Top and Middle Management Teams' Strategic Decision Making Processes: Case Study of a Saudi Arabian Higher Education Institution

Huda Mohammed AlShehri

B.Sc., M.Sc. Public Administration, and
PGcert Professional Research Practice

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Abstract

This thesis explores strategic decision-making process (SDMP) in the context of a higher education (HE) institution in Saudi Arabia, identifying those factors that influence SDMP and performance more generally within Saudi HE institutions. To achieve this, it investigates the impact of management team heterogeneity on SDMP. The thesis employs a mixed methods approach, whereby quantitative data was collected utilising a survey questionnaire (244 respondents) and qualitative data via semi- structured interviews (31 interviewees).

The findings indicate that education level heterogeneity within top management teams (TMTs) and middle management teams (MMTs) is moderately high in the context of Saudi HE institutions. Moreover, tenure heterogeneity in TMT/MMTs is also relatively high. They further reveal that access to knowledge resources is greater for members of TMTs and MMTs in the research context. Moreover, this finding suggests knowledge sharing among the members of TMTs and MMTs is moderately high at the target HE institution in Saudi Arabia.

The findings further reveal that education level heterogeneity within TMTs and MMTs positively influences SDMP comprehensiveness. Moreover, the greater education level heterogeneity, the more efficient SDMP is. The findings also suggest the more heterogeneous TMT/MMT tenure is, the less comprehensive SDMP will be. In addition, the study findings indicate that the more heterogeneous TMT/MMT tenure is, the slower SDMP is. Furthermore, the higher the rate of knowledge sharing among members of TMT and MMT, the swifter the decision-making process. The findings also imply that greater access there is to knowledge resources

the slower SDMP is. Finally, the greater the comprehensiveness of SDMP the more superior the performance of the organisation. Therefore, management teams within the HE institution are expected to provide opportunities to enhance comprehensiveness in SDMP in the context of Saudi Arabia.

The present study contributes to the management literature by examining job-related heterogeneity at the target Saudi HE institution. It also contributes to existing cross-cultural management literature, bringing an appreciation of the role of culture in the process of SDMP, in what has previously been an under explored cultural context. The final chapter discusses the academic and practical contributions of the thesis.

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Declaration of Authorship

I hereby, declare that this thesis, submitted in partial fulfilment of the requirements for the award of Doctorate of Philosophy and entitled "Top and Middle Management Teams' Strategic Decision Making Processes: Case Study of a Saudi Arabian Higher Education Institution" represents my own and original work and that, to the best of my knowledge and belief, except where otherwise referenced or acknowledged in the text. I also declare that the document has not been submitted, either in whole or in part, for any other award at this or any other university.

Huda Mohammed AlShehri

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I would like to dedicate this thesis to my parents: my father (may he rest in peace) and my mother; for their love, prayers, and the sacrifices they have made for my future and personal career. I am extremely grateful to my brothers and sisters for their encouragement and constant love, and for supporting me spiritually while I was writing this thesis and during my life in general. I also wish to express a deep sense of gratitude to my husband for his understanding and continuous support and assistance while I completed my research. Special thanks go to my dear sons (Abdullah and Mohammed), as do my wishes for them to have abundant joy and happiness.

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List of abbreviations

Abbreviations used in this thesis are as follow:

HE	Higher education
HEI	Higher education institution
MMT	Middle management team
SA	Saudi Arabia
SD	Strategic decision
SDM	Strategic decision making
SDMP	Strategic decision making process
TMT	Top management team

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Chapter 1   INTRODUCTION

1.1   Background

Strategic decisions (SDs) have major and enduring impacts for the firm concerned (Mintzberg et al., 1976), and can be defined as the decisions taken by the top management that establish the vision, or mission, of the organisation, and the associated objectives, in order to achieve the organisation's goals (Eisenhardt and Zbaracki, 1992). According to Papadakis, Thanos and Barwise (2010), strategic decision making (SDM) is a systematic and formally recognised process for making the major decisions that help an organisation to thrive, going forward, and involve establishing a mission, vision, objectives, and goals. It is therefore a key approach employed by companies as it engenders the formulation by the management of decisions based on the unique nature of the organisation, which facilitates the selection of informed and effective strategies that help to achieve the organisation's goals.

According to Al Jassim (2014), SDM is one of the most important functions of the top management team (TMT), and the achievement of an organisation's goals is heavily dependent on the making of successful judgements. The fair and effective allocation of company resources is also a result of good SDM (Schwenk, 1995). The process of SDM establishes realistic purposes and goals for an organisation that are consistent with it

mission, and which are communicated to key employees, in order to achieve the company's objectives in the most efficient manner (Robinson and Pearce, 1984). It also provides a clear foundation for measuring progress, compensating employees, and creating an environment for future effective decision making. In addition, SDM helps to establish a clear vision of what an organisation wants to achieve, and to establish the methods necessary for achieving the organisation's goals, and for facilitating its success.

The continuous evolution of the world market requires that organisations make appropriate long-term SDs, and without these, many studies suggest that one out of every five top companies in all industries will cease to exist after five years, or will have become uncompetitive if they still exist (Ahmed et al., 2014). However, a major focus on SDM enables a company to remain in existence for the long term, therefore, in this fiercely competitive market, insightful and focused SDM is a vital tool for uncovering potential business segments, innovative ideas, market conditions, and new product and service offerings. Moreover, an effective and targeted approach to SDM guides all marketing and sales activities, as well as distribution decisions, and other associated business decisions, ultimately creating profitability for the business, and securing it a strong position in the market. In addition, SDM produces decisions that define best practice for a company, and position it apart from its competitors (Robinson and Pearce, 1984). Furthermore, customer satisfaction is heavily dependent on the use of unique strategies, and on offering services or products of value or status. As such, unique and appropriate decisions taken by the TMT can help an organisation to forge new offerings, and to satisfy their customers.

1.2   Significance of the study

This research study focuses on the strategic decision making process (SDMP) and the factors influencing it, and is significant for a number of reasons, as detailed below.

☐   **The comprehensiveness and speed of SDMP**

The importance of SDMP was highlighted by Dean and Sharfman (1996, p.389), who concluded that "decision processes influence the strategic choices managers make, which in turn influence the outcomes affecting a firm." These processes can be characterised according to a range of aspects (Brouthers et al., 2000; Papadakis, 2005), including comprehensiveness, rationality (Hough and White, 2003), and speed (Baum and Wally, 2003; Kownatzki et al., 2013).

Comprehensiveness refers to the ability of the management team to seek information, and to consider multiple approaches, decision criteria, and courses of action (Miller et al., 2008). Such comprehensiveness improves performance by providing opportunities for decision makers to develop insights regarding their environment (Miller, 2008; Talaulicar et al., 2005). It is essential that the SD process is rational and comprehensive, because, as Papadakis and Barwise (1997) noted, SDs are responsible for the allocation of considerable resources. Moreover, SDs are difficult to reverse, and have long-term implications. Research regarding SDMP can provide important insights that can enhance the usefulness of the SDs developed by executives, thereby delivering a positive influence on organisational achievement (Shepherd and Rudd, 2014).

The existing empirical work focusing on comprehensiveness delivered contradictory and mixed findings, which was especially apparent in the conflicting discoveries of

Fredrickson (1984), Fredrickson and Iaquinto (1989), Fredrickson and Mitchell (1984), and Bourgeois and Eisenhardt (1988). In their study, Bourgeois and Eisenhardt (ibid.) found that, in a high-velocity environment, extensiveness was related significantly to firm performance. However, the studies undertaken by Fredrickson (1984), and Fredrickson and Mitchell (1984) demonstrated the negative impact of unstable environments and comprehensiveness on company performance, and the way in which extensiveness positively affects performance in stable conditions. Meanwhile, the study conducted by Fredrickson and Iaquinto (1989) supported the view that comprehensiveness has a negative impact on performance in an unstable environment, and a positive relationship under stable conditions. In addition, Eisenhardt (1989) conducted eight contextual investigations in the high-speed microcomputer industry to examine the association between SDMP and speedier SDs. In a notable contrast with both Eisenhardt's (ibid.) and Fredrickson's (1984) studies, Fredrickson and Iaquinto (1989) did not assess the speed of the SDs, despite it appearing to be an essential outcome of SDMP under certain conditions (Judge and Miller, 1991).

The relationship between comprehensiveness and SDMP is complex. While Bourgeois and Eisenhardt (1988) highlighted the critical impact of external conditions on the relationship between comprehensiveness and performance, other researchers demonstrated that the connection between comprehensiveness and the outcomes of SDMP requires further study. For example, Atuahene-Gima and Li (2004) demonstrated the presence of a nuanced connection between extensiveness and the distinctive measurements of environmental vulnerability. They found that the connection between thoroughness and the implementation of a new item was negatively affected by

innovation instability, yet significantly directed by request vulnerability. Additionally, in their study, the impact of extensiveness on new item quality was strongly linked to requested instability, yet unaffected by innovation vulnerability. Finally, Miller (2008) highlighted the intricate relationship between comprehensiveness and the external environment. Thoroughness and execution in a stable environment were observed to be connected in a transformed U-moulded capacity, while in a turbulent environment, exhaustiveness had a clear effect on execution, specifically at elevated levels of thoroughness.

These puzzling findings of studies exploring comprehensiveness and rationality in SDMP are perhaps due to a lack of consideration of the operationalisation and conceptualisation of key concepts and ideas. Indeed, the influence of comprehensiveness and rationality on the results of a SDMP suggests the impression of it being dependent upon, or at least affected by, relevant factors (Elbanna and Child, 2007a; Rajagopalan et al., 1993). The absence of a clear agreement emerging from the research (Elbanna, 2006) underlines the necessity not only for additional observational investigations examining the immediate impacts and connections of the characteristics of SDMP, and its environmental factors, but also the reasonable definition and estimation of these concepts and their effect on the results of SDMP. This research study thus attempts to address this gap in the existing literature.

In addition, in high-velocity environments, TMTs must make SDs quickly, if they are to remain competitive and successful (Cheng et al., 2010; Eisenhardt, 1989; Kownatzky et al., 2013). Thus, the speed of decision making is also critical to a SDMP.

Whilst the extant literature identified the importance of rationality and comprehensiveness, knowledge of how TMTs or middle management teams (MMTs) make SDs in HEIs in Saudi Arabia is limited. Influenced by changes to and demands from the political, economic, and social spheres, as well as the impacts identified above, the HE system involves a large amount of complex decision making with far-reaching consequences. Furthermore, while HEIs have autonomy, they also have more responsibility than other organisations (Zechlin, 2010). Achieving an understanding of the process of SDM in HEIs is therefore important for revealing how the reliability and efficacy of SDM within the HE sector in Saudi Arabia can be improved. The present research study therefore seeks to extend understanding in this area by asking how TMTs and MMTs in these institutions make SDs.

As previously noted, SDMP can be described in terms of a range of attributes, such as speed, rationality, and comprehensiveness. In the extant literature, a number of authors provided a definition of comprehensiveness in this context that is generally characterised by the degree to which an organisation or team endeavours to be exclusive or inclusive when incorporating strategic choices (Fredrickson and Mitchell, 1984).

☐ **TMT heterogeneity and SDMP**

Heterogeneity in age, experience, tenure, and education is a feature associated with demographic diversity. Previous research demonstrated the presence of a relationship between demographic diversity and the features of SDMP, such as comprehensiveness and adaptability. Meanwhile, Simons et al. (1999) recognised that the connection between the differences in the TMT, and an organisation's execution was related incompletely to

the breadth of SDMP, in terms of comprehensiveness in making and incorporating SDs, and that the TMT had a significant effect on the number of different qualities in a TMT, along with the exhaustiveness of SDMP. The findings of Simons et al. (ibid.) likewise suggested that occupation-related TMT differentiation factors, such as differences in tenure at the organisation, and practical experience, have a more noteworthy impact on the extensiveness of SDMP than non-work-related TMT differentiating factors, such as age. However, other researchers were unable to find a relationship between non-job-related qualities and SDMP. For instance, Sharfman and Dean (1997) failed to locate a noteworthy connection between TMT heterogeneity and adaptability, which is characterised as openness and recursiveness in SDMP. Meanwhile, Dayan et al. (2012) reported that although practical differences engendered political conduct, statistical differences, such as age, ethnicity, and sexual orientation, did not. Finally, Simsek et al. (2005) reported that diversity in terms of educational qualifications directly affected behavioural integration, although they found no relationship between behavioural integration and job-related heterogeneity.

Meanwhile, some earlier studies found that attributes of TMTs, such as instruction and encounter/residency, have an impact on SDMP (Papadakis et al., 1998; Kannadhasan and Nandagopal, 2010). Conversely, Lyles and Mitroff (1980) argued that the qualities of a TMT do not affect the authoritative issue plan handle (referred to in Papadakis et al., 1998, p.118). Differing qualities within a TMT's statistical attributes have their limitations, and such differences render communication between dissimilar individuals more difficult (McCain et al., 1983), and conflict more likely (Elbanna, 2009). High levels of heterogeneity may have negative authoritative results, such as a leaders being

powerless to make decisions. Accordingly, earlier studies analysing the role of TMTs in decision making delivered mixed outcomes, and additional research is therefore required to better examine the relationship between TMT heterogeneity and SDMP. The present study intends to address this gap in the literature.

While previous researchers primarily examined SDMP in the context of manufacturing organisations in developed countries (Alkaraan and Northcott, 2013), the present study contributes to the literature by examining TMT/MMT heterogeneity and SDMP in the service-based HE sector of a developing country. Saudi Arabia is a particularly interesting context within which to conduct this research, because of its workplace culture, in which there is a clear demarcation between employees and managers, with the latter required to maintain a high level of formality (Pauleen, 2007), as older and senior managers must be afforded special respect. As a result, the management system tends to be hierarchical, and managers are more likely to collaborate with their direct peers than with their subordinates (Scott et al., 2005). This can create problems in terms of SDMP, as in this workplace culture, subordinates are always dominated by their bosses, and leadership styles tend to be autocratic, rather than participative (Ali and Al-Dubaisi, 2008). By examining the role that TMTs/MMTs, such as deans or heads, play in SDMP within one HEI in Saudi Arabia, this study attempts to address a gap in the existing literature.

☐ **Role of knowledge sharing and knowledge resources**

Knowledge is a crucial asset if organisations are to gain a sustainable competitive edge (Grant, 1996). The competitiveness of an organisation is associated with its versatility, in terms of learning through information sharing and exchange. Knowledge sharing is a

group procedure in which colleagues share important thoughts, data, and recommendations with one another. The extant research demonstrated that information sharing gives individuals, work groups, and associations the opportunity to enhance their work performance, and to establish new ideas and advancements (Cumming, 2004). One study demonstrated that out of nearly 2,000 United States (US) organisations assessed, 34% were utilising information administration frameworks (Wah, 1999). Information sharing is a vital part of management learning, as it aids the classification of the store of accessible information in an organisation, and its expansion over time (Leibowitz, 1999). Knowledge sharing is a basic group tool, because if information is not shared, the intellectual assets accessible within a team remain underutilised (Argote, 1999). As information sharing does not occur naturally in a team, the group's manager has a vital part to play in its encouragement and facilitation. The process involved in the execution of this may differ, depending on the relationship with the dominant authority, and one of the main findings of the extant research was that absolutist management hinders knowledge sharing by colleagues (Yukl, 2002). Although knowledge sharing is essential for engaging a company's initiative, few studies have examined this relationship, therefore further research is required to explore it more fully.

Matters regarding knowledge resources have received increasing consideration in recent years (Leiponen and Helfat 2004; Cohen and Malerba, 2001). Access to knowledge resources has a direct positive impact on innovative accomplishment in dynamic environments (Leiponen and Helfat, 2004; Cohen and Levinthal, 1990; Spreitzer, 1995; Woodman et al., 1993; Amabile et al., 1996; Pritchard and Karasick, 1973). Organisations with generous information resources can increase their chances of development by

encouraging their employees to consolidate their existing learning in new ways (Kogut and Zander, 1992; Cohen and Levinthal, 1990; Leiponen and Helfat, 2004; Nonaka, 1994). Thus, knowledge resources are crucial for creating improved organisational performance.

Knowledge-based views suggest that knowledge sharing and knowledge resources influence SDMP (Kogut and Zander, 1992; Kogut, 2000), as sharing higher-level knowledge resources grants managers access to pertinent data that can enable a more comprehensive analysis of the strategic options. However, only a small number of researchers examined the impact of knowledge sharing and resources in developed countries. For instance, Nicolas (2004) interviewed 92 firms in the US and Europe, and found that knowledge management strategies assist with the accumulation of strategic knowledge bases, and that knowledge assists with legitimising strategic choices. While knowledge sharing and knowledge resources are predicted to influence SDMP, there is limited understanding of the impact of knowledge sharing and resources on SDMP in HEIs in Saudi Arabia. This study therefore seeks to address this gap by examining the impact of knowledge sharing and knowledge resources on SDMP in an HEI in Saudi Arabia.

☐ **The impact of speed and comprehensiveness on organisational performance**

The extant literature suggested that the speed and comprehensiveness of SDMP can influence the performance of an organisation (Bourgeois and Eisenhardt, 1988; Judge and Miller, 1991; Fredrickson and Mitchell, 1984; Heavey et al., 2009), and the speed of decision making was found to be a vital factor in influencing the performance of a firm in high velocity environments (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989a;

Eisenhardt and Bourgeois, 1988). This finding, which was inductively derived in the 1988 study conducted by Bourgeois and Eisenhardt, was deductively tested and quantitatively supported by Judge and Miller (1991, p.450), who argued, "The conclusion that (decision) speed and performance are associated is certainly in keeping with the experiences of a growing number of corporations that are relying on organisational speed to improve their financial performance."

Fast decision speeds may improve competitive performance across environments, because rapidly-taken SDs engender (1) the early adoption of successful new products, or improved business models that provide competitive advantages (Jones, Lanctot and Teegen, 2000); (2) the early adoption of efficiency-gaining process technologies, even in established industries (Baum, 2000); and/or (3) pre-emptive organisation combinations that enable economies of scale and knowledge synergies. In short, decision speed may enable firms in both dynamic and non-dynamic environments to exploit opportunities before they disappear (Stevenson and Gumpert, 1985).

Decision comprehensiveness is one of the most salient and enduring information-processing constructs in team research (Heavey, et al., 2009). TMTs employing decision comprehensiveness investigate problems or issues with a wide lens, explore multiple alternative approaches and possible choices, and evaluate these using multiple decision criteria (Simons et al., 1999).

The positive impact of decision comprehensiveness on the quality of SDs and organisational performance is supported across both stable and uncertain environments (Forbes, 2007; Fredrickson, 1984; Fredrickson and Mitchell, 1984; Heavey et al., 2009). Given that the capacity to process and interpret external information is argued to play a

significant role in determining the success of organisational actions and initiatives (Tushman and Nadler, 1978), the effect of decision comprehensiveness on performance is an issue of significance and long-standing (Carmeli, Friedman and Tishler, 2013). It is also an issue that has yet to be resolved (Forbes, 2007). While a number of studies found that decision comprehensiveness plays a positive role in generating better decisions, other studies found no, or a negative impact (Miller and Toulouse, 1998; Walters and Bhuian, 2004).

Despite the influence of speed and comprehensiveness, there is limited extant research examining the impact of these aspects of SDMP on the performance of an organisation. The present study aims to address this gap by examining the impact of speed and comprehensiveness on the performance of an HEI in Saudi Arabia.

⬜ **Process of SDM**

The process of SDM is essential to any organisation. It commences with the existence of an issue or problem, and is followed by the recognition and acknowledgement of the issue, the development of alternative courses of action, and the selection of the best solution (Mintzberg et al., 1976). In addition, Ozer (2005) suggested that the process of SDM can be influenced by a number of factors, such as the decision makers' personality, the condition of the organisation, and other external and internal factors. Strategy process research focuses on the various activities that lead a firm to select a specific course of action (Papadakis and Barwise, 2002), and the relevant factors that influence the process of strategic actions (Schwenk, 1995). In recent years, researchers have become increasingly interested in exploring how management teams make decisions (Dean and Sharfman, 1996; Elbanna, 2006; Papadakis et al., 2010), and the factors influencing the

SDMP. This study aims to examine the process of SDM at an HEI in Saudi Arabia.

□ **Role of Islamic culture and the MMT**

The working culture of Saudi Arabia, including SDM, is influenced by the Islamic tradition. According to Hofstede's cultural index (1988 cited in Rice, 2003), unlike the individualistic culture of the US, the populations of Arab states have a collectivistic culture. A collective Arab society employs social connections to influence important decisions. Moreover, as Zakaria et al. (2003, p.17) noted, "Arabic cultures tend to know more about each other than Westerners". Therefore, socialising, and the forging of connections, are important aspects of any Saudi Arabian organisation. Individuals in Arab states tend to utilise their connections in the various facets of life; this is called *wasta*, or mediation, and Weir (2006) noted that it is an integral part of Arab culture. The Islamic religion distinguishes between negative *wasta* and positive *wasta*, encouraging *wasta* for supporting only good acts, such as suggesting the right person for the right position, while believing that it must not be used in nefarious ways, such as suggesting an unqualified individual for a job, in order to achieve personal gain. Furthermore, in the context of conflict resolution, Kabasakal and Bodur (2002) observed that Arabs tend to resolve conflict through mediators, whereas Western society primarily does so through direct and open confrontation, which would not be appropriate in Arab societies. Although Islamic culture undoubtedly influences the decision making processes within organisations, research has thus far not explored its full impact. The present study aims to address this gap by examining the relationship between Islamic culture and SDMP in the context of an HEI in Saudi Arabia.

Finally, the ability to develop superior quality SDs is vital for an organisation's long-term health and survival. Since TMTs are generally responsible for making SDs, the focus of the present study concerns the members of such teams. According to Hambrick and Mason (1984), understanding top managers' conduct is significant for assessing SDMP; accordingly, previous researchers focused on exploring the actions of top managers, and their effects on SDs. The strategic or management choice perspective emphasises the fact that SDMP has a behavioural element, and echoes the decision maker's personal peculiarities (Cyert and March, 1992). Some studies extended the argument further, suggesting that the composition of TMTs plays a vital role in determining the process and content of a strategy (Hambrick and Mason, 1984).

The scope of strategy making research has expanded to include not only top managers, but also middle managers, and other organisational members whose activities and behaviour are an essential aspect of how strategy is formulated (Balogun and Hailey, 2008; Raes et al., 2011; Darkow, 2015), and the extant research in this field demonstrated that middle managers play a critical role in the formulation, as well as implementation of the strategy (Floyd and Wooldridge, 2000). For example, Mintzberg (1990) argued that the MMT actively contributes to both the generation and undertaking of strategy. Moreover, middle managers assist in translating the strategy of their organisation into tangible actions (Uyterhoeven, 1972). According to Westley (1990), MMT involvement provides an essential impetus for strategic thinking, and strategies articulated with MMT input are likely to be superior to those formulated exclusively by the TMT. The MMT contributes to strategy development by amplifying the practical challenges to the TMT, framing problems, and mobilising other actors in the organisation, in order to undertake

appropriate actions (Dutton and Ashford, 1993). Their involvement is also key to the implementation of the strategy designed by the TMT (Mair and Thurner, 2008). Thus, both the TMT and the MMT are considered to play a crucial role in SDMP.

Some studies addressed the role of the MMT in strategy process technique improvement, and in their exhaustive review of strategy process research, Hutzschenreuther and Kleindienst (2006, p. 673) recognised the middle administration perspective as an "expanding" area in technique investigation, and subsequently a research opportunity. Another comprehensive review conducted by Shi, Markoczy and Dess (2009) revealed that 30 papers on the subject had been published in leading management and strategy journals, between 1993 and the date of their review. The most notable reviews were conducted by Wooldridge and Floyd (1990; 1992), and prompted a discourse on the inclusion of middle administration in procedure advancement.

Meanwhile, later reviews focused on the role of middle management in connecting top administrators to the firm, and Balogun and Johnson (2009, p.1259) argued that additional research should focus on how middle managers, as the "change beneficiary", view and actualise vital decisions in an organisation. Without the top administration, collaboration and correspondence among associates regarding key changes affects how methodologies are executed. In their research, Jarzabowski and Balogun (2009) demonstrated that vital collaboration must be accomplished through transactions and deals between leading individuals, including members of the middle administration, throughout the change process. This involvement of the middle administration in SDs increases agreement, and enhances the firm's performance. Thus, Raes et al. (2011) identified middle management as the connecting pin, able to make vital decisions, and to empower, postpone, or even

damage the execution of procedures. The authors also formulated and theorised an interface model to clarify how the two management teams, the top and the middle, affect one another during procedure advancement. For further investigation in this field, these authors prescribed utilising a methodology-as-practice technique. Meanwhile, other researchers offered additional evidence of the role of middle managers, such as Roleau and Balogun (2011), who provided a further understanding of how mid-level administration deliberately affects an organisation, and how middle managers should be incorporated into procedural advancement. The authors employed the strategy-as-practice method, and collected subjective information from mid-level administrators, provided in the form of biographies, that clarified their involvement in procedure advancement. In addition, Kellermanns et al. (2011) conducted a meta-analysis of the impact of key agreement on firm performance, and one of the crucial discoveries of their examination of 23 autonomous examples was that the relationship between agreement and execution is especially important to middle administration for methodology utilisation, but of low significance to top administration groups.

Furthermore, Balogun (2007) and Rouleau (2005) highlighted the significance of addressing the everyday elements of middle management, while Johnson et al. (2008), and Buss and Kuyvenhofen (2011) characterised three patterns that influence the focus of mid-level administration on key change, including 1) hierarchical decentralisation of key activities; 2) improved middle manager trust in the vital space, because of enhanced preparation; and 3) operational duty and modes of learning being pushed onto the middle management level.

The present study makes three contributions to the field, firstly compressing the models and instruments used to study middle administration behaviour in key change activities. Secondly, it investigates the unpredictable and demanding role of middle managers in vital change, as noted by individuals. Finally, it establishes a typology, drawn from the existing examinations, and tests its adequacy for determining the breadth of the role of middle administration in vital change implementation.

While there is currently a small, but growing, body of literature regarding the role of the MMT in SDMP, there is limited existing research examining both role of TMTs and MMTs in the context of HEIs in Saudi Arabia. This study therefore attempts to address the gap in the existing literature regarding the role of TMT and MMT in SDMP, in the context of a Saudi HEI.

Based on the above discussion, it is anticipated that the present study will contribute to furthering the understanding of the process of SDM, and the impact of TMT heterogeneity, knowledge sharing, and knowledge resources on SDMP, in the context of an HEI in Saudi Arabia. In addition, it seeks to explore the role of Islamic culture and MMTs in SDM in the same context.

1.3   Research aims, objectives, and research questions

The aims of this study are to explore SDMP by TMT and MMT in a HEI in Saudi Arabia. Specifically, this study aims to identify the factors that influence SDMP and the performance of an organisation in the context of an HEI in Saudi Arabia.

Specifically, the objectives of the research study are:

1. To investigate the extent of TMT/MMT heterogeneity at one HEI in Saudi Arabia;

2. To explore the impact of TMT/MMT heterogeneity, knowledge sharing, and resources on SDMP at one HEI in Saudi Arabia;

3. To examine the impact of the comprehensiveness and speed of SDMP on the performance of the organisation at one HEI in Saudi Arabia.

4. To investigate the process of SDM at one HEI in Saudi Arabia;

5. To examine the critical factors, such as Islamic culture, and support from senior management, that influence SDMP, specifically in terms of its comprehensiveness and speed, at one HEI in Saudi Arabia.

These objectives engender the following main research questions:

1. What is the extent of TMT/MMT heterogeneity at HEIs in Saudi Arabia?

2. What is the extent of knowledge sharing and access to knowledge resources at HEIs in Saudi Arabia?

3. Are there significant differences between the extent to which TMTs and MMTs share knowledge, and have access to knowledge resources?

4. What is the impact of TMT/MMT heterogeneity, knowledge sharing, and knowledge resources on SDMP at HEIs in Saudi Arabia?

5. What is the impact of the speed and comprehensiveness of SDMP on the performance of an HEI in Saudi Arabia?

6. How does SDMP usually work at HEIs in Saudi Arabia?

7. What are the critical factors, such as Islamic culture, and the role of TMTs and MMTs, that influence SDMP, for example, in terms of its comprehensiveness and speed, at HEIs in Saudi Arabia?

1.4 Research context

The research context is the higher education (HE) sector in Saudi Arabia. Saudi Arabia's education system includes 25 public and 27 private universities. The government of Saudi Arabia spends the highest proportion of its budget on the education sector (Allahmorad, 2020). Saudi Arabia has heavily invested in research and the formation of new and specialist universities. According to the World Bank (2012), the Saudi government spent 12 billion Riyals ($US 320 billion) on education and educational reforms between 2004 and 2013. In order to develop and focus the HE sector further, the government of Saudi Arabia has introduced "Saudi Vision of 2030". Vision 2030 is part of the Kingdom's reform initiative, designed to address the critical economic challenge predicted as Saudi Arabia's budget deficit increases due to falling oil prices. One of the key aims of KSA Vision 2030 is to diversify the Saudi economy and create dynamic job opportunities by committing to education, entrepreneurship and innovation.

KSA Vision 2030 sets out an ambitious road-map for education reform in the Kingdom of Saudi Arabia (Mitchell & Alfuraih, 2018). Among other changes, it includes modernisation of the curriculum and standards at Saudi educational institutions from childhood into the higher education sector. In addition, a key ambition of KSA Vision 2030 is to have at least five Saudi universities ranked among the top 200 universities internationally, and to encourage students to achieve above average performance

relative to international standards. In large part, the success of the Vision 2030 will depend on the engagement and commitment of Saudi universities, and their contribution to knowledge creation and innovation (Fakeeh, 2016). Therefore, the role of higher education institutions (HEIs) is critical in the successful implementation of KSA Vision 2030.

In the Vision 2030 plan, the country has a roadmap detailing how it can fulfil its goals and create a sustainable future for the Saudi population. A key part of the Vision 2030 reform plans is promoting the status of women. The Ministry of Labor and Social Development aim to enable women to participate in the workforce at a much higher level than currently, reducing their unemployment rate. They are dedicated to ensuring that young women have the skills and opportunities they need to participate in the kingdom's economic expansion.

Some notable impacts of the Vision 2030 on the role of women in education and employment, include the fact that approximately 1 female million students are currently (2019) enrolled in Saudi universities and colleges, compared to 7,000 in 1970, representing a dramatic improvement (The Embassy of The Kingdom of Saudi Arabia, 2020). Saudi women now comprise 57% of the student body currently in HEIs. Women are able to attend all major universities, and there are also numerous all-female colleges and private women's universities within the Kingdom. The ranking of Saudi Arabia is 25th in the world in terms of the balance between male and female students enrolled in higher education. Despite recent improvement in this area, the participation of the female labour force in Saudi Arabia remains comparatively lower than that in

developed countries. Additional effort is needed to improve the participation of women in HE and subsequently in employment in Saudi Arabia.

1.5   Scope of the thesis

This research project will be conducted at a single HEI in Saudi Arabia, thus the geographic context is limited to that country. The study focuses on a government-owned organisation, namely a HEI. Such institutions provide a unique context in which to examine SDMP in a public-sector environment. In general, HEIs are largely funded by the government, and the overall responsibility for HE lies with the relevant government departments. Each government department is usually supported by a national-level advisory or consultative body, called the Higher Education Council, the Advisory Council, the Research Council, or similar (Eurydice, 2008). These systems of monitoring mean that HEIs differ from private sector organisations, in terms of their management, decision making processes, and governance systems.

Although the typical SDMP also possesses characteristics such as political behaviour or rationality, the present study focuses on only the two characteristics of speed and comprehensiveness. Moreover, the data involved in the study is collected only from the TMT and MMTs, thus employees other than these groups are not part of the survey questionnaire and interviews.

1.6 Structure of the thesis

This thesis is organised as follows:

Chapter 1 presents the background of the study, alongside the importance of the research, and its aim, objectives, and research questions, together with the scope of the study, and the structure of the thesis.

Chapter 2 presents a review of the literature associated with SDMP, and the factors influencing that process. The chapter commences with a definition of SDM, followed by its importance, a definition of the TMT, and a definition of SDMP research, along with the processes involved in SDM, and the steps involved in the decision making process. It also presents a review of the literature concerning the two characteristics of SDMP of comprehensiveness and speed, and the impact of comprehensiveness and speed on the performance of SDMP. The chapter also reviews literature on the factors that can influence SDMP, such as TMT demographic heterogeneity, knowledge sharing, knowledge resources, and Islamic culture and the role of the MMT in SDMP. The chapter concludes with the HE system in Saudi Arabia and followed by a discussion of the conceptual framework and hypotheses.

Chapter 3 presents the research methodology employed to investigate the research questions of this study. The chapter commences with a review of research philosophy, and provides a justification for choosing to employ the pragmatic approach. It then presents the research strategy, and the design of the present study, before discussing the possible research approaches, namely the quantitative approach, qualitative approach, and

the mixed-method technique, along with justifying the selection of the sequential mixed methods approach for the present study. The chapter then describes the study's population, sampling, sample size, and sample selection method, as well as describing the development of the questionnaire and its instrumentation, and the interview questions. This is followed by a discussion of the validity, reliability, and generalisability of the study, then that of the data collection method, and data analysis strategy. The chapter concludes with the presentation of the unit of analysis, and the ethical concerns involved in the study, together with a description of the storage of the data, and the way in which it was protected from damage.

Chapter 4 presents the findings linked to the factors influencing SDMP. The findings are based on the quantitative data obtained from the survey questionnaire. It proceeds to a presentation of the research methodology and the data collection, the unit of analysis, and the measurement of variables, and addresses the common method bias. This is followed by a presentation of the findings related to TMT/MMT heterogeneity, knowledge sharing, and resources in HEIs in Saudi Arabia, and a comparison of TMT and MMT levels. The chapter then presents the findings related to the impact of heterogeneity, knowledge resources, and knowledge sharing on SDMP and the findings related with the impact of SDMP speed and comprehensiveness on the performance of SDMP, followed by a discussion of the findings, and culminating with a presentation of the conclusion of the findings.

Chapter 5 presents the findings related to the process of SDM, and the factors influencing its process. The findings in this chapter are based on interviews conducted with a TMT

and MMTs at an HEI in Saudi Arabia. The chapter commences with an introduction, followed by a reiteration of the research aims, objectives, and research questions. It then proceeds to a synopsis of the literature concerning SDMP, and the factors influencing it. This is followed by a brief overview of the research methodology employed for the present study, and a presentation of the findings, and a discussion regarding the stages and characteristics of SDMP. The chapter then describes the factors influencing SDMP at the HEI in question, and explores the challenges faced during the employment of SDMP at HEI. The chapter closes with a presentation of the conclusions drawn from the findings.

Chapter 6 provides a comprehensive discussion of the findings in Chapters 4 and 5. The chapter commences with the findings concerning research objective 1, and discusses the implications of the findings, as well as comparing the findings with the extant literature concerning TMT heterogeneity. This is followed by a discussion of the findings concerning research objective 2, in terms of the impact of heterogeneity, knowledge sharing, and knowledge resources. This chapter also discusses the findings related with the impact of SDMP speed and comprehensiveness on the performance of SDMP. The chapter then discusses the findings concerning research objective 3, regarding the stages of SDMP at the HEI in Saudi Arabia. The next section of the chapter discusses the findings related to research objective 4, concerning the critical factors influencing the process of SDM in an HEI in Saudi Arabia. The chapter concludes with a discussion of the contributions of the present study to knowledge and practice.

Chapter 7 presents the conclusions of the study, commencing with a summary of the key findings for each research objective, and proceeding to the academic contributions of the study, and the implications of the research findings for practice. The chapter then presents the limitations of the study, before closing with a discussion of possible directions for future research.

Chapter 2   LITERATURE REVIEW

2.1   Introduction

This chapter reviews literature on SDMP. Specifically, the chapter starts with definitions of SDM and TMTs, as well as SDMP. It then reviews prior literature on SDMP. The next section reviews the theoretical perspectives on SDMP, followed by the literature on specific characteristics of SD, such as significance, uncertainty, rationale, pressure, familiarity, and decision matters. The subsequent section then reviews the literature on the role of context in SDMP, followed by SDMP outcomes. The last section presents literature relating to factors influencing the SD making process, such as the TMT, heterogeneity, knowledge sharing, knowledge resources, Islamic culture, and MMT. The chapter also highlights research gaps identified in the existing literature.

2.2   Strategic Decision (SD) Making

Making decisions is crucial and vital for every manager. SD making is defined as the decisions taken by top management to determine the vision or mission of the company, and other associated objectives, in order to achieve the organisation's goals (Eisenhardt and Zbaracki, 1992). Other management experts define SDM as the ongoing process of designing and implementing strategies for the purpose of reaching goals, or altering

strategies on the basis of observed outcomes. Consider the example of the management of a fast food company that wanted to increase sales and decided to implement a strategy that offered a lower price on particular products during off-peak hours. After one year, six months, or even one month of implementing this strategy, the management would look at the sales data to evaluate whether the strategy was effective at increasing sales or whether it required some modification. This is an example of SD making.

Fredrickson and Mitchell (1984) defined SDs as the decisions made frequently by the higher-level management of an organisation that directly affect the long-term survival and health of the firm. According to Stacey (1995), SD making is defined as the setting of long-term goals and objectives by the company's higher-level management in order to transform the vision and mission of the company.

Therefore, SD making is the key system of the company, which drives the management to formulate decisions based on the nature of and issues related to SD making, in a manner that enables the selection of informed and effective strategies aimed at achieving the goals of the organisation.

2.3   The Importance of SD Making

SD making is one of the most vital functions of top management. The achievement of a company's goals depends to a large extent on successful judgements. The fair and effective allocation of company resources is also the result of good SDM (Schwenk, 1995). In addition, SD making is crucial in the following aspects of an organisation:

SDM establishes the realistic purposes and goals of the organisation, which are consistent with the mission of the organisation and communicated to key employees, in order to achieve the company objectives in the most efficient way (Robinson and Pearce, 1984). It also provides a clear basis for measuring progress, compensating employees, and creating an environment for effective decision making. In addition, SDM helps establish a clear vision of what an organisation wants to achieve, as well as to implement the methods for achieving the organisation's goals and facilitating its success.

The continuous evolution of the world market is now occurring faster than ever before, and companies without a solid strategy must rely on luck to achieve their business goals and visions. According to many studies, one out of every five top companies in all industries will not exist after five years, or will not be able to cope with competition in the market (Ahmed et al., 2014). In this case, a strong focus on SDM enables a company to remain in the market for a long time. In a fiercely competitive market, insightful and focused SDM is a vital tool for uncovering potential business segments, innovative ideas, market conditions and new product and service offerings. Moreover, a good systematic approach to SDM will guide all marketing and sales activities, distribution decisions, and other associated business decisions, ultimately leading to profitability and the ability to establish a strong position in the market. SDM generates decisions that are unique and best practices for the company, and help it to stand out from its competitors in all possible ways (Robinson and Pearce, 1984). Furthermore, customer satisfaction is heavily dependent on the use of a range of unique strategies, and offering customers things of value or status. As such, unique decisions by top management levels can help an organisation to offer new products and /or services and satisfy their customers.

2.4 The Top Management Team (TMT)

A TMT is the most important role in an organisation. It is important to note that scholars have defined TMTs precisely. Most of the time, top level executives are considered the TMT, and their titles are listed in publicly available documents (Herring, 2009). When investigating SDM, it is essential to study the people who are engaged in carrying out specific decisions, as the definition of SDM argues that team demographics can influence SDs. In TMTs, it is not always necessary to include all the top executives, but they may include managers and experts from the top levels of the company. According to Hutzschenreuter and Horstkotte (2013), it should be noted that the actual decision making authority of an organisation may not always be included in the officially designated team of top management. A TMT is composed of key employees, and it influences any changes to the decision making situation. Therefore, when defining and designing top level management teams, the inconsistency and incongruity of empirical results could be addressed by carrying out observations and interviews. The members and size of each TMT team differ from organisation to organisation. Thus, a comparison of TMTs is impossible. In terms of TMT composition, the definition and size of the top management is very important, as it provides empirical findings for diversity studies.

According to Chen, Hsu and Huang (2010), the TMT of any organisation consists of individuals who are responsible for the leadership and management functions of the company. The members of the TMT should hold certain common values and beliefs. A TMT can attain higher levels of efficiency in achieving the goals of the organisation if

they ensure that the individual objectives of the team members are consistent with organisational ones.

Kauer et al. (2007) observed that research on this topic has highlighted the critical role of members of TMTs in formulating and implementing strategic change (Daft and Weick, 1984), as well as designing strategic responses. Based on upper echelon theory, prior studies have explored the role of top managers in organisational success. However, literature reviews by researchers such as Carpenter et al. (2004) and Priem et al. (1999) have indicated that existing findings on the impact of top managers on organisation performance are ambiguous. According to Priem et al. (1999) and Oppong (2014), a large causal gap in the literature between the demographic of TMTs and performance of the organisation still exists. Indeed, Carpenter et al. (2004) and Priem et al. (1999) recommended that the complex relationship between the demographic characteristics of TMTs and organisational performance should be examined in future studies.

2.5   The Strategic Decision Making Process (SDMP)

Extensive theoretical and experimental work on SDM has been carried out over the past three decades in the disciplines of psychology and management. Prior studies (e.g. Stoptoe-Warren et al., 2011) aimed to strengthen understanding of what constitutes a good SD maker, the skills essential to be an effective SD maker, and the factors influencing an individual's SDMP (Stoptoe-Warren et al., 2011).

According to Papadakis et al. (2010), SDM is a systematic and formally recognised way of deciding the handful of major decisions that helps the organisation to thrive over the next couple of years. This involves setting the company's mission, vision, objectives, and goals. According to Schwenk (1995), SD making is connected with the meaning of long-term goals, and with carrying out the strategies for achieving the

company's mission in an efficient manner.

Therefore, SDM is the key system used by a company to drive the management to formulate decisions based on the nature of issues related to SDM. This should be done in a way that leads to knowledgeable and effective decisions being-taken to achieve the goals of the company.

Although SDMP is a moderately new idea, the idea of a strategic subject goes back many years. For instance, Sun Tzu, a Chinese military writer, described the tactics of fighting. Moreover, in around 1513 Machiavelli developed a technique for managing states in Italy. According to Carter et al. (2008), many of the ideas in Machiavelli's writing permeate today's literature. However, Chandler (1962) should be given credit for moving the focus of research away from planning towards strategy, which led to the introduction of the concept of strategy in management literature. Moreover, prior research has indicated that a shift from planning to strategy occurred as a result of the negative influence of planning on the performance of organisations (Carter et al., 2008).

Chandler (1962) characterised strategy as the formulation of the long-term objectives of an organisation, and the selection of strategies and distribution of assets necessary to achieve these objectives. This explanation is now generally accepted (Carter et al., 2008).

There are two streams of strategy research: content and process. Content research manages the substance of choice, for example, mergers, expansion, and portfolio administration (Elbanna, 2006). In contrast, process research examines the arrangement of actions guiding a SD to appropriate actions (Papadakis and Barwise, 2002), and the variables that influence the procedure of SDM (Schwenk, 1995). Rajagopalan et al. (1993) observed that several researchers examined research on strategy content in their

empirical work, while process research received significantly less consideration. Indeed, although a decent amount of progress in strategy process research has been achieved over the past two decades, a number of areas remain under-explored. Moreover, the findings in the field are conflicting, which has amplified the need for more experimental investigation (Papadakis et al., 2010; Elbanna, 2006).

The previous section reviewed the starting points of SDMP research. This sub-section provides a general overview of the importance of SDMP research. This includes a description of SDMP, and the consequences of various SDMP qualities for SDMP impact. This section also reviews the factors that influence SDMP attributes and the relationships between SDMP characteristics and results.

Decision making is a process involving judgements about the possibility of undefined incidents in circumstances in which people make estimates about the future, choose between two or more substitutes, or implement the chosen strategic option (Matlin, 1989).

SDMP is generally a significant aspect of management decisions. This is because diverse selection procedures prompt TMTs to settle on various decisions, and not all decisions are equivalent – some are superior to others (Dean and Sharfman, 1996). Thus, SDMP is superior to other forms of decision making.

SDMP has generally been portrayed as a sequence of actions (Papadakis and Barwise, 2002). Schwenk (1995) theorised that SDMP is comprised of the detection stage, where threats and prospects are identified and pertinent data is gathered; the formulation stage, where different options are produced; the assortment stage, where alternate options are assessed and one option is selected; and finally, execution. These stages are revisited by managers during each decision making process, and each decision made is reviewed.

Mintzberg (1976) emphasised the repetitive nature of such procedures, as managers regularly revisit prior stages to gather additional data and re-evaluate presumptions. However, a substantial and increasing number of studies in the literature portray SDMP in terms of its qualities or dimensions, the most regularly analysed of which incorporate comprehensiveness, rationality, political conduct, and – increasingly – intuition and behavioural reconciliation (Fredrickson, 1984; Eisenhardt, 1989; Lubatkin et al., 2006; Carmeli and Schaubroeck, 2006; Simsek et al., 2005; Elbanna, 2006). Further research has also examined additional characteristics, including contradiction, performance, progressive decentralisation, speed, conflict, and adaptability (e.g. Olson et al., 2007a; 2007b; Papadakis et al., 1998).

Examination of the impact of the various qualities of SDMP on results, such as organisational performance and SD rationality (for example Eisenhardt, 1989; Elbanna and Child, 2007a; Fredrickson, 1984) has produced conflicting findings. For instance, previous studies have reported that SDMP comprehensiveness positively influences performance of the organisation in higher velocity environments (Eisenhardt, 1989; Bourgeois and Eisenhardt, 1988), yet adversely affects the performance of an organisation in unstable environments (Fredrickson and Mitchell, 1984; Fredrickson, 1984). However, Goll and Rasheed (2005) reported a positive influence of rationality on organisational performance under stable conditions, and Elbanna and Child (2007a) also stated that rationality has a direct positive impact on SD comprehensiveness in unstable environments.

Despite the differences in the scope of the investigation and measurement of concepts in these studies, no agreement has been reached regarding the influence of SDMP attributes on SDMP results, and how relevant factors, such as the outside conditions,

affect these associations. In addition, there is limited experimental evidence regarding the impacts of SDMP qualities, such as political conduct and intuition, on SDMP outcomes (Papadakis et al. 2010; Elbanna, 2006). Nevertheless, research has depicted SDMP in a practical light by assessing the social aspects of SDM, which rationality or comprehensiveness cannot capture effectively (Eisenhardt and Zbaracki, 1992). In general, prior studies on SDMP have focused on financial results, such as the performance of an organisation, while other factors, such as speed and decision quality, have received relatively little attention (Papadakis and Barwise, 1997). Thus, the impacts of SDMP features on these non-financial results remain mostly unclear.

The previous section focused on the types of research carried out in SDMP studies. However, the theory of decision making should be reviewed before reviewing specific theory used in SDMP research. The following section reviews literature on the theory of decision making.

2.6   The Theory of Decision Making

A wide range of disciplines have examined decision making. Each discipline considers its form of decision-making theory to be unique. Beach and Connolly (2005) provided a useful overview of theories of decision making.

2.6.1 Prescriptive Theory

The discipline of economics examines decision-making by formulating axiomatic models that designate the relevant market forces in specific situations and recommends suitable steps in the context of the relevant assumptions of the models. A similar logic is followed in operational research; however, the operation scholars model tends to be limited to

specific issues faced in specific organisations.

In this context, decision making theories are generally developed based on deterministic axioms. However, a thorough account of the SD process is viable if the description is given via the real-time perception. Consequently, a real-time decision is possible by repeating the fundamental cognitive process application.

The key focus of decision-making research using prescriptive theory is prescribing what should be done and not what decision makers should do. Prescriptive theory does not focus on the implementation of decisions. The primary focus is on addressing the tasks involved in choices. Consequently, the majority of studies of prescriptive theory evaluated decision making behaviour in the context of how well it complies with the prescriptive models. Behaviour complying with the prescriptive models was considered to be rational and behaviour not conforming to the models was considered irrational.

However, a different opinion was expressed by Simon (1982), who suggested that due to the strong emphasis on the individual, rational choice theorists ignored the reality of what actually happens and what exists inside organisations. Simon (1982) argues that people may not have the necessary knowledge or capability to address complex matters, even though they are generally rational. As a result, managers within organisational complex settings may choose the safest choice, which may limit the variety of decision results. This argument is consistent with Newell and Simon (1972), who reported that decision makers tend to search for limited alternatives in the decision making process. Decision makers will make decisions by choosing the first satisfying choice rather than comparing all possible alternative choices.

Organisational behaviour researchers are more interested in describing what people do than in prescribing what they should do. Therefore, organisational behaviour researchers approach decision making in a very different manner and consequently focus on the ways in which managers employ data to reach a decision.

2.6.2 Behavioural Theory

Behavioural theory started examining the extent to which unaided decision making conforms to the processes and outputs of prescriptive decision theory. Simon (1997) suggested that from a rational actor's point of view, decision making is taken into consideration by traditional theorist. However, as such a narrow focus will not provide a full picture of the decision-making process, the focus should be on the limited computational ability of humans; these human limitations affect an individual's rational behaviour. Simon argued that human limitation on rationality and calculation will exist because of "the disparity between the complexity of the world and the fitness of human computational capabilities, with or without computers" (Simon, 1997, p. 319).

The assumption of decision-makers' rationality is challenged by Simon (1979), who focuses on bounded rationality and the cognitive limitations of the decision maker. Simon (1979) stated that "rationality is bounded when it falls short of omniscience. And the failures of omniscience are largely failures of knowing all the alternatives, uncertainty about relevant exogenous events, and inability to calculate consequences" (Simon, 1979, p. 502). The behavioural model of Simon (1979) argues that the cognitive abilities of decision makers are limited due to limitations in knowledge and values. Therefore, decision makers are unable to make optimum decisions. Simon (1979) regarded rationality as a contextual phenomenon and categorised it into two types – procedural and substantive. A decision is substantively rational if the decision-maker's performance

towards the company is within the limited constraints. Simon thought that "behaviour is procedurally rational when it is the outcome of appropriate deliberation. Its procedural rationality depends on the process that generated it" (Simon, 1976, p. 131). Simon (1976b) stated that "rationality of behaviour depends upon the actor in only a single respect – his goals. Given these goals, the rational behaviour is determined entirely by the characteristics of the environment in which it takes place" (p. 130).

Simon (1955) argued that decision makers make satisfying decisions (rather than rational decisions) due to a lack of proper procedural rationality and limited knowledge about the decision. This is due to the fact that the ability of the human mind to exercise a degree of rationality is limited. Therefore, with the intention to satisfy the decision maker in address the circumstances, the decision maker builds a simplified model of rationality. In this context, Simon (1976) referred to limitations such as values, skills and perceptions, which may not be compatible with company objectives and goals. These limitations also make the decision-making process more complicated (Simon, 1976, p. 241). Simon (1976, p. 271) used the "satisficing" rule as one empirical and realistic substitute for the "maximisation rule".

2.6.3 Ethical Theories

The significance of ethics and morals tends to be underrated in the social sciences (Beach and Connolly, 2005). A possible explanation for such under-representation is related to the fact that what is considered moral or ethical in one culture or by one person could be considered immoral or unethical by others. In this context, culture and religion may influence behaviour and decision-making.

Beliefs about ethics and moral values significantly influence the behaviour of individuals

(Beach and Connolly, 2005). Moreover, beliefs and ideologies also influence people's behaviour. A religious person is obliged to behave in ways that are noticeably dissimilar from people who are less religious. In general, beliefs, morals, ethics, and values all influence the decision-making process by the proscription and prescription of a particular course of action.

Consistent with ethical theories, this study focuses on the Islamic culture and religion as factors influencing the SDMP in HEIs in Saudi Arabia.

2.6.4 The Multiple Perspectives Approach

The multi-perspective approach to decision making was first proposed by Mitroff and Linstone (1993). It is based on the unbounded systems thinking concept (Churchman 1971). This concept assumes that "any problem is a member of any other problem". The multi-perspective approach categorises perspectives as organisational, technical or individual in nature. Analytical models that collect data as the basis of understanding the system would all fall under the technical perspective. As many stakeholders and role players as possible should be investigated in order to cover the individual and organisational perspective. Data collection should consist of multiple modes. In addition to above approaches, the researcher should also consider the aesthetic and ethical perspectives (Mitroff and Linstone, 1993). A decision could be right in a technical sense but may not be ethical.

2.7   The Process of Strategic Decision Making

One of the research objective of this study is to explore the SDMP in the context of HEIs in Saudi Arabia. This section reviews literature pertaining to SDMP.

An increasing number of studies have focused on examining and furthering understanding of the decision-making process (Nooraie, 2008 and Nobrega et al., 2009; Salas et al., 2009; Jalal-Karim, 2013). The process of decision making includes a selection of options that have been determined by a manager and precisely characterised to provide an opportunity to identify a solution.

The stages of basic SDMP differ according to each research approach. The most utilised methodologies are: SDM in seven stages, SDM in five stages, an SDMP of four phases (or a creative decision-making process), an SDMP in three phases, and others. The primary qualities of these models are presented below.

In all models, the initial step or stage is detecting an issue or the need to select a course of action. The primary component that recognises tackling the issue and decision making is the one identified with human limitations: decision making does not assume the general population to be altogether rational because of the presence of emotional motivation. Solving the issue is based on speculation and heuristic techniques; judgment is natural, and a solution is reached quickly. In most cases, previous researchers have used two terms interchangeably - decision making and strategic thinking.

2.7.1   The decision-making process in seven steps

In this SDM model, SDMP is divided into three phases: characterising, distinguishing, and developing. The seven stages taken within this structure (Litherland, 2013) are: characterising the issue, recognising and restricting the components, improving potential arrangements, examining the different options, selecting the best option, executing the choice, and building up a control and assessment framework. This procedure is the one most commonly utilised by supervisors.

2.7.2   The decision-making process in five steps

SDMP in five stages (Doyle, 2012) is additionally utilised as an aspect of administrative practice and involves: distinguishing the choice to make, looking at the alternatives, gathering data, making the decision, and executing the choice. The manager must investigate each option in detail in order to identify the most appropriate choice. This is facilitated with the inquiries: Which? What? How? and What if? The alternatives are examined, different versions and options are detailed and considered, and potential choices, any conclusions, and missing data are identified. Conceptualising is a procedure that involves the collation of data and helps the team leader to select an effective solution.

Thus, the stages of the procedure are as follows:

Gathering data (step one). Data might be collected via the Internet, at the library, or from different sources (such as an examination of market development, studies of market competition, investigation of development openings, and cost analysis).

Decision making (step two). The assembled data is incorporated into the assessment choices. The manager should approve the selection, and ensure the support of the rest of the team.

Choice implementation (step three). The assembled data and extra information gathered during the choice detailing stage are used to implement the selection. The managers in the firm may pick any of the procedure models identified previously. Doyle (2012) proposed that a more complex model may be helpful to directors, as it could be adjusted to any circumstance. He called the model CDP (Complex Decisional Process). This model considers the three phases of a robotic framework which can be adjusted to fit

administrative issues in the decision making process: data sources, forms and yields.

According to Doyle (2012), the sources of information are: environmental elements, data or potential information, learning, a team's proposals, and moral standards. Market variables affect the choices. Environmental requirements, inward risks and cut-off points, particularly those identified with assets, are considered. Data accumulated or kept confidential, in addition to verifiable information, such as the current or measured data of the organisation and of the external conditions, inform the beginning stage, during which the available options are identified according to the organisation's goals. The information gathered by the company, teams, and managers completes the unique process, and the standards of the firm refine it.

The choice procedure involves characterising the issue, gathering data, distinguishing the options, cementing team support and choosing an option, anticipating the results of the choice and actualising it. In general, characterising the issue is related to decision making, although several studies (for example Nooraie, 2008; Salas and Wildman, 2009; Jalal-Karim, 2013) have not reached a consensus with regard to the distinction between solving an issue and decision making by the management. The reasonable portrayal of the issue encourages alternate sides of the procedure. Gathering data involves choosing the data and information that align best with the issue under consideration, and which are taken from the framework inputs. Continuing to recognise options is based on the information and data gathered. The selection of the most appropriate solution from the options examined is carried out collaboratively by a team. This cooperation leads to an agreement, and also lessens anxiety and the time taken to make the decision. At this point, the 80/20 rule is helpful, which involves acquiring 80% yields with 20% of the sources of information. Before implementing the decision, it is examined with regard to the potential

outcomes for the organisation, and the possible risks or failure associated with the choice, such as management achievement or disappointment, the firm's knowledge of the authoritative learning process, team support, and the company's qualities and convictions. If the choice does not meet these criteria, the procedure is repeated with a different option. However, it does not matter whether administration is effective in the decision making; instead, the company must improve by gaining new knowledge, establishing cooperation within the team, and strengthening its qualities.

2.8   Theoretical Perspectives in SDMP Research

This section reviews literature on the theoretical perspectives in SDMP research. The theoretical perspectives within SDMP research can be categorised into two groups: synoptic formalism and political incrementalism (Goll and Rasheed, 1997; 2005; Elbanna, 2006; Child et al., 2010). According to the synoptic formalism perspective, organisations are involved in (or should be involved in) thoughtful, analytical, effortful, deliberate, and formal SDMPs (Hitt and Tyler, 1991; Fredrickson and Mitchell, 1984). In contrast, the political incremental perspective takes a practical view of SDMP, emphasising the cognitive and social elements of SDs, such as intuition and politics, together with the formal processes of SDMP (Schwenk, 1988; Papadakis and Barwise, 1997).

2.8.1   Synoptic-Formalism

The synoptic formalisation perspective is concerned with the extent to which SDMP necessitates the scrutiny of data, and strives to be integrative and thorough. The indicators of the synoptic formal perspective are comprehensiveness and procedural rationality (Elbanna, 2006; Fredrickson and Mitchell, 1984). In subsequent research studies,

behavioural integration was used within the synoptic formal perspective to understand exchanges between TMT members during SDMP (Simsek et al., 2005; Lubatkin et al., 2005; Carmeli and Schaubroeck, 2006). The focus of behavioural integration is on collaborative behaviour, the open sharing of information and ideas, and joint decision-making (Hambrick, 1994). Therefore, the behavioural integration approach has significant potential to explain SDMP outcomes.

In this study, comprehensiveness (operationalised in a quantitative sense) and behavioural integration are used to represent synoptic formalism. Specifically, behavioural integration is used as a lens to explore (in a qualitative way) the TMT/MMT interactions and behaviours during SDMP.

The following subsections present literature on three characteristics of SDMP: rationality, comprehensiveness, and behavioural integration. First, each characteristic is defined, followed by a review of the relevant literature on each SDMP characteristic.

2.8.2   Synoptic Formal SDMP Characteristics: Rationality

The concept of rationality was initially conceived in the field of economics, in which was defined as a process of subjective maximisation of utility (Von Neumann and Morgenstern, 1947; Bell et al., 1988). However, Cyert and March (1963) and March and Simon (1958) later developed the concept of bounded rationality, based on criticism of the assumption that decision-makers in an organisational context make decisions based on the process of subjective maximisation of utility. According to bounded rationality, decision-makers have cognitive limitations that reduce their ability to gather and scrutinise information and identify all potential alternatives (Griffith et al., 2012). Thus, in the context of maximisation of economic utility, SDMP is unlikely to be rational.

However, procedural rationality indicates a desire to make the best decision under the given circumstances. Procedural rationality is, therefore, a process of collecting necessary information to identify prospects regarding several alternative options and, ultimately, to make a decision (Dean and Sharfman, 1993).

A number of researchers have carried out empirical studies of rationality in SDMP. Dean and Sharfman (1993) suggested that a large proportion of strategic management literature is based on the idea of rationality, and the concept of rationality has also been extensively used in organisation theory (Dean and Sharfman, 1993; 1996), since strategic choices are determined by TMTs. Notably, there is no clear agreement as to the exact effect of rationality on SD outcomes, despite the significance of rationality for SDMP research (Elbanna, 2006; Goll and Rasheed, 2005; Priem et al., 1995). One of the reasons for these inconsistent findings is the diverse definitions and variation in the operationalisation of rationality employed by researchers in various studies (Papadakis et al., 2010). Rationality has frequently been operationalised as comprehensiveness, and has been used interchangeably with comprehensiveness in earlier literature (for example Fredrickson and Iaquinto, 1989; Fredrickson and Mitchell, 1984).

Due to conceptual and operationalisation overlaps between rationality and comprehensiveness (Elbanna, 2006), this thesis focuses only on SDMP comprehensiveness. Moreover, one of the research objectives of this thesis is to examine factors influencing SDMP comprehensiveness. The following subsection therefore reviews the literature on SDMP comprehensiveness.

2.8.3   Synoptic Formal SDMP Characteristics: Comprehensiveness

A number of authors have provided definitions of SDMP comprehensiveness, which is

generally characterised as the degree to which an organisation or team endeavours to be thorough or systematic in making strategic choices (Fredrickson and Mitchell, 1984). Atuahene-Gima and Li (2004) argue that comprehensiveness also includes the degree to which the TMT searches for data and considers various methodologies, approaches, and decision-making criteria in assessing and choosing an elective strategy.

Definitions of comprehensiveness are extensive and depict a procedure that attempts to be comprehensive in the search for data, and in creating and assessing (and in the criteria used for assessing) diverse choice alternatives.

In the area of SDMP research, rationality and comprehensiveness are interchangeable (Papadakis et al., 1998; Priem et al., 1995; Elbanna, 2006; Goll and Rasheed, 2005; Goll and Rasheed, 1997; Papadakis and Barwise, 2002) and occasionally combined to frame a compound adjective (for example Hough and White, 2003; Priem et al., 1995; Goll and Rasheed, 2005). SDs should be coherent in pursuing certain objectives (Elbanna, 2006, p.3). They can be arrived at through either procedural rationality or comprehensiveness. Comprehensiveness and procedural rationality can therefore be conceptualised as two measurements of effective SDM. In this study, SDMP comprehensiveness will be explored in detail.

Observational work focusing on comprehensiveness has yielded mixed and contradictory findings. This is particularly evident in the conflicting conclusions of Fredrickson (1984), Fredrickson and Iaquinto (1989), Fredrickson and Mitchell (1984), and Bourgeois and Eisenhardt (1988). Bourgeois and Eisenhardt (1988) found that in a high-velocity environment, comprehensiveness was significantly related to firm performance. However, studies by Fredrickson (1984) and Fredrickson and Mitchell (1984) demonstrated the negative impact of unstable environments and comprehensiveness on

company performance, and how comprehensiveness positively affects performance in stable conditions. The findings of the study by Fredrickson and Iaquinto (1989) supported those of studies, showing that comprehensiveness has a negative relationship with performance in an unstable environment, and a positive relationship under stable conditions. Meanwhile, Eisenhardt (1989) conducted eight contextual investigations into the high-speed microcomputer industry, aiming to demonstrate the association between SDMP and speedier SDs. A noteworthy contrast in the Eisenhardt and Fredrickson studies is that Fredrickson et al. did not assess SD speed; instead, it was seen – in certain conditions – to be an essential SDMP outcome (Judge and Miller, 1991).

Finally, Miller (2008) again highlighted the complex relationship between comprehensiveness and the external environment, finding that, in a turbulent environment, comprehensiveness strongly affected execution, although only at elevated levels of thoroughness. These variation in the findings of studies exploring comprehensiveness in SDMP is perhaps due to the lack of consideration paid to the operationalisation and conceptualisation of these concepts and ideas. Indeed, the impacts of comprehensiveness on SDMP results give the impression of being dependent on, or at least affected by, relevant factors (Elbanna and Child, 2007a; Rajagopalan et al., 1993). The absence of any clear agreement emerging from the research (Elbanna, 2006) highlights the necessity not just for additional observational investigations examining the immediate impacts and connections of SDMP characteristics and their environmental factors, but also the need for reasonable definitions and estimations of these concepts and their effect on SDMP results.

2.8.4   Synoptic Formal SDMP Characteristics: Behavioural Integration

This sub-section reviews the literature on behavioural integration. Hambrick (1994) defined behavioural integration as the degree to which decision-makers are involved in joint and mutual interactions. In SDMP research, the concept of behavioural integration is significant, since behavioural integrations are able to capture the level of complexity and dynamism in SDM, which other single-process dimensions are unable to adequately illustrate (Simsek et al. 2005). Thus, by incorporating social aspects of SDMP, behavioural integration complements comprehensiveness. According to Hambrick (1994), behavioural integration includes the quality and quantity of data exchange, social cohesion of a group, and collective decision-making. Thus, behavioural integration collectively apprehends elements of processes in a group, which are captured by a range of different concepts, such as collaboration between members and social integration (Carmeli and Schaubroeck, 2006). Carmeli and Schaubroeck (2006) and Lubatkin et al. (2006) suggest that behavioural-integrated TMTs adopt a deep and diverse apprehension of the knowledge base of teams, create alternative viewpoints, and promote social mechanisms that, in turn, encourage members of the team to share their tacit knowledge.

It is noteworthy that there is limited existing research examining behavioural integration in SDMP context, despite over two decades having passed since Hambrick's seminal article on the subject in 1994. Simsek et al. (2005) carried out one of the first empirical studies on behavioural integration, which examined the TMT, CEO, and organisation-level antecedents of behavioural integration. The findings suggested that CEO tenure and collectivist orientation have a positive and significant influence on behavioural integration. Lubatkin et al. (2006) published the second empirical paper examining behavioural integration, the findings of which indicate that organisations could achieve

ambidexterity (the ability to exploit and explore simultaneously) if they can unify TMTs and synchronise tasks and social processes. Although limited research has been carried out into behavioural integration, the concept has significant potential to contribute vital insights to SDMP literature. By focusing on the social and complex behavioural aspects of SDM, behavioural integration could potentially explain a range of SDMP outcomes, such as SDMP speed and implementation success. Thus, the fourth research objective seeks to explore, behavioural integration in SDMP of an HEI in Saudi Arabia.

2.9   The Role of Context in SDMP

The previous subsection reviewed the literature on the three characteristics of SDMP (rationality, comprehensiveness, behavioural integration), which are linked with the synoptic formalism perspective of SDMP. The present subsection builds upon the previous one by critically reviewing the literature on SDMP, with a focus on detecting the impacts of various contextual variables on SDMP.

Consistent with prior studies (for example Papadakis and Barwise, 2002; Papadakis et al., 1998; Rajagopalan et al., 1993), this study reviewed literature on the context of SDMP, such as TMT and SD-specific characteristics. Each type of context is linked with a particular type of theoretical perspective. For example, the TMT context is linked to the upper echelons' perspective (Hambrick and Mason, 1984). In addition, the SD-specific characteristics perspective argues that the categories and labels that are attached to a SD (such as uncertainty and familiarity) inform the successive processes and outcomes of that decision.

2.9.1   The Strategic Choice or Upper Echelons Perspective

The TMT is composed of the most senior managers in an organisation: those who have the responsibility for deciding the overall path of the organisation (Hambrick and Mason 1984; Carpenter et al., 2004). The central premise of the upper echelons' perspective is that the personalities, values, and experience of managers influences the way they interpret the situations they face, which, in turn, influences their strategic choices (Hambrick, 2007).

The following subsection reviews the literature on TMT demography heterogeneity and SD characteristics.

2.9.2   TMT Demography Heterogeneity

The heterogeneity of the TMT affects the role of management in SDMP. Research in this area has focused on the notion that vital decisions have a behavioural aspect, and mirror the individual characteristics of top managers (Cyert and March, 1963). Child (1972) recommended that whilst the top administration should reach an agreement on key organisational decisions, such as objectives, spaces, innovations, and structure, these choices be influenced by a level of individual motivation, which might be linked to a desire for a particular outcome. Similarly, Keats and Hitt (1988) recommended that firms adapt to environments, reacting to established components and attempting to adjust alternative components, thus bolstering their performance.

This viewpoint is based on extensive research conducted in the field of the behavioural choice hypothesis (Hitt and Tyler, 1991). Research conducted before the development of the behavioural choice hypothesis predicted that managers could increase their authority on the premise of complete and flawless data. However, behavioural choice scholars and

strategists have proposed to that managers regularly disregard the suggestions of the theoretical model (for example Hambrick and Mason, 1984). Consequently, complex decisions are predominantly the result of behavioural factors, rather than balanced investigations that consider the collected data. Furthermore, demographic factors can also alter the SDM procedure. Some of the researchers (for example Child, 1972; Andrews, 1971) who have developed 'normal' or traditional models of SDMP have argued that the evaluation and assessment procedures of managers play a role in SDMP. Furthermore, more recently, other researchers have analysed the connection between

TMT features, and how these may influence their evaluation and assessment strategies, and therefore SDMP (for example Brouthers et al., 2000). In contrast to the earlier discourse, some scholars have even argued that managerial qualities may not affect the SDM procedure (for example Lyles and Mitroff, 1980). However, in general, research findings have tended to suggest that various characteristics of TMTs influence SDMP.

Many studies have investigated the characteristics of TMTs and have categorised management attributes into identity factors and demographic factors. The term 'demography' refers to statistical qualities – for example, age, sex, training level – of the population under review. In understanding the impact of TMT demography on the SDM procedure and results, it is vital to distinguish between the impact of demographic qualities and assorted qualities. Demographically differing qualities refers to a situation in which the top management is demographically diverse. TMT demographic heterogeneity indicates that managers will gather data from a range of sources and have different interpretations and points of view (Dutton and Duncan, 1987), prompting increased inventiveness, development, viable discussions, and therefore optimal choices

(Wiersema and Bantel, 1992).

However, the presence of differing qualities within a TMT's demographic characteristics and attributes also imposes certain limitations. For instance, such differences will make correspondence between individuals who do not agree with each other more difficult (McCain et al., 1983), and possible disagreement (Pfeffer, 1983; Elbanna, 2009). As such, a large degree of heterogeneity may have negative outcomes, such as management's inability to reach a decision. On the other hand, solidarity, sponsorship and commonality are more likely to be found amongst similar individuals (Pfeffer, 1983), prompting corresponding shared beliefs and perspectives of a firm and how it functions (Wagner et al., 1984; Tushman and Romanelli, 1985), and, consequently, high levels of agreement amongst managers (Dutton and Duncan, 1987).

Social psychological research on decision-making teams has demonstrated that if individuals have similar views, qualities, beliefs, and states of mind, this increases unity amongst managers. Thus, it could be anticipated that cohesiveness is related to high levels of similarity, a strong sense of duty regarding existing strategies, a tendency to maintain a traditional business structure, a lack of openness to different data resources, and a resistance on the part of managers to exhaustively utilise available data (Wiersema and Bantel, 1992).

It should be noted that the majority of studies that have focused on the role of top management qualities in decision making have delivered mixed results, and no single trait has been explored in enough depth to fully comprehend its role in SDMP (Finkelstein and Hambrick, 1990). Instead, past reviews that have examined the role of directors in organisations have generally focused on the factors of age, residency, experience, and training foundation. These factors are explored in more depth in turn below.

 Age

Research has indicated that a director's age has an influence on SDMP (Child, 2002). For instance, younger directors may place a more prominent focus on cooperation in decision making compared to senior managers (Ireland, 1987). Prior studies have proposed that, adaptability diminishes with age, while inflexibility and resistance to change increase. This might be because both monetary and job security are likely to be particularly important to more experienced directors, in which case more established managers will tend to be more traditionalist when deciding on new business strategies (Brouthers et al., 1998), and may avoid risky choices that involve significant change to the core structure of a firm. On the other hand, Hambrick and Mason (1984) proposed that more youthful officials tend to make riskier decisions. An investigation by Wiersema and Bantel (1992) supported this theory.

Furthermore, Schermerhorn et al. (2003) found that more established managers are vulnerable to being categorised as rigid and inflexible. On the other hand, Greening and Johnson (1996) note that more youthful managers tend to look for additional data in their decision-making process, in order to assess data more precisely, put more prominent emphasis on participative administration, and contribute improved resources to the decision-making procedure. Hitt and Tyler (1991) reported that a manager's age also affects the key assessment of candidates for employment. Prior research has reported contradictory findings on age: Bantel (1993) observed no impact of youth on SDMP, and argued that that it is not the age of supervisor that influences key procedures, but rather the number of years that managers have spent inside the organisation.

Individuals of similar age tend to take part in numerous non-work-related encounters and

develop comparable dispositions, qualities, beliefs, and points of view (Ireland, 1987; Rhodes, 1983). Alternatively, diverse team age may prompt a variety of points of view on the key issues confronting an organisation (Wiersema and Bantel, 1992), offer numerous creative strategic options to consider (Bantel and Jackson, 1989) and enable firms to develop further response practices, notwithstanding risks (Greening and Johnson, 1996).

Various research findings suggest that heterogeneity in age has no major impact on major change (Wiersema and Bantel, 1992). Forbes (2005) found that more aged managers make quicker SDs than their more youthful peers. Furthermore, Hitt and Tyler's (1991) investigation of top officials proposed that age influences the relationship between the utilisation of target criteria and the assessment of a particular type of SD when assessing applicants, whereas younger managers tend to form a positive assessment of an applicant, and utilise diverse criteria to do so (Hitt and Tyler, 1991). Finally, Goll and Rasheed (2005) found that the average age of the TMT is significantly related to rationality.

   □ **Tenure**

Much prior research has reported that tenure has an impact on SDMP. In fact, tenure may have the greatest impact of all demographic features (Pfeffer, 1983). There are a number of methods for measuring tenure, such as executive tenure, incorporating tenure into the top management group, tenure in position, tenure in the company, and residency in the business. team tenure in the top administration team refers to the average length of time for which administrators have cooperated as a group or collective, while organisation tenure is the length of time a director has worked at the company. Of all tenure variables, organisation tenure has the most significant association with SDMP. As

such, it is a focal indicator of the broader concept of tenure. Alternative measures of tenure, such as firm tenure, have yielded similar findings (Finkelstein and Hambrick, 1990). Thus, prior studies have demonstrated an association between tenure and SDMP regardless of the different measurements of tenure used. Greening and Johnson (1996) observed that earlier research proposed a relationship between organisation tenure and increased rigidity, a sense of duty regarding institutionalised practices, and a decrease in data preparation after some time. This suggests that tenured top managers might be more committed to maintaining existing business conditions (Staw and Ross, 1980), have a greater understanding of hierarchical approaches and methodologies (Kanter, 1977), be more convinced of the vision of the organisation's established behaviours (Wanous and Youtz, 1986), and be more rigid and less responsive to change (Wiersema and Bantel, 1992).

Historically, tenured teams have been less reliant on external data resources, and become less open to change, which may weaken their models of conduct. In contrast, short tenure teams have clear, comprehensive data and a greater tendency towards action, and regularly renounce their industry's traditions. As tenure increases, directors' perspectives become significantly limited, and risk-taking is carried out at a strategic distance (Finkelstein and Hambrick, 1990). Generally, latency towards change appears to be more pervasive in firms with a higher average hierarchical tenure (Wagner et al., 1984).

Heterogeneity in team tenure demonstrates that the individuals involved in administration are promoted at various stages. When TMTs have a greater range of tenure times, they have a tendency to be less socially durable, creating contrasts in learning and viewpoints on vital matters (Wiersema and Bantel, 1992), which in turn leads to more effective decisions on key issues (Greening and Johnson, 1996).

In their research, Papadakis and Barwise (2002) and Papadakis et al. (1998) focused on the role of the CEO, usually considered the most powerful individual in any top management team (Hambrick and Mason, 1984). Both sets of researchers discovered that CEO tenure was significantly related to progressive decentralisation (support of central managers) in SDMP. Furthermore, there is additional evidence that TMT tenure has a positive relationship with reliability (Goll and Rasheed, 2005), although Iaquinto and Fredrickson (1997) could not identify any significant impact of the average hierarchical tenure of the TMT on the breadth of SDMP (completeness in circumstance finding, choices assessment, and choice combination). Nonetheless, changes in TMT intra-firm tenure have been observed to be significantly related to changes in SDMP thoroughness (Fredrickson and Iaquinto, 1989). Thus, CEO tenure can be said to affect behavioural coordination, though there is no significant relationship with TMT tenure (Simsek et al., 2005).

 Experience

Prior studies examined the influence of job experience on SDMP. There are two aspects of experience: the degree of work involvement, and the type of work understanding. Both are critical. Some researchers have proposed that supervisors' impressions of the nature and procedures of their organisations are formed by experience (for example Tyler and Steensma, 1998; Markoczy, 1997). As such, a manager's degree of experience may influence the procedures utilised as part of SD making. For instance, Hitt and Barr (1989) reported that more experienced managers made pay-related decisions individually, in contrast to less experienced supervisors, while Fredrickson (1985) revealed that relevant variables affect the SD procedures of inexperienced officials, but may not influence the decision-making procedures of experienced administrators.

Furthermore, Hitt and Tyler (1991) found that the aggregate sum of job experience influenced the relationship between target standards and the assessment of important decisions.

The type of experience of the top management may also influence system procedures, decisions, and execution (for example Hitt and Ireland, 1986; Greening and Johnson, 1996). This finding supports the notion that organisations mirror the foundations of their most effective top managers, who describe the issues and decide the scope of systems used by firms to identify issues (Chaganti and Sambharya, 1987).

Heterogeneity of functional experience in TMTs may prompt increased data exchange and a superior comprehension of the SDs under consideration (Schwenk, 1988). Greening and Johnson (1996) argued that functional background homogeneity ought to prompt social union amongst TMT members, since they contribute to building a communal scheme for SDMP and a comparable point of reference. Indeed, social attachment and homogeneity have been shown to be related to an inability to rationally evaluate various strategies (Whyte, 1989). However, Hitt and Tyler (1991) argued that the connection between experience and strategic choice might be more complex than that proposed by prior research. For instance, they criticised an investigation by Walsh (1988), arguing that the study's discoveries may not be entirely generalisable to top managers, since the example used appears to be based on TMTs with an average age of 38, in other words, mid-career.

Furthermore, the relationship between experience and the speed of SDMP implies a reliance on external conditions. Judge and Miller (1991) discovered that whilst board involvement (taking into account average tenure on the board, age, and average years working in the business field) was negatively related to SD speed in non-profit making

organisations, in the materials and bio-innovation enterprises, the association was significant. Finally, Forbes (2005) reported that entrepreneurs with previous experience of decision making can make speedier SDs.

The type of functional experience also seems to influence SDMP. Brouthers et al. (2000) reported that the degree to which individuals from the TMT depend upon the structure of a firm is a determining factor of strategic aggressiveness, with TMT individuals from accounting and finance backgrounds being more inclined to depend on hierarchical structure than TMT individuals with general backgrounds. However, Brouthers et al. (2000) failed to demonstrate any impact of director level on the relationship between external environmental factors and aggressiveness in SDMP. Thus, the findings regarding the relationship between experience and SDMP are mixed.

 Educational Background

The educational background of the directors is a reflection of their knowledge and ability base (Hambrick and Mason, 1984). Several prior studies have examined the relationship between SDMP and educational background. For example, Hitt and Barr (1989) found that decisions varied according to the level of formal instruction managers had received.

Therefore, depending on the amount and type of instruction received by managers, it may be possible to predict their qualities and psychological inclinations, which will influence their SDM. Indeed, research has shown that the extent of SDMP information-searching and examination undertaken by managers depends on their educational background (Dollinger, 1984). For instance, highly educated administrators are likely to focus more on financial analysis (Papadakis et al., 1998), roll out more key improvements (Wiersema and Bantel, 1992), have a greater ability to appreciate environmental and managerial

issues from several few points of view, and be more prepared to act in unstable circumstances, such as key choice selection (Greening and Johnson, 1996).

At the same time, some studies have provided contradictory evidence on the relationship between educational level and SDMP (for example Hitt and Tyler, 1991). For instance, Bantel (1993) failed to find a connection between level of instruction and key choice behaviour, and suggested that this indicated that education does not enable directors to make better decisions, but rather demonstrates that experience has a greater impact on decisions than formal education, as a lot of managers received their formal training many years previously.

With regard to the type of instructive specialisation, a director's previous educational programme of study is reflected in their subjective style and identity, shaping their viewpoints and perspectives (Wiersema and Bantel, 1992). For instance, Hitt and Tyler (1991) proposed that the assessment of new candidates is influenced by the nature of their academic degree, and other researchers have indicated that the subject matter of an academic degree also plays a role. For example, Wiersema and Bantel (1992) suggested that specific instructive fields, such as science and architecture, are more likely to initiate change in corporate strategy than others. Moreover, in the UK, Alkaraan and Northcott (2006) argued that a CFO's education influences their decision-making style. According to Alkaraan and Northcott, CFOs have usually previously been business undergraduates, who tend to score highest for descriptive style decision-making. This is not surprising, given the emphasis that formal instruction, especially business training, places on comprehensive consideration. For example, courses in bookkeeping, measurement, and finance all require rational examination. This can help to identify the potential distinctive approaches of people from various educational backgrounds to a decision-making issue.

There is evidence to suggest that the training level of the TMT is significantly related to balanced and exhaustive SDMPs (breadth in circumstance finding, options era/assessment (Goll and Rasheed, 2005). Additionally, Papadakis et al. (1998) reported that better-educated CEOs tend to employ financial analysis in SDMP. It should be noted that several studies have failed to find any significant association between the education level of the TMT and CEO and SDMP. Papadakis and Barwise (2002) found no connection between CEO instruction and the attributes of SDMP (completeness, progressive decentralisation, horizontal correspondence, and politicisation). In addition, Hitt and Tyler (1991) found no direct association between directors' education level and attributes of SDMP. Brouthers et al. (2000) were similarly unable to identify a moderating impact of directors' education level on the connection between external business environmental factors and SDMP aggressiveness. However, Hitt and Tyler (1991) were able to provide empirical support for the impact of a manager's academic degree on the association between the utilisation of objective criteria and the assessment of merger and acquisition targets.

       □   **Research gaps in TMT heterogeneity**

Heterogeneity of age, experience, tenure, and education is an aspect of demographic diversity. Previous research has provided evidence of the relationship between demographic diversity and the features of SDMP, such as comprehensiveness and adaptability. For instance, Simons et al. (1999) found that the connection between TMT differences and organisational execution was related to SDMP breadth (comprehensiveness in making and incorporating SDs), and that TMT heterogeneity significantly affected the connection between the number of different qualities in a TMT and SDMP exhaustiveness. The findings of Simons et al. (1999) also suggested that

occupation-related TMT differentiation factors (for example organisational tenure differences and practical experience differences) have a more significant impact on SDMP extensiveness than non-work-related TMT differentiating factors (such as age). However, several researchers were unable to identify a relationship between non-work-related qualities and SDMP. For instance, Sharfman and Dean (1997) were not able to find a significant connection between TMT heterogeneity and adaptability, characterised as openness and recursiveness in SDMP. Dayan et al. (2012) found that, although practical differences influenced political conduct, statistical differences (age, ethnicity, and sexual orientation) did not. Lastly, Simsek et al. (2005) reported that diversity of educational qualifications had a direct impact on behavioural integration. However, no relationship was found between behavioural integration and job-related heterogeneity.

Some earlier studies have found that TMT attributes, such as instruction and encounters/residency, have an impact on SDMP (Papadakis et al., 1998; Kannadhasan and Nandagopal, 2010). However, Lyles and Mitroff (1980) argued that TMT qualities do not affect SDMP (referred to in Papadakis et al., 1998, p. 118). Differing qualities within a TMT's statistical attributes are also associated with certain limitations; for instance, such differences will make correspondence between dissimilar individuals more difficult (McCain et al., 1983), and conflict more probable (Elbanna, 2009). High levels of heterogeneity may have negative authoritative results, such as an inability of leaders to make decisions. Accordingly, earlier studies analysing the role of the TMT in decision making have yielded mixed outcomes. Therefore, further research is required to better examine the relationship between TMT heterogeneity and SDMP. The current study intends to address this gap in the literature.

2.9.3   The SD Characteristics Perspective

The particular qualities of a SD are the names that a manager ascribes to it, in view of their potential benefits (Papadakis et al., 1998). Previous studies demonstrated that the way managers define the SD in the initial phases of SD making fundamentally affects the manner in which the company reacts (Elbanna and Child, 2007b; Papadakis et al., 1998). The SD qualities highlighted most often in SDMP research include: significance, uncertainty, rationale, pressure, familiarity and types of decision.

2.9.3.1. Significance

An effective SD is critical because it is considered to have a considerable impact on a firm's operations and execution (Papadakis et al., 1998). Research has shown that SD significance specifically affects the qualities of SDMP, including exhaustiveness, progressive decentralisation, and utilisation of financial analysis, although the findings of existing research are generally far from clear. Papadakis et al. (1998) found that thoroughness, utilisation of financial analysis, decentralisation at various levels, and horizontal correspondence were all significantly related to the efficacy of the SD. However, Dean and Sharfman (1993) were not able discover a connection between SD significance and objectivity (accumulation and investigation of data). In addition, Elbanna and Child (2007a) were not able prove their theory that SD significance strengthens the positive connection between assessment and SD viability, characterised as the degree to which the choice achieves its goals (Dean and Sharfman, 1996). Elbanna and Child (2007a) also found that SD significance reinforces the negative relationship between intuition and political conduct and SD viability. Nonetheless, Dayan and

Elbanna (2011) found that decision significance was unrelated to the utilisation of intuition, and Dayan et al. (2012) found that significance brought about more noteworthy political conduct in new item advancement teams. Finally, Nutt (2008) noted that the achievement of a SD is enhanced when it is seen to be of high significance, disclosure SDMPs were more effective for important SDs, and new open door SDMPs were more productive for less significant SDs. Thus, prior studies have shown an association between SD importance and SDMP.

2.9.3.2. Uncertainties

The level of uncertainty surrounding the SD influences SDMP. Clarity and relevant data are required for uncertain SDs (Sonenshein, 2007). Previous studies have reported the influence of SD uncertainty on certain qualities of SDMP, such as accuracy, adaptability and politicisation, as well as the connection between rationality and SD viability. Uncertainty also influences other aspects of SDMP. Sharfman and Dean (1997) also discovered that SD instability is significantly related to adaptability in SDMP. SD uncertainty has additionally been found to negatively affect firm performance in SDMP (Papadakis et al., 1998), as key leaders cannot agree which data are applicable and which moves to make. Papadakis et al. (1998) likewise confirmed that uncertainty positively affects politicisation (coalitions, arrangement, resistance) and contradiction in SDMP. However, Elbanna and Child (2007a) were not able to locate any exact proof for their speculations that SD instability reinforces the negative connections between political conduct and intuition and SD viability, although they did find that the positive connection between thorough consideration and SD adequacy was weaker for low uncertainty decisions than for high instability decisions. Lastly, Dayan and Elbanna (2011) reported the absence of a relationship between decision uncertainty and the

utilisation of intuition in SDM, and Dayan et al. (2012) found no noteworthy impacts on political conduct. However, the utilisation of instinct in SDMP is connected to decision uncertainty (Elbanna et al., 2013).

2.9.3.3. Rationale

SD rationale is based on whether the SD is regarded as a risk or an open door, and affects the features of SDMP, as well as directing the relationship between reasonability and political conduct, and SD adequacy. Papadakis et al. (1998) found that risk was significantly related to progressive decentralisation in SDMP, and Fredrickson (1985) demonstrated that MBA understudies addressing an issue were more far-reaching than when confronted with an open-door SD, although there were no distinctions in the official sample. Furthermore, Ashmos et al. (1998) could not demonstrate evidence for their hypothesis that investment in SDMP would be more noteworthy for SDs seen as circumstantial risks. Finally, Elbanna and Child (2007a) found no confirmation that detailed consideration moderates (debilitates) the negative connection between instinct and appropriate choice selection, yet found that intention directs the uncertainty.

Unverifiable SDs require clarity regarding the moves to be made and the data required to facilitate effective option selection (Sonenshein, 2007). Instability in SDs has been reported to have some influence on the specific attributes of SDMP, including reliability, adaptability and politicisation, and has also been shown to affect the relationship between instinct and SD adequacy. Unverifiable SDs are negatively associated with rationality in SDMP, because SD vulnerability is "identified with elements that just can't be known" (Dean and Sharfman 1993a, p.593). Previous research

has also examined the relationship between adaptability and SD instability. Sharfman and Dean (1997) found that SD instability is significantly related to adaptability in SDMP. SD vulnerability has likewise been found to negatively affect firm performance in SDMP (Papadakis et al., 1998), as key leaders cannot agree which data are applicable and which moves to make.

Dayan and Elbanna (2011) reported that new item advancement teams depended more on instinct when the selection process was prompted by an open-door decision. In contrast, Elbanna et al. (2013) failed to find evidence of their theorised impacts of decision consideration on the utilisation of instinct in SDMP. Lastly, political conduct is lessened in new item advancement groups when the decision is prompted by a risk or emergency (Dayan et al., 2012).

2.9.3.4 Pressure

The degree to which there is time pressure to select a choice is expected to influence the features of SDMP, despite the lack of evidence. Papadakis et al. (1998) recognised that SD pressure is negatively related to various-order devolution, and identified a positive association with problem-solving disagreement in SDMP. Nutt (2000) showed that decision urgency had a modest impact on decision success, although SDMPs were effective in high urgency choices (Nutt, 2008). Therefore, some evidence does support the relationship between pressure and the nature of SDMP.

2.9.3.5 Familiarity

Familiarity relates to whether a specific kind of SD takes place inside a firm and whether it formulates part of another SD. However, an empirical study conducted by Papadakis et

al. (1998) was not able to recognise any noteworthy impact on any of the features of SDMP. Thus, there is limited evidence to prove an association between familiarity and SDMP.

2.9.3.6 Decision Type

Decision type is one of the most critical aspects of SDMP (Hickson et al., 1986). The Bradford Studies (Hickson et al., 2001) found that the decision type had the biggest impact on the elements of SDMP. Three distinct decision types were reported by the authors: vortex, tractable, and familiar, each of which are described by various levels of multi-level detail and separation (Astley et al., 1982). Vortex decisions tend to garner a variety of inputs, are non-precursive, and outwardly predisposed. Tractable decisions have fewer contributions, more homogenous outcomes, are less serious, are uncommon, precursive, and garner more balanced inputs. Familiar matters have limited costs, are non-precursive and are unequally impacted and internally impacted (Cray et al., 1991).

Vortex types have been found to bring about an erratic SDMP. Erratic SDMPs are liable to disturbance and deferral, and there is possibility of negotiation (Cray et al., 1988), while fluid SDMPs are relentlessly paced, fast, and officially directed (Hickson et al.,1986, p.120). Lastly, familiar types have been found to bring about a constricted SDMP. Constricted SDMPs rotate around a focal manager with power who obtains data and guidance from office staff and outside specialists, needing no extraordinary motivation to obtain it. Constricted SDMPs have a negligible inclusion of management committees (Cray et al., 1988). Hickson et al. (1986) likewise found that specific choices were usually connected with either sporadic, constricted, or fluid SDMPs. For instance, firm-wide corporate organisation brought about either a constricted or fluid process,

because all staff members had been through the activity previously and knew the rules. Overall, the literature in the field tends to indicate the importance of decision type in the context of SDMP.

2.9.4   Research Gaps

The particular qualities of an SD have a critical impact on SDMP attributes, compared to other relevant factors (Elbanna and Child, 2007b). However, despite their obvious significance, very few studies have addressed their direct impact on the connection between SD qualities and organisational performance. A large portion of the SD qualities considered have merely been included in observational reviews, and the degree to which the conclusions of the reviews presented here are generalisable is unclear. There is likewise a requirement for the operationalisation and exact definition of SD attributes and SDMP qualities. While the level of impact of a SD is undoubtedly related to SDMP comprehensiveness (Papadakis et al., 1998), SD significance has no association with rationality (Dean and Sharfman, 1993a). Moreover, decision familiarity was only highlighted in one observational review, and while it did not deliver significant outcomes to any great extent, it is likely to be a key feature in successful instinctive SDMPs, because intuition functions by detecting cues in a decision scenario and matching them to patterns stored in their schemas. Thus, if a choice is commonplace, the circumstance will probably trigger a strong instinctive reaction, as managers will accurately identify and match the cues presented to them to the patterns stored in their schemas, if made by an adequate TMT (Ericsson et al., 2007). In new choice situations where TMTs are not acquainted with the specific choice, having encountered the alternatives either rarely or at no other time, instinct is significantly more liable to be one-sided, bringing about ineffectual

decisions. It is likely that giving careful consideration to the recognition of the choice accounts for a portion of the contradictory discoveries reported by existing studies on intuition (for example Elbanna and Child, 2007a).

The previous sections focused on the contextual variables influencing SDMP. The following subsection addresses the outcomes of SDMP.

2.10   SDMP Outcomes: Speed

Prior literature has focused heavily on the economic outcomes of SDMP and paid inadequate attention to other vital SDMP outcomes that are significant to managers, and vital to the overall success of the SD (Papadakis and Barwise, 1997; Rajagopalan et al. 1993; 1997). The speed of SDMP is important if organisations are to be able to take advantage of opportunities, especially in fast-changing environments (Baum and Wally, 2003). Thus, one of SDMP outcomes explored in this study is speed.

2.10.1 SDMP Speed

SDMP speed refers to the rapidity with which firms implement all aspects of the SD process, from the preliminary consideration of alternative sequences of action, to the time an agreement to execute an action is decided (Eisenhardt, 1989). Variations in decision speed are imperative for several reasons. In dynamic environments, firms that settle on speedier choices can exploit market openings, such as new mechanical capacities, before these prospects are exploited by others (Gumpert and Stevenson, 1985). The fast use of such prospects may give companies a first-mover advantage (Makadok, 1998) or a progression of transient points of interest (Garud et al., 1998). Selection speed can be particularly critical in new endeavours, which often involve dynamic environments and

attempt to exploit the agility presented by their relatively small size (Chen and Hambrick, 1995).

Eisenhardt (1989) observed that faster decision making contributes to firm performance, especially in fast-moving conditions. Judge and Miller (1991) found support for this theory, though only in dynamic environments, while Baum and Wally (2003) discovered support in a range of environmental settings. However, in another current review, Perlow et al. argued that selection speed may in fact take away from firm performance at times. For their investigation of an Internet company, they concluded that, "an emphasis on settling on quick choices, while at first a wellspring of upper hand, inevitably turned into

an inside created and foolish requirement for speed", demonstrated by "an endless loop of declining consideration regarding decision matter and an expanding number of issues that required conclusive activity" (Perlow et al. (2002, p.37). Collectively, the findings of these studies highlight the significance of SDMP speed, although they indicate that its relevance to firm performance might be complex and restrictive. Thus, speed can have a crucial impact, even when it does not directly influence firm performance. For instance, quick decision making can reinforce the interest of potential investors, representatives, and other key partners, by highlighting that the firm is proactive and versatile (Langley, 1995). Similarly, Pfeffer and Sutton argued that "discussion and examination without activity are inadmissible" (Pfeffer and Sutton, 2000, p.251). However, quicker decision making may have damaging results too, at least in causing firms to lose the advantage of data that is uncovered gradually after some time (Shankar and Carpenter, 1998).

Eisenhardt (1989) conducted contextual analyses of eight microcomputer firms, and established a range of suggestions connecting choice speed with certain team behaviours, including the utilisation of continuous data, the consideration of numerous concurrent

options, and the utilisation of knowledgeable instructors. Judge and Miller (1991) focused on two determining factors anticipated by Eisenhardt – the quantity of options considered and the utilisation of experienced instructors – and analysed their impacts on choice speed. In an investigation of 36 teams in three different companies, they found that whilst considering more choices increased SDMP speed, paying little focus to external setting, the utilisation of experienced managers affected speed in various settings. Wally and Baum (1994) requested that 151 Chief Executive Officers (CEOs) react to a speculative investment situation and found that the participants' psychological capacity, utilisation of instinct, resistance to hazards, and tendency to act were all significantly related to choice speed, as were managerial control and implementation. In a later study conducted in 2003, Baum and Wally observed 318 CEOs in research that again utilised speculative choice situations, and found that two environmental attributes – dynamism and munificence – had a considerable impact on choice speed.

Past research on this topic has generally focused on large, established firms, or at least moderately stable organisations. For instance, Wally and Baum (1994) originally reviewed the CEOs of established firms with an average of 721 workers and $81 million turnover. The organisations included in their second review (2003) were drawn from a more extensive range of businesses, yet seem to have been of comparative size. Overall, limited attention has been paid to the factors determining decision speed, and there is limited, large-scale quantitative examining of organisations of different sizes in a dynamic environment. Most of the findings in this field have been reported in the context of large corporations. Thus, researchers must examine these issues in the context of start-ups and other emerging market contexts. Such investigation could shed light on how start-ups are struggling and growing (Aldrich, 2000).

Speedy decision making is one of the essential requirements of increasing organisation performance (Schoonhoven et al., 1990; Bhide, 1994).

However, investigating the factors affecting SDM speed is, to some degree, more restricted than research on extensiveness. One previous study argued that expanding comprehensiveness decreases the speed of decision making, because broad investigations require significant investment and, if drawn out, examination may even result in "loss of motion" (Langley et al., 1995). Identified within this theory is a view that heterogeneous teams can prevent fast selection, because they experience friction and cooperation issues that make agreement troublesome and tedious (for example Watson et al., 1993; Hambrick et al., 1996; Zenger and Lawrence, 1989; Jackson, 1992).

Previous execution is another significant factor. Teams who have been successful in the past may be less motivated to implement key improvements (Sherman and Chaganti, 1998). Wally and Baum (1994) also examined the impact of the characteristics of individual top managers in a firm on the pace of SDM.

There have been a few subsequent investigations into selection speed, and administrative councils have often endorsed quick decision making as a wellspring of market advantage (Jones, 1993). Specialists assert they progressively settle on vital choices in less time (Kepner-Tregoe, 2001; Ancona et al., 2001).

In her aforementioned examination of eight firms, Eisenhardt (1989) observed that the speediest top managers achieved the best results and benefits. Extending this examination to 32 teams in three businesses, Judge and Miller (1991) investigated the relationship between SDMP speed and performance. They found no relationship, with the exception of biotechnology companies, which operate in a high-speed industry.

Consequently, Eisenhardt (1989) and Judge and Miller (1991) found that firms making quicker decisions had better performance in volatile environments. Conversely, Forbes (2001) focused on 83 young Internet-based organisations and found that decision speed had no impact on firm performance.

Rapid selection may enhance strong performance in a range of situations, since quick key choices prompt (1) the early selection high growth opportunities (Baum, 2000), (2) the early adoption of effective new items or improved plans of action that enhance a company's competitive edge (Jones et al., 2000), or potentially (3) pre-emptive associations that enable economies of scale and information sharing efforts. In short, SDMP speed may empower firms in both dynamic and stable environments to pursue industry openings before the advantages disappear (Gumpert and Stevenson, 1985).

However, quick decision making may deliver terrible choices and poor execution if extensive data is sacrificed in order to increase speed (Kahneman et al., 1982). In fact, Fredrickson (1984) found a positive connection between far-reaching choice procedures (comprehensive and integrative) and performance in stable conditions, but a negative connection between thoroughness and performance in unstable conditions. Furthermore, Eisenhardt (1989) observed that quick decision making does not indicate superficial handling, but rather that decision making in the best organisations was quick and exhaustive. Moreover, other analysts likewise found that leaders may "stay aware of" rapidly changing conditions, as they take part in exhaustive research, scanning, and examination to produce superior performance (Priem et al., 1995; Glick et al., 1993).

2.11 Impact of SDMP Speed and comprehensiveness on performance

Prior researchers defined decision comprehensiveness as the extent to which the TMT engages in a formal, rational decision making process that aims to be either exhaustive or inclusive (Fredrickson, 1984; Simons, Pelled and Smith, 1999). It reflects the synoptic processes involved in SDM (Forbes, 2007; Fredrickson, 1984). The comprehensiveness of a decision correspondingly reflects the degree to which an organisation's TMT systematically analyses and assesses information concerning both the internal and external environments involved in each of these stages (Eisenhardt, 1989; Simons et al., 1999).

Prior researchers have reported a positive effect from SDMP comprehensiveness on SDM quality and organisational performance, both in stable and unpredictable environments (Forbes, 2007; Fredrickson, 1984; Fredrickson and Mitchell, 1984; Heavey et al., 2009). However, although some studies have revealed that decision comprehensiveness plays a positive role in generating better decisions, others have found no or a negative impact (Miller and Toulouse, 1998; Walters and Bhuian, 2004). For instance, Bourgeois and Eisenhardt (1988) found that in a high velocity environment, comprehensiveness was positively related to organisational performance. Nevertheless, the results of Fredrickson and Mitchell's (1984) and Fredrickson's (1984) studies demonstrate the opposite; i.e. that in unstable environments comprehensiveness negatively correlates with organisational performance, whereas in stable environments it has a positive effect on organisational performance. Fredrickson and Iaquinto's (1989) longitudinal extension of the Fredrickson and Mitchell (1984) and Fredrickson (1984)

studies, corroborates these earlier findings; demonstrating once again that comprehensiveness is negatively associated with performance in an unstable environment, and positively in a stable environment.

Research on decision speed and performance was first initiated by Bourgeois and Eisenhardt (1988). Decision speed was defined by how quickly organisations execute all aspects of the decision-making process (Eisenhardt, 1989). Decision speed was found to be a vital factor influencing firm performance in high velocity environments (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989a; Eisenhardt and Bourgeois, 1988). This finding, inductively derived in the 1988 study by Bourgeois and Eisenhardt, was later deductively tested and quantitatively supported by Judge and Miller (1991, p. 450), who argued: "The conclusion that (decision) speed and performance are associated is certainly in keeping with the experiences of a growing number of corporations that are relying on organisational speed to improve their financial performance. For example, Bower and Hout argued that organisations that make fast decisions 'are like World War II fighter pilots- they win by making faster decisions which preempt the opposition's moves' (1988, p. 110)."

The increased attention given to speed of the SDMP is a result of increasingly global markets and shortened product life cycles (Judge and Miller, 1991). Stalk from the Boston Consulting Group (1988, p.41), Stalk and Hout (1990), and Thomas (1990, p.2) state: "the ways leading companies manage time represent the most powerful new sources of competitive advantage." and "The big don't outperform the small, the fast outperform the slow." Besides the relevance of decision speed in practical b u s i n e s s environments, the speed of SDs also represents an essential unit of analysis

in the theoretical context. Eisenhardt (1989a, p.543) states this: "Although decision speed seems to affect firm performance in high-velocity environments (Bourgeois and Eisenhardt, 1988) and is a key characteristic differentiating SDs (Hickson et al., 1986), there has been little research on fast SDM." In addition to the established correlation between decision speed and firm performance in high velocity environments (Bourgeois and Eisenhardt, 1988), an additional point of discussion in the literature concerns whether speeding decisions have implications for the quality of SDs, which in turn have been shown to affect firm performance (Schwenk, 1990). In this regard, Wally and Baum (1994, p. 948) articulate, "Although fast decisions may not necessarily be better decisions, speeding decision making also need not diminish the quality of outcomes."

2.12 Factors Influencing SDMP

The previous sections reviewed the literature on SDMP, the theoretical perspectives on SDMP, and the role of context in SDMP. SDMP could be influenced by a number of other factors, including knowledge sharing and knowledge resources, middle management teams, and Islamic and Arab culture. The following subsection reviews the literature on these factors.

2.12.1 Knowledge Sharing and Knowledge Resources

The strategic management literature highlights the knowledge-based view of organisations. The knowledge-based view extends the resource-based view of organisations to include knowledge as a resource (Penrose, 1959; Barney, 1991). According to the knowledge-based view, knowledge is the most critical and strategic

resource an organisation possesses. Some researchers, including Grant (1996), Kogut and Zander (1992), and Kogut (2000), have expanded the knowledge-based view of organisations on this basis. According to this view, SDMP is influenced by knowledge-sharing and knowledge resources (Kogut and Zander, 1992; Kogut, 2000). For instance, if knowledge is not shared among team members, the cognitive resources of the team will remain under-utilised. Knowledge sharing is a valuable team process (Argote, 1999), without which management teams will be unable to make the best possible SDs. This study examines the impact of knowledge sharing and knowledge resources on SDMP.

Knowledge is a crucial asset for organisations to gain a sustainable competitive edge (Grant, 1996). The competitiveness of an organisation is established in the versatility of learning that is obtained through information sharing and exchange. It has been demonstrated that information sharing gives people, work groups, and associations the chance to enhance work performance and establish new ideas and advancements (Cumming, 2004). To improve knowledge sharing, companies have endeavoured to embrace decentralised, level structures; for example, work group settings. One benefit of this group-based hierarchical construction lies in its adaptable social structure (Argote et al., 2003), in which people not only profit by the intimate connections within teams, they also have the ability to establish relationships with external resources for securing and giving knowledge.

Knowledge sharing is a group procedure in which colleagues share important thoughts, data, and recommendations with each other. Group adequacy is a measure of the level of confidence of colleagues in their ability to execute certain practices important to achieving a desirable level of performance in a task (Bandura, 1997).

Information sharing and group adequacy are both essential elements of group performance (Gully et al., 2002; Argote, 1999).

One study demonstrated that out of nearly 2,000 US organisations assessed, 34% were utilising information administration frameworks (Wah, 1999). Information sharing is a vital part of administration learning, as it helps to classify the store of accessible information in an organisation and expand it over time (Leibowitz, 1999). Knowledge sharing is a basic group tool, because if information is not shared, the intellectual assets accessible inside a team remain underutilised (Argote, 1999). Information sharing does not occur naturally in a team, and the group's manager has a vital part to play in making it happen. Enabling its execution can appear differently in relation to domineering authority, and one of the focal contrasts in the results from existing research is that absolutist management hinders knowledge sharing by colleagues (Yukl, 2002). Thus, knowledge sharing is an essential advantage to engaging company initiative. However, as very few studies have examined this relationship, further research is required to explore this relationship in more depth.

House and Dessler (1974) characterised a steady manager as somebody who gives direction to employees, treats them reasonably, and regards their contributions as important. Colleagues should receive reasonable acknowledgment from a supportive leader for their contribution of ideas and data, which prompts them to impart their unique knowledge to each other. Thus, participative decision making and instructing practices from a supportive manager will likewise energise learning participation in teams. When a manager takes part in participative decision making, there are more opportunities for colleagues to share their thoughts (Locke et al., 1997). For instance, a leader may allow colleagues to share their opinions and urge them to suggest recommendations. In this

case, the chances of colleagues' contributions having an impact on decision making are higher, and as a result colleagues may discover their insight-sharing to be important. Educating and granting self-sufficiency prompt a search for solutions both inside and outside a team, and a more significant collective endeavour to help each other through knowledge sharing. As indicated by Arnold et al. (2000), the training conduct of an engaging manager involves urging colleagues to tackle issues together, and furnishing them with chances to share their insights.

Knowledge sharing may lead to better firm performance for two reasons: enhanced decision making, and better coordination. Stasser and Titus (1985) reported that expanded knowledge distribution led to more far-reaching choices and a superior use of existing information inside a group, prompting enhanced decision making. Therefore, knowledge sharing is considered vital for organisation performance.

Knowledge sharing is also likely to enhance group execution on account of its helpful impact on group coordination. Information sharing aids the production of collective mental models and the advancement of transactive memory, in this way leading to improved harmonisation among colleagues. Shared mental models can be characterised as normal information held by employees about their jobs and social procedures (Mathieu et al., 2000). A shared mental process has a positive impact on an organisation. As explained by Okhuysen and Eisenhardt (2000), if individuals share data over time, they build up the capacity to perceive and handle it in pieces or examples instead of discrete units (Isenberg, 1988). This example handling (i.e., instinct) is quicker than preparing single items of data. Accordingly, data sharing over time can prompt the improvement of collective team instinct. Given their involvement in sharing knowledge, colleagues can notice even small prompts from others and fill in the gaps (Isenberg, 1988). Therefore,

knowledge sharing assists in the creation of shared mental models that empower individuals to be in agreement during task execution, and accomplish better group performance. Sufficient proof from empirical investigations (Mathieu et al., 2000; Marks et al., 2000) has demonstrated the beneficial outcomes of shared mental models on the performance of an organisation. Thus, shared mental process has a positive impact on organisation performance.

Knowledge sharing could prompt enhanced coordination due to the improvement of transactive memory, characterised as the learning of who knows what in a group (Wegner, 1987). Transactive memory begins to form as soon as employees start recognising the expertise of their colleagues. With the creation of transactive memory, harmonisation is

likely to be enhanced, since employees in the organisation can predict each other's conduct (Wittenbaum et al., 1998). Prior research has examined other aspects of knowledge sharing. Lewis (1999) argued that continuous collaborations encourage understanding of other individuals' perspectives when colleagues uncover data showing their particular knowledge. She found that information trade in groups prompts the development of transactive memory, which is instrumental in higher execution.

Knowledge resources have received increased consideration since 2001 (Leiponen and Helfat, 2004; Cohen and Malerba, 2001). Access to knowledge resources has a direct positive impact on innovative accomplishment in a dynamic environment (Leiponen and Helfat, 2004; Cohen and Levinthal, 1990; Spreitzer, 1995; Woodman et al., 1993; Amabile et al., 1996; Pritchard and Karasick, 1973). Organisations with generous information resources can increase the chances of development by encouraging employees to consolidate earlier aspects of learning in new ways (Kogut and Zander, 1992; Cohen and Levinthal, 1990; Leiponen and Helfat, 2004; Nonaka, 1994). Thus,

knowledge resources play an important role in improving organisation performance.

The knowledge based view suggests that knowledge resources could assist in internal information exchanges (Kogut, 2000; Kogut and Zander, 1992). Learning systems, including data and social systems, encourage information exchange (Smith et al., 2005; Argote et al., 2003; Kogut, 2000). Social systems provide effective instruments for obtaining and coordinating new information, particularly in high-velocity environments (Kogut, 2000). Viable knowledge sharing and recombination occurs when workers can reach individuals, refresh important knowledge assets and retain pieces of data (Smith et al., 2005; Monteiro et al., 2004).

Knowledge exchange is encouraged when representatives can utilise information assets, such as community standards, casual interpersonal organisations and formal gatherings, to manufacture solid relationships, and prompt a readiness to share information (Gupta and Govindarajan, 2000; Eisenhardt and Galunic, 2000; Hargadon, 1998). Knowledge sharing benefits from focused worker trades, simplicity of correspondence, and high-quality connections (Nonaka, 1994). Attending gatherings and courses helps workers to distinguish between innovative activities and routine exercises, and stay away from the easiest course of action by remaining mindful of best practices (Rhyne et al., 2002).

Social inclinations affect the connection between knowledge assets and information exchange. In societies with higher power distance, progression is a noteworthy source of status. Reaching the next rung on the ladder is an objective for many employees, since they will be held in higher regard and have access to more prominent accolades. Knowledge is a vital instrument in this endeavour. Workers whose knowledge can be used to an advantage by bosses can charm their way up the career ladder (Ghauri and Fang, 2001). Fortifying these connections may provide them with recognition for

forthcoming favours. In this way, employees may accumulate knowledge until they can use it to reach the most favourable position.

2.12.2 The Middle Management Team and SDMP

Development of management strategy and usage is causing a significant transformation in the selection of new advancements, new interfaces with clients and providers, and industrial union. Other drivers of globalisation, such as rivalry, clients, and cost (Yip, 2003) are prompting the advancement of worldwide techniques adopted by organisations.

With a specific objective of keeping up, management teams are arranging, inspiring and leading these progressions. However, Balogun and Haley (2008) found the disappointment rate of key change projects to be 70%. There has been little discussion of the actual practices of middle managers (Rouleau, 2005) and how these can be improved (Balogun, 2007). Mayer and Smith (2007) argued that the role of the MMT is often misunderstood and unsupported by the top administration. This study focuses on the role of middle management as one of the key components in change implementation, keeping in mind the end goal to reveal a general rule that will enhance vital performance. Middle managers confront challenges in methodology execution. They do not characterise the new system. They work in a perplexing domain where they deal with the top administration and face inquiries and resistance from their teams. They also regularly deal with internal and external partners. They may confront problems and limitations that are regularly not adjusted to the new technique being proposed.

The role of middle management in technique improvement has been addressed in some studies. In their exhaustive review of strategy process research, Hutzschenreuther and

Kleindienst (2006) recognised the middle administration point of view to be an "expanding" area in technique investigation and therefore a research opportunity. Another comprehensive review conducted by Shi et al. (2009) revealed that 30 papers have been published in leading management and strategy journals since 1993. The most noticeable review was by Wooldridge and Floyd (1990; 1992), which prompted the discourse on the inclusion of middle administration inclusion in procedure advancement.

Later reviews focused on the role that middle management plays in connecting top administration to the firm. Balogun and Johnson (2009) argued that more research is needed on how middle managers, as change implementers, view and actualise vital decisions in the organisation. Without the top administration, collaboration and correspondence among associates about key changes affects how methodologies are executed. Jarzabowski and Balogun (2009) demonstrated that vital collaboration must be accomplished through transactions and various deals between leading individuals, including middle administration, throughout the change procedure. This incorporation of middle administration increases agreement, and enhances firm performance. Thus, Raes et al. (2011) identified middle management as the connecting pin that can make vital decisions and empower, postpone or even damage the execution of procedures. Moreover, Raes et al. (2011) also formulated and theorised an interface model to clarify the impacts of the two management teams – top and middle – on each other during procedure advancement. For further investigation in the field, these authors prescribed utilising a methodology as-practice technique.

Other researchers have provided further evidence of the role of middle managers. Roleau and Balogun (2011) aimed to increase understanding of how middle administration deliberately impacts the organisation, and how middle managers ought to be

incorporated into procedure advancement. Roleau and Balogun (2011) also used the strategy as-practice method, and collected subjective information from middle administrators, given in biographies, clarifying their inclusion in procedure advancement. Kellermanns et al. (2011) carried out a meta-analysis of the impact of key agreement on firm performance. One of the most important findings of their examination of 23 autonomous examples was that the relationship between agreement and execution is especially important in middle administration for methodology utilisation, and of low significance in top administration groups.

Balogun (2007) and Rouleau (2005) highlighted the significance of dealing with the everyday elements of middle management. Johnson et al. (2008) characterised three patterns influencing middle administration's focus on key change, including 1) hierarchical decentralisation of key activities; 2) improved middle manager trust in the vital space because of enhanced preparation; and 3) operational duty and learning being pushed onto the middle management level. This paper makes three claims. Initially, it compresses the models and instruments used to study middle administration behaviour in key change activities. Secondly, it investigates the unpredictable and demanding role of middle managers in vital change as noted by individuals from the example. Finally, it establishes a typology, drawn from the existing examination, and tests its adequacy in determining the breadth of middle administration's role in vital change implementation.

2.12.3 Islamic and Arab Culture

This section reviews the extant literature concerning Arab culture and its significance in the context of management and organisations in Arab countries. It commences with a definition of Arab culture, followed by a discussion of the influence of Islam on the culture. It then assesses the literature concerning the impact of this culture on

management and organisations, and that regarding the impact of organisational culture on the same. It concludes with a summary of the key characteristics of management in Arab contexts.

Definition of Arab culture

Hofstede (1991) defined the Arab group as consisting of the national culture of the following seven countries in the Arab region: the United Arab Emirates, Kuwait, Iraq, Lebanon, Egypt, Libya, and Saudi Arabia. The culture of these countries is collectively known as Arab culture. Hofstede (ibid.) identified these countries as possessing high collectivism, a large power distance, a moderate level of masculinity, and relatively strong uncertainty avoidance. Supporting this categorisation, Wilson (1996) suggested that the attitudes and beliefs shared by the majority of people in Arab countries were similar across social and national classes. However, other studies oppose this categorisation of the Arab group. For instance, Lamb (1987) argued that the generalisation of major aspects of cultural values across Arab countries is impossible. However, the majority of previous research has treated Arab culture as one unit when examining the impact of Arab culture on organisations.

In this thesis, Arab culture will not be treated as one unit. Instead, individual countries will be regarded as a single unit of analysis. Specifically, the thesis concerns the culture of Saudi Arabia, and its influence SDMP in its HEIs.

The impact of religion on Arab culture

A number of studies, such as that conducted by Shahin and Wright (2004), regarded religion as a significant variable influencing major aspects of Arab culture, with the most

critical factor being Islam. Thus, religion can be considered one of the most distinctive and critical dimensions of Arab culture.

The roots of Arab social life, the Arabic language, and Arab values, and traditions lie in Islam, which Muslims believe to be a comprehensive way of living (Kavoossi, 2000). Indeed, most aspects of the daily life of all Muslims are founded on this belief. Other factors are slowly influencing aspects of the lives of people in Arab countries, such as the economic and political systems, which are increasingly influenced by secularism, together with capitalism and socialism (Al-Shaikh, 2003). However, Islam remains the dominant factor influencing the Arab way of life.

The Islamic religion is argued to strengthen specific characteristics of the Arab culture, including trust, loyalty, and honesty (Ali, 1998). In addition, Islam considers work to be a part of worship, and the aspiration to work is grounded in non-material needs (Dadfar, 1990). According to Dadfar (ibid.), the Islamic system of management is rooted in consultation, participation, the dissemination of wisdom and knowledge, and the equal elevation of opportunity. While some studies, such as that by Badawy (1980), indicated that the attitudes and approaches of Arab managers possess similarities with those of managers from western countries, Hofstede (1991) suggested that Arab cultures are distinct in terms of power distance, uncertainty avoidance, and collectivism. Concurring with this view, Dadfar (1990) concluded that Arab culture possesses unique features that differentiate it from western cultures. For instance, unlike western cultures, Arab cultures adhere to the Islamic religion, and can be characterised by individuals' loyalty to their families in the first instance, followed by loyalty to their tribe, or to their extended family members (Sidani and Thornberry, 2009). According to Dadfar (1990), business is

generally connected with family, and is usually based on relationships with people. Another distinctive feature differentiating Arab from western culture is its attitude towards time, since Arabs are considered to be traditional and oriented towards their past (Kalliny and Gentry, 2007), and eastern cultures consider time to be an infinite and never-ending resource (Miroshnik, 2002).

Impact of culture on management and organisations

A number of studies have examined the Arab culture, and its impact on management and organisations, providing evidence of the influence of culture and politics on the behaviour of managers, and identifying the significance of Islam, government control, and tribalism in developing contemporary management in Arab countries (Budhwar and Mellahi, 2006; Weir, 2001).

In the city of Medina, in present-day Saudi Arabia, the Prophet Mohammed established the first principles of an Islam-based management style, a major feature of which was consultation, or Shura. The Prophet regularly consulted with his followers on various issues related to state management and policy development, formalising the consultation process by creating an official consultative council, consisting of knowledgeable, pious, and wise individuals. The consultative council participated in decision-making concerning matters affecting the community of Muslims. The successors of Prophet

Mohammed were the Caliphs, who followed Prophet Mohammed's example by employing consultative councils, and consulting with their followers (Al-Hirrawi, 1986). Therefore, consultation with followers constitutes a part of Arab culture that was originally employed and promoted by the Prophet Mohammed.

In addition to the practice of consultation, organisations in Arab countries use the directive form of management, which means that although followers or subordinates are consulted during the decision-making process, the ultimate decision-making power remains with the leaders or managers of an organisation. Managers in Arab organisations do not delegate authority or power to their employees, and although employees frequently participate as a group in the consultation process, the managers alone make the ultimate decisions. As a result, the managers do not transfer their powers, and their employees are generally disinterested in obtaining power and its associated responsibilities (Mendonca and Kanungo, 1994; Muna, 1980; Saigie and Zeynep, 2003). Thus, a dual system of management is generally apparent in Arab countries, where consultation and directive management are employed concurrently in the decision-making process.

As noted previously, the principle of Shura constitutes the foundation from which the consultative rules within organisations in Arab countries are usually derived. The root of Shura is Islamic governance and Arabic tradition (Ali, 1998). However, some studies have indicated that the practice of consultation within Arab organisations differs from the Arab tradition. For instance, Bjerke and Al-Meer (1993) suggested that the process of consultation is conditional, and is limited to select employees, or committees. Thus, the consultation process is well recognised conceptually within Arab countries, but the practice itself varies across organisations.

Evidence of the use of directive management in Arab countries has been provided in studies such as those conducted by Badawy (1980) and Muna (1980), which indicated that directive-consultative styles are employed by managers in Arab countries more frequently than formal types of participation. Muna (1980) examined the leadership

conduct of managers in companies from six Arab countries, and reported that directive management, along with the regular use of the consultation process, was the dominant style employed by Arab managers. This frequent use of directive management, together with the consultative decision-making style, is consistent with the social and cultural traditions of Arab countries. However, Bjerke and Al-Meer (1993) examined the impact of culture on attitudes towards the decision-making process in the context of Arab countries, and concluded that the cultural values and norms could limit, or simplify, the usefulness of management practices.

Culture has been the subject of much scholarly investigation in SDMP research. Cross-cultural studies have indicated that managerial practices are influenced by the national culture of a country (Song et al., 2000). Due to globalisation and free market movements, SDM has become a thought-provoking issue (Herrmann and Datta, 2002; Buckley, 1993). This suggests that management considerations and behaviours influence the development of internationalised firms (Tyebjee, 1994; Burton and Schlegelmilch, 1987), possibly bringing about diverse change. Tse et al. (1988) proposed that SDMP is influenced by national culture. Thus, knowledge and understanding of different national cultures and their influence on SDMP is very useful. Such knowledge can help managers to work in various national settings, and to outline and implement viable key strategies in remote markets. Moreover, authors in SDMP research (Strandskov and Pedersen, 2008; Tihanyiet al., 2001; Loane et al., 2008) have suggested that the managers' subjective considerations in utilising objective logical arguments are also useful in different organisational and cultural settings.

In Islamic culture, Bedouin management practices are prominent. Bedouin refers to local people in Arab states and their beliefs and practices. Bedouin administration practices are characterised by an emphasis on the rejection of instability and maintenance of collective

congruity (Ouchi, 1981; Hofstede, 1980, 1997), convincing directors to avoid any open clashes (Dawes and Massey, 2005). In this way, managers avoid punishment and vulnerability while taking part in less discerning decision making. As a way to ease the tension involved in settling on critical choices, and to mentally diminish emotional vulnerability, Arabic managers position themselves with regard to social standards such as "Wasta" (associations). However, these standing framework activities can obstruct the rationality of SDs, such as a manager's diversion from the ordinary SDM tools, a scarcity of appropriate understanding, and absence of solid and relevant data (Omar, 1984; Abdulwahab, 1979). In the meantime, they are not tolerant of employees' unrestricted activities, or do not allow deviation from the formal guidelines (Muna, 1980; Bjerke and Abdulrahim, 1993). These practices in Arab managerial conduct might be additionally strengthened by the way that religion and acquired social standards and customs frame a sense of recognisable social proof. This helps to achieve success in the organisation. It

has been argued that managers apply more power inside the organisation, which again is required to lessen critical thinking disputes (Weir, 2001; Dadfar, 1993; Budhwar and Mellahi, 2006). This type of control creates additional time targets. Given the above foundation, the principle supposition is that Arabic managers establish a relationship to begin with, then form associations, before addressing the heart of the planned business at a later meeting. Whilst this procedure is extremely tedious, an assertion has been built up verbally (Weir, 1998).

SD style is the nature of accessible assets that managers focus on to accomplish the goals of the commercial organisation (Weick, 1979). A study by Rowe and Boulgarides (1983) showed that a diverse number of aspects and judgments influence the system of hierarchical decision making. They theorised that business leaders recognise their SDs

and demonstrated a model of choice styles driven by four identity powers (order, expository, applied, and behavioural). In moving towards the particular issue of administrative conduct and Arab countries' decision-making approaches, Hickson and Pugh (1995) stated that there were four distinct variables in Arabic management practices: the external environment, the Western journey for oil, Bedouin/tribal conventions, and Islam. The size of the impact of each determinant obstructs management in the area, embracing strict codes of top-down structure, frequently referred to as a "bureaucracy" administrative style.

Moreover, scientists looking at the impression of polychromic time values (Trompenaars and Hampden-Turner, 2007; Schneider and Barsoux, 2003) clarified that Arab administrators chip away at various tasks without a moment's delay, are versatile, and are not upset by any interruption in work by others. The Arabic management style has unique characteristics. Walker et al. (2003) reported that Arabs are able to do numerous jobs and assignments at once. Thus, the idea of time for them is liquid and adaptable, although there is a risk that it could be overlooked completely. The Arab administration style has been depicted as divided and directionless (Ali, 1990; 1995), which may lessen the speed and rationality of SDs. In this way, the knowledge of administrators' decision-making styles from a Saudi Arabian viewpoint is undeveloped.

The Arab culture depicts the quest to gather individuals' objectives and mirrors a culture viewpoint where social individuals determine self-importance in a group working setting (Steensman et al., 2000; Morris et al., 1994; Griffith et al., 2006). Cooperation and independence, as aspects of social legacy and national practices, have been shown to have different influences on how managers utilise target data when making decisions (Hitt et al., 1997; Smith et al., 1996). Components of cooperation can likewise be followed in

Hofstede's examination (1994), in which it is argued that collectivist nations are characterised by useful correspondence between people and divisions, and solid, strong social systems are a persuasive channel of data used to satisfy hierarchical objectives. Significantly, numerous Muslim analysts have explored the possibility of creating an appropriate Arabic management practice that can assist progression strategies and accomplish particular goals (Parnell and Hatem, 1999; Ali, 1996; Aycan et al., 2007; Ali and Ahmed, 1996). Besides, Arab administrators are usually more hesitant to delegate, escape obligations and take risks, lean towards a stable a way of life over fulfilling yet difficult work, and express the need for kinship and individual contemplation over authoritative objectives and execution (Sabri, 2004; Ali, 1996).

In the context of Arab culture, relationship building and elements of warmth have been found necessary, and trust, respect, and individual relationships are key elements of methods and approaches of business (Saif, 2009). With regard to global human movement, Dedoussis (2004) suggested that Arab relationships have a tendency to be variously levelled and collectivist. Likewise, Mohamed et al. (2008) and Deresky (1994) highlighted that Arabic culture could be described in terms of setting, verbal association, and nonverbal correspondence, in which it is necessary to find hidden meanings and decipher secretive pieces of information. In addition, nepotism, individual associations, and biases fundamentally affect Arab administrators' choices (Harastani and Al-Turki, 1985; Barakat, 1983). Thus, previous research has demonstrated an unmistakable impression of profoundly collectivistic, face-saving, and status-awareness features (Gregg, 2005) that characterise decision making in Arabic culture.

The findings of Eisenhardt (1989) and Zehir and Ozsahin (2008) supported the linkage between inclusion and the speed of vital decision making, and demonstrated that

widespread interest speeds up the decision making process. Although the results of research by Hofstede (1980) were generalised to every Arab country, just six Arab states (barring Qatar) were inspected. His findings showed the existence of a social contrast between the general public and the inner workings of similar industries.

Pecking order directs the distribution of energy and the work specialists concerned with key decision making (Grinyer et al., 1986). This type of social factor can be observed in the work environment in terms of the amount of joint effort anticipated between administrators and representatives. Organisations scoring high on progression will be more totalitarian, favour collective decision-making processes, and see the director as the specialist (Gupta, 2012). In a comparison of business practices in Japan and Arab states, Dedoussis (2004) argued that Arab administrators request conviction, submission, and consistency from their subordinates, indicating a social separation between supervisors and managers, which might be ascribed to convictions about specialists in conventional social orders. This finding is supported by the respect for position and experts, as dictated by age, family, sex, and their inclination to restrict individuals inside frameworks of conventional and customised specialist structures (Ali, 1993; Abdalla, 2000; Rugh, 1997; Al-Aiban and Pearce, 1993). These findings were additionally reinforced by Al-Rasheed (2001), who argued that Arabic managers are more dictatorial leaders following an absolutist style of management. In this manner, regardless of the nature of the general public, and the solid emphasis on consultative practice within religious instruction, choices are never made together with, or assigned to, subordinates. In addition, Sabri (2007) and Ali and Sabri (2001) observed that a firm's managerial style is related to high power and exclusive societies. Furthermore, Baker and AbouIsmail (1993) noted that organisations make decisions that rely on the top management applying strong control and limiting any perception of a status chain.

In view of the political managerial practices observed by Eisenhardt and Bourgeois (1988), it appears that managers perform official tasks, as managers trust that other managers will be influenced by the outcome of a decision. This political conduct encourages a tendency for managers to try and fulfil their own needs by influencing SDMP. This could politically affect the Arab authority given by GLOBE (Global Leadership and Organisational Behaviour Effectiveness) analysts (House et al., 2004),

which revealed that Arabic directors were found to score lower than those from other locations in terms of appeals, group arrangements, or participative qualities (Smith et al., 2007). Thus, there are visible differences between managers from Arab countries and those from other nations. It is worth noting that successful Arabic managers scored more highly on "self-defensive" characteristics – egotism, status-cognisance, struggle enlistment, and dependence on technique.

Thus far, this literature review has focused on national cultures within Arab countries. However, as organisational cultures also influence management and organisations, the following section reviews the literature concerning this aspect.

Cartwright and Cooper (1993) defined national culture as the set of beliefs, behaviours, norms and customs prevalent among the population of a particular country. National culture is an essential element of a nation and society, and is profoundly entrenched in organisational practices and systems; it could affect the strategies and actions used by an organisation (Sirmon and Lane, 2004). Previous research indicates that national cultural values are of limited significance if their values are preserved in organisational cultures (Manuel, 2012; Sun, 2009). Petrou (2007) argued that organisational cultures are concerned with employees and organisational practices are affected by the national cultures of a country. Therefore, the national culture of a country influences the

organisational culture of both local organisations and international firms.

In the context of Saudi Arabia, Arab culture influences organisational culture. Moreover, most aspects of Arab culture are influenced by Islamic culture. However, Islamic culture does not always influence every aspect of Arab and organisational culture. The following sub-sections present the links between Islamic culture, Arab culture and organisational culture, along with the differences between Islamic culture and Arab culture.

The major and only widely accepted religion in Saudi Arabia is Islam. Islam underlies the behaviour of the population of Saudi Arabia. Therefore, Islam is regarded as the main influence on the personal behaviour, namely the Arab culture, of people in Saudi Arabia. For example, in a political context, the basis of the relationship between the people and their leader is Islam. The Islamic religion develops guidance by consensus and consultation in decision-making processes in politics (for example Moran et al., 2014; Al-Twaijri and Al-Muhaiza, 1996). Similarly, the consultation process is expected to be practiced in organisations in Arab countries, including Saudi Arabia. In addition, Islam promotes noble virtues and social aspects of behaviour, such as honesty, generosity, hard work, and time-management (Deresky, 2014; Al-Twaijri and Al-Muhaiza, 1996).

Previous studies (Hassan and Lewis, 2014; Robertson et al., 2001) indicate that the attitude and behaviour of managers in Saudi organisations and the way in which Saudi organisations operate are significantly influenced by Islamic values. Anastos et al. (1980) showed that management practices and attitudinal behaviour towards business in Saudi Arabia are influenced by Islamic values. Managers and employees in Saudi organisations are thus expected to maintain superior moral standards when conducting business.

Previous research has suggested that cultural values in Saudi Arabia are derived only from Islamic teachings (Hunt and At-Twaijri, 1996; Moran et al., 2014; Saudi National Portal, 2017; Saudi Vision 2030, 2016). Therefore, previous studies have tended to consider

broad and uniform values in society and organisations that are derived from Islamic teachings. These suggestions have led some researchers to consider Saudi Arabia as a homogenous Islamic society in which all economic, social, management and political issues are based on obedience to Islamic cultural principles. However, such research ignores some practical issues. For instance, the level of obedience to Islamic values varies within Saudi Arabia, despite Islam being the only official religion of the country. In this context, Ali and Al-Shakhis (1989, p.181) suggested that whilst hard work is perceived positively in Islam, the promotion of ethics in the workplace generally echoes principle rather than actual practice. Moreover, Bjerke and Al-Meer (1993) reported that managers and leaders in Saudi Arabia consult only a few select people when making decisions, even though Islam stresses the importance of consultation processes in decision-making.

A deviation from Islamic teaching has also been observed with regard to the position of women in society and organisations. Previous studies (Abalkhail and Allan, 2015; Al Lily, 2011; Deaver, 1980) have examined the treatment of women in Islamic teachings and social tradition in Saudi Arabia. In general, the role of women is to maintain the family and society (Alireza, 1987). However, according to the teachings of Islam, women should be allowed to pursue their education or career under certain conditions (Abalkhail and Allan, 2015; Elamin and Omair, 2010; Al-Munajjid, 2008). Some of these conditions include undertaking less risky work (jobs that do not require hard manual labour), a working environment that complies with Islamic teaching, and work that causes no disruption to family commitments.

Nonetheless, the role of women in Saudi public life is complicated and controversial. On one hand, some reports and studies present the position of women in a less positive light (Alhareth et al., 2015; Badran, 2011). On the other hand, some studies have provided alternative positive views about the position of women in Saudi Arabia (Abalkhail and

Allan, 2015; Qureshi, 2014). Despite recent progress in women's participation in education and work, a number of Islamic and social norms remain unaffected. For instance, the concept of a *mahram* (a male guardian for women) is still applicable in public life and organisations (see Abalkhail and Allan, 2015). In addition, the Saudi government has put considerable effort into enhancing women's work opportunities, as indicated by Alhareth et al. (2015). However, there is a lack of empirical research investigating the role of women in the workplace. Moreover, there is limited knowledge about the role of women in the decision-making process in organisations. The present study aims to explore the role of Arab and Islamic culture in the context of SDMP, with a focus on the role of women.

Impact of organisational culture on management and organisations

Organisational culture refers to the expected and accepted habits, attitudes, and values within a particular organisation (Glaser, Zamanou and Hacker, 1987). A number of studies have examined the impact of organisational culture on various aspects of organisations, such as the productivity and performance of employees (Akin and Hopelain, 1986), strategic planning and policy execution (Schein, 1985), and selection, recruitment, innovation, and socialisation in new product development. The organisational culture also influences management practices and work values, including promotion practices, material rewards, and team-working. Thus, it is necessary to align the structure, strategy, practices, and systems of an organisation with the major aspects of the cultural context (Newman and Nollen, 1996; Lines, 2004).

In the context of organisations in Arab countries, bedoaucracy has been identified as a distinctive feature of organisational culture; the term originates from 'Bedouin'. While

Saudi Arabia, one of the Arab countries, has striven to adopt the modern management theories and practices developed in western countries (Al-Awaji, 1971), the behaviour and attitudes of Saudi managers remain traditional, which has engendered the current form of Saudi bureaucracy. The study conducted by Kassem and Habib (1989) focused on the significance of understanding organisational culture and highlighted the importance of understanding the external context of Saudi Arabia. Concurring with their views, Assabaq (1991) emphasised the importance of understanding the external context, adding that, despite recent developments, the managerial system in Arab countries requires improvement to enable it to address personnel issues, such as selection, evaluation, training, and motivation.

Based on a study involving 80 Saudi managers, Abdulwahab (1989) found that managers who attend management training tend to follow a scientific technique of decision-making. The study also reported that the managers involved highlighted the importance of training, despite receiving relatively little of it. In addition, Khashogjy and Yaqy (1989) identified a lack of participation as an important issue in the decision-making process. According to Abdulwahab (1982), a strong relationship exists between job satisfaction and the decision-making process, while Khamees (1990) found participation to be the most critical social requirement for identifying with a group, arguing that it can also help enhance loyalty to an organisation. Meanwhile, Aseflan (1984) reported that employees who have undergone HE participate to a greater degree.

While previous researchers have focussed on the participation of employees in Saudi Arabian organisations, they have also examined the leadership styles used in organisations. Anastos, Bedos and Seaman (1980) connected the centralised decision-making process in Saudi Arabia with the personal form of leadership founded on the

Bedouin ethos, while Badaway (1980) considered the management style of Saudi Arabian managers to be a conflict between the consultative and authoritarian styles. The authoritarian nature of traditional Arab leadership is connected with the authoritarian management style, while the tribal and Islamic values of Shura are connected with the consultative style of leadership. Moreover, Ali and Swiercz (1985) regard Arab culture as being authoritarian, arguing that leaders within the culture control the behaviour of their followers or subordinates through manipulation, and that managers control the environment in which their employees operate. The findings of this study demonstrated that a high level of satisfaction was observed when managers operated a participative leadership style, while satisfaction levels were low when managers operated an autocratic leadership style. Moreover, there was found to be a high level of trust in the subordinates of participative managers, and a low level in those of autocratic managers.

Meanwhile, Al-Nimir and Palmer (1982) examined innovation ability and found that bureaucracy was the main reason for low levels of innovative behaviour among Saudi bureaucrats, highlighting the challenge of generating social change, even if such change would benefit Saudi bureaucracