69	1.00	1
PQC1 - I develop quality metrics that include stakeholder satisfaction with the amount of information they are receiving about the project	1.74	1.00	1
PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)	1.72	2.00	1
PQC3 - The quality metrics I create include the user adoption rates	2.15	2.00	2[a]
PQC4 - As part of the project risk, I consider and document the level of self-sufficiency	2.08	2.00	2[a]
PQC5 - I use the gathered data to evaluate and improve on communications plans and training plans and use adoption strategies	1.59	1.00	1
a. Multiple modes exist. The smallest value is shown			

Table 14: Managing the organisational side of project change

The mode average is in table 1 below. This shows a high frequency of respondents managing change throughout the project cycle, suggesting that there is a relationship between the independent variables and the respondents.

	Mean	Median	Mode
IC1 - When it is required, I initiate change projects independently	1.85	2.00	1[a]
IC2 - One of my tasks is to formulate the change project name and the project vision	2.08	2.00	2
PC1 - I identify and build the key stakeholder engagement strategy and plan	1.49	1.00	1
PC2 - I identify the target behavioural patterns/standards needed for higher performance	1.54	1.00	1
PC3 - Identifying critical events to shape the project change is one of my tasks	1.62	2.00	2
PC4 - I ensure that the 'people' factor is given just as much consideration as elements that are more technical are at the outset of a project	1.72	2.00	2
PC5 - I keep both organisational adoption and value creation in mind during the planning process	1.38	1.00	1
EC1 -Throughout the execution phase, I manage stakeholder needs and expectations	1.38	1.00	1
EC2 - To ensure the success of the change project, I utilise both subject matter experts and change agents during a project executing process	1.56	2.00	1
MC1 - I assess and meet the ever-evolving needs and expectations of stakeholders	1.38	1.00	1
MC2 - I adjust project plans and designs based on stakeholder needs and concerns	1.54	1.00	1
CC1 - Before closing a project, I ensure that value creation is realised and lessons learned are captured	1.41	1.00	1
a. Multiple modes exist. The smallest value is shown			

Table 15: Managing change throughout the project cycle

In the table below, there is no one mode that best describes the central tendency of the independent variables below. Two values, 1 and 2, share the highest frequency, suggesting that there is a relationship between the respondents and the independent variables.

Statistics			
	Mean	Median	Mode
EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees	1.82	2.00	2

	Mean	Median	Mode
EPC2 - I develop an action plan, set deadlines and identify people responsible for transition activities	1.41	1.00	1
EPC3 - One of my key responsibilities is to monitor the implementation of the plan	1.49	1.00	1
EPC4 - To ensure stakeholders' satisfaction, I collect and analyse feedback and update the communications plan regularly	1.59	1.00	1
EPC5 - I am responsible for performing assessments and analysing results	1.74	2.00	2
EPC6 - I am assigned to update existing action plans to mitigate risks	1.69	2.00	2
EPC7 - I support the implementation of action plans and monitor the results	1.41	1.00	1

Table 16: Evaluating the performance of change effort

In the table below, the mode average of the independent variables is 1, suggesting that there is a relationship between all the respondents and the independent variables but one. The independent variable MP5 has the value of 3, suggesting that there is no relationship between the respondents and the independent variable in developing the reward and recognition systems that reflect the expected new performance requirements.

Statistics			
	Mean	Median	Mode
MP1 - I evaluate the human resources plan against the project and change management requirements	1.85	2.00	1
MP2 - Developing and managing project teams is one of my responsibilities	1.62	1.00	1
MP3 - I attain visible support for the change from senior-level leadership	1.56	1.00	1
MP4 - I provide the project with emotional support when experiencing change-induced stress	1.670	1.00	1
MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements	2.080	1.00	3
MP6 - I provide the project team with adequate and timely information	1.310	1.00	1
MP7 - I ensure that the team members have clear understanding of how their roles and responsibilities may be affected	1.280	1.00	1
MP8 - I ensure that everyone in the team has direct engagement and involvement in the change	1.38	1.00	1
MP9 - I conduct a training needs analysis and design the approach to training in the context of the project	1.77	2.00	1[a]
People 10 - I play a major role in developing, planning and scheduling a training programme	1.82	2.00	1
People 11 - I contribute to the coordination and preparation of training activities	1.87	2.00	2
People 12 - After the training, I assess the training program's effectiveness and employee satisfaction with the training	1.720	2.00	1

Table 17: Managing people (motivation/rewards/training/human resources)

The histograms can be found in the appendices.

8.4 Hypotheses Testing

The ANOVA statistical method is used to analyse the findings of this study. According to Sounderpandian (2008, p. 349), the analysis of variance (ANOVA) is a statistical method that is 'used for determining the existence of differences among several population means'. This method can detect the differences between a number of population means by doing an analysis of diverse sets of data associated with random samples. On the other hand, Moore (2010, p. 635) suggests that a statistical problem would occur when the researcher carries out many comparisons at once. Therefore, the use of ANOVA is needed to resolve the problem. Moore (2010) summarised the process as follows: (1) The researcher takes a test to figure out any existing evidence of differences among the parameters that will be compared. (2) A detailed follow-up analysis is conducted to decide which of the parameters is different, and then an estimation of how big the differences are is done.

This chapter, therefore, undertakes a detailed analysis of the ANOVA tests to find out the similarities or differences in the views of the respondents. The variations identified in this study are based on the experiences of the respondents and different specialties. The opinions of the respondents have been collected using a survey based on testing hypotheses. An ANOVA was performed to justify the statistical differences. According to Sounderpandian (2008), the basic premise for the hypothesis test in ANOVA is

$$H_0: \mu_1 = \mu_2 = \mu_3 = \cdots = \mu_i$$

$$H_i: Not\ at\ all\ \mu_i (i = 1, \dots, r) are\ equal$$

8.5 Restatement of Research Hypothesis

The table below shows the research hypotheses formulated by this research.

The first hypothesis deals with planning change skills in relation to initiating, planning, execution, monitoring and control and closing phases of a project. The second hypothesis aims to

reveal the difference in opinion in relation to the PM skills in evaluating the performance of a change effort. The third hypothesis is targeted at testing the skills in managing people (motivation/rewards/training/human resources); the last hypothesis is concerned with checking the difference in rating organisational skills.

Restatement of Research Hypotheses		
1- Causes of variation related to planning change		
	H1	There is a statistically significant difference in the ranking of planning change variables based on respondents' position
2- Causes of variation related to evaluating the performance of a change effort		
	H2	There is a statistically significant difference in the ranking of evaluating the performance of change effort variables based on respondents' position
3- Causes of variation related to managing people		
	H3	There is a statistically significant difference in the ranking of managing people variables based on respondents' position
4- Causes of variation related to managing the organizational side of project change		
	H4	There is a statistically significant difference in the ranking of managing the organisational side of project change variables based on respondents' position

Table 18: Restatement of research hypotheses

8.6 **Rationale for the Selection of Statistical Test**

There is no such thing as a universal decision that would directly enable a researcher to select the right statistical test (Kinnear & Gray 2000). A number of philosophical positions are adopted by researchers for statistical analysis. The 'parametric' and 'nonparametric' methods are used for this research.

Per Field (2003), a parametric test requires that the study data do not disrupt certain conventional assumptions. Hence, it is highly important to validate the assumptions before choosing the suitable statistical test (Field 2003).

On the other hand, the selection of a statistical test is related to the understanding of research questions, the type of items and the level and nature of measurement used for each variable (Pallant 2005). Common aspects have been cited by researchers to be taken into consideration while choosing between parametric and nonparametric tests to ensure that the right philosophical approach is adopted. This involves the profile of the population distribution, the sample size and the type of measurement.

8.7   Analysis of Variance between the Respondents

The aim of this section is to find out whether there is a difference in the mean rating of the competencies and skills of the respondents. The testing is based on the job position of the respondents. This is selected because of its importance to the skills being measured. The following sections will report the results. The difference in rating is testing using ANOVA at a 0.05 level of significance.

8.8   Competencies in the Initiation Stage

Planning the change

The table below shows that the significance values associated with ratings IC1, IC2, PC2 and EC1 are below 0.05; thus, this suggests that there is a statically significant difference in the mean rating of planning competences by the respondents. This means that the respondent answers are not the same. To confirm where the differences reside between the respondents, Tukey's test as a post hoc multiple comparison test is used.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
IC1 - When it is required, I initiate change projects independently	Between Groups	7.194	3	2.398	5.284	.004
	Within Groups	15.883	35	.454		
	Total	23.077	38			
IC2 - One of my tasks is to formulate the change project name and the project vision	Between Groups	9.311	3	3.104	9.480	.000
	Within Groups	11.458	35	.327		
	Total	20.769	38			
PC2 - I identify the target behavioural patterns/standards needed for higher performance	Between Groups	4.134	3	1.378	3.100	.039
	Within Groups	15.558	35	.445		
	Total	19.692	38			
EC1 -Throughout the execution	Between Groups	2.397	3	.799	3.166	.036

phase, I manage stakeholder needs and expectations	Within Groups	8.833	35	.252		
	Total	11.231	38			
	Within Groups	12.000	35	.343		
	Total	13.436	38			

Table 19: ANOVA test for causes of variation related to planning change

8.8.1 Tukey's Tests for IC1, IC2, PC2 and EC1

The tables above illustrate the significant value of $p < 0.05$, which indicates that there are significant variances among the items listed in the same subset. The full post hoc data results are shown in table below. The results showed $p > 0.05$; therefore, it can be concluded or confirmed that there is no statistically significant difference among the respondents.

IC1 - When it is required, I initiate change projects independently

Tukey B[a,b]

		Subset for alpha = 0.05	
		1	2
My current work position is	N	1	2
Project director	5	1.00	
Department manager	6	1.67	1.67
Project manager	20	1.85	1.85
Project coordinator	8		2.50

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

IC2 - One of my tasks is to formulate the change project name and the project vision

Tukey B[a,b]

		Subset for alpha = 0.05		
		1	2	3
My current work position is	N	1	2	3
Project director	5	1.20		
Department manager	6	1.83	1.83	

Project manager	20	2.05	
Project coordinator	8		2.88

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PC2 - I identify the target behavioural patterns/standards needed for higher performance

Tukey B[a,b]

		Subset for alpha = 0.05
My current work position is	N	1
Project director	5	1.20
Project manager	20	1.35
Department manager	6	1.67
Project coordinator	8	2.13

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

EC1 - Throughout the execution phase, I manage stakeholder needs and expectations

Tukey B[a,b]

		Subset for alpha = 0.05
My current work position is	N	1
Project director	5	1.20
Project manager	20	1.20
Department manager	6	1.67
Project coordinator	8	1.75

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

Table 20: Results for Tukey's tests for IC1, IC2, PC2 and EC1

Evaluating the performance of change

In table below, the one-way ANOVA displays a different opining in rating in evaluating the performance of change factors by a group. To solve this issue, we need to use Tukey's test as a post hoc multiple comparison test using SPSS.

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees	Between Groups	6.244	3	2.081	4.699	.007
	Within Groups	15.500	35	.443		
	Total	21.744	38			
EPC5 - I am responsible for performing assessments and analysing results	Between Groups	6.453	3	2.151	6.854	.001
	Within Groups	10.983	35	.314		
	Total	17.436	38			
EPC6 - I am assigned to update existing action plans to mitigate risks	Between Groups	3.774	3	1.258	3.513	.025
	Within Groups	12.533	35	.358		
	Total	16.308	38			

Table 21: ANOVA test for causes of variation related to evaluating the performance of a change effort

8.8.2   Tukey's Tests for EPC1, EPC5 and EPC6

The tables above illustrate the significant value of $p < 0.05$, which indicates that there are no significant variances among the items listed in the same subset. To summarise, the H0 ($p > 0.05$)—null hypothesis—is that there is no statistically significant difference in the ranking of evaluating the performance of change effort variables based on respondents' position except for three factors, namely, EPC1, EPC5 and EPC6, based on the independent variable experience and seven factors based on the independent variable respondents' position. The full post hoc data are shown in table 22.

EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees

Tukey B[a,b]

My current work position is	N	Subset for alpha = 0.05	
		1	2
Project director	5	1.20	
Department manager	6	1.50	
Project manager	20	1.80	1.80
Project coordinator	8		2.50

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

EPC5 - I am responsible for performing assessments and analysing results

Tukey B[a,b]

My current work position is	N	Subset for alpha = 0.05	
		1	2
Project director	5	1.40	
Project manager	20	1.45	
Project coordinator	8		2.25
Department manager	6		2.33

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

EPC6 - I am assigned to update existing action plans to mitigate risks

Tukey B[a,b]

My current work position is	N	Subset for alpha = 0.05	
		1	2
Project director	5	1.40	
Project manager	20	1.50	1.50
Department manager	6	1.83	1.83
Project coordinator	8		2.25

Means for groups in homogeneous subsets are displayed.

a. Uses harmonic mean sample size = 7.385.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 22: Results for Tukey's tests for EPC1, EPC5 and EPC6

Managing people factors

In table 23 below, the one-way ANOVA displays four managing people factors, namely, MP1, MP2, MP4 and MP5, showing a significant difference between different groups. To solve this issue, we need to use Tukey's test as a post hoc multiple comparison test using SPSS.

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
MP1 - I evaluate the human resources plan against the project and change management requirements	Between Groups	7.044	3	2.348	4.102	.014
	Within Groups	20.033	35	.572		
	Total	27.077	38			
MP2 - Developing and managing project teams is one of my responsibilities	Between Groups	12.406	3	4.135	13.370	.000
	Within Groups	10.825	35	.309		
	Total	23.231	38			
MP4 - I provide the project tram with emotional support when experiencing change-induced stress	Between Groups	10.467	3	3.489	10.009	.000
	Within Groups	12.200	35	.349		
	Total	22.667	38			
MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements	Between Groups	10.736	3	3.579	7.812	.000
	Within Groups	16.033	35	.458		
	Total	26.769	38			

Table 23: ANOVA test for causes of variation related to managing people

8.8.3 Tukey's Tests for MP1, MP2, MP4 and MP5

The tables above illustrate the significant value of p > 0.05, which indicates that there are no significant variances among the items listed in the same subset. To summarise, the H0 (p > 0.05)—null hypothesis—is that there is no statistically significant difference in the ranking of managing people variables based on respondents' position except for four factors, namely, MP1, MP2, MP4 and MP5, based on the independent variable experience, and 12 factors based on the independent variable respondents' position. The full post hoc data are shown in table 24.

MP1 - I evaluate the human resources plan against the project and change management requirements

Tukey HSD[a,b]

My current work position is	N	Subset for alpha = 0.05	
		1	2
Project director	5	1.00	
Project manager	20	1.80	1.80
Department manager	6	1.83	1.83
Project coordinator	8		2.50
Sig.		.168	.301

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

MP2 - Developing and managing project teams is one of my responsibilities

Tukey HSD[a,b]

My current work position is	N	Subset for alpha = 0.05	
		1	2
Project director	5	1.00	
Department manager	6	1.00	
Project manager	20	1.55	
Project coordinator	8		2.63
Sig.		.246	1.000

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

MP4 - I provide the project tram with emotional support when experiencing change-induced stress

Tukey HSD[a,b]

My current work position is	N	Subset for alpha = 0.05	
		1	2
Project director	5	1.00	
Department manager	6	1.00	
Project manager	20	1.70	1.70
Project coordinator	8		2.50
Sig.		.123	.062

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements

Tukey HSD[a,b]

My current work position is	N	Subset for alpha = 0.05		
		1	2	3
Project director	5	1.00		
Department manager	6	1.67	1.67	
Project manager	20		2.20	2.20
Project coordinator	8			2.75
Sig.		.250	.440	.413

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 24: Results for Tukey's tests for MP1, MP2, MP4 and MP5

Managing the organizational side of project change factors

In table 25 below, the one-way ANOVA shows that respondents have a different opining in rating seven 'managing the organisational side of project change' factors, namely, PRC2, PRC3, PSC4, PSC5, PQC2, PQC3 and PQC4. To solve this issue, we need to use Tukey's test as a post hoc multiple comparison test using SPSS.

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
PRC2 - I plan risk responses and control risks and draw on the competencies within the team and utilise the recommendations of expert judgment	Between Groups	5.014	3	1.671	3.098	.039
	Within Groups	18.883	35	.540		
	Total	23.897	38			
PRC3 - I conduct iterative stakeholder engagement sessions and analyse results	Between Groups	5.027	3	1.676	3.249	.033
	Within Groups	18.050	35	.516		
	Total	23.077	38			
PSC4 - I plan stakeholder management to facilitate change adoption and to maintain project funding and support throughout the project life cycle	Between Groups	4.826	3	1.609	3.624	.022
	Within Groups	15.533	35	.444		
	Total	20.359	38			
PSC5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project life cycle to ensure organisation value is achieved	Between Groups	5.174	3	1.725	3.155	.037
	Within Groups	19.133	35	.547		
	Total	24.308	38			
PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)	Between Groups	6.614	3	2.205	5.049	.005
	Within Groups	15.283	35	.437		
	Total	21.897	38			
PQC3 - The quality metrics I create include the user adoption rates	Between Groups	7.394	3	2.465	5.500	.003
	Within Groups	15.683	35	.448		
	Total	23.077	38			
PQC4 - As part of the project risk, I consider and document the level of self-sufficiency	Between Groups	7.519	3	2.506	5.085	.005
	Within Groups	17.250	35	.493		
	Total	24.769	38			

Table 25: ANOVA test for causes of variation related to managing the organisational side of project change

8.8.4 Tukey's Tests for PRC2, PRC3, PSC4, PSC5, PQC2, PQC3 and PQC4

The tables below illustrate the significant value of p > 0.05, which indicates that there are no significant variances among the items listed in the same subset. To summarise, the H0 (p > 0.05)—null hypothesis—is that there is no statistically significant difference in the ranking of

managing people variables based on respondents. position except for four factors, namely, PRC2, PRC3, PSC4, PSC5, PQC2, PQC3 and PQC4, based on the independent variable experience, and 21 factors based on the independent variable respondents' position. The full post hoc data are shown in table 26.

PRC2 - I plan risk responses and control risks and draw on the competencies within the team and utilise the recommendations of expert judgment Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.00	
Project manager	20	1.65	1.65
Department manager	6	1.83	1.83
Project coordinator	8		2.25
Sig.		.149	.409

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PRC3 - I conduct iterative stakeholder engagement sessions and analyse results Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.00	
Project manager	20	1.85	1.85
Department manager	6	2.00	2.00
Project coordinator	8		2.25
Sig.		.052	.710

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PSC4 - I plan stakeholder management to facilitate change adoption and to maintain project funding and support throughout the project life cycle Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.00	
Project manager	20	1.80	1.80
Department manager	6	1.83	1.83
Project coordinator	8		2.25
Sig.		.095	.570

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PSC5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project life cycle to ensure organisation value is achieved Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.00	
Project manager	20	1.60	1.60
Department manager	6	1.83	1.83
Project coordinator	8		2.25
Sig.		.153	.344

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment) Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.00	
Project manager	20	1.55	1.55
Department manager	6		2.17
Project coordinator	8		2.25
Sig.		.392	.195

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PQC3 - The quality metrics I create include the user adoption rates Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.20	
Project manager	20		2.15
Department manager	6		2.17
Project coordinator	8		2.75
Sig.		1.000	.328

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

PQC4 - As part of the project risk, I consider and document the level of self-sufficiency Tukey HSD[a,b]			
		Subset for alpha = 0.05	
My current work position is	N	1	2
Project director	5	1.20	
Department manager	6	2.00	2.00
Project manager	20	2.05	2.05
Project coordinator	8		2.75
Sig.		.111	.189

Means for groups in homogeneous subsets are displayed.
a. Uses harmonic mean sample size = 7.385.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 26: Results for Tukey's tests for PRC2, PRC3, PSC4, PSC5, PQC2, PQC3 and PQC4

8.9 Association Analysis

The Pearson product-moment correlation coefficient test will measure the extent to which the dependent variable and its factors vary with the independent variable by looking for a significance value of less than 0.01 (Foster 2001). The test here is to find the association between the PM competency skills and their performance in managing change initiatives.

1- *Association between planning change competencies and performance*

The test results are shown in the table. For example, the respondent competencies PC1, PC2, PC5, EC1, EC2, MC1, MC2 and CC1 are significantly associated with change objective attainment.

Correlations				
	Organisational change Management is one of my tasks in the context of project work.	My annual performance appraisal includes the assessment of my projects' effectiveness.	I have experience in participating in managing projects.	My change management project objectives are met.
IC1 - When it is required, I initiate change projects independently	.354[*]	.562[**]		
IC2 - One of my tasks is to formulate the change project name and the project vision	.317[*]	.436[**]	.365[*]	
PC1 - I identify and build the key stakeholder engagement strategy and plan	.356[*]		.362[*]	.370[*]
PC2 - I identify the target behavioural patterns/standards needed for higher performance	.492[**]	.452[**]	.594[**]	.590[**]
PC3 - Identifying critical events to shape the project change is one of my tasks	.424[**]		.356[*]	
PC4 - I ensure that the 'people' factor is given just as much consideration as elements that are more technical are at the outset of a project		.404[*]		
PC5 - I keep both organisational adoption and value creation in mind during the planning process			.331[*]	.397[*]
EC1 -Throughout the execution phase, I manage stakeholder needs and expectations	.412[**]	.366[*]	.510[**]	.397[*]
EC2 - To ensure the success of the change project, I utilise both subject matter experts and change agents during project executing process	.345[*]	.409[**]	.539[**]	.378[*]
MC1 - I assess and meet the ever-evolving needs and expectations of stakeholders		.366[*]	.510[**]	.478[**]
MC2 - I adjust project plans and designs based on stakeholder needs and concerns			.387[*]	.343[*]
CC1 - Before closing a project, I ensure that value creation is realised and lessons learned are captured	.356[*]	.357[*]	.454[**]	.397[*]
*. Correlation is significant at the 0.05 level (two-tailed).				
**. Correlation is significant at the 0.01 level (two-tailed).				

Table 27: Correlation between the planning change phase's variables and change projects' performance (independent vs. dependent)

2- *Association between evaluating the performance of change projects' competencies and performance*

The test results are shown in the table. For example, the respondents' competencies EPC2 and EPC7 are significantly associated with change objective attainment.

[176]

Correlations				
	Organisational change Management is one of my tasks in the context of project work.	My annual performance appraisal includes the assessment of my projects' effectiveness.	I have experience in participating in managing projects.	My change management project objectives are met.
EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees	.291	.437**	.327*	
EPC2 - I develop an action plan, set deadlines and identify people responsible for transition activities	.356*		.618**	.323*
EPC3 - One of my key responsibilities is to monitor the implementation of the plan		.318*	.384*	
EPC4 - To ensure stakeholder's satisfaction, I collect and analyse feedback and update the communications plan regularly	.366*		.440**	
EPC5 - I am responsible for performing assessments and analysing results	.479**	.429**	.399*	
EPC7 - I support the implementation of action plans and monitor the results	.356*		.454**	.397*
*. Correlation is significant at the 0.05 level (two-tailed).				
**. Correlation is significant at the 0.01 level (two-tailed).				

Table 28: The correlation between evaluating the performance of change effort variables and change projects' performance (independent vs. dependent)

3- *Association between managing change projects competencies and performance*

The test results are shown in the table. For example, the respondents' competencies, MP1, MP2, MP3, MP5 and MP9, are significantly associated with change objective attainment.

Correlations				
	Organisational change Management is one of my tasks in the context of project work.	My annual performance appraisal includes the assessment of my projects' effectiveness.	I have experience in participating in managing projects.	My change management project objectives are met.
MP1 - I evaluate the human resources plan against the project and change management requirements	.327*	.463**	.400*	.324*
MP2 - Developing and managing project teams is one of my responsibilities	.320*	.467**	.518**	.285
MP3 - I attain visible support for the change from senior-level leadership	.428**		.503**	.353*
MP4 - I provide the project tram with emotional support when experiencing change-induced stress		.386*	.379*	
MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements		.552**	.322*	.333*
MP6 - I provide the project team with adequate and timely information			.489**	
MP7 - I ensure that the team members have clear understanding regarding how their roles and responsibilities may be affected			.375*	

MP8 - I ensure that everyone in the team has direct engagement and involvement in the change	.412**		.510**	
MP9 - I conduct a training needs analysis and design the approach to training in the context of the project	.330*		.354*	.345*
MP10 - I play a major role in developing, planning and scheduling a training programme	.364*	.359*	.436**	
MP11 - I contribute to the coordination and preparation of training activities	.380*		.334*	
MP12 - After the training, I assess the training program effectiveness and employee satisfaction with the training			.494**	
*. Correlation is significant at the 0.05 level (two-tailed).				
**. Correlation is significant at the 0.01 level (two-tailed).				

Table 29: The correlation between the managing people (motivation/rewards/training/human resources) variables and the change project performance (independent vs. dependent)

4- *Association between measuring the success factors competencies and performance*

The test results are shown in the table. For example, the respondents' competencies, PQC1, PQC2 and PQC5, are significantly associated with change objective attainment.

Correlations				
	Organisational change Management is one of my tasks in the context of project work	My annual performance appraisal includes the assessment of my projects' effectiveness	I have experience in participating in managing projects.	My change management project objectives are met.
PRC1 - I identify risks by making organisation- and people-related risks part of the official project risk registry	.380*		.379*	
PRC2 - I plan risk responses and control risks and draw on the competencies within the team and utilise the recommendations of expert judgment			.350*	
PRC3 - I conduct iterative stakeholder engagement sessions and analyse results	.354*			
PPC1 - When generating a request of proposal (RFP), I consider how procurement of resources might influence stakeholders and organisations			.344*	
PPC2 - I consider, accept and am ready to utilise the change that will be introduced by the supplier or vendor		.339*		
PSC1 - I identify stakeholders in an attempt to enhance and unify project and change management			.374*	
PSC2 - I clarify the different types of stakeholder groups and their relationship with the project			.331*	
PSC3 - I conduct a stakeholder quantitative and qualitative information analysis to determine whose interest should be taken into account throughout the project	.386*		.324*	
PSC4 - I plan stakeholder management to facilitate change adoption and to maintain project funding and support throughout the project life cycle	.410**		.348*	
PSC5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project life cycle to ensure organisation value is achieved	.436**	.330*	.356*	
PQC1 - I develop quality metrics that include stakeholder satisfaction with the amount of information they are receiving about the project	.462**	.397*	.432**	.329*
PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)	.533**	.427**	.494**	.400*

PQC3 - The quality metrics I create include the user adoption rates			.318[*]	
PQC4 - As part of the project risk, I consider and document the level of self-sufficiency		.341[*]	.334[*]	
PQC5 - I use the gathered data to evaluate and improve on communication plans, training plans and use adoption strategies	.439[**]		.419[**]	.386[*]
*. Correlation is significant at the 0.05 level (two-tailed).				
**. Correlation is significant at the 0.01 level (two-tailed).				

Table 30: Correlation between managing the organisational side of project change variables and change projects' performance (independent vs. dependent)

8.10 Stepwise Multiple Regression Analysis

In this study, the performance of managers, in relation to their competencies, is measured by a project objective achievement attainment variable. The idea here is to find out which of the PM skills may cause variation in their performance. The aim here is not to predict the performance of the PMs based on their skills but to see whether the probability of variation in PM performance is associated with the PMs skills. In this sense, the stepwise regression gives us the opportunity to assess the PM performance in managing changing management initiatives based on their skills.

Test the relationship between the performance of the managers, and their pertained skills logistic regression was used to test the following hypothesis:

The performance of PMs in managing change management initiatives is associated with their skills.

Correlation and multiple stepwise regression analysis were utilised to examine the association between the PM's achievement of his project objectives and the skills required in change management. In total, eight experiments were conducted.

1- Association between PM objectives and planning change skills

All the variables of 'planning of change' were used in a stepwise regression model to assess the performance of PMs. The correlation of the independent variables (except for variable IC2) to the dependent variables was significant at *P<0.05*. The best fit model only contained one of the 11 planning change variables and was converged in one step with no variables removed by the algorithm. The generated model is artistically significant *F (19.784, 37)*, *P<0.001*, and accounted for approximately 33% of the variance of the PM performance in achieving project objectives (R

= 0.590, adjusted R2 = 0.331). PC2, 'identify the target behavioural patterns/standards needed for higher performance', is the primary predictor of the PM performance. It explained 59% of the variation in the data set. The generated model data along with standardised regression coefficients are shown in the table below:

Model Summary[b]									
Mod el	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.590[a]	.348	.331	.491	.348	19.784	1	37	.000
a. Predictors: (Constant) PC2 - I identify the target behavioural patterns/standards needed for higher performance									
b. Dependent variable: My change management project objectives are met									

Coefficients[a]													
Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-Order	Parti al	Part	Tolera nce	VIF
1	(Constant)	.781	.188		4.166	.000	.401	1.161					
	PC2 - I identify the target behavioural patterns/standa rds needed for higher performance	.492	.111	.590	4.448	.000	.268	.716	.590	.590	.590	1.000	1.000
a. Dependent variable: My change management project objectives are met													

Table 31: Association between PM objectives and planning change

2- *Association between PM objectives and evaluating performance skills*

All the variables of 'evaluating the performance of change effort' were used in a stepwise regression model to assess the performance of PMs. The correlation of the independent variables (except for variable EPC5 and EPC1) to the dependent variables was significant at $P<0.05$. The best fit model only contained two of the seven cluster variables and was converged in two steps with no variables removed by the algorithm. The generated model is artistically significant $F(4.9,36)$, $P<0.034$, and accounted for approximately 22% of the variance of the PM performance in achieving project objectives (R = 0.508, adjusted R2 = 0.217). EPC7 appears to be main latent variable in this cluster. It explains 68% of the variation in the data set. This may

suggest that this PM skill is important in evaluating the performance of the change projects. It is notable that the EPC6 negatively contributes to the prediction of PM archiving project objectives. The generated model data along with standardised regression coefficients are shown in the table below:

Model Summary[c]									
					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.397[a]	.158	.135	.558	.158	6.922	1	37	.012
2	.508[b]	.258	.217	.531	.101	4.877	1	36	.034
a. Predictors: (Constant) EPC7 - I support the implementation of action plans and monitor the results									
b. Predictors: (Constant) EPC7 - I support the implementation of action plans and monitor the results; EPC6 - I am assigned to update existing action plans to mitigate risks									
c. Dependent variable: My change management project objectives are met.									

Coefficients[a]												
		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1	(Constant)	.973	.233		4.183	.000	.502	1.445					
	EPC7 - I support the implementation of action plans and monitor the results	.401	.152	.397	2.631	.012	.092	.709	.397	.397	.397	1.000	1.000
2	(Constant)	1.228	.250		4.920	.000	.722	1.734					
	EPC7 - I support the implementation of action plans and monitor the results	.690	.195	.683	3.533	.001	.294	1.086	.397	.507	.507	.551	1.816
	EPC6 - I am assigned to update existing action plans to mitigate risks	−.391	.177	−.427	−2.208	.034	−751	−.032	.031	−.345	−.317	.551	1.816
a. Dependent variable: My change management project objectives are met												

Table 32: Association between PM objectives and evaluating performance skills

3- Association between PM objectives and Managing people skills

All the variables of 'managing' were used in a stepwise regression model to assess the performance of PMs. The correlation of the independent variables (except for variables MP4, MP6, MP7, MP8 and MP8) to the dependent variables was significant at $P<0.05$. The best fit model only contained one of the 12 cluster variables and was converged in one step with no variables removed by the algorithm. The generated model is artistically significant *F(5.2, 37), P<0.028*, and accounted for approximately 10% of the variance of the PM performance in achieving project objectives (R = 0.353, adjusted R2 = 0.101). MP3 appears to be main latent variable in this cluster. It explains 35% of the variation in relation to managing people skills. The generated model data along with standardised regression coefficients are shown in the table below:

Model Summary[b]									
					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.353[a]	.124	.101	.569	.124	5.258	1	37	.028

a. Predictors: (Constant) MP3 - I attain visible support for the change from senior-level leadership

b. Dependent variable: My change management project objectives are met.

Coefficients[a]												
		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1	(Constant)	1.021	.243		4.199	.000	.529	1.514					
	MP3 - I attain visible support for the change from senior-level leadership	.331	.144	.353	2.293	.028	.038	.623	.353	.353	.353	1.000	1.000

a. Dependent variable: My change management project objectives are met

Table 33: Association between PM objectives and managing people skills

4- *Association between PM objectives and organisational skills*

All the variables of 'organisational skills' were used in a stepwise regression model to assess the performance of PMs. Only three independent variables (PRC1, PQC1 and PQC2) were significantly correlated at $P<0.05$ to the dependent variables. The best fit model only contained one (PQC2) of the 21 cluster variables and was converged in one step with no variables removed by the algorithm. The generated model is statistically significant *$F(7.04,37)$, $P<0.012$*, and accounted for approximately 13.7% of the variance of the PM performance in achieving project objectives (R= 0.400, adjusted R2 = 0.137). PQC2 appears to be the main latent variable in this cluster. It explains 40% of the variation in relation to organisational skills. The lower number of variables contributing to the fitness model may be due to stringent criteria used in the stepping method. In this research, variables are used if their significance value is blow *$P<0.05$*. The generated model data along with standardised regression coefficients are shown in the table below:

Model Summary[b]										
				Std. Error of the Estimate	Change Statistics					
Model	R	R Square	Adjusted R Square		R Square Change	F Change	df1	df2	Sig. F Change	
1	.400[a]	.160	.137	.558	.160	7.040	1	37	.012	

a. Predictors: (Constant) PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)

b. Dependent variable: My change management project objectives are met

Coefficients[a]													
		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1	(Constant)	.995	.223		4.457	.000	.543	1.448					
	PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)	.316	.119	.400	2.653	.012	.075	.558	.400	.400	.400	1.000	1.000

a.   Dependent variable: My change management project objectives are met.

Table 34: Association between PM objectives and organisational skills

5- *Association between PM annual performance and planning change skills*

All the variables of 'planning of change' were used in a stepwise regression model to assess the performance of PMs. The correlation of the independent variables (except for variable PC5) to the dependent variables was significant at *P<0.05*. The best fit model only contained two of the 11 planning change variables and was converged in one step with no variables removed by the algorithm. The generated model is artistically significant *F(4.618, 36)*, *P<0.038*, and accounted for approximately 36% of the variance of the PM performance in achieving *planning change skills* (R = 0.627, adjusted R2 = 0.360). IC1, 'when it is required, I initiate change projects independently', is a primary predicator of the PM performance. It explained 49% of the variation in the data set. The generated model data along with standardised regression coefficients are shown below:

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.562[a]	.316	.297	.469	.316	17.057	1	37	.000
2	.627[b]	.393	.360	.448	.078	4.618	1	36	.038

Model Summary[c]

a. Predictors: (Constant) IC1 - When it is required, I initiate change projects independently

b. Predictors: (Constant), IC1 - When it is required, I initiate change projects independently; EC2 - To ensure the success of the change project, I utilise both subject matter experts and change agents during project executing process

c. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness.

Coefficients[a]

Model		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1	(Constant)	.973	.195		4.983	.000	.578	1.369					
	IC1 - When it is required, I initiate change projects independently	.403	.098	.562	4.130	.000	.205	.601	.562	.562	.562	1.000	1.000
2	(Constant)	.646	.241		2.687	.011	.159	1.134					
	IC1 - When it is required, I initiate change projects independently	.352	.096	.490	3.660	.001	.157	.547	.562	.521	.475	.939	1.065
	EC2 - To ensure the success of the change project, I utilise both subject matter experts and	.269	.125	.288	2.149	.038	.015	.524	.409	.337	.279	.939	1.065

change agents during project executing process									

a. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness

Table 35: Association between PM annual performance and planning change skills

6- *Association between PM annual performance and evaluating performance skills*

All the variables of 'evaluating the performance of change effort' were used in a stepwise regression model to assess the performance of PMs. The correlation of the independent variables (except for variables EPC4, EPC6 and EPC7) to the dependent variables was significant at $P<0.05$. The best fit model only contained two of the seven cluster variables and was converged in two steps with no variables removed by the algorithm. The generated model is artistically significant $F(4.703,36)$, $P<0.037$, and accounted for approximately 24.5% of the variance of the PM performance in achieving project objectives (R = 0.533, adjusted $R2$ = 0.245). EPC1 appears to be the main latent variable in this cluster. It explains 33% of the variation in the data set. This may suggest that this PM skill is important in the evaluating the performance of the change projects. It is notable that EPC5 contributes positively to the prediction of PM in evaluating the performance of the change projects. The generated model data along with standardised regression coefficients are shown in the table below:

Model Summary[c]									
				Std.	Change Statistics				
Model	R	R Square	Adjusted R Square	Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.437[a]	.191	.169	.510	.191	8.724	1	37	.005
2	.533[b]	.284	.245	.486	.094	4.703	1	36	.037

a. Predictors: (Constant) EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees

b. Predictors: (Constant) EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees; EPC5 - I am responsible for performing assessments and analysing results

c. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness

Coefficients[a]												
	Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1 (Constant)	1.130	.215		5.248	.000	.694	1.566					
EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees	.323	.109	.437	2.954	.005	.101	.545	.437	.437	.437	1.000	1.000
2 (Constant)	.804	.254		3.158	.003	.287	1.320					
EPC1 - Part of my job is to analyse change (business process, org. structure, people, technology, etc.) its impact on the organisation and employees	.247	.110	.334	2.245	.031	.024	.470	.437	.350	.317	.898	1.113
EPC5 - I am responsible for performing assessments and analysing results	.266	.123	.323	2.169	.037	.017	.516	.429	.340	.306	.898	1.113
a. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness												

Table 36: Association between PM annual performance and evaluating performance skills

7- *Association between PM annual performance and managing people skills*

All the variables of 'managing' were used in a stepwise regression model to assess the performance of PMs. The correlation of the independent variables (except for variables MP3, MP6, MP7, MP8 and MP11) to the dependent variables was significant at $P<0.05$. The best fit model only contained one (MP5) of the 12 cluster variables and was converged in one step with no variables removed by the algorithm. The generated model is artistically significant $F(16.191,37)$, $P<0.000$, and accounted for approximately 28% of the variance of the PM performance in achieving project objectives (R = 0.552, adjusted R2 = 0.286). MP5 appears to be the main latent variable in this cluster. It explains 55% of the variation in relation to managing people skills. The generated model data along with standardised regression coefficients are shown in the table below:

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.552[a]	.304	.286	.473	.304	16.191	1	37	.000

Model Summary[b]

a. Predictors: (Constant) MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements

b. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness

Coefficients[a]

Model		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1	(Constant)	.954	.204		4.668	.000	.540	1.368					
	MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements	.368	.091	.552	4.024	.000	.183	.553	.552	.552	.552	1.000	1.000

a. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness

Table 37: Association between PM annual performance and managing people skills

8- *Association between PM annual performance and organisational skills*

All the variables of 'organisational skills' were used in a stepwise regression model to assess the performance of PMs. Only five independent variables (PPC1, PQC5, PQC1, PQC2 and PQC3) were significantly correlated at $P<0.05$ to the dependent variables. The best fit model only contained one (PQC2) of the 21 cluster variables and was converged in one step with no variables removed by the algorithm. The generated model is statistically significant *F(8.266,37), P<0.007*, and accounted for approximately 16.1% of the variance of the PM performance in achieving project objectives (R = 0.427, adjusted R2 = 0.161). PQC2 appears to be main latent variable in this cluster. It explains 42.7% of the variation in relation to organisational skills. The lower number of variables contributing to the fitness model may due to stringent criteria used in the stepping method. In this research, variables are used if their significance value is blow *P<0.05*. The generated model data along with standardised regression coefficients are shown in the table below:

Model Summary[b]									
				Std. Error of the Estimate	Change Statistics				
Model	R	R Square	Adjusted R Square		R Square Change	F Change	df1	df2	Sig. F Change
1	.427[a]	.183	.161	.513	.183	8.266	1	37	.007

a. Predictors: (Constant) PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)

b. Dependent variable: My annual performance appraisal includes the assessment of my project' effectiveness

Coefficients[a]														
		Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics		
Model		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound	Zero-Order	Partial	Part	Tolerance	VIF
1	(Constant)	1.177	.205		5.731	.000	.761	1.593					
	PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)	.315	.110	.427	2.875	.007	.093	.537	.427	.427	.427	1.000	1.000

a. Dependent variable: My annual performance appraisal includes the assessment of my projects' effectiveness

Table 38: Association between PM annual performance and organisational skills

8.11 **Summary of the Chapter**

Chapter eightpresents the analysis of the quantitative data collected using the questionnaire. The hypotheses tested are restated, and the distribution of the questionnaire is outlined. The results obtained through the use of ANOVA tests are presented in tables and explained.

This study confirmed that there is no difference between the respondents in rating the competencies required in managing change initiatives. The research also found that planning change competencies (PC1, PC2, PC5, EC1, EC2, MC1, MC2 and CC1) are associated with achieving PM objectives. The study also found that evaluating the performance of change projects competencies (EPC2 and EPC7) is associated with achieving the PM objectives. The study also found that managing change projects competencies (MP1, MP2, MP3, MP5 and MP9) is associated with achieving the PM objectives. The study also found that measuring the success factors competencies (PQC1, PQC2 and PQC5) is associated with achieving the PM objectives. The regression analysis found that the project managers' performance in terms of achieving objectives depends on PC2, IC1, EC2, EPC1, EPC5, EPC6, EPC7, MP3, MP5 and PQC2. The next chapter of the study provides a summary of the study process and findings.

9 Discussion

9.1 Introduction

Chapter nine provides a discussion of the interview findings. The categories that were brought about as a result of the data analysis and found relevant and contribute to the objectives of the study are explained. The hypothesis testing using ANOVA is presented, and the outcomes of the stepwise regression and correlation outcomes are outlined.

9.2 Discussion of the Interview Findings

The study investigated the ability of project managers in the areas of motivation, participation and communication as critical skills for all leaders to enable them to influence others. According to theory O, the objective of change is achieved by managing teams, performance and communication. The outcome of the study showed that project managers do perform the aforementioned tasks throughout the organisational change as part of their role as change leaders. Project managers contribute to the management and development of teams through different means. Project managers plan change, monitor the implementation and evaluate the outcomes of all the change phases. Project managers contribute to the management of staff performance through their reporting process. The gaps in the performance of teams are pointed out, and action plans are developed to help managers enhance the quality of work and meet deadlines. When required, project managers act as mentors, trainers and consultants. Communication, as revealed by all the subjects of the research, provides stakeholders affected by change clear information about the necessity and requirements of change. As stated in the literature review, Maurer (2010) sees that such activities result in reducing employees' resistance to change. The outcome of the research agrees with the statement. Although reducing resistance to change is not a task, project managers' daily activities during change contribute to department managers' attempts to reduce resistance within their teams.

On the other hand, Kanter et al. (1992) suggest in his 'ten commandments' for performing change that leadership must be established. Similarly, Luecke (2003), in the seven steps, also suggests that leadership plays a critical role in the change process. Leaders develop the organisational vision, inspire employees and cooperatively bond them to a shared vision. To

achieve the vision, leaders of change give employees a 'can do' behaviour. As evident in the analysis of the collected data, project managers play a leadership role in organisational change. Their work, whether intended to motivate staff or not, bonds everyone to a shared vision and gives the staff a 'can do' behaviour. This is also in line with Senior and Fleming's (2006) statement that leadership is about influencing others in pursuit of the achievement of organisational goals.

On the other hand, researchers such as Turner, Grude and Thurloway (1996) argue that project managers are able to change agents; and through their work and skills, they can be responsible for change. For them, project managers can take the role of change managers. The responses of the subjects in relation to the applied skills show that project managers use all the project managers' skills they normally use in managing projects. However, it has been noted that the efforts and the tasks done by project managers during change go beyond their usual activities. It has been noted also that the interference of project managers in the internal business of departments varies immensely depending on the sector and the size of the projects.

Project managers, as noted in the responses of the department managers, do influence and support others. The achievement of the change objectives strongly depends on the work of the project managers. In terms of communication, it has been found that all the project managers lead the communication process. In contrast, it has been found that project managers are not directly involved in the process of motivating and involving all staff in the change tasks. Project managers do not have a role in planning the motivation and participation of the staff during change management. There is a difference in the tasks performed by project managers working for the regulatory sector. They are more involved in the training and development of internal and external stakeholders. However, all project managers do influence others through other skills, such as communication, monitoring, assessing and reporting performance and outcomes of the project phases.

Analysis of the collected data has revealed several categories related to the role of project managers in change management within the UAE context. Some of the categories were ignored as they represent part of other key tasks performed by project managers. Also, categories that were not emphasised by the majority of the subject were deleted. The following are the

categories that are brought about as a result of the data analysis and found relevant and contribute to the objectives of the study.

- **Task focused**

Van der Voet (2014) states that change is progressively managed as projects, and there is a rising implementation of project management tools and techniques to manage change within organisations. As evident in the data analysis, the tools and techniques of project management play a major role in defining the requirements of change. These specialised tools and techniques are used in planning change and then in monitoring the implementation of change. As suggested by Van der Voet (2014), managing people in times of change includes keeping people aware of the changes and telling them what to expect and what tasks need to be done differently. As noted in the collected data, project managers in all sectors define the tasks and owners of each task. Furthermore, project managers monitor the implementation of each task to ensure that the objectives are accurately met. In case of drawbacks, project managers wear the hat of consultants to ensure that tasks are completed effectively.

This study adopts the concept of theory O, which focuses on people, but does not deny the importance of applying both theories O and E to ensure the success of organisational change. As noted in the study, project managers are concerned with results which may sound as a focus on financial results rather than people. The responses of the interviewees show that project managers give priorities to certain tasks but, at the same time, follow up with stakeholders and support them to ensure that tasks are performed effectively. According to Hiatt and Creasey (2003), the inability to focus on both people and business change will lead to the failure of the project. Considering that a focus on people only will lead to failure of projects, project managers' role maintains a balance between achievement of tasks and people management. The collected data demonstrate that project managers plan and implement tasks and inspire people to achieve them. In most cases, the responses emphasised the quality of tasks performed, meeting deadlines, evaluating performance, planning tasks and so on. However, it has been noted that in all these activities, project managers are inspiring others, influencing project teams, communicating with stakeholders and contributing to the development of staff to be able to perform emerging tasks. The findings of this study also mirror Cleland and Ireland's (2002)

suggestion that project management improves accountability because of isolated tasks and assigned responsibilities with a focus on certain important assignments.

- **Stakeholders' Management**

The findings of this research contradict Taylor's (1998) argument that neither the functional control of a project nor the authority over a team is within the responsibilities of project managers. The findings of this research are in opposition to the above statement. It has been found that project managers, depending on the change project type, play a key role in managing the internal and external stakeholders. The management of stakeholders involves managing teams involved in the change management process. The management of teams may not be performed directly in most times. However, project managers do work closely with department managers and line managers to ensure that change is implemented effectively.

The outcome of the analysis shows that project managers are responsible for stakeholders' management throughout the change project phases. The responsibility includes communicating the need for change, the plan, the requirements and the tasks that must be done to achieve the objectives of change. Project managers monitor the performance of stakeholders, mentors key people and train internal and/or external stakeholders. As stated by the department managers, the work of project managers is appreciated by the stakeholders. It is also evident from the data collected that project management tools and techniques help stakeholders understand the requirements of each phase of change. Clear communication with project managers helps stakeholders facilitate, monitor and enhance the achievements of their teams.

In addition, the findings of this study echo Munns and Bjeirmi's (1996) contribution that the project manager is responsible for managing the project all through its life cycle. The project manager's main goal is to monitor and control work to achieve the final stage of a project that is considered successful by internal and external stakeholders. The findings are also in agreement with Munns and Bjeirmi's (1996) argument that project managers manage the project team and the overall communication process to ensure that information is conveyed to the project team and its stakeholders.

Moreover, the collected data come in line with PMI's (2013a) argument that the project managers identify and prioritise project stakeholders who will affect or be affected by change. They also measure and analyse the satisfaction of the stakeholders. They conduct surveys to know stakeholders' satisfaction with the information they receive, the support given to them and the effectiveness of the development opportunities. It is evident from the data collected that it is in line with PMI's (2013a) statement that the outcomes of the surveys are used to improve project management plans and actions.

- **Quality Assurance**

The PMBOK identified nine core areas of knowledge related to project management, including maintaining the quality of projects (PMI 2004). Per the PMBOK, the quality of the project requires proper knowledge in quality management. This area of knowledge involves all the activities and processes that ensure the quality of the entire project, including the policies, objectives and project outcomes. Similarly, Nahmias (2009) suggests that planning scope and quality is what project managers do, while it is not part of change managers' roles.

The analysis of the data collected for this study shows that quality assurance is also one of the main roles of project managers during organisational change. This finding echoes Kotter's (2007) contribution that change management is reflected in a wide range of terms such as restructuring, reengineering, rightsizing, business turnaround, cultural change and total quality management. The data collected for this study show that the quality of work is a major consideration in the planning, execution and monitoring of organisational change. It has also been found that project managers are concerned with the quality assurance of the change project's end results.

According to PMI (2013a), project quality management includes all activities and processes that ensure that the project meets the objectives of the project. To maintain quality, PMI (2013a) suggests that stakeholders be involved in the decision-making process. The collected data for this study are in line with the above statements. Project managers give stakeholders the opportunity to judge the quality of change projects through surveys. The outcomes of the surveys are considered, action plans are developed and changes are implemented accordingly.

- **Risk Assessment**

Risk management is one of the nine knowledge areas identified by the PMBOK (PMI 2004). The related competencies of project managers include the ability to identify, analyse and control the risk in a project. In addition, the Project Management Institute (PMI) states that project management usually assists in defining project goals and identifying problems and risks, which results in isolating activities and better monitoring outcomes. Nahmias (2009) include monitoring and controlling risk and planning risk management as a role of project managers, not change managers. The data collected and analysed for the study reflect the aforementioned information. In organisational change, risk management is a key function to ensure the achievement of change objectives. As evident in the responses of the subjects of this study, it has been noted that project managers' roles include risk identification and risk mitigation. Project managers stated that people are considered high risk during change management. Therefore, the roles of project teams are defined, and their performance is monitored by project managers. When risk is identified, action plans are developed by project managers. The implementation of the action plan is monitored, and the outcomes are evaluated and reported by the change project manager.

Furthermore, the findings of the study agree with PMI's (2013a) statement that project risk management involves certain processes and activities performed by project managers during change management. These activities include risk management planning, identifying risks, analysing risks, planning responses and controlling risks. In addition, the outcomes are in line with the PMBOK (2004), which identifies risk as one of the project management knowledge areas. It has been noted in the outcomes of the study that project managers identify risks related to stakeholders. As a result of identifying the human risk in a project, project managers take appropriate actions to mitigate risk.

- **Reporting**

The PMBOK (2004) states that project managers generate reports on the project performance and compliance. The data collected for this study show that reports developed by project managers are highly important during organisational change. It has been found that the reports generated and communicated by project managers have a positive impact on the success of change projects. The change management plan is documented and communicated in project

managers' report. In addition, the reports are effective tools used to define key owners of change and the roles and responsibilities of individuals and teams. It is also a tool applied to monitor and evaluate the performance of teams. Based on these reports, action plans are developed and implemented to ensure that the objectives of change are achieved.

The findings echo the argument of Clarke (1999) that project management is perceived as an additional control mechanism or another corporate reporting tool. Nahmias (2009) suggests that administration and project reporting are done by project managers and not change managers. The outcome of this study is in agreement with Nahmias's (2009) perspective. It has been noted also that the reporting process is best done by project managers using the tools and techniques of project management. As revealed by the subjects of this study, project managers adapt their reports to apply to the needs of change. In addition, some project managers stated that they do more reporting and more communication during organisational change. These reports, as mentioned earlier, evaluate, influence and facilitate the work of stakeholders. Clarke (1999) criticises project management in terms of the insufficient official completion of change projects and the project excess patterns. However, this has not been noted in this research. Conversely, it has been noted that department managers appreciate the use of project management tools and techniques used in the project managers' reports.

Reporting is one means of communication used by project managers to officially communicate project values, progress and consequences. PMI (2013a) states that project communications management processes are executed in all project phases. The outcomes of the research demonstrate the effectiveness of project managers' reporting throughout the life cycle. The outcomes of the study also agree with PMI's (2013a) discussion that the project managers' role includes internal and external project communication. The responses of the interviewees emphasised the critical role project managers play in creating and distributing project-related information through a continuous reporting process. It has also been noted, in line with PMI (2013), that project managers' reports include identification of the roles of individuals and teams and assessment of their performance. Project managers, as noted in the responses of the interviewees, also collect information from relevant departments and include it in their reports and share it with management and key stakeholders. Other reports include the risk management reports and project performance records.

- **Communicating Change**

According to Gotsill and Meryl (2007), three critical steps have to be followed in times of change. The first is focusing on people to reduce their resistance to change. The second is communicating strategic messages to ensure that people know the values and consequences of change and implement change management effectively. The third step is combining training and communication.

The data collected for this study show that communication is a continuous process that is performed by project managers in change management. The outcomes of the interviews confirm that project managers in the UAE do communicate the necessity and the consequences of change to all key stakeholders affected by change. They plan and communicate it, divided into phases, and the phases are divided into steps. Project managers communicate formally with stakeholders through reports, meetings and presentations. In some cases, as revealed by the project managers working for the regulatory sector, they conduct workshops and training courses. In addition, project management communicates information to stakeholders as consultants, and this is done formally in meetings or informally through telephone or one-to-one conversations.

The effectiveness of the role of communication, as suggested by Del Val and Fuentes (2003), is conveying clear information to avoid misunderstanding. They suggest that lack of effective communication will result in low motivation and consequently will create resistance. The data collected for this study are in line with the aforementioned statement. As stated by department managers, the communication they receive from project managers help them motivate their staff and encourage their participation in change management. Then, although project managers are not directly involved in motivating employees, their activities lead to enhancing participation and motivation within the organisation. In addition, Lines et al. (2005) suggest that effective communication contributes to enhancing motivation and leads to reducing resistance to change. This suggestion supports the findings of this study. In the analysis of data collection, it has been noted that project managers are effective communicators. It has also been noted that reducing resistance to change is not a defined task for project managers. However, reducing resistance to change is an achievement that is embedded in project managers' activities and communication process. It has also been noted that communication of project managers contributes to the

reduction of resistance of change. This finding mirrors Lines et al.'s (2005) argument that lack of effective communication will result in low motivation and consequently will create resistance.

Thus, both the literature and the outcome of the study reveal that the communication process performed by project managers enhances motivation, lessens uncertainty and reduces resistance to change. The findings are also in line with PMI (2013a) that project managers' communication activity involves both internal project communication and external project communication. As noted in the data collected for this study, the roles of project managers include project information management. Through communication, they keep internal stakeholders informed about work-related information and strategic decisions and define their roles and responsibilities. They also target external stakeholders to raise awareness, enhance understanding, pass on knowledge and amplify motivation (PMI 2013a).

- **Reducing Resistance to Change**

The data analysis showed that project managers are not directly involved in planning or implementing processes to reduce resistance to change. However, it has been noted that the activities of project managers enhance employees' participation and reduce their resistance to change. As suggested by Kendall Consulting (2003), resistance to change is caused by lack of communication amongst management and employees. As discussed earlier in the literature and in the findings of this study, project managers are efficient communicators. Their contribution is based on a defined communication plan to ensure accuracy and currency of information. On the other hand, Crawford and Hassner-Nahmias (2009) argue that resistance occurs when people do not understand the positive consequences of change.

Carter (2008) suggests that communication is a significant mechanism used by management to reduce uncertainty, lessen employees' resistance and enhance stakeholders' commitment and participation. As noted above, project managers provide stakeholders affected by change with clear information and guidance. Moreover, as argued by Ibbs, Wong and Kwak (2001), when employees do not get involved in the process of sustaining the change, there is a possibility that harmful changes would prevail. Hassner-Nahmias (2009) suggests that several additional problems may arise if problems that will occur in the change implementation process are not monitored. Therefore, without guidance and control, issues would arise and affect the success of change. As noted in the data analysis, project managers offer stakeholders affected by change

with enough guidance to implement change effectively. Change is monitored and controlled by project managers. They evaluate and measure the performance of teams. When resistance affects the outcomes of work, they manage risk, plan corrective actions, apply preventive actions and maintain quality. Crawford and Hassner-Nahmias (2009) add that lack of learning from continuous mistakes increases resistance to change. If employees resist change and continue making mistakes, management will copy their negative attitude, thus impeding positive change from occurring. As revealed by some of the subjects of this research, project managers contribute to the development and training of the staff. Furthermore, they share lessons learned with the change project's stakeholders.

The data collected and the analysis process resulted in imparting answers to the research questions of the study. The study investigated the role of project managers in implementing success factors related to people management within the UAE context. The outcomes of the study are aligned with the literature that promotes project managers as efficient change managers. The study shows that the effective communication activity of project managers contributes immensely to the success factors of change management. The communication process with internal and external stakeholders is one of the project managers' main responsibilities. It is a two-way communication as project managers collect and share data using different means of communication. The communication activity, as seen by the respondents, provides guidance and facilitates and simplifies project tasks. It has also been noted that communication is a continuous process across the change project life cycle.

The next success factor investigated is the role of project managers in motivating others. Motivation is a leadership characteristic that is vital at all times. The research shows that project managers are able leaders, and motivation is an integral part of what they do. As stated by the research subjects, motivation is not a task assigned to project managers, nor is it in their job description. However, it has been found that the work of project managers is a motivational factor that influences the stakeholders affected by change. Although in most cases the motivation is not intentional or does not target the project team directly, the activities of project managers are seen as motivational and inspiring. These activities include communicating the values and consequences of change, communicating the change plan, providing guidance, contributing to staff development, monitoring and reporting performance.

The success factor of participation is another success factor of change management. The study answered the question related to the role of project management in ensuring the participation of stakeholders. The study reveals that the roles and responsibilities of key individuals and project teams are identified by the project managers. Their performance is planned, monitored, assessed and reported by project managers. The human element of change is considered in the risk management role of project managers. Action plans and corrective plans are developed in case of performance or quality drawbacks. Also, amendments to the change plan are done based on the stakeholders' feedback. As stated by the study subjects, encouraging participation is not done directly, nor is it in the job description. However, as also revealed by the subjects, all these activities result, in most cases indirectly, in enhancing the participation of stakeholders.

The next question is related to the role of project managers in enhancing commitment during change management. The study answered the question, and the responses of the subjects are relatively similar to those of enhancing participation and commitment. The subjects' responses reveal that the activities of the project managers contribute to the enhancement of commitment of the project stakeholders. Enhancing commitment is not a planned activity. As revealed by the subjects, the activities of project managers contribute to the enhancement of commitment of the project teams. These activities include planning, monitoring and evaluating the work of project teams. As project managers are task oriented and concerned with the end results of the project, lack of commitment affects the objectives of project managers. Therefore, lack of participation and commitment of project stakeholders is reported to avoid negative consequences. Changes to roles and responsibilities or changes to project sponsors are suggested by project managers as corrective plans to reduce risk.

The study answered the question related to the role of project managers in training staff when organisational change is initiated. Planning training and development is not assigned to project managers. However, the subjects of the study reveal that project managers' work is used in the training of the staff. They also state that the skills scan developed by the project manager is used as the foundation for analysing current and required skills. Consequently, department managers set the development plan in accordance with the human resources and the training and development manager. Moreover, in most cases, project managers act as mentors and consultants for the key people involved in organisational change. In some cases, project managers conduct training for internal and external stakeholders. This shows that project managers have the ability

to manage the training and development of the staff even if they are not assigned as change organisational development project managers.

The question related to the leadership of project managers in change management has been answered as well. The responses of the subjects demonstrate that project managers possess the characteristics of leaders. As evident in the study, project managers' role in change management includes leading others throughout the project life cycle. Project managers plan, communicate and evaluate change progress. They guide, motivate, influence and inspire others throughout the change project phases. They wear the hat of a leader when things go wrong, and they are decision makers when a change project is initiated. Other leadership characteristics noted in the study is project managers as observers, mentors and consultants for key people involved in change management. As mentioned by the study subjects, the work of project managers encourages stakeholders' participation and commitment.

The study also answered the second part of the questions concerned with managing an organisation's stakeholders. The subjects' responses reveal that project managers do manage stakeholders as part of their roles in change management. The stakeholders' management includes both internal and external stakeholders. The management role starts in the planning phase. Project managers identify, analyse and prioritise stakeholders affected by change and stakeholders who will affect the change. Project managers define the roles and responsibilities of stakeholders and guide them throughout the change project life cycle. They also develop the communication plan based on the stakeholders' analysis and then communicate with key people all through the project phases. Project managers assess stakeholders' performance, carry out risk assessments and identify drawbacks. They act as consultants for stakeholders and share lessons learned when guidance is to ensure that the change project meets its objectives and adds value to the organisation.

As for the last question about the role of project managers in reducing employees' resistance to change, the study reveals a positive response. Project managers are not assigned to reduce employees' resistance to change, and it is not part of their planning. However, as stated by the subjects of the study, project managers contribute in many ways to reducing resistance. The clear explanation provided by project managers about the necessity of change enhances stakeholders' understanding and acceptance of organisational change. Project managers, by identifying

stakeholders and defining the roles and responsibilities of key individuals and teams, help stakeholders know exactly what they need to do. The skills scan and the identification of knowledge and skills contribute to the planning of the training and development of internal stakeholders. The planned continuous communication with key people keeps stakeholders informed about the decisions and the progress of the change project. The reporting activity of project managers helps management point out the gaps in their departments, and they take proper actions to enhance the commitment and participation of their teams. Project managers act as consultants and mentors to ensure that stakeholders have the required knowledge and are able to perform effectively. All the aforementioned activities are factors that reduce stakeholders' resistance to change and help them accept and perform successfully the tasks that emerge with change management.

On the other hand, the categories that emerged from the data analysis provided more insight on the role of project managers in change management within the UAE context. The study revealed some of project managers' roles that are related to theory O and contributed to the success of the project. The categories summarised below, based on the contributions of the subjects, have been found as the most effective in the study context.

The first category is 'task focused', and this is agreed in earlier research. However, this study showed that project managers, being task focused, encourage stakeholders to be more participative in change activities. Moreover, this category contributes to motivating others and enhancing the commitment of stakeholders. Being task focused is seen in this study as an addition to project managers' leadership traits.

The second category is 'stakeholders' management'. This practice has been seen by many as a change management responsibility. However, this study revealed that project managers are able to manage both internal and external stakeholders involved in the study. The responsibility of project managers starts with defining and prioritising stakeholders. The communication plan classifies stakeholders based on their impact and involvement in change management processes. The performance of project teams is assessed by project managers as part of the assessment of project progress. Project managers involve stakeholders in the decision-making process by collecting feedback and conducting surveys. As evident in the outcome of this research, project managers' daily practices have a considerable impact on the people element of change.

The third category is 'quality assurance'. A critical activity is performed by project managers to ensure that the work is completed up to the expected standards to meet change objectives and add value to the organisation. Quality is planned, observed and measured by project managers, thus contributing to the success of change management.

The fourth category is 'risk assessment'. As evident in the subjects' responses, the risk assessment conducted by project managers includes the risk of human element of change. The risk assessment, normally, requires more activities, such as preventive and corrective actions. Hence, by conducting the risk assessment and risk register, project managers are contributing to the success of change management by mitigating risk caused by the human element of change.

The fifth category is 'reporting', which is part of the communication process performed by project managers with key stakeholders. However, it has been found that the role of reporting exceeds its main purpose of communication. Analysis of data revealed that reporting is a tool for enhancing commitment, participation and motivation. Positive contribution to change management reports is an objective for department managers. Drawbacks and nonconformities pointed out in the project manager's report is a motivation for key people to enhance the performance of project teams.

The sixth category is 'communicating change'. This includes communicating the necessity and consequences of change. It also includes communicating the roles and responsibilities of key stakeholders and project teams. In addition, project managers receive data and communicate the progress and the closing of the project. Then, communication is an inevitable and critical continuous process performed by project managers. As noted in the study, the impact of people management goes beyond conveying information to contribute to the motivation, commitment and participation of stakeholders. In addition, communication is a means of knowledge transfer, which affects the next category.

The seventh category is 'reducing resistance to change', an endeavour that is embedded in the activities of project managers. Reducing resistance to change is not an assignment, nor is it the project manager's responsibility. However, it was evident from the data analysis that the activities and practices of project managers have a positive impact on employees' acceptance and participation in change management.

Therefore, as a result of the above, the study promotes project managers working within the UAE context as efficient agents of change. Whether intentionally or unintentionally and whether it is an assignment or embedded in the daily activities, the work of project managers positively contributes to managing the human element of change management.

9.3 **Hypothesis Testing**

The study used ANOVA tests to check the variance in the respondents' mean. The results demonstrated that there is no statistical difference in the responding in rating the importance of PM competencies for managing change initiatives. The comparison is based on the job position of the respondent. This is selected because it is assumed to tally with PM competencies. The summary of the results is shown in the following tables. As shown in the table, the respondents did not agree on the rating on some of the competencies. But further statistical tests demonstrated that the variance is due to noise in data rather than differences between respondents.

Research question	There is no difference in opining in the responding in rating the necessary competencies for managing change initiatives.
Hypothesis	Ha_0 $(p<0.05)$
Results	The ANOVA results indicated that there were significant differences between the survey participants regarding the following skill competencies: IC1, IC2, PC2, EC1, EPC1, EPC5, EPC6, MP1, MP2, MP4 MP5, PRC2, PRC3, PSC4, PSC5, PQC2, PQC3 and PQC4
Researcher's observation	However, the post hoc test demonstrated that tests confirmed that there is no difference in the mean ranking of the PM competencies between the survey respondents.
Conclusion	The null hypothesis was rejected for variables. The null hypotheses (H0: 1=0) – (p < 0.05) were retained for variables.

The findings are in agreement with the literature of project managers' competencies necessary for managing change. As mentioned in the literature review chapter, Crawford (2011) states that

there are strong similarities between project managers' and change managers' roles. Moreover, the personal competencies of project managers necessary for managing change initiatives have been explained by Crawford and Nahmias (2010). The main change management competencies discussed and quoted by Zadeh et al. (2016) are 'leadership, stakeholder management, team development, planning, communication, decision making, cultural awareness, and problem solving'. The change success factors of communication, motivation, participation, commitment, training and leadership identified by Guler (2010) are used for this research. These competencies, among others explained in the literature, are performed and assessed by project managers throughout the project life cycle (Zulch 2014; PMBOK Guide 2004; PMI 2015; PMI 2012; Steyn 2008; Steyn 2012). In addition, the fifth edition of the PMBOK identifies 10 project management knowledge areas. All the knowledge areas are used in managing projects and consequently in managing the change in projects.

9.4   Stepwise Regression and Correlation

9.4.1   Correlation

Correlation and regression tests were conducted on the data sample. The purpose of the tests is to demonstrate the association between PM competencies and PM achieving their change initiative objectives (i.e., planning of change).

9.4.1.1   Planning of Change

Several competencies were found to be significantly associated with PM performance. In particular, the following competencies related to the planning of change were found to be associated with PM performance.

PC1 - I identify and build the key stakeholder engagement strategy and plan
PC2 - I identify the target behavioural patterns/standards needed for higher performance
PC5 - I keep both organisational adoption and value creation in mind during the planning process
EC1 -Throughout the execution phase, I manage stakeholder needs and expectations
EC2 - To ensure the success of the change project, I utilise both subject matter experts and change agents during the project executing process

MC1 - I assess and meet the ever-evolving needs and expectations of stakeholders
MC2 - I adjust project plans and designs based on stakeholder needs and concerns
CC1 - Before closing a project, I ensure that value creation is realised and lessons learned are captured

All these competencies are important in achieving project success. The literature has shown that both project managers and change managers play a key role in planning and executing organisational change projects (Pollack & Algeo 2014). On the other hand, Nahimas (2009) states that project managers have the competencies for planning risk, cost, time, scope and quality of change projects.

Moreover, as discussed in the literature review chapter, Pollack and Algeo (2014) argue that both project managers and change managers play a major role in planning change projects. Cocks (2014) states that planning involves planning project change, and the planning process involves managing project teams along with other resources.

9.4.1.2   Evaluating the Performance of Change Projects

Several competencies were found to be significantly associated with PM performance. In particular, the following competencies related to evaluating the performance of change projects were found to be associated with PM performance:

EPC2 - I develop an action plan, set deadlines and identify people responsible for transition activities
EPC7 - I support the implementation of action plans and monitor the results

Evaluating the performance of change projects and related activities involves project management competencies that are all important in achieving project success. The literature has shown that evaluating the complexity of the project and understanding the reason behind employee resistance and the selection of the most promising change project initiatives contribute to the success factors of change initiatives (Muller & Turner 2007). The analysis performed by project managers involves 'gathering and analysing quantitative and qualitative information to determine whose interests should be taken into account throughout the project' (PMI 2013a, p.

395). On the other hand, Heldman (2011) suggests that the project management process of project quality management is concerned with measuring the entire performance and monitoring project deliverables compared with the quality standards defined in the planning phase.

9.4.1.3 Managing Change Projects

Several competencies were found to be significantly associated with PM performance. In particular, the following competencies related to managing change projects were found to be associated with PM performance.

MP1 - I evaluate the human resources plan against the project and change management requirements
MP2 - Developing and managing project teams is one of my responsibilities
MP3 - I attain visible support for the change from senior-level leadership
MP5 - I develop the reward and recognition systems that reflect the expected new performance requirements
MP9 - I conduct a training needs analysis and design the approach to training in the context of the project

Project management competencies are all important in achieving project success. As shown in the literature review chapter, in terms of the involvement of project managers in managing change initiatives, Pollack and Algeo (2016) argue that projects involve change elements. Therefore, project management and change management can together contribute to the management of change initiatives. On the other hand, the PMBOK (2014) states that project managers play a contributory role in facilitating the acceptance of project outputs and deliverables as they facilitate the organisation acceptance of change. It is also stated that when project managers' responsibilities go beyond planning, executing and closing to managing the success factors, then the project is expected to be more successful (Müller & Jugdev 2012; Müller & Turner 2007).

As also discussed in the literature review chapter, the PMBOK referred to the 'integrated change control' in the knowledge area of project integration management. This can be interpreted as an attempt to incorporate the management of change in other knowledge areas. However, integrated

change control is limited to dealing with requests to change as part of a project obviously but does not embrace people-related matters (Crawford et al. 2014; Lundy & Morin 2013).

9.4.1.4 **Measuring Success Factors**

Several competencies were found to be significantly associated with PM performance. In particular, the following competencies related to measuring success factors were found to be associated with PM performance.

PQC1 - I develop quality metrics that include stakeholders' satisfaction with the amount of information they are receiving about the project
PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)
PQC5 - I use the gathered data to evaluate and improve communications plans and training plans and use adoption strategies

Project management competencies related to measuring the success factors are all important in achieving project success. For example, the literature has shown that communication is a key skill for project managers, and if they are not good communicators, they will not accomplish their objectives (Zulch 2014).

Highly experienced project managers focus on team satisfaction as one of the most important and effective success factors. As discussed in the literature review chapter, the fifth addition of the PMBOK states that project managers have the ability to identify, analyse and control the risk in a project. When project managers collect and assess data, they can improve the staff development plan, communication plan and stakeholders' adoption strategies. In addition, project managers' knowledge area of human resource management is seen as a competency that qualifies them to lead and evaluate the performance of change project teams. In addition, the book emphasises the role of project managers in monitoring, controlling and managing the entire communication of change, including the project management plan updates and the organisational asset updates.

9.4.2   Stepwise Regression

A summary of the results is shown in the table below. Multiple regression was also used to check what combination of these skills is associated with PM performance.

The results showed only PC2 (I identify the target behavioural patterns/standards needed for higher performance) as having a statistical significant association with PM performance. As discussed in the literature review chapter, Gotsill and Meryl (2007) define three critical steps that have to be followed during change projects. The first is focusing on people to reduce their resistance to change. The second is communicating strategic messages to ensure that people know the values and consequences of change and implement change management effectively. The third step is combining training and communication to enhance performance. Nikolaou et al. (2007) studied the skills and characteristics of competent change agents. The outcome of the study shows that the skills of project management correlate positively with the performance of project teams even when employees resist change.

This is a very important competency related to the control and tracking of projects. The result also indicates that the ability of PMs to initiate change (IC1 – when it is required, I initiate change projects independently) independently is an important contributor to success. The literature has shown that senior managers working for the organisation initiating change are considered the change owners. These senior managers involve project managers in the change management process (Pellegrinelli et al. 2007). On the other hand, the PMBOK Guide (PMI 2013a) emphasises the role of project managers in the initiating process group, which includes all the processes, skills and activities required to effectively define the starting point of a project. To ensure a logical progression of the project, permits, authorisations and work orders are set. Effective initiation of a project sets the foundation for success throughout the project life cycle. This process group involves initialising teams.

Furthermore, the results seem to show that the PMs need to be equipped with knowledge (EC2 – to ensure the success of the change project, I utilise both subject matter experts and change agents during the project executing process) that is necessary for a change agent. As shown in the literature review chapter, the PMBOK Guide (PMI 2013a) states that making use of both subject matter experts (SMEs) and experienced change agents to ensure effective execution of the project's internal communication means that communication is done within the organisation

between internal stakeholders. These stakeholders may be the project team members, consultants and subject matter experts.

More importantly, the results demonstrated that the PMs must possess analytical skills for examining the change requirements (EPC1 – part of my job is to analyse change such as business process, organisation structure, people, technology, etc., and EPC5 – I am responsible for performing assessments and analysing results). The literature has shown that project managers have knowledge of project risk management. They have the ability to identify, analyse and control the risk in a project (PMBOK Guide; PMI 2013a). On the other hand, the fifth edition of the PMBOK emphasises the role of project managers in identifying stakeholders who have an impact or may be influenced by the change management. Project managers analyse and document information related to their involvement in the project, interest and influence on project success. This process helps project managers appropriately focus their attention on each individual stakeholder or group of stakeholders.

Managing and controlling (EPC7 – I support the implementation of action plans and monitor the results) the implementation of change initiatives was also found to be significant for achieving objectives. As mentioned in the literature review chapter, Murch (2011) states that project managers evaluate the projects and its requirements through constant monitoring. Imitating and planning a project is achieved by establishing its setup, path and baselines and measure variance, then managing change accordingly. Project managers ensure the progress of a project by working towards defined goals, resolving occurring problems, managing uncertainty and mitigating risks. To accomplish the objectives of a project, project managers create a positive environment for the project teams and guide them to deliver the change application (Murch 2011).

According to the PMBOK Guide (PMI 2013a), the monitoring and controlling phase involves addressing budget considerations and mitigating unpredicted risks that may affect the human resources' ability to achieve project expectations. Project managers drive the project forward by monitoring its progress and using their vision and immediate response to resolve project challenges. Project managers assess the performance of the project and modify the project plans and schemes based on the stakeholders' needs and interests.

Moreover, the PM's leadership skills of coordination with senior and other stakeholders and managing subordinates were also found to be associated with achieving project objectives. (MP3

– I attain visible support for the change from senior-level leadership; MP5 – I develop the reward and recognition systems that reflect the expected new performance requirements; PQC2 – I assess the level of support required for the project (typically measured with a stakeholder analysis assessment). The literature has shown that even though the literature emphasises the technical competencies of project managers, there is also a growing emphasis on topics related to people, such as leadership, project teams and motivation (Kloppenborg & Opfer 2002). Moreover, stakeholder management has been discussed in detail as a knowledge area in the fifth edition of the project management. As the PMBOK Guide (PMI 2013a) states, project managers assess and manage stakeholders' needs and expectations. They provide them with sufficient and well-timed information that helps them understand their roles and responsibilities.

The table below demonstrates the competencies supported by hypotheses and shows the significance and the contributing variables.

Models			
Competencies	Contributing variables	Sig	Hypotheses support
Planning change	PC2	0.000	Yes
	IC1	0.001	Yes
	EC2	0.037	Yes
Evaluating the performance of change projects	EPC1	0.031	Yes
	EPC1	0.034	Yes
	EPC5	0.037	Yes
	EPC7	0.001	Yes
Managing change projects	MP3	0.028	Yes
	MP5	0.000	Yes
Measuring success factors	PQC2	0.007	Yes

9.5 Summary of the Chapter

The ninth chapter is the last part of the analysis. The purpose of the analysis is to answer the research questions. The three case studies have provided an insight into project managers'

competencies in managing the people element of change within the UAE context. In particular, the interviews and analysis focused on the role of project managers in managing the people element of change. In this chapter, the emerging categories are summarised and mapped to those similar in the literature review conducted for this study. The hypothesis testing and the stepwise regression and correlation results are discussed. The next chapter presents the conclusion and wraps up the outcomes of the study.

10 Conclusion and Recommendations

10.1 Introduction

This chapter presents the conclusion of the study and outlines the robustness of the research methodology. The chapter also presents a review of the objectives of the study against the findings of the research. The ethical consideration, the limitation of this research and the findings from the survey are also outlined. Recommendations are provided at the end of the chapter.

10.2 Robustness of the Research Methodology

This study was conducted to investigate the role of project managers in change management. In particular, the main concern of the study was the management of the people element of change within the UAE context. The subject matter of the study was selected for more than one fundamental reason. First, the country went through an aggressive and rapid change in the last few years and is still in a continuous process to meet national and regional development plans. Second, the relevant literature is immature, although project management is growing in the UAE context as a profession and as education. Third, the literature concerned with the role of project managers in change management, in spite of its importance, is relatively poor.

However, the literature provided several key factors that contribute to the success of change management. The study used key success factors related to people management as a foundation of this study. The competencies related to managing the success factors were also considered and explained. The study provided information about project management, change management and integration of both disciplines. The competencies and skills of project managers and change managers were outlined and compared. Accordingly, the abilities of project managers as change managers were identified and explained.

Therefore, the study looked, in specific, at project managers' role in enhancing people's commitment, participation and motivation. In addition, because of the importance of leadership and information management in change management, the project managers' role as leaders and as communicators was investigated. The study also investigated the role of project managers in stakeholders' management.

Chapter six presented the methodology of the research. The mixed method approach was selected as the appropriate method of research. Qualitative data were collected using semistructured interviews with subjects working for UAE organisations that went through major change in the past few years. The oil and gas, construction and regulatory sectors were selected as case studies. Project managers and department managers were interviewed, and the data collected were analysed to determine the research codes and categories. The categories were identified based on the analysis of the subjects' views about the role of project managers in managing the people element of change.

On the other hand, the quantitative research was conducted using a questionnaire (available in Appendix 3) to verify the findings of the qualitative research outcomes. Data were collected using an online survey. An adequate number of responses were received; collected data were checked for errors and completeness and coded according to SPSS standards. Statistical tools were applied to analyse the survey results; descriptive statistics were used to study the variation in the responses and ANOVA to analyse and test the research hypotheses.

10.3 **Accomplishing the Research Objectives**

The research has been conducted based on the following specific objectives that have all been met:

- Review the role of project managers in managing change initiatives.

The study provided detailed information about the role of project managers in managing change initiatives. Chapter two presented the project management theoretical background. The theory of project and the theory of management were explained with reference to project managers' competencies. To review the role of project managers in managing change initiatives, the integrations between change management and project management were explained. The section shows how project managers are able to play a key role in managing change initiatives. Moreover, chapter three shed light on the role of project managers in meeting the change project objectives.

- Review and extract project management competencies for managing change initiatives.

Chapter three of the study presented the literature review of the project management competencies and experiences related to managing change initiatives. In chapter four, the competencies required for change management were explained and the project management competencies were outlined. The collected data showed similarities between the competencies of change managers and those of project managers, suggesting that project managers can be efficient agents of change.

- Investigate the role of project managers in managing the people element of change and their contribution to relevant success factors of change.

The theoretical background of the research focused on the importance of managing the people element of change, and this introduced the research subject. The literature review also focused on the role of project managers' role in managing the people element of change. Chapters 3 and 4 presented earlier contributions promoting project managers as change agents who have the ability to manage change initiatives and the people element of change. The competencies of project managers were mapped to several success factors related to managing the people element of change. These competencies included communication, participation, motivation, commitment, training and leadership. Both qualitative and quantitative research approaches were used to investigate the role of project managers in managing the people element of change.

The research methodology and design led to answering the following research questions:

- Do project managers in the UAE contribute to the people element of change in managing change initiatives?
- How do the competencies of project managers contribute to the success factors in the management of change initiatives related to the people element of change?

The outcome of the study agreed with the previous research findings that promoted project managers as effective change agents. It has been found from the interview responses that project managers possess the leadership characteristics that enable them to motivate others. The study showed that the work of project managers inspires and empowers others, thus resulting in enhanced participation and commitment of stakeholders. The outcome of the study also demonstrated that project managers manage stakeholders effectively. As a result of the above

practices, project managers contribute to the reduction of employees' resistance to change as part of their ability to manage the people element of change. The same applies to the quantitative research outcomes as it has been found that the competencies of project managers contribute to the success factors of change projects. Managing change projects competencies is associated with achieving PM objectives. Moreover, it has been found that managing change projects competencies is associated with achieving PM objectives and that measuring the success factors competencies is associated with achieving project objectives.

10.4 **Ethical Consideration**

Ethical considerations play a vital part in research. 'Analysis requires a commitment to being truthful, complete, mindful and useful' (Berman 2007, p. 13). To ensure the honesty, truthfulness and objectivity of this research throughout the research process, research protocols were followed. The data and results were reported clearly and honestly. The researcher did not support a favoured conclusion or guide the respondents by asking leading questions. The privacy of the respondents was maintained and respected, and the responses were treated confidentially and exclusively used for research purposes. The participants were given the right to remain anonymous, and they received a copy of the final report (Evans & Sapsford 1984, cited in Bell 1999).

A point was made that the design of the research methods and processes does not involve any harm to the participants. The researcher secured voluntary approval from the selected participants to respond to the questions and to present their responses in the study (Neuman 2003). Moreover, consent forms were sent to all the participants to sign and return to the researcher at least two weeks before the interview. In addition, the participants were informed that they could withdraw from the research at any time. The interviews were conducted in a comfortable environment with minimal interruptions. The participants were identified using numbers rather than their real names. Each participant had a separate transcript using the identification code. To maintain confidentiality, all collected data were stored safely so that no external third party could access them.

Informing the respondents about the ethical considerations maintained in this research made them feel more comfortable. They were promised that their participation would not have a negative impact on them or their organisations. Some of the participants preferred to have the interviews outside the work premises, and this request was respected by the researcher. As a result, none of the participants apologised or withdrew after the interview. However, it was noticed that the interviews conducted after work hours were more detailed and the respondents felt more relaxed. It is essential to mention that the interviews revealed a high level of competency and understanding of project managers' role as change agents. Their responses and perspectives provided an insight into the tasks they are assigned to do as project managers and what they voluntarily or unintentionally contribute for the success of change projects.

A thank-you e-mail was sent to each participant, and their managers were cc'd in these e-mails. They were thanked for their time, impressive contributions and enthusiasm to participate in the study.

10.5 Limitations of the Study

The study has certain limitations in terms of its research methodology. It used interviews and questionnaires to collect data, disregarding other data collection methods. For example, although observation would have provided additional data, it was not used because of the long time required and the confidentiality policies of the organisations. As for the research content, the research led to divergent findings that could not be investigated to keep the focus of the research. Some queries emerged during the course of data collection but could not be investigated, such as the following:

- What are the barriers preventing project managers from being involved in specific change management processes?
- What are the internal and external factors that affect the role of project managers in change management?
- What is the difference between the change management role of project managers working for public organisations and that of project managers working for private organisations?

However, the limitations of this study are suggestions for follow-up research using the outcomes of this study as a foundation for further studies. On the other hand, the study contributes to the project management literature in general and to the literature of project management in the UAE in particular. The findings of the study confirm the role of project managers as change managers and verify the ability of project managers to manage the human element of change. Among other findings, the study points to the role of project managers that are embedded within their responsibilities. It also highlights the voluntary role that project managers play during change management.

The study demonstrates the appreciation of stakeholders involved in change for the role of project managers. Also, the study confirms the competencies of project managers in change management. The study shows that, in addition to their project management tasks, project managers are effective change agents, leaders, quality assurers and consultants. They contribute to the reduction of resistance to change through their ability to effectively communicate and motivate others. Therefore, the study draws attention to the importance of project managers' competencies and outlines the additional role project managers may be able to perform if given the opportunity and authority.

10.6 **Findings from the Survey**

Findings from the survey have confirmed that there is no difference between the respondents in rating the competencies required in managing change initiatives. The study also showed that *planning change competencies* (PC1, PC2, PC5, EC1, EC2, MC1, MC2 and CC1) are associated with achieving PM objectives. It appears from the study that the objectives of a change initiative are achieved through the project managers' competency of managing stakeholders, suggesting that they identify and build the key stakeholder engagement strategy and plan. Project managers need the necessary skills to identify the target behavioural patterns/standards needed for higher performance. In addition, the study shows that project managers keep both organisational adoption and value creation in mind during the planning process. Project managers need to be equipped with competencies to manage the execution stage of change initiatives. The study also showed that these skills are necessary for managing stakeholder needs and expectations. Also, subject matter experts are deemed to be important agents during successful execution process. As

part of the evaluation process, project managers should have the ability to assess and meet the ever-evolving needs and expectations of stakeholders. When change becomes a necessity, project managers should have the skills that would enable them to adjust project plans and designs based on stakeholder needs and concerns. Moreover, they ensure that value creation is realised and lessons learned are captured. This finding has the implication that these competencies should be considered in project managers' job descriptions and change management responsibilities. These competencies should be part of education programs at universities for project managers.

The study also found that *evaluating the performance of change projects competencies* (EPC2 and EPC7) are associated with achieving PM objectives. It appears from the study that PM skills in relation to developing action plans, setting deadlines, identifying responsible people, implementing action plans and monitoring the results of transition activities are essential skills for accomplishing change initiative objectives. This finding has the implication that PMs should be trained to acquire these hard and soft skills.

The study also found that *managing change projects competencies* (MP1, MP2, MP3, MP5 and MP9) are associated with achieving PM objectives. It appears from the study that the achievement of change projects' objectives is influenced by project managers' ability to evaluate the human resources plan against the project and change management requirements. The achievement of the objectives is also affected by project managers' competencies in developing and managing project teams and obtaining visible support for the change from senior-level leadership. Meeting the objectives of change projects is also influenced by project managers' skills in developing the reward and recognition systems that reflect the expected new performance requirements. Conducting training needs analysis and designing the approach to training in the context of the project have also been found to be project managers' competencies that have an influence on the change project's result. This finding has the implication that project managers involved in managing change initiatives should possess these competencies to ensure that the change initiatives are accomplished.

The study also found that *measuring the success factors competencies* (PQC1, PQC2 and PQC5) are associated with achieving project objectives. It appears from the study that project managers contribute to the success of the project through their competency in developing quality metrics, which include stakeholder satisfaction with the amount of information they are receiving about

the project, and the other influential competency is assessing the level of support required for the project (typically measured using a stakeholder analysis assessment). The third competency is using the gathered data to evaluate and improve communication plans and training plans and use adoption strategies. This finding has the implication that project managers' involvement in the management of the people element of change contributes to the success factors of the project, resulting in meeting the objectives of change.

The regression analysis found that the project managers' performance in terms of achieving objectives depends on PC2, IC1, EC2, EPC1, EPC5, EPC6, EPC7, MP3, MP5 and PQC2. It appears from the study that meeting the objectives requires the project manager's competency in identifying the target behavioural patterns/standards needed for higher performance. It also depends on the involvement of project managers in the project at an early state to use their skills in formulating the change project name and the project vision. To ensure the success of the change project, cooperation with subject matter experts and change agents during the project executing process is important. In addition, project managers are required to use their competency in analysing change (business process, org. structure, people, technology, etc.) and its impact on the organisation and employees. This entails the application of the competency of performing assessments and analysing results and accordingly the project manager update existing action plans to mitigate risks, support the implementation of action plans and monitor the results. In addition, the performance of project managers depends on the visible support for change from senior-level leadership. To play an effective role in managing the people element of change and be able to achieve the objectives of change initiatives, project managers need to be involved in the reward and recognition systems that reflect the expected new performance requirements. They also have to use their competencies in assessing the level of support required for the project (typically measured using a stakeholder analysis assessment). The implication of this finding is that project managers need the support of senior managers and the cooperation of subject matter experts to be able to be efficient drivers of change. This support includes obtaining the authority to manage internal stakeholders based on an official assignment from senior management. In this case, management of the people element of change will be an added competency rather than being just an additional task implemented on paper as part of the planning and evaluation processes. This will contribute to the success factors of change and will enhance the probability of achieving the change project objectives.

10.7 **Recommendations for Future Research**

Based on the findings of this study, the rationale is to involve project managers in planning activities and practices that result in the reduction of resistance to change. The responses of the project managers and department managers revealed several activities embedded in the daily project management practices. The study was limited to investigating the general role of project managers in managing the people element in change management. By analysing the collected data, the study revealed additional information that requires further in-depth research. The study detected some people management activities in the three case studies, which are relatively different.

To know more about these differences, it is suggested that further research look at the role of project managers in managing people within different business sectors. In addition, the data analysis revealed categories that highlighted relevant critical activities that contribute to people management and consequently to the success of change management. These activities need further research that focuses on these categories. For example, future research may tackle the role of project managers in maintaining quality assurance of project teams' work in change management. This research may be connected to project managers being task-focused to achieve the objectives of the change. Another study that needs attention is the impact of project managers' role in reducing people risk in change management. Moreover, the study revealed that the reporting process goes beyond its purpose of official communication as a motive for people to enhance their performance. Future study in this area would reveal more benefits of project managers' reporting activity and would result in highlighting additions to the reports related to people management. A future study may also investigate the reporting activity as part of the communication process. As evident in this study, the communication process performed by project managers is a critical success factor of change. Such important factor deserves to be studied in depth, taking into account the different means of communication, including the informal communication and its impact on people management.

10.8 **Knowledge Contribution**

It was discussed in the literature that people management is more task for change managers. This study contradicted this notion and showed that project managers are effective managers of the human element of change. Therefore, it is suggested that a more in-depth study on the impact of project management practices on reducing employees' resistance to change be conducted.

Findings from the survey suggest that change management competencies, including the management of the people element of change, should be considered in project managers' job descriptions and change management responsibilities. Moreover, the competencies that contribute to the success factors of change should be part of education programs at universities for project managers. Project managers should be trained to acquire hard and soft skills necessary for managing people in a way that contributes to the accomplishment of change initiatives. On the other hand, per the findings of this study, senior managers must support project managers, and this also applies to consultants and subject matter experts working for the organisation. Senior managers should give project managers more authority, especially in the area of managing the people element of change. Moreover, more authority should be given to them in terms of involvement in the rewarding and acknowledgment of project teams.

10.9 **Summary of the Chapter**

Chapter ten presented the conclusion and recommendations. The robustness of the research methodology was outlined; then the accomplishment of the research objectives was reviewed against the research findings, and it was found that the objectives were met. Ethical considerations were presented, which showed that this study was conducted based on the standards of ethical research. The limitations of the study give an overview of future research that would investigate the topic further. The findings of the survey were also explained to point out the competencies of project managers that positively influence the management of change initiatives and the people element of change. Recommendations were provided based on the research findings.

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12 Appendices

Appendix 1: Interview Questions

Part 1: Leadership

A: Motivation

Question: As a change leader, is motivating staff one of your job tasks? If yes, how do you achieve your objective?

Question: What project management skills you apply to enhance staff motivation?

B: Participation

Question: As a change leader, is one of your job tasks to ensure participation of all staff? If yes, what is your strategy to achieve this objective?

Question: What project management skills you apply to ensure participation of all staff?

C: Commitment

Question: As a change leader, do you contribute to enhancing staff commitment to the workplace? If yes, how do you achieve this objective?

Question: What project management skills you apply to contribute effectively to the enhancement of staff commitment?

Part 2: Team Development

Question: How do you contribute to the development of staff   training plan during change management? Kindly define if your role is general or limited to the project management department.

Question: What project management skills you apply to contribute effectively to the training plan?

Part 3: Communication

Question: Is communicating change motives and consequences part of your job tasks? If yes, what communication channels you apply to keep staff updated of the changes that affect them?
Question: What project management skills you apply to communicate effectively with staff?

Part 4: Stakeholders Management

A: Stakeholders Management

Question: what is the specific role you play within your organization to manage stakeholders during organizational change?

Question: What project management skills you apply when managing stakeholders?

B: Reducing Resistance to Change

Question: Do you think that your role during change leads to reducing employees' resistance to change? What project management skills you apply to reduce employees' resistance to change?

Appendix 2: Quotes from Interviewees Contributions

Quotes from the interviews are presented in this section as examples of the data collected from project managers and department managers. Due to the large size of collected data, only six quotes are provided for each question. The quotes were selected based on their clearness and directness to give a clear image of the process. To keep the subjects anonymous, codes are used to differentiate between the respondents' positions and sectors.

The organisations will have the code of (O) Oil and Gas Company; (S) Sector Regulator (C) Construction Company. The codes of the project managers will have the code of the organisation, the letter P and a number (i.e. SP1). The code of the Department managers will have the code of the organisation, the letter D and a number (i.e. SD1).

Part 1: Leadership

A: Motivation

Question: As a change leader, is motivating staff one of your job tasks? If yes, how do you achieve your objective?

Question: What project management skills you apply to enhance staff motivation?

CP1	*As a project manager in a construction company I occasionally participate directly in motivation of staff. My main goal is to work on the progress of the project. My interaction with different parties would be for example to reduce cost and maximise benefits and I do not deal with individuals. If you mean by motivation rewarding staff and recommending promotions or salary raise then no this is not part of my work. I focus on the task rather than the person doing the task. However I report discrepancies and violations.*
CD1	*Our relationship with the project managers is focused on communicating the objectives of project, the requirements of the client. We work with the project manager throughout the phases of the project to manage resources, time, scope and quality of work. Motivating my staff is part of my responsibilities however, the project manager have a say in the performance of teams.*

SP2	*The part of motivation may be embedded in the different activities we do with the organisations registered under the sector. However, we motivate the organisation as a whole rather than working with individuals. We are aware of the importance of stakeholders' satisfaction to be motivated. That is why we do many surveys to measure their satisfaction and we support the organisations who struggle to implement change. As for the internal employees in general, the answer is no we do not have a say in that. The Project Management Department motivates its internal staff the same as other departments. Based on the performance appraisal and the achievement of each staff, the senior management decides who will be rewarded.*
SD2	*As a Department Manager I do not involve the Project Managers in motivating of my staff. This is not part of their job descriptions. However, we consider the reports of the project managers especially when the project is closed.*
OP2:	*As a project manager in Oil and Gas industry I manage a large portfolio of assets with big responsibilities towards the production and progress of each project. Motivating employees is not in my job description and I have never thought of it. In my projects I look for quality end results leaving the development of workers and motivation activities to their direct managers and Human Recourses Department.*
OD2:	*Motivating staff is my job and Project managers do not interfere in this. Our relation with the project managers does not include any intangible activities. We deal with them based on the tangible tasks required to manage a successful project. Part of my contribution to the success of the project is to motivate my staff.*

B: Participation

Question: As a change leader, is one of your job tasks to ensure participation of all staff? If yes, what is your strategy to achieve this objective?

Question: What project management skills you apply to ensure participation of all staff?

CP2	*Ensuring the participation of all staff is part of the planning of each and every project. However, due to the big sizes of the projects, the project managers do not interfere in the participation of individuals but we plan the participation of teams leaving the management of staff to their line managers.*
	Question: Do you assess the participation of individuals as part of the project evaluation and control?
	Usually we do not. It is the role of line managers to assess the performance of their team members. We assess the performance of teams and we report to senior management.
	Question: Do you suggest training and development for teams who underperform?
	No this is not part of the report we create. We report the performance problems and then we leave the decisions to management and of course Human Resources Department. For example, in the report I may write that the safety measurements are not maintained and the engineers or the supervisors may ask for a workshop for the workers as a corrective action.
	Question: What skills do you use to encourage the participation of teams?
	Planning, communication, evaluation, reporting and problem solving
CD2	*As a Human Recourses manager one of my main responsibilities is to ensure that all the staff is participating effectively in change projects. The training and development*

	is very active in this area to ensure change is well implemented. In our decisions we rely on the project managers' report and we conduct a training needs analysis based on their findings. *Question: do you consult the project managers before deciding the content of the training or who needs the training?* *No I do not do that however, we work closely with heads of departments and supervisors because they deal directly with the project managers.*
SP1	*The change starts from within, piloted internally then it is transferred to the other entities. We share lesson learned with them. In other words, we act as their consultants to enhance staff performance. The stakeholders are required to report the status of the project including the participation of staff and we usually share best practices with all the entities. The Project Management Department keeps the door open for suggestions and these are taken seriously and discussed in the meetings of different committees. Accordingly, corrective actions are taken and additional training is decided when required.* ***Question: what are the skills you apply to ensure the participation of all staff?*** *We plan, monitor, evaluate, communicate plan and lesson learned, report, manage meetings, stakeholders' management, problem solving. All the project management skills are integrated and used throughout the project phases.*
SD2	*Yes the project managers in the regulatory sector work closely with the department managers to ensure the participation of all staff. When change is initiated, training staff is usually part of the plan to reduce the resistance of staff. Some of the training is done internally but many are done by the regulatory sector especially for line managers and supervisors. However, this depends on the type of change and the time frame for implementing it.*
OP1	*Yes to some extent. In a change project plan the people aspect is always considered.*

	As a project manager, I define the roles and responsibilities of project teams but I do not interfere in the details. I ensure that all relevant teams are informed about the requirements of change and then I leave the rest in the hands of administrative managers and field supervisor. They assess the participation of their team members. *Questions: do they report to you the participation of their team members?* *No, the reports go to their managers. I evaluate the general performance of divisions making sure that managers and line managers are implementing change within their departments. They in turn support their staff and ensure their participation.*
OD1	*The project manager of a change project communicates the plan and me as a line manager is responsible for involving all my staff in the implementation. Usually the communication is not direct with the project manager and I report to my manager who meets with the project managers and reports the completion of each phase.*

C: Commitment

Question: As a change leader, do you contribute to enhancing staff commitment to the workplace? If yes, how do you achieve this objective?

Question: What project management skills you apply to contribute effectively to the enhancement of staff commitment?

CP3	*As a project manager I play a critical role during change. For example, change in the system has occurred more than one time in the last few years. Of course it included all the divisions in the company. Last year the supplier and the system were changed. A committee was formed to ensure the change is implemented effectively and I was one of the members. My role is the committee was to plan the phases of change; control the cost set the deadlines for all the divisions in the company. A colleague was responsible for monitoring and communicating with the supplier based on management feedback. Of course my main target was to implement change successfully in the project I was managing. Quality of work is a major consideration in addition to accurate execution of the change plan. This is where I contributed to*

	the commitment of the project teams. ***Question: what did you do exactly to ensure the commitment of your teams?*** *I closely work with the team and I keep them informed of the objectives and outcomes of the change project. It is very important to make people aware of the benefits of change. We meet once a week and I listen carefully to them. To enhance their commitment to the job, I always remind them that the work of one person would affect the company's reputation as a whole. As a project manager I have the skill of persuading others, presentation skills, breaking down data for everyone to understand and task delegation skills. However, I am not a decision maker in rewarding staff to enhance their commitment so I cannot promise any compensation but I can do them some favours. Also job security is one thing that I always remind my team of as an exchange to their commitment.*
CD1	*The commitment of my team is my role and it is not in any policy or procedure to share this task with a project manager. I believe that recognition and constructive feedback do motivate employees and this is what I do. My objective is to follow the project plan and implement change in my department to deliver the end product on time. Project managers include the achievements of the department in their reports to senior management and this is what concerns me most. This can be the role of project managers that I can think of but we do not do anything related to commitment together.*
SP4	*As a project manager in sector regulatory I monitor the stakeholders' implementation of the change project I am responsible for. One of the things I do is looking at employee-engagement items in the satisfaction survey as they have the strongest correlations with business results. Usually the lack of commitment is a result of the resistance to change. I work with the entities' management to point out the error and set a plan to resolve issues such as reducing the resistance. The plan always includes training and development of staff. Lack of commitment usually affects the quality of work and affects the completion of licensing. Therefore, in case of non-conformities and poor achievement of change projects we question the commitment of*

	management. I assess the risk and the commitment of management is one of the major risks that affect the results. We provide support to management based on the issue affecting performance then unresolved issues in terms of staff commitment are dealt with internally.
SD2	*Part of my role is to ensure the commitment of my staff. The project manager working with me on a change project helps in enhancing the commitment of all staff as I report to him the role and the achievements of each division. My report reveals the weaknesses and the strengths in the implementation phase. This may result in changing role to ensure that the individual in charge is able and committed to do the work. Usually no one wants to be embarrassed so the high majority show commitment especially in times of change.*
OP3	*I do not have a direct involvement in encouraging staff to be more committed. When change is initiated I must implement it in my project. Whether it is in the system of in the structure I ensure all staff is aware of the change and the requirements. My projects are usually big and the number of people working on it is big also. I encourage the supervisors to oversee the work of their teams and ensure their commitment to do the work in a timely manner. However I can say that I encourage commitment through monitoring the project the project activities to ensure objectives and deadlines are met. I can say also that the regulations in my company are very strict so it is hard for uncommitted people to keep the job. Lack of commitment has a negative impact on the quality of performance and on meeting the change objectives effectively.*
	Question: Did you contribute to the development of your company's legislations that involve people management such as enhancing commitment?
	No I did not. I have contributed to the development of the Project Management Department policies and procedure. As you may know commitment is embedded in our policies and procedures to complete any project on time within the available resources. Whether we deal with change as a project or sometimes as part of a project people involvement is usually a risk that we consider in our assessments.

	Question: can you clarify to me what do you do in case one or more of your team do not show commitment to implementing change? *As I told you the regulations of the company are very strict so anyone who is not showing commitment or do not contribute to the change project effectively will receive verbal warning, written warning and then this person more likely will be sacked if his behaviour does not change. On the other hand, committed people are appreciated and respected. In some cases committed people are promoted but I do not have a say in the final decision. However, I can ensure job the security of the people contributing to change.*
OD2	*As a line manager for a big number of staff, change always brings issues. If it is change in the structure the new seniors will bring change based on their school of management. If the change is in the system then I have to mentor others and be persistent in implementing change to maintain the reputation of my department. Commitment in times of change is lower than usual. It takes a lot of effort to convince people that change is advantageous. Do I work with project managers on enhancing the commitment of my staff? The answer is no. but if you ask me if the project managers have an input in the activities brought up with change then yes. We work based on project managers' planning and the project is monitored by them. I report to the project manager and my reports follow the deadlines of different activities. Everyone has to be committed.*

Part 2: Team Development

Question: How do you contribute to the development of staff training plan during change management? Kindly define if your role is general or limited to the project management department.

Question: What project management skills you apply to contribute effectively to the training plan?

CP5	*I do not develop the plan as this is the role of the HR based on the information they receive from the project manager. I must say that I not believe that training courses alone will give the employees the required skill especially when the change requires more than one new skill. Many employees resist change simply because they might find the course material difficult. From my experience, high achievers are those who admit that they do not know and take every opportunity for self-development. This is where my job as the project manager of change becomes more effective. I define the new skills required to implement change and I ensure through reports that information is conveyed to staff. I do not have the authority to work with all the employees. I analyse the new tasks against the skills and knowledge missing and those available skills within the team. I report my analysis to senior management, human resources department and to line managers. It is their decision how the training and development will take place. I always notice that employees' resistance to change is reduced when they are given ownership of the project. To reach all the staffs, part of the ownership given to department managers is taking part in the developing their teams. I provide on-going support to managers by ensuring they are aware of the change needs. I monitor the performance and the progress of their departments and I give feedback. Managers provide their teams with whatever knowledge or skills they need to implement change including the training. This is a continuous process until change becomes a normal daily practice.* *As for the project management office, I play a major role in the development of the team. Change is initiated and planned in the project management department. All the team must be well aware of the requirements of change in each phase of the project. The development is done using different methods such as training courses, mentoring and coaching, and sharing lessons learned.*
CD1	*The training and development of staff when change is initiated is a team work. It starts with the contribution of the change project manager. Based on the needs*

	communicated to me as a manager I act immediately and I plan the development of my staff. I work with the HR department id training is needed. The approval of senior management is required before any agreement with training providers. ***Question: how does the project manage contribute to the training and development plan.*** *I myself always consult the project management before I work on the training and development plan of my team. I always receive helpful and constructive feedback. The plan is not prepared by the project manager but it is monitored by him and included in a return on investment report.*
SP4	*At first I send a business case to management for developing the internal staff. Once it is approved I develop the training plan and I set the evaluation strategy for both; internal and external stakeholders. I do help our stakeholders in training their staff through the workshops delivered in our premises. We also send learning material to the stakeholders to use in their internal training. The training that we conduct is related to the strategic objectives of change. It is very important for us as a regulatory sector to ensure that all the organisations are on the right track. Training and development of stakeholders is one of the key performance indicators (KPIs) of the project management department. Trainees complete a satisfaction survey on the effectiveness of the training and the competency of the trainer and the outcome is analysed and reported to senior management. The skills I use for this task are many such as communication, monitoring, evaluating, developing action plans, reporting, presentation skills, budgeting, using project management tools and many more.*
SD2	*When change is initiated the project management send the requirements of change and the deadlines that create a sense of urgency. The execution of the plan is controlled against measurable objectives based on the specific change objectives. Managers work with the project manager jointly or individually to implement the plan.*
OP2	*Change needs a plan to transform new skills and knowledge to people. It starts with*

	communicating the goals of learning, the strategies to achieve the target and the assessment criteria. I analyse the newly introduced task and I communicate the managers in meetings and via reports the requirements to implement change as planned. My role as a project manager is to provide information and the managers are responsible for managing the training process for their teams. Usually the human resources department is involved in the planning and execution of the training activities based on the change project requirements. When the plan is implemented my role is to assess the compliance of different department with the plan. It is my responsibility to make sure this phase is completed by all involved departments according to the budget and the deadline. As for the skills I use in change management I can say they are the same project management skills. Maybe I do more communication and extra reporting. I also do a lot of consultancies as I receive a lot of questions from counterparts managing other departments.
OD1	*The project manager provides all the managers with a skills matrix we use as a base for the training and development plan. Many of the team would be already competent and have the skill from education or previous jobs. The nature of my department's work allows for forming learning network between staff. Learning exchange always work with me as the competent team members act as mentors for less competent colleagues. The problem is when some people resist change and show negligence to learn. I share all the obstacles with the project manager and I get assistance and advice on how to reduce the risk and how to broaden the development plan to include some other activities that may be accepted by all. The sense of urgency communicated by project managers during organisational change is always taken seriously. They monitor and appraise quantitatively and qualitatively the progress of the development project and report to upper management. The reports usually have an action plan for managers to implement to comply with the change management plan.*

Part 3: Communication

Question: Is communicating change motives and consequences part of your job tasks? If yes, what communication channels you apply to keep staff updated of the changes that affect them?

Question: What project management skills you apply to communicate effectively with staff?

CP4	*When change is initiated, it is my responsibility to plan the communication based on the information that should be provided to stakeholders. I plan information distribution to ensure relevant people receive the information on time. I also generate and collect information then report performance to track the development and take corrective actions to meet the deadlines. I also collect and circulate information to formalize the close of a phase or project. I use technology and project management tools in my communication.*
	Question: Will you please define the project management tools you use when you communicate change project?
	I use the same tools for all projects and they are many. For example I use the Critical Path Method (CPM) to schedule activities in a straight line which is easy to read and a Gantt chart for scheduling and timeframes. I use the critical chain to demonstrate the resources needed for project tasks' execution. I also use Work Breakdown Structure (WBS) to show the breakdown or the project. For program review I use Program Evaluation Review Technique (PERT) to analyse and represent the different tasks of a project. Many other tools are used in my reports and communication depending on who I am communicating information to
CD1	*Yes, the project manager plays a main role in communicating change. Following the communication of project managers help me to plan change tasks systematically and shows me where I am heading. During change, as a manager, I go through a lot of stress until my staff understand and accept change. I usually work closely with the project manager to solve problems that will affect the achievement of my department. Communication during change is more extensive than usual. It is a two way continuous communication in which formal and informal discussions take place verbally and in writing.*

SP3	*For every project including change we develop a communications management plan as a guide for communicating with internal and external stakeholders all through the project timeframe. The communication is usually based on an analysis of stakeholders to plan the whole communication process. Also the administrative closure of the project requires additional communication such as communicating closure reports and lessons learned. We use different project management tools depending on the type of information and the person or the team we are communicating with. Usually during organisational change the communication includes a lot of meetings and discussions. We prepare presentations and use a lot of visual aids to deliver clear messages. Stakeholders use our presentations to communicate change to their teams. Also when change is initiated the communication plan is tailored and updated throughout the different project phases depending on the type and consequences of change.*
SD1	*When change is initiated the project manager prepares and shares the logistical arrangements in advance. In addition, the project manager calls for more than one meeting where we as department managers are given the roles and responsibilities of our teams. Throughout the project phases we are called for meetings and the project manager informs us about the issues that may occur during the execution of change. Sometimes changes in the plan take place during the execution of change and we are kept informed. Other than the meetings we exchange daily emails and weekly reports. The project manager makes sure we receive up to date information and follow up with the progress achieved within the department.*
OP4	*Communication is one of main responsibilities as a project manager. We have gone through different types of change during my work in this company. In this case, communication is sometimes different because a lot of verbal or informal communication takes place. In my communication of all projects I use a standardised plan which is adopted to include supplementary information and additional receivers. I use the Power/Interest Grid to prioritise stakeholders and group teams and individuals. I communicate with them based on their level of authority and the level*

	of their concern in the change project. I develop the distribution structure to define what information to send, when or how often I will send it and the method I will use. I use standardised formats and project management tools for formal communication such as performance reports, status reports, and progress reports. Emails are extensive especially in times of change. Meeting is another important method that helps to build close relationships with project teams where information about the progress is shared and problems are resolved.
OD1	*During change the project manager provides a great help to department managers. Change is not always accepted and sometimes employees struggle to implement change especially when it is technical. Also administrative changes produce resistance and extra work. When administrative and technological changes occurred 2 years ago discussions between upset employees continued for months. Many non-compliance incidents occurred as people found it difficult to change their daily practices based on the major changes we went through. We had to work with the project managers to resolve issues. We used project management planning templates and presentations to communicate the change required in each department. For example, we receive and share a RACI Chart (responsible, accountable, consulted, and informed) from the change project manager. The chart shows the person(s) responsible for each category of the project. It also shows who is helping the responsible person in each category. We also work together to complete each phase of the change based on defined resources, time frame and budget. We as department managers, report progress to project managers via emails, meetings and department minutes of the meeting*

Part 4: Stakeholders Management

      A: Stakeholders Management

Question: what is the specific role you play within your organization to manage stakeholders during organizational change?

Question: What project management skills you apply when managing stakeholders?

CP5	*When we present stakeholders with major changes we put them in a difficult position at least at the beginning. We understand that most people will be overwhelmed as they do not have any choice but to implement change whether they accept is or not. From my experience I can testify that a high percentage of the stakeholders hate change. To overcome difficulties and failure of the change project my job is to identify key stakeholders and departments affected by change. I also define the potential impact on stakeholders as high and low in order to decide on the support I should offer to stakeholders. I also assess how stakeholders would react to change by dividing then to high sensitivity and low sensitivity. Example of the key stakeholders is the senior managers, resources manager, engineers, project sponsor and contractors.*

To ensure that change is implemented as planned I build relationships with all key stakeholders. I prioritise my communication and support based on their impact on change in each phase of the project. I have diverse role when I work with stakeholders during organisational change that is why I develop the strategic plan for the whole project beforehand. I use the project management tools and forms to deliver clear messages to key stakeholders based on a communication plan. In the implementation phase, I work with key stakeholders to ensure the progress of the project. I manage risk and work with managers and supervisors to mitigate unpredictable problems throughout the project phases.

Question: What are the specific project management skills you use when you manage change?

I use all the project management skills when I manage organisational change. As a project manager I am capable to use, adapt and communicate project management tools and techniques. I also use my interpersonal skills to persuade people of the advantages of change and help them see the bigger picture behind change. |

CD1	*The project managers of change work with us throughout the change projects. The communications we receive from project managers always help us to understand the expectations and the impact of change. Other than communication, project managers interfere when for example I send a report with missed deadlines resulted from external stakeholders' contribution. I work with the project manager to communicate with the third party and re-plan the activity to ensure the overall project is completed on time. This applies also to conflicts with internal departments.* ***Question: Is there a difference between the contribution of change managers and project managers in times of change?*** *I only deal with the project manager of the project at all times including organisational change. For example, there has been a major change in the procurement policies and procedures. As a result there has been a change in the approved suppliers, vendors and contractors. This led to changes in the documents used for tenders and quotes, timeframes, and the procurement committee. The change affected the procurement process and changed many of the internal and external stakeholders. The project manager was involved in managing and communicating the change to all key stakeholders including me as a department manager.*
SP5	*Managing stakeholders in in the heart of my responsibilities as a project manager in a regulatory sector. Change has been initiated extensively in the past few years due to certain external factors and rapid global and national development. I work with internal stakeholders and with ever changing external stakeholders. The sector is growing and many new organisations are launched every year. With new stakeholders we deal with every project as a change project. The new organisations, to comply with the regulations, have to do a lot of changes in their policies and processes. They also need to upgrade their systems to comply with quality assurance measures. As a project manager working with one or more external stakeholders I communicate with key people in the organisations to help them implement change. Some of the external stakeholders face difficulties such as missed deadlines, breaching scope of company's registration and confusion of what needs to be done.*

	The project management department conducts and analyses several surveys to ensure acceptance and satisfaction of stakeholders. As a project manager it is my responsibility to close successfully all the projects whether it is a new project or a change project. I use all project management techniques and tools in planning, executing, monitoring and evaluating the outcomesI share success stories with external stakeholders. I also manage workshops for individuals involved in change. The list of tasks is big. In summary when change is initiated and I am assigned as the project manager of a particular change project I manage it from A to Z in accordance with all involved stakeholders. ***Question: How do you ensure that the requirements of change are met by all the stakeholders?*** *As a project manager, I report to seniors and managers who are responsible for implementing change in their organisations. We conduct meetings and we exchange emails. I provide them with the requirements using project management tools and techniques. They in turn report progress and issues and they ask questions. To manage change I need to know the project governance structure. I need to identify the decision makers and their specific role in the change project. I represent the regulatory sector and I must know who represents the organisation in every phase and activity of change. I plan my communication based on the power and interest of stakeholders to ensure that key people are fully informed and committed. I do not usually deal with external low power stakeholders but I monitor their achievements through their managers. Internally I work with a team and in this case I manage all my team no matter their level of power.*
SD2	*Yes the project managers are a great help during change. Staffs need a lot of support to accept and implement change effectively. As department manager in a regulatory sector the change starts in my department then it is transmitted to external stakeholders through project managers with senior management guidance. Without the planning of project managers my job will be harder. I follow a well-developed*

	plan with clear deadlines and budget and I in turn strive to meet these deadlines to close each phase of the project on time. Project managers assist me is resolving issues whether it is on departmental level or sometimes with individuals. Project managers define the competencies needed to implement change and I in turn work with HR on training my staff.
OP5	*In Oil and Gas sector many of the projects are high risk and stakeholders are treated as part of the risk. Both internal and internal stakeholders may represent a risk of failure if change is not managed well. First I always know the stakeholders I will be working with. I plan my communication based on their level of authority and based on the information they need to know or deliver. I work with internal stakeholders to ensure they understand the value of change. I work with external stakeholders to make sure they understand why change took place. During change a governance structure is formed depending on the type and volume of change. For major change projects a steering committee from senior managers is formed. I report directly the committee chair and I do presentations in the committee meetings. As a project manager I do not work with individuals. My work is usually at departments and divisions level through their managers. When I develop the plan of change, I define each department's roles and responsibilities for work to be achieved within the timeframe. I monitor the performance of departments but I interfere in problems caused by individuals only if I am asked by the department manager. This is part of my responsibilities as a problem solver is to remove barriers to ensure the success of the change project. I monitor stakeholders' behaviour to ensure they are working towards the change goal. I do several surveys to understand and analyse the internal and external stakeholders' reaction to change. When problems occur, I conduct a root cause analysis and I share the outcome and the corrective actions with stakeholders. Throughout the process I use project management techniques and tools to communicate change project plan to all involved stakeholders.*
OD2	*As an internal stakeholder I need the assistance of project manager of organisational change. We usually have weekly meetings and daily correspondence with the project manager. I report to the project manager and my reports include the achievements*

	and the obstacles that are many during change. Yes I can say that without the help of the project managers things will be more difficult to manage change requirements.
CP3	*I plan preventive actions and corrective actions. I report to key internal and external stakeholders such as senior managers and department managers involved in the change. Based on observation and correspondence with key stakeholders I generate my reports.*

B: Reducing Resistance to Change

CP2	*As a project manager, my main objective is to close my project successfully. Change always brings more work and more complicated tasks for project managers and for all staff. One main issue that takes time and effort is dealing with employees who resist change. There is nothing in my job description that states I am responsible for reducing resistance to change. My role in this case is embedded in my daily activities as project manager. When employees resist change it is likely that the project will face a lot of problems. I do not plan resistance to change however I work with other managers to ensure their staffs are doing the work based on the main plan. The role of each department's manger is to work with his team and I work with the key people in each department to help the team understand the reasons behind change. I introduce change divided to phases and steps using project management tools. My plan defines the owners of each activity of change and this creates a sense of personal control and ownership in the team. People during change have many questions and I, through my correspondence with department managers, define the knowledge and skills people lack to do the job. I provide managers with reports and presentations to use in developing their teams. I do not develop training plans but I contribute to the development of staff by defining the new skills required. I advocate the department managers involved in the change until they become the promoters of change. The managers are key stakeholders who have the ultimate impact on their teams. I do my best to be a role model to others by promoting change and its*

	advantages and by being positive all the time.
CD2	*I appreciate the help provided form project managers during change. We follow a well-structured plan that helps us trace the skills required. For major change projects we meet with the project manager we participate in setting expectations and deadlines, Sometimes we receive last minute requests though and this creates more resistance form staff. Project managers do not have a direct role in reducing change within my department. However, their work helps me to convey clear massages to my staff about change activities. When the scope of change is clear, the deadlines are logical and the strategy is well planned this helps me in preparing my team. I am responsible and accountable for reducing my team's resistance to change. The project manager interferes only when an issue is escalated to senior management.*
SP5	*The success of change requires the participation and commitment of all people involved so resistance to change is a major problem. I manage change projects with numerous external stakeholders and I face resistance in many cases not from employees but mainly from management. The resistance may be due to different factors such as budget, recruitment of staff with special qualifications and change in the organisation's policies. Resistance becomes obvious when the organization passes the deadlines, cancel follow up meetings and send complaints to senior management. This is where I have to use all my skills to resolve issues because I have a target to meet. In all cases my work results in reducing resistance to change. I communicate openly all the information about change. I inspire people by making them understand how the new system will result in better performance and better quality of their work. I use the feedback from shareholders and generate risk-management plans based on lessons learned from previous projects. When I face strong resistance from key stakeholders I break down the skills, knowledge and deadlines to make easier for them to be on track.* *Question: Do you develop a plan for reducing employees' resistance to change?* *No I do not. I deal with managers and they are held accountable for their staff. I provide them with full information and sometimes visual aids, presentations or*

	material for workshops. I look for results so each manager has the freedom to deal with his staff based on his competencies in reducing resistance to change.
SD1	*The project managers provide support to all the department managers during organisational change. All the department managers are involved in setting predictions and deadlines. Project managers define from the beginning the role of managers to make sure change is implemented based on a well-developed plan. This gives us a clear vision of the future and we help our teams to understand that change will not affect their positions as they perceive. Department managers distribute the work between the team members making sure they are able to do the work. When we understand the objectives of change and gain the knowledge and skills we lack it is easier for us to transfer the new knowledge and skills to the team. Change always brings challenge and resistance and as a sector regulatory we initiate and implement the change before we circulate it externally. This means perfection, quick decisions and instant actions. This puts our employees under stress as they need to master the new system or employ a new strategy because they will be consulted by external stakeholders. Without the support of the project manager we cannot achieve all this. We refer to the project manager mostly when employees' morals are down because of deadlines and volume of work. We do what we can to minimise delays caused by resistance but at the end we need the project manager's assistance to give us more flexible options. This usually helps and lifts the morals of staff because they feel that their voices are heard.* ***Question: What project management skills do the project managers use to reduce resistance to change?*** *I think all project management skills are used such as using technology to communicate the change project, risks and success factors. The project managers use specific forms to convey the messages which are clear and provide a systematic approach to change. Also project managers conduct successful meetings and very good presenters. At the same time they are good listeners. I take my strength during change from the project manager who is more stressed than anyone else but move forward without hesitation. Other skills are the ability to look at details, evaluate and*

	provide constructive feedback, adjust the plan yet keep its structure, resolve issues and make everyone feels that he is the owner of the change project.
OP2	*I am not the decision maker of change but I am the owner of change in the project assigned to me. Resistance is always considered as a critical risk that may affect the success of the project. One of the challenges I face is how to communicate change in a way that does not create resistance from the beginning. In the Oil and Gas business change is affected by many internal and external factors. The decision to change may be quick but the change itself is always well planned and this is best done by a project manager. To reduce resistance to change I always provide a positive and optimistic purpose for the project. Sometimes I include the weaknesses of the current system to show the need for change. I cannot do this all the time especially for example when the reason behind change is cutting the budget. There were times when I believed that the change decided by management might reduce quality. However, as a project manager I understand well that there is no other option so I see change as an advantage and I do my best to get out the best of it. To achieve the goal of change I make sure it is understood by all the involved parties. I use several project management tools in planning, communicating and evaluating progress. I make sure that there is a smooth flow of information to and from the managers I work with. Managers must accept change and it is my role to convince them using whatever people skills it takes. To reduce resistance I keep people involved in the decision making process. Sometimes I cannot involve them in defining the deadlines but certainly I can involve them in the breakdown of tasks. I provide them with data, documents, charts, reports and templates to use in their communication with their teams. I monitor the contribution of each department and sometimes I myself mentor the managers especially in the areas of my expertise. I think the best thing I do to reduce resistance is that I do my best to make people feel at ease. I try to make them see themselves as the champions of change. I tell them directly and indirectly that change is a must so if they succeed in implementing change effectively they will enjoy job security. I cannot promise them of anything else but I wish I can because this will be the best motive to make everyone strive to make the change process a success.*

	Question: Is reducing employees to change one of the skills required in your job analysis? Is it included in your job description? *No and it has never been in my last job also. I think if I am given the authority I will play a more important role than now in reducing resistance to change. Currently I do not have to deal directly with staff and I do not receive any reports regarding resistance of staff. Sometimes department managers or engineers contact me regarding issues such as late work. I conduct root cause analysis when we have problems and all the time resistance of employees is one of the main reasons. My job is to draw the attention of managers to the importance of employees' involvement and motivation. The decision of how to deal with the department problem is not mine as I do not have authority over individuals. Unless asked to provide help, managers will not appreciate in my interference in their internal business.* *Question: What would you do if you were given the authority to set a plan to reduce individuals' resistance to change?* *Not much unless I am given the authority to reward or promote high achievers. Also with the large project I usually manage I do not have any spare time to deal with individuals or even special cases. I plan for the whole organisation and delegate the responsibility of dealing with employees to the direct managers and some projects to supervisors and team leaders*
OD1	*The project manager predictions and planning help me to convince my staff that change increases productivity. Through the monitoring and the reports I receive from the project manager and share with my staff they see the business progress.* *Question: So the project manager has a direct influence on reducing staff's resistance to change?* *I cannot say it is a direct influence because the project manager deals with me not with my staff. But yes the work of the project department makes it easier for me to understand the reason behind change. The accurate planning of change helps me to know the role of my department and what skills should the staff gain to implement*

change. The project manager involves me in making change and I involve my people.

Question: does the project manager develop a plan to reduce the organisation's resistance to change?

No he does not. This is my role and it is not a written plan as I deal with each case individually. I understand that resistance is related to the level of competency. I mentor my staff. Train them and encourage them to learn how to do the work effectively. Low achievers resist more and they represent the obstacles to meeting deadlines. Here is where the project manager is asked for assistance. This requires minor changes in the deadlines or shift of responsibilities between staff that must be approved by the project manager first.

Appendix 3: Survey Questions

Dear respondents,

The below questionnaire investigates the role of project managers in managing the human element of change within the UAE context

The questionnaire aim is to reveal the project managers' competencies and skills utilized/ignored throughout the change process.

Change projects performance:

- Organizational Change Management is one of my tasks in the context of project work
  - o Yes
  - o No
- My annual performance appraisal includes the assessment of my projects' effectiveness
  - o Unsatisfactory
  - o Satisfactory
  - o Excellent
- I have experience of participating in and/or managing projects
  - o Yes
  - o No
- My change management project objectives are meet
  - o Always
  - o Sometimes
  - o Never

Questionnaire

Section 1: Demographics	
1. My current work position is	o Project Director o Project Manager o Project Coordinator o Portfolio Manager o Department Manager
2. My gender is	o Male o Female
3. My age range is	o 22 to 35 o 36 to 49 o Above 50
4. The industry of my project is	o Construction o Oil and Gas o Information Technology o Manufacturing o Quality Assurance o Regulatory Sector o Education o Supply Chain Management o Other

Section 2: Planning change: please rate your involvement in the following planning change activities	Always	Sometimes	Never
1- Initiating Change			
IC1	• When it is required, I initiate change projects independently			
IC2	• One of my tasks is to formulate the change project name and the project vision			
2- Planning phase			
PC1	• I identify and build the key stakeholder engagement strategy and plan			
PC2	• I identify the target behavioural patterns / standards needed for higher performance			
PC3	• Identifying critical events to shape the project change is one pf			
PC4	• I ensure that the "people" factor is given just as much consideration as elements that are more technical are at the outset of a project			
PC5	• I keep both organizational adoption and value creation in mind during the planning process			
3- Execution phase			
EC1	• Throughout the execution phase, I manage stakeholder needs and expectations			

		Always	Sometimes	Never
EC2	• To ensure the success of the change project I utilize both subject matter experts and change agents during project executing processes			
4- Monitoring and control phase				
MC1	• I assess and meet the ever-evolving needs and expectations of stakeholders			
MC2	• I adjust project plans and designs based upon stakeholder needs and concerns			
5- closing phase				
CC1	• Before closing a project, I ensure that value creation is realized and Lessons learned are captured.			
Section 3: Evaluating the performance of change effort: please rate your involvement in the following project change activities		**Always**	**Sometimes**	**Never**
EPC1	• Part of my job is to analyse change (business processes, org structure, people, technology etc.) its impact on the organization and employees			
EPC2	• I develop an action plan, set deadlines and identify people responsible for transition activities			
EPC3	• One of my key responsibilities is to monitor the implementation of the plan			
EPC4	• To ensure stakeholders' satisfaction, I collect and analyse feedback, update the communications plan regularly			
EPC5	• I am responsible for performing assessments and analysing results			
EPC6	• I am assigned to update existing action plans to mitigate risks			
EPC7	• I support the implementation of action plans and monitor the results			
Section 4: Managing people (Motivation/rewards/training/human resources): please rate your involvement in the following project change activities		**Always**	**Sometimes**	**Never**
MP1	• I evaluate the human resources plan against the project and change management requirements			
MP2	• Developing and managing project teams is one of my responsibilities			
MP3	• I attain visible support for the change from senior-level leadership			
MP4	• I provide the project tram with emotional support when experiencing change-induced stress			
MP5	• I develop the reward and recognition systems that reflect the expected new performance requirements			
MP6	• I provide the project team with adequate and timely information			
MP7	• I ensure that the team members have clear understanding regarding how their roles and responsibilities may be impacted			
MP8	• I ensure that everyone in the team has direct engagement and involvement in the change			
MP9	• I conduct a training needs analysis and design the approach to training in the context of the project			
MP10	• I play a main role in developing, plan and schedule a training programme			

		Always	Sometimes	Never
MP11	• I contribute to the Coordination and preparation of training activities			
MP12	• After the training I assess the training program effectiveness and employee satisfaction with the training			
Section 5: Managing the organizational side of project change : : please rate your involvement in the following project change activities		**Always**	**Sometimes**	**Never**
5.1 Project Communication Management				
PCC1	• I create and distribute messages to external stakeholders to build awareness, understanding, knowledge and motivation			
PCC2	• I communicate project updates that are relevant to those outside of the immediate project team			
PCC3	• I create and execute communication events for external stakeholders			
PCC4	• I collect feedback from stakeholders regarding project operations and I ensure their concerns are captured and used to modify or improve project performance			
PCC5	• I am responsible for monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met			
5.2 Project Risk Management				
PRC1	• I identify risks by making organization- and people-related risks part of the official project risk registry,			
PRC2	• I plan risk responses and control risks and draw on the competencies within the team and utilize the recommendations of expert judgment.			
PRC3	• I conduct iterative stakeholder engagement sessions and analyze results			
5.3 Project Procurement Management				
PPC1	• When generating a request of proposal (RFP) I consider how procurement of resources might impact stakeholders and the organization			
PPC2	• I consider, accept and be ready to utilize the change that will be introduced by the supplier or vendor.			
PPC3	• It is my duty to monitor contractors' performance, and make changes and corrections to contracts as appropriate			
5.4 Project Stakeholder Management				
PSC1	• I identify stakeholders in an attempt to enhance and unify project and change management			
PSC2	• I clarify the different types of stakeholder groups and their relationship with the project.			
PSC3	• I conduct a stakeholder quantitative and qualitative information analysis to determine whose interests should be taken into account throughout the project			
PSC4	• I plan stakeholder management to facilitate change adoption and to maintain project funding and support throughout the project lifecycle.			
PSC5	• I develop a comprehensive stakeholder map that is integrated with project activities throughout the project lifecycle to ensure organizational value is achieved.			
5.5 Project Quality Management				
PQC1	• I develop quality metrics that include stakeholder satisfaction with the amount of information they are			

		receiving about the project			
PQC2	•	I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)			
PQC3	•	The quality metrics I create include the user adoption rates			
PQC4	•	As part of the project risk I consider and document the level of self-sufficiency			
PQC5	•	I use the gathered data to evaluate and improve on communications plans, training plans and user adoption strategies			

Appendix 4: Statistics

Part1:

IC1 - When it is required I initiate change projects independently

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	38.5	38.5	38.5
	Sometimes	15	38.5	38.5	76.9
	Never	9	23.1	23.1	100.0
	Total	39	100.0	100.0	

IC2 - One of my tasks is to formulate the change project name and the project vision

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	9	23.1	23.1	23.1
	Sometimes	18	46.2	46.2	69.2
	Never	12	30.8	30.8	100.0
	Total	39	100.0	100.0	

PC1 - I identify and build the key stakeholder engagement strategy and plan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	24	61.5	61.5	61.5
	Sometimes	11	28.2	28.2	89.7
	Never	4	10.3	10.3	100.0
	Total	39	100.0	100.0	

PC2 - I identify the target behavioural patterns/standards needed for higher performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	23	59.0	59.0	59.0
	Sometimes	11	28.2	28.2	87.2
	Never	5	12.8	12.8	100.0
	Total	39	100.0	100.0	

PC3 - Identifying critical events to shape the project change is one pf

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	17	43.6	43.6	43.6
	Sometimes	20	51.3	51.3	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

PC4 - I ensure that the "people" factor is given just as much consideration as elements that are more technical are at the outset of a project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	16	41.0	41.0	41.0
	Sometimes	18	46.2	46.2	87.2
	Never	5	12.8	12.8	100.0
	Total	39	100.0	100.0	

PC5 - I keep both organizational adoption and value creation in mind during the planning process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	13	33.3	33.3	97.4
	Never	1	2.6	2.6	100.0
	Total	39	100.0	100.0	

EC1 -Throughout the execution phase, I manage stakeholder needs and expectations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	13	33.3	33.3	97.4
	Never	1	2.6	2.6	100.0
	Total	39	100.0	100.0	

EC2 - To ensure the success of the change project I utilize both subject matter experts and change agents during project executing process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	19	48.7	48.7	48.7
	Sometimes	18	46.2	46.2	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

MCC1 - I assess and meet the ever-evolving needs and expectations of stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	13	33.3	33.3	97.4
	Never	1	2.6	2.6	100.0
	Total	39	100.0	100.0	

MCC2 - I adjust project plans and designs based upon stakeholder needs and concerns

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	51.3	51.3	51.3
	Sometimes	17	43.6	43.6	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

CC1 - Before closing a projet, I ensure that value creation is realized and Lessons learned are captured

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	12	30.8	30.8	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

Part2:

EPC1 - Part of my job is to analyze change (business process, org structure, people, technology etc.) its

impact on the organization and employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	38.5	38.5	38.5
	Sometimes	16	41.0	41.0	79.5
	Never	8	20.5	20.5	100.0
	Total	39	100.0	100.0	

EPC2 - I develop an action plan, set deadlines and identify people responsible for transition activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	12	30.8	30.8	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

EPC3 - One of my key responsibilities is to monitor the implementation of the plan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	23	59.0	59.0	59.0
	Sometimes	13	33.3	33.3	92.3
	Never	3	7.7	7.7	100.0
	Total	39	100.0	100.0	

EPC4 - To ensure stakeholder's satisfaction, I collect and analyze feedback, update the communications plan regularly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	21	53.8	53.8	53.8
	Sometimes	13	33.3	33.3	87.2
	Never	5	12.8	12.8	100.0
	Total	39	100.0	100.0	

EPC5 - I am responsible for performing assessments and analyzing results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	38.5	38.5	38.5
	Sometimes	19	48.7	48.7	87.2
	Never	5	12.8	12.8	100.0
	Total	39	100.0	100.0	

EPC6 - I am assigned to update existing action plans to mitigate risks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	16	41.0	41.0	41.0
	Sometimes	19	48.7	48.7	89.7
	Never	4	10.3	10.3	100.0
	Total	39	100.0	100.0	

EPC7 - I support the implementation of action plans and montor the results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	12	30.8	30.8	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

Part3:

MP1 - I evaluae the human resources plan against the project and change management requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	17	43.6	43.6	43.6
	Sometimes	11	28.2	28.2	71.8
	Never	11	28.2	28.2	100.0
	Total	39	100.0	100.0	

MP2 - Developing and managing project teams is one of my responsibilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	22	56.4	56.4	56.4
	Sometimes	10	25.6	25.6	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

MP3 - I attain visible support for the change from senior-level leadership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	51.3	51.3	51.3
	Sometimes	16	41.0	41.0	92.3
	Never	3	7.7	7.7	100.0
	Total	39	100.0	100.0	

MP4 - I provide the project tram with emotional support when experiencing change-induced stress

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	51.3	51.3	51.3
	Sometimes	12	30.8	30.8	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

MP5 - I develop the reward and recognition systems that reflect the expected new performance

requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	12	30.8	30.8	30.8
	Sometimes	12	30.8	30.8	61.5
	Never	15	38.5	38.5	100.0
	Total	39	100.0	100.0	

MP6 - I provide the project team with adequate and timely information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	30	76.9	76.9	76.9
	Sometimes	6	15.4	15.4	92.3
	Never	3	7.7	7.7	100.0
	Total	39	100.0	100.0	

MP7 - I ensure that the team members have clear understanding regarding how their roles and

responsibilities may be impacted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	30	76.9	76.9	76.9
	Sometimes	7	17.9	17.9	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

MP8 - I ensure that everyone in the team has direct engagement and involvement in the change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	13	33.3	33.3	97.4
	Never	1	2.6	2.6	100.0
	Total	39	100.0	100.0	

MP9 - I conduct a training needs analysis and design the approach to training in the context of the

project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	16	41.0	41.0	41.0
	Sometimes	16	41.0	41.0	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

MP10 - I plan a main role in deveoping, plan and schedule a training programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	16	41.0	41.0	41.0
	Sometimes	14	35.9	35.9	76.9
	Never	9	23.1	23.1	100.0
	Total	39	100.0	100.0	

MP11 - I contribute to the Coordination and preparation of training activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	12	30.8	30.8	30.8
	Sometimes	20	51.3	51.3	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

MP12 - After the training I assess the training program effectiveness and employee satisfaction with the trainining

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	18	46.2	46.2	46.2
	Sometimes	14	35.9	35.9	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

Part4:

PCC1 - I create and distribute messages to external stakehoders to build awareness, understanding, knowledge and motivation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	19	48.7	48.7	48.7
	Sometimes	14	35.9	35.9	84.6
	Never	6	15.4	15.4	100.0
	Total	39	100.0	100.0	

PCC2 - I communicate project updates that are relevant to thos outside of the immediate project team

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	22	56.4	56.4	56.4
	Sometimes	14	35.9	35.9	92.3
	Never	3	7.7	7.7	100.0
	Total	39	100.0	100.0	

PCC3 - I create and execute communication evnts for external stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	9	23.1	23.1	23.1
	Sometimes	24	61.5	61.5	84.6
	Never	6	15.4	15.4	100.0
	Total	39	100.0	100.0	

PCC4 - I collect feedback from stakeholders regarding project operations and I ensure their concerns are captured and used to modify or improve project Performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	23	59.0	59.0	59.0
	Sometimes	14	35.9	35.9	94.9
	Never	2	5.1	5.1	100.0
	Total	39	100.0	100.0	

PCC5 - I am responsibile for monitoring and controlling communications throughout the entire project cycle to ensure the information needs of the project stakeholders are met

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	21	53.8	53.8	53.8
	Sometimes	15	38.5	38.5	92.3
	Never	3	7.7	7.7	100.0
	Total	39	100.0	100.0	

PRC1 - I identify risks by making organization - and people-related risks part of the official project risk registry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	51.3	51.3	51.3
	Sometimes	12	30.8	30.8	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

PRC2 - I plan risk responses and control risks and draw on the competencies within the team and utilize the recommendations of expert judgment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	19	48.7	48.7	48.7
	Sometimes	12	30.8	30.8	79.5
	Never	8	20.5	20.5	100.0
	Total	39	100.0	100.0	

PRC3 - I conduct iterative stakeholder engagement sessions and analyze results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	38.5	38.5	38.5
	Sometimes	15	38.5	38.5	76.9
	Never	9	23.1	23.1	100.0
	Total	39	100.0	100.0	

PPC1 - When generating a request of proposal (RFP) I consider how procurement of resources might impact stakeholders and organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	24	61.5	61.5	61.5
	Sometimes	5	12.8	12.8	74.4
	Never	10	25.6	25.6	100.0
	Total	39	100.0	100.0	

PPC2 - I consider, accept and be ready to utilize the change that will be introduced by the supplier or

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	18	46.2	46.2	46.2
	Sometimes	9	23.1	23.1	69.2
	Never	12	30.8	30.8	100.0
	Total	39	100.0	100.0	

PPC3 - It is my duty to monitor contractors' performance, and make changes and corrections to contracts as appropriate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	18	46.2	46.2	46.2
	Sometimes	10	25.6	25.6	71.8
	Never	11	28.2	28.2	100.0
	Total	39	100.0	100.0	

PSC1 - I identify stakeholders in an attempt to enhance and unify project and change management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	25	64.1	64.1	64.1
	Sometimes	10	25.6	25.6	89.7
	Never	4	10.3	10.3	100.0
	Total	39	100.0	100.0	

PSC2 - I clarify the different types of stakeholder groups and their relationship with the project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	21	53.8	53.8	53.8
	Sometimes	14	35.9	35.9	89.7
	Never	4	10.3	10.3	100.0
	Total	39	100.0	100.0	

PSC3 - I conduct a stakeholder quantitative and qualitative infromation analysis to determine whose interest should be taken into account throughout the project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	18	46.2	46.2	46.2
	Sometimes	12	30.8	30.8	76.9
	Never	9	23.1	23.1	100.0
	Total	39	100.0	100.0	

PSC4 - I plan stakehlder management to facilitate change adoption and to maintain project funding and support throughout the project lifecycle

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	38.5	38.5	38.5
	Sometimes	17	43.6	43.6	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

PSC5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project lifecylce to ensure organiation value is achieved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	51.3	51.3	51.3
	Sometimes	11	28.2	28.2	79.5
	Never	8	20.5	20.5	100.0
	Total	39	100.0	100.0	

PQC1 - I develop quality metrics that include stakeholde satisfaction with the amount of information they are receiving about the project

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	51.3	51.3	51.3
	Sometimes	9	23.1	23.1	74.4
	Never	10	25.6	25.6	100.0
	Total	39	100.0	100.0	

PQC2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	18	46.2	46.2	46.2
	Sometimes	14	35.9	35.9	82.1
	Never	7	17.9	17.9	100.0
	Total	39	100.0	100.0	

PQC3 - The quality metrics I create include the user adoption rates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	9	23.1	23.1	23.1
	Sometimes	15	38.5	38.5	61.5
	Never	15	38.5	38.5	100.0
	Total	39	100.0	100.0	

PQC4 - As part of the project risk I consider and document the level of sel-sufficiency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	11	28.2	28.2	28.2
	Sometimes	14	35.9	35.9	64.1
	Never	14	35.9	35.9	100.0
	Total	39	100.0	100.0	

PQC5 - I use the gathered data to evaluate and improve on communications plans, training plans, and use adoption strategies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	22	56.4	56.4	56.4
	Sometimes	11	28.2	28.2	84.6
	Never	6	15.4	15.4	100.0
	Total	39	100.0	100.0	

Appendix 5: Histograms

Part 1:

IC1

Initiate 1 - When it is required I initiate change projects independently

PC2

Plan 2 - I identify the target behavioural patterns/standards needed for higher performance

IC2

Initiate 2 - One of my tasks is to formulate the change project name and the project vision

PC3

Plan 3 - Identifying critical events to shape the project change is one pf

PC1

Plan 1 - I identify and build the key stakeholder engagement strategy and plan

PC4

Plan 4 - I ensure that the "people" factor is given just as much consideration as elements that are more technical are at the outset of a project

PC5

Plan 5 - I keep both organizational adoption and value creation in mind during the planning process

Mean = 1.38
Std. Dev. = .544
N = 39

Plan 5 - I keep both organizational adoption and value creation in mind during the planning process

MC1

Monitor 1 - I assess and meet the ever-evolving needs and expectations of stakeholders
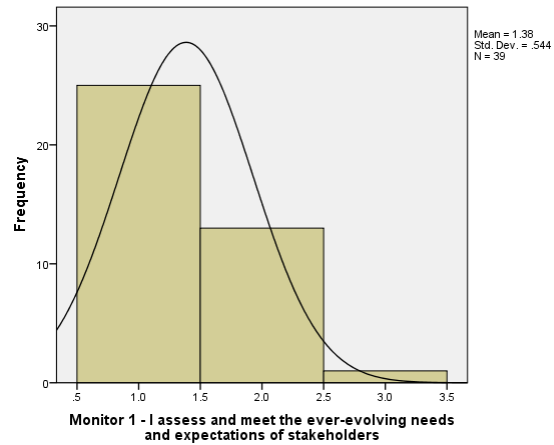
Mean = 1.38
Std. Dev. = .544
N = 39

Monitor 1 - I assess and meet the ever-evolving needs and expectations of stakeholders

EC1

Execute 1 -Throughout the execution phase, I manage stakeholder needs and expectations
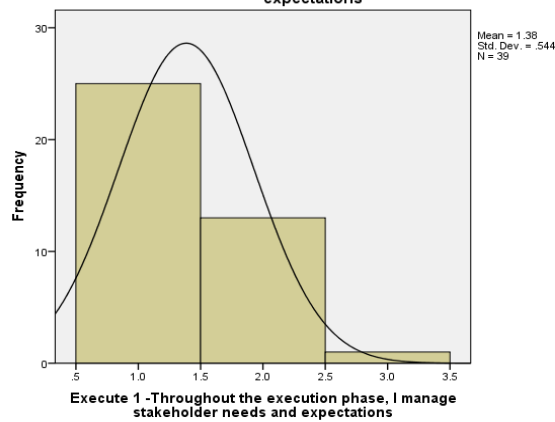
Mean = 1.38
Std. Dev. = .544
N = 39

Execute 1 -Throughout the execution phase, I manage stakeholder needs and expectations

MC2

Monitor 2 - I adjust project plans and designs based upon stakeholder needs and concerns
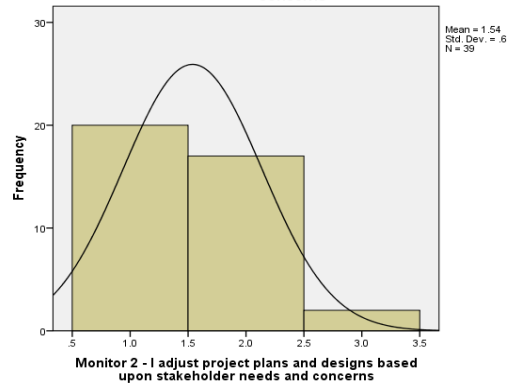
Mean = 1.54
Std. Dev. = .6
N = 39

Monitor 2 - I adjust project plans and designs based upon stakeholder needs and concerns

EC2

Execute 2 - To ensure the success of the change project I utilize both subject matter experts and change agents during project executing process

Mean = 1.56
Std. Dev. = .598
N = 39

Execute 2 - To ensure the success of the change project I utilize both subject matter experts and change agents during project executing process

CC1

Close 1 - Before closing a projet, I ensure that value creation is realized and Lessons learned are captured

Mean = 1.41
Std. Dev. = .595
N = 39
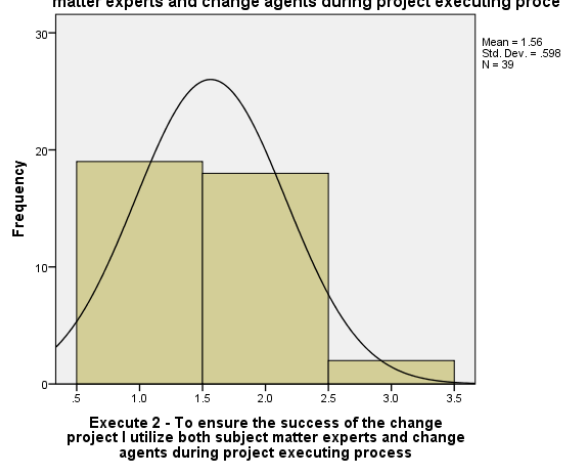
Close 1 - Before closing a projet, I ensure that value creation is realized and Lessons learned are captured

Part 2:

EPC1	EPC2
Eval 1 - Part of my job is to analyze change (business process, org structure, people, technology etc.) its impact on the organization and employees Mean = 1.82 Std. Dev. = .756 N = 39	Eval 2 - I develop an action plan, set deadlines and identify people responsible for transition activities Mean = 1.41 Std. Dev. = .595 N = 39
EPC3	**EPC4**
Eval 3 - One of my key responsibilities is to monitor the implementation of the plan Mean = 1.49 Std. Dev. = .644 N = 39	Eval 4 - To ensure stakeholder's satisfaction, I collect and analyze feedback, update the communications plan regularly Mean = 1.59 Std. Dev. = .715 N = 39
EPC5	**EPC6**
Eval 5 - I am responsible for performing assessments and analyzing results Mean = 1.74 Std. Dev. = .677 N = 39	Eval 6 - I am assigned to update existing action plans to mitigate risks Mean = 1.69 Std. Dev. = .655 N = 39
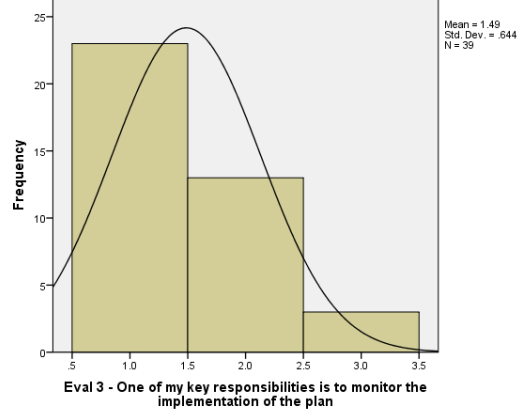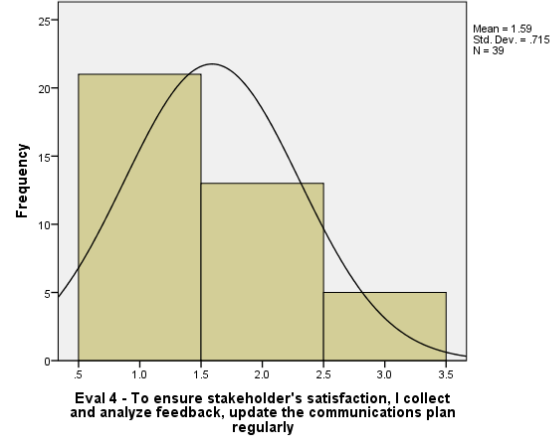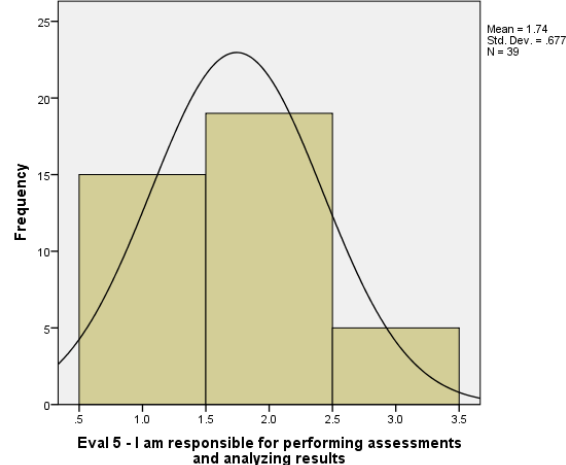
EPC7

Eval 7 - I support the implementation of action plans and montor the results

Mean = 1.41
Std. Dev. = .595
N = 39

Eval 7 - I support the implementation of action plans and montor the results

Part 3:

MP1	MP2
People 1 - I evaluae the human resources plan against the project and change management requirements Mean = 1.85 Std. Dev. = .844 N = 39	**People 2 - Developing and managing project teams is one of my responsibilities** Mean = 1.62 Std. Dev. = .782 N = 39
MP3	MP4
People 3 - I attain visible support for the change from senior-level leadership Mean = 1.56 Std. Dev. = .641 N = 39	**People 4 - I provide the project tram with emotional support when experiencing change-induced stress** Mean = 1.67 Std. Dev. = .772 N = 39
MP5	MP6
People 5 - I develop the reward and recognition systems that reflect the expected new performance requirements Mean = 2.08 Std. Dev. = .839 N = 39	**People 6 - I provide the project team with adequate and timely information** Mean = 1.31 Std. Dev. = .614 N = 39
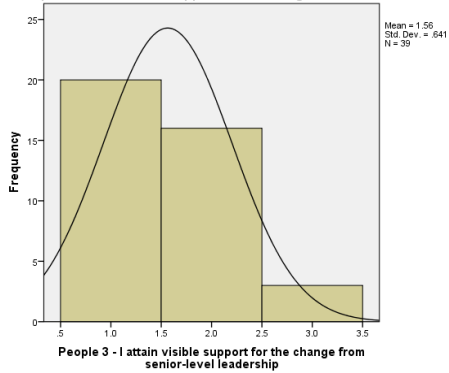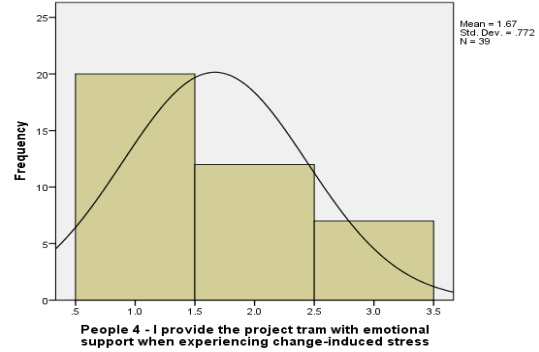
MP7

Figure: People 7 - I ensure that the team members have clear understanding regarding how their roles and responsibilities may be impacted

Mean = 1.28
Std. Dev. = .56
N = 39

Y-axis: Frequency
X-axis: People 7 - I ensure that the team members have clear understanding regarding how their roles and responsibilities may be impacted

MP8

Figure: People 8 - I ensure that everyone in the team has direct engagement and involvement in the change

Mean = 1.38
Std. Dev. = .544
N = 39

Y-axis: Frequency
X-axis: People 8 - I ensure that everyone in the team has direct engagement and involvement in the change

MP9

Figure: People 9 - I conduct a training needs analysis and design the approach to training in the context of the project

Mean = 1.77
Std. Dev. = .742
N = 39

Y-axis: Frequency
X-axis: People 9 - I conduct a training needs analysis and design the approach to training in the context of the project

MP10

Figure: People 10 - I plan a main role in deveoping, plan and schedule a training programme

Mean = 1.82
Std. Dev. = .79
N = 39

Y-axis: Frequency
X-axis: People 10 - I plan a main role in deveoping, plan and schedule a training programme

MP11

Figure: People 11 - I contribute to the Coordination and preparation of training activities

Mean = 1.87
Std. Dev. = .695
N = 39

Y-axis: Frequency
X-axis: People 11 - I contribute to the Coordination and preparation of training activities

MP12

Figure: People 12 - After the training I assess the training program effectiveness and employee satisfaction with the trainining

Mean = 1.72
Std. Dev. = .759
N = 39

Y-axis: Frequency
X-axis: People 12 - After the training I assess the training program effectiveness and employee satisfaction with the trainining

Part 4:

PCC1 Comm 1 - I create and distribute messages to external stakehoders to build awareness, understanding, knowledge and motivation Mean = 1.67 Std. Dev. = .737 N = 39	**PCC2** Comm 2 - I communicate project updates that are relevant to thos outside of the immediate project team Mean = 1.51 Std. Dev. = .644 N = 39
PCC3 Comm 3 - I create and execute communication evnts for external stakeholders Mean = 1.92 Std. Dev. = .623 N = 39	**PCC4** Comm 4 - I collect feedback from stakeholders regarding project operations and I ensure their concerns are captured and used to modify or improve project Performance Mean = 1.46 Std. Dev. = .6 N = 39
PCC5 Comm 5 - I am responsibile for monitoring and controlling communications throughout the entire project cycle to ensure the information needs of the project stakeholders are met Mean = 1.54 Std. Dev. = .643 N = 39	**PRC1** Risk 1 - I identify risks by making organization - and people-related risks part of the official project risk registry Mean = 1.67 Std. Dev. = .772 N = 39
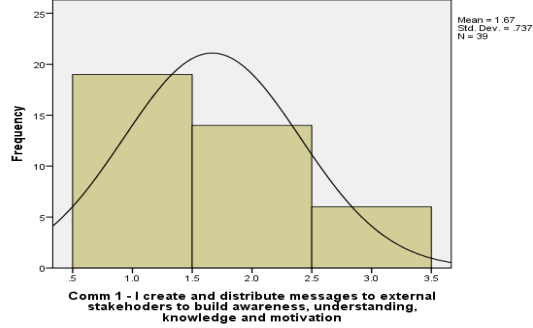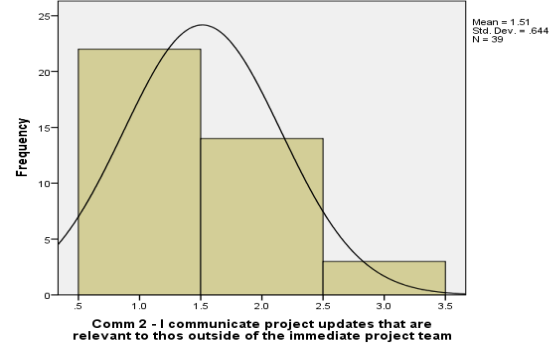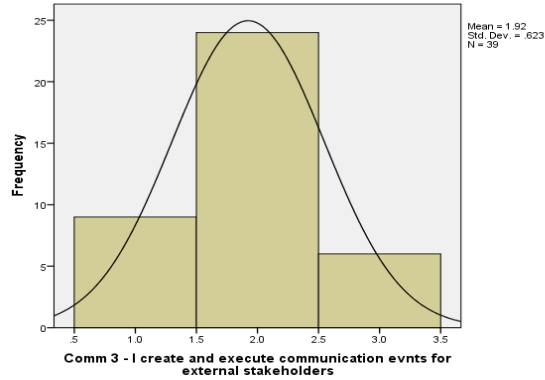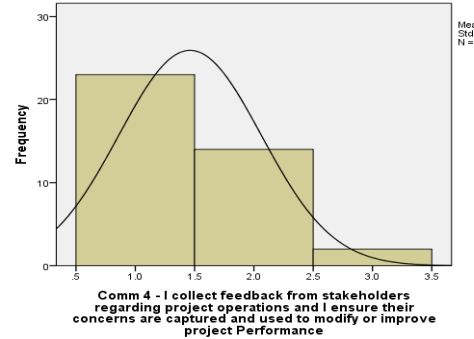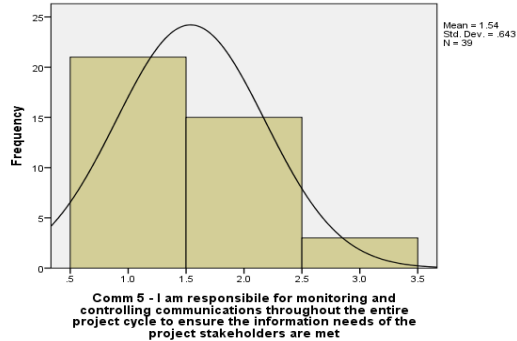
PRC2

Risk 2 - I plan risk responses and control risks and draw on the competencies within the team and utilize the recommendations of expert judgment

Mean = 1.72
Std. Dev. = .793
N = 39

Frequency

Risk 2 - I plan risk responses and control risks and draw on the competencies within the team and utilize the recommendations of expert judgment

PRC3

Risk 3 - I conduct iterative stakeholder engagement sessions and analyze results
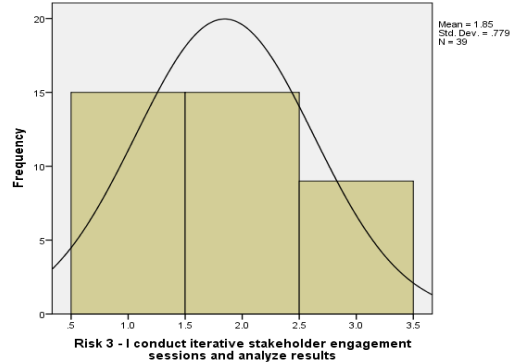
Mean = 1.85
Std. Dev. = .779
N = 39

Frequency

Risk 3 - I conduct iterative stakeholder engagement sessions and analyze results

PPC1

Procur 1 - When generating a request of proposal (RFP) I consider how procurement of resources might impact stakeholders and organization

Mean = 1.64
Std. Dev. = .873
N = 39

Frequency

Procur 1 - When generating a request of proposal (RFP) I consider how procurement of resources might impact stakeholders and organization

PPC2

Procur 2 - I consider, accept and be ready to utilize the change that will be introduced by the supplier or vendor

Mean = 1.85
Std. Dev. = .875
N = 39

Frequency
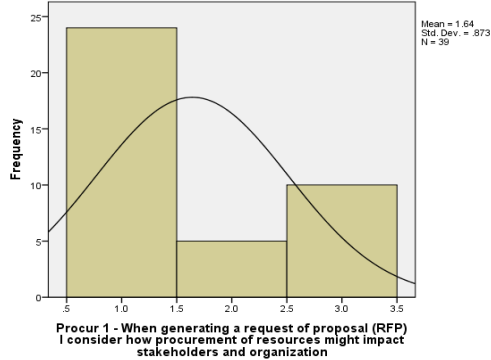
Procur 2 - I consider, accept and be ready to utilize the change that will be introduced by the supplier or vendor

PPC3

Procur 3 - It is my duty to monitor contractors' performance, and make changes and corrections to contracts as appropriate

Mean = 1.82
Std. Dev. = .854
N = 39

Frequency
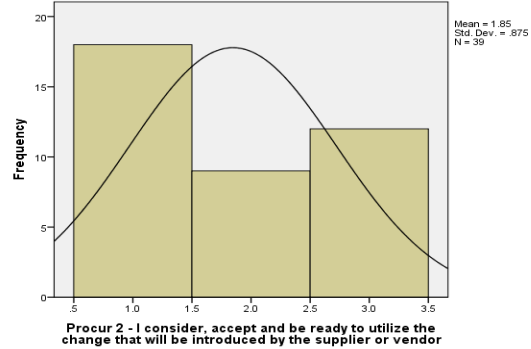
Procur 3 - It is my duty to monitor contractors' performance, and make changes and corrections to contracts as appropriate

PSC1

Stake 1 - I identify stakeholders in an attempt to enhance and unify project and change management

Mean = 1.46
Std. Dev. = .682
N = 39

Frequency
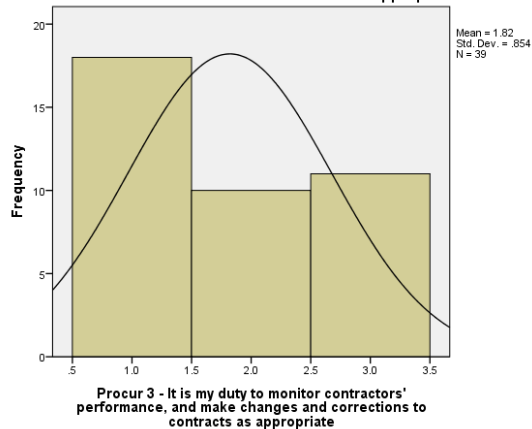
Stake 1 - I identify stakeholders in an attempt to enhance and unify project and change management

PSC2

Stake 2 - I clarify the different types of stakeholder groups and their relationship with the project

Mean = 1.56
Std. Dev. = .68
N = 39
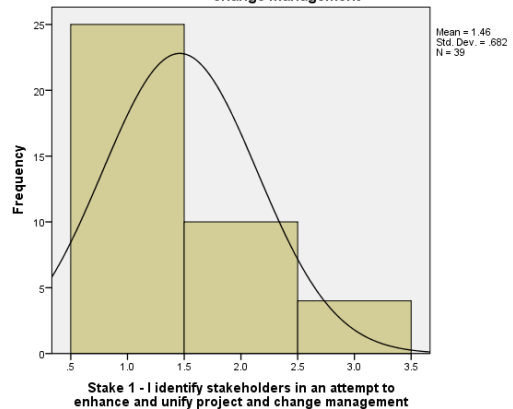
Stake 2 - I clarify the different types of stakeholder groups and their relationship with the project

PSC3

Stake 3 - I conduct a stakeholder quantitative and qualitative infromation analysis to determine whose interest should be taken into account throughout the project

Mean = 1.77
Std. Dev. = .81
N = 39
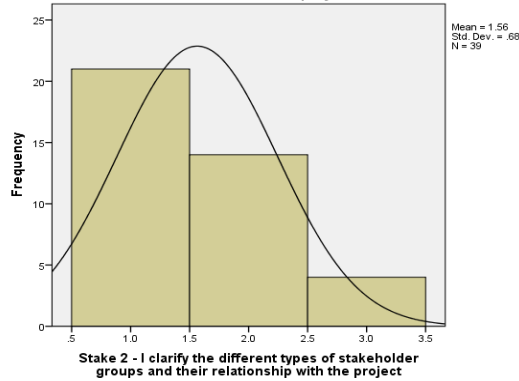
Stake 3 - I conduct a stakeholder quantitative and qualitative infromation analysis to determine whose interest should be taken into account throughout the project

PSC4

Stake 4 - I plan stakehlder management to facilitate change adoption and to maintain project funding and support throughout the project lifecycle

Mean = 1.79
Std. Dev. = .732
N = 39
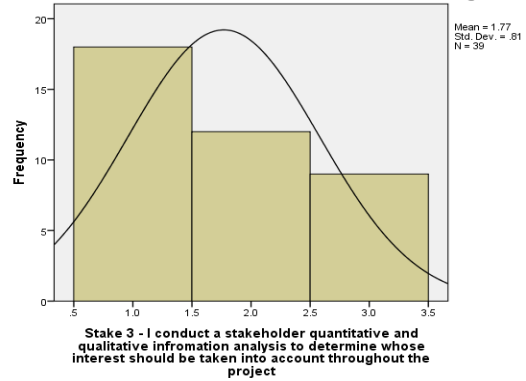
Stake 4 - I plan stakehlder management to facilitate change adoption and to maintain project funding and support throughout the project lifecycle

PSC5

Stake 5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project lifecyClce to ensure organiation value is achieved

Mean = 1.69
Std. Dev. = .8
N = 39
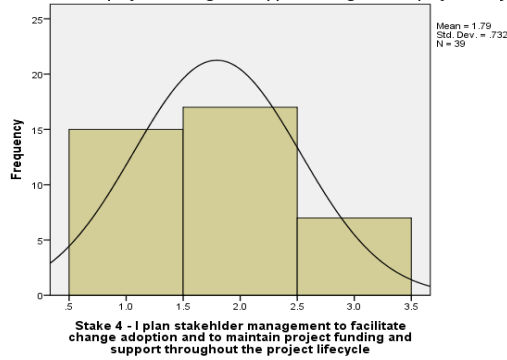
Stake 5 - I develop a comprehensive stakeholder map that is integrated with project activities throughout the project lifecylce to ensure organiation value is achieved

PQC1

Quality 1 - I develop quality metrics that include stakeholde satisfaction with the amount of information they are receiving about the project

Mean = 1.74
Std. Dev. = .85
N = 39
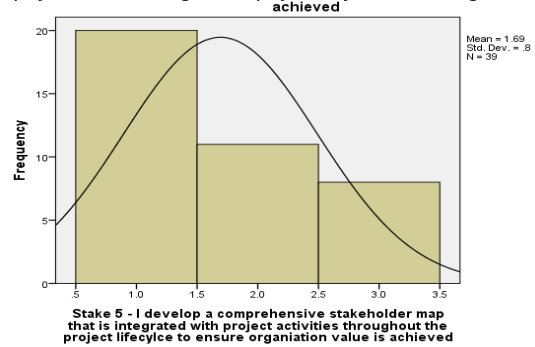
Quality 1 - I develop quality metrics that include stakeholde satisfaction with the amount of information they are receiving about the project

PQC2

Quality 2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)

Mean = 1.72
Std. Dev. = .759
N = 39

Quality 2 - I assess the level of support required for the project (typically measured with a stakeholder analysis assessment)

PQC3

Quality 3 - The quality metrics I create include the user adoption rates

Mean = 2.15
Std. Dev. = .779
N = 39

Quality 3 - The quality metrics I create include the user adoption rates

PQC4

Quality 4 - As part of the project risk I consider and document the level of sel-sufficiency

Mean = 2.08
Std. Dev. = .807
N = 39

Quality 4 - As part of the project risk I consider and document the level of sel-sufficiency

PQC5

Quality 5 - I use the gathered data to evaluate and improve on communications plans, training plans, and use adoption strategies

Mean = 1.59
Std. Dev. = .751
N = 39

Quality 5 - I use the gathered data to evaluate and improve on communications plans, training plans, and use adoption strategies

Appendix 6: Logistic Regression

Table 39: Logistic Regression

Notes

Output Created		19-OCT-2016 16:40:56
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_0310 2016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt /METHOD=ENTER PlanChange1 PlanChange2 PlanChange3 PlanChange4 PlanChange5 /SAVE=PRED PGROUP /PRINT=GOODFIT /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02
Variables Created or Modified	PRE_1	Predicted probability
	PGR_1	Predicted group

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
Yes	1

Block 0: Beginning Block

Classification Table [a,b]

	Observed		Predicted		Percentage Correct
			Organizational Change Management is one of my tasks in the context of project work?		
			0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0	0	7	.0
		Yes	0	32	100.0
	Overall Percentage				82.1

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	PlanChange1	4.931	1	.026
		PlanChange2	9.434	1	.002
		PlanChange3	6.997	1	.008
		PlanChange4	1.479	1	.224
		PlanChange5	3.220	1	.073
	Overall Statistics		12.952	5	.024

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	14.063	5	.015
	Block	14.063	5	.015
	Model	14.063	5	.015

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	22.645[a]	.303	.496

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.

1	11.417	6	.076

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	4	3.227	0	.773	4
	2	1	1.800	4	3.200	5
	3	0	.720	4	3.280	4
	4	1	.698	4	4.302	5
	5	0	.290	4	3.710	4
	6	0	.149	4	3.851	4
	7	1	.098	7	7.902	8
	8	0	.018	5	4.982	5

Classification Table[a]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0	5	2	71.4
		Yes	0	32	100.0
	Overall Percentage				94.9

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	PlanChange1	1.908	1.739	1.204	1	.272	6.741
	PlanChange2	-2.974	1.502	3.918	1	.048	.051
	PlanChange3	-3.484	1.861	3.502	1	.061	.031
	PlanChange4	.915	1.232	.552	1	.458	2.496
	PlanChange5	.871	1.540	.320	1	.572	2.390
	Constant	7.151	2.658	7.237	1	.007	1275.781

a. Variable(s) entered on step 1: PlanChange1, PlanChange2, PlanChange3, PlanChange4, PlanChange5.

Logistic Regression

Notes

Output Created		19-OCT-2016 16:44:09
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_0310 2016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt /METHOD=ENTER EvalPerChange1 EvalPerChange2 EvalPerChange3 EvalPerChange4 EvalPerChange5 EvalPerChange6 EvalPerChange7 /SAVE=PRED PGROUP /PRINT=GOODFIT /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02
Variables Created or Modified	PRE_2	Predicted probability
	PGR_2	Predicted group

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

	Observed		Predicted		Percentage Correct
			Organizational Change Management is one of my tasks in the context of project work?		
			0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0	0	7	.0
		Yes	0	32	100.0
	Overall Percentage				82.1

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	EvalPerChange1	3.312	1	.069
		EvalPerChange2	4.945	1	.026
		EvalPerChange3	2.893	1	.089
		EvalPerChange4	5.237	1	.022
		EvalPerChange5	8.953	1	.003
		EvalPerChange6	.554	1	.457
		EvalPerChange7	4.945	1	.026
	Overall Statistics		12.617	7	.082

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	15.847	7	.027
	Block	15.847	7	.027
	Model	15.847	7	.027

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	20.861[a]	.334	.548

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	2.121	7	.953

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	3	3.108	1	.892	4
	2	1	1.540	3	2.460	4
	3	1	1.156	4	3.844	5
	4	1	.838	3	3.162	4
	5	1	.306	4	4.694	5
	6	0	.040	5	4.960	5
	7	0	.013	4	3.987	4
	8	0	.000	4	4.000	4
	9	0	.000	4	4.000	4

Classification Table[a]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0	3	4	42.9
		Yes	0	32	100.0
	Overall Percentage				89.7

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	EvalPerChange1	-.597	.864	.478	1	.489	.550
	EvalPerChange2	-.100	1.186	.007	1	.933	.904
	EvalPerChange3	-.845	1.454	.338	1	.561	.429
	EvalPerChange4	.730	1.473	.246	1	.620	2.076
	EvalPerChange5	-3.514	2.100	2.799	1	.094	.030
	EvalPerChange6	21.404	9357.217	.000	1	.998	1975433025.668
	EvalPerChange7	-20.567	9357.217	.000	1	.998	.000
	Constant	8.307	3.631	5.234	1	.022	4050.929

a. Variable(s) entered on step 1: EvalPerChange1, EvalPerChange2, EvalPerChange3, EvalPerChange4, EvalPerChange5, EvalPerChange6, EvalPerChange7.

Logistic Regression

Notes

Output Created		19-OCT-2016 16:45:06
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_03102016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing

Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt
		  /METHOD=ENTER MngPeople1 MngPeople2 MngPeople3 MngPeople4 MngPeople5 MngPeople6 MngPeople7 MngPeople8 MngPeople9 MngPeople10 MngPeople11 MngPeople12
		  /SAVE=PRED PGROUP
		  /PRINT=GOODFIT
		  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).

Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.05
Variables Created or Modified	PRE_3	Predicted probability
	PGR_3	Predicted group

[DataSet1] D:\buid research\buid students\souad\RawData_03102016_1 (002).sav

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0	0	7	.0
		Yes	0	32	100.0
	Overall Percentage				82.1

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	MngPeople1	4.168	1	.041
		MngPeople2	3.985	1	.046
		MngPeople3	7.149	1	.008
		MngPeople4	.533	1	.466
		MngPeople5	1.537	1	.215
		MngPeople6	3.844	1	.050
		MngPeople7	.600	1	.438
		MngPeople8	6.615	1	.010
		MngPeople9	4.242	1	.039
		MngPeople10	5.181	1	.023
		MngPeople11	5.618	1	.018
		MngPeople12	2.743	1	.098
	Overall Statistics		17.568	12	.129

Block 1: Method = Ente

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	19.739	12	.072
	Block	19.739	12	.072
	Model	19.739	12	.072

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	16.969[a]	.397	.651

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	22.030	8	.005

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	4	3.684	0	.316	4
	2	2	1.734	2	2.266	4
	3	0	.848	4	3.152	4
	4	0	.383	4	3.617	4
	5	0	.187	4	3.813	4
	6	0	.090	4	3.910	4
	7	1	.046	3	3.954	4
	8	0	.023	4	3.977	4
	9	0	.005	4	3.995	4
	10	0	.000	3	3.000	3

Classification Table[a]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0	5	2	71.4
		Yes	0	32	100.0
	Overall Percentage				94.9

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	MngPeople1	-1.047	1.588	.434	1	.510	.351
	MngPeople2	-3.633	2.340	2.411	1	.120	.026
	MngPeople3	-1.694	1.294	1.715	1	.190	.184
	MngPeople4	3.873	2.643	2.148	1	.143	48.082
	MngPeople5	.780	1.519	.264	1	.608	2.181
	MngPeople6	-3.884	2.935	1.751	1	.186	.021
	MngPeople7	5.870	3.795	2.392	1	.122	354.204
	MngPeople8	-2.437	1.860	1.716	1	.190	.087
	MngPeople9	2.245	1.781	1.589	1	.208	9.437
	MngPeople10	-3.624	2.615	1.921	1	.166	.027
	MngPeople11	1.659	2.138	.602	1	.438	5.251
	MngPeople12	-.231	1.647	.020	1	.889	.794
	Constant	6.568	3.143	4.366	1	.037	711.966

a. Variable(s) entered on step 1: MngPeople1, MngPeople2, MngPeople3, MngPeople4, MngPeople5, MngPeople6, MngPeople7, MngPeople8, MngPeople9, MngPeople10, MngPeople11, MngPeople12.

Logistic Regression

Notes

Output Created		19-OCT-2016 16:46:36
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_03 102016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt /METHOD=ENTER ProCommChange1 ProCommChange2 ProCommChange3 ProCommChange4 ProCommChange5 /SAVE=PRED PGROUP /PRINT=GOODFIT /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03
Variables Created or Modified	PRE_4	Predicted probability
	PGR_4	Predicted group

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

	Observed			Predicted		Percentage Correct
				Organizational Change Management is one of my tasks in the context of project work?		
				0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0		0	7	.0
		Yes		0	32	100.0
	Overall Percentage					82.1

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	ProCommChange1	.584	1	.445
		ProCommChange2	.858	1	.354
		ProCommChange3	.098	1	.754
		ProCommChange4	1.552	1	.213
		ProCommChange5	.023	1	.879
	Overall Statistics		4.703	5	.453

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4.610	5	.465
	Block	4.610	5	.465
	Model	4.610	5	.465

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	32.098[a]	.111	.183

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3.269	7	.859

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	2	2.083	2	1.917	4
	2	1	1.168	3	2.832	4
	3	1	.819	3	3.181	4
	4	2	1.114	5	5.886	7
	5	0	.723	5	4.277	5
	6	1	.441	3	3.559	4
	7	0	.394	5	4.606	5
	8	0	.204	4	3.796	4
	9	0	.054	2	1.946	2

Classification Table[a]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0	1	6	14.3
		Yes	1	31	96.9
	Overall Percentage				82.1

a. The cut value is .500

Logistic Regression

Notes

Output Created		19-OCT-2016 16:47:08
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_03102016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt /METHOD=ENTER ProRiskChange1 ProRiskChange2 ProRiskChange3 ProProChange1 ProProChange2 ProProChange3 /SAVE=PRED PGROUP /PRINT=GOODFIT /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02
Variables Created or Modified	PRE_5	Predicted probability
	PGR_5	Predicted group

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value

0	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0	0	7	.0
		Yes	0	32	100.0
	Overall Percentage				82.1

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	ProRiskChange1	5.625	1	.018
		ProRiskChange2	2.514	1	.113
		ProRiskChange3	4.891	1	.027
		ProProChange1	1.480	1	.224
		ProProChange2	.271	1	.603
		ProProChange3	.386	1	.534
	Overall Statistics		9.648	6	.140

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	12.003	6	.062
	Block	12.003	6	.062
	Model	12.003	6	.062

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	24.705[a]	.265	.434

a. Estimation terminated at iteration number 20 because maximum iterationshave been reached. Final solution cannot be found.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	2.049	7	.957

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	3	3.192	2	1.808	5
	2	2	1.409	2	2.591	4
	3	1	1.093	4	3.907	5
	4	0	.475	4	3.525	4
	5	0	.284	3	2.716	3
	6	1	.459	6	6.541	7
	7	0	.087	4	3.913	4
	8	0	.000	5	5.000	5
	9	0	.000	2	2.000	2

Classification Table[a]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0	3	4	42.9
		Yes	2	30	93.8
	Overall Percentage				84.6

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ᵃ	ProRiskChange1	-21.225	9248.720	.000	1	.998	.000
	ProRiskChange2	19.969	9248.719	.000	1	.998	470237458.996
	ProRiskChange3	.092	1.282	.005	1	.943	1.096
	ProProChange1	-20.857	9248.720	.000	1	.998	.000
	ProProChange2	20.337	9248.720	.000	1	.998	679313861.443
	ProProChange3	.260	1.293	.040	1	.841	1.297
	Constant	4.082	1.721	5.622	1	.018	59.239

a. Variable(s) entered on step 1: ProRiskChange1, ProRiskChange2, ProRiskChange3, ProProChange1, ProProChange2, ProProChange3.

Logistic Regression

Notes

Output Created		19-OCT-2016 16:47:46
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_03102016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt /METHOD=ENTER ProStakeChange1 ProStakeChange2 ProStakeChange3 ProStakeChange4 ProStakeChange5 /SAVE=PRED PGROUP /PRINT=GOODFIT /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02
Variables Created or Modified	PRE_6	Predicted probability
	PGR_6	Predicted group

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0	0	7	.0
		Yes	0	32	100.0
	Overall Percentage				82.1

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	ProStakeChange1	2.943	1	.086
		ProStakeChange2	1.624	1	.202
		ProStakeChange3	5.804	1	.016
		ProStakeChange4	6.563	1	.010
		ProStakeChange5	7.420	1	.006
	Overall Statistics		9.045	5	.107

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	9.882	5	.079
	Block	9.882	5	.079
	Model	9.882	5	.079

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	26.826[a]	.224	.367

a. Estimation terminated at iteration number 20 because maximum iterations have been reached. Final solution cannot be found.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	.773	6	.993

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	2	1.966	1	1.034	3
	2	2	1.832	2	2.168	4
	3	1	1.160	3	2.840	4
	4	1	1.111	5	4.889	6
	5	0	.279	3	2.721	3
	6	1	.581	10	10.419	11
	7	0	.070	4	3.930	4
	8	0	.000	4	4.000	4

Classification Table[a]

	Observed			Predicted		
				Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
				0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0		2	5	28.6
		Yes		1	31	96.9
	Overall Percentage					84.6

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	ProStakeChange1	-19.027	12760.237	.000	1	.999	.000
	ProStakeChange2	19.647	12760.237	.000	1	.999	340830392.391
	ProStakeChange3	-.352	1.146	.094	1	.759	.703
	ProStakeChange4	17.535	12760.237	.000	1	.999	41229090.690
	ProStakeChange5	-19.161	12760.237	.000	1	.999	.000
	Constant	4.245	1.577	7.247	1	.007	69.778

a. Variable(s) entered on step 1: ProStakeChange1, ProStakeChange2, ProStakeChange3, ProStakeChange4, ProStakeChange5.

Logistic Regression

Notes

Output Created		19-OCT-2016 16:48:28
Comments		
Input	Data	D:\buid research\buid students\souad\RawData_03102016_1 (002).sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	39
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing
Syntax		LOGISTIC REGRESSION VARIABLES OrgChangeMgmt /METHOD=ENTER ProQualitChange1 ProQualitChange2 ProQualitChange3 ProQualitChange4 ProQualitChange5 /SAVE=PRED PGROUP /PRINT=GOODFIT /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03
Variables Created or Modified	PRE_7	Predicted probability
	PGR_7	Predicted group

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	39	100.0
	Missing Cases	0	.0
	Total	39	100.0
Unselected Cases		0	.0
Total		39	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 0	Organizational Change Management is one of my tasks in the context of project work?	0	0	7	.0
		Yes	0	32	100.0
	Overall Percentage				82.1

a. Constant is included in the model.
b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1.520	.417	13.267	1	.000	4.571

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	ProQualitChange1	8.311	1	.004
		ProQualitChange2	11.068	1	.001
		ProQualitChange3	2.514	1	.113
		ProQualitChange4	3.285	1	.070
		ProQualitChange5	7.518	1	.006
	Overall Statistics		11.852	5	.037

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	13.408	5	.020
	Block	13.408	5	.020
	00Model	13.408	5	.020

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	23.300[a]	.291	.477

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.290	7	.746

Contingency Table for Hosmer and Lemeshow Test

		Organizational Change Management is one of my tasks in the context of project work? = 0		Organizational Change Management is one of my tasks in the context of project work? = Yes		Total
		Observed	Expected	Observed	Expected	
Step 1	1	3	2.619	1	1.381	4
	2	2	2.205	2	1.795	4
	3	1	1.237	5	4.763	6
	4	0	.473	4	3.527	4
	5	0	.185	4	3.815	4
	6	1	.204	5	5.796	6
	7	0	.068	4	3.932	4
	8	0	.007	3	2.993	3
	9	0	.002	4	3.998	4

Classification Table[a]

	Observed		Predicted		
			Organizational Change Management is one of my tasks in the context of project work?		Percentage Correct
			0	Yes	
Step 1	Organizational Change Management is one of my tasks in the context of project work?	0	5	2	71.4
		Yes	2	30	93.8
	Overall Percentage				89.7

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	ProQualitChange1	-1.543	1.804	.731	1	.392	.214
	ProQualitChange2	-2.360	1.622	2.117	1	.146	.094
	ProQualitChange3	3.418	3.103	1.213	1	.271	30.505
	ProQualitChange4	-1.447	1.886	.589	1	.443	.235
	ProQualitChange5	-.062	1.152	.003	1	.957	.940
	Constant	5.342	1.927	7.687	1	.006	208.954

a. Variable(s) entered on step 1: ProQualitChange1, ProQualitChange2, ProQualitChange3, ProQualitChange4, ProQualitChange5.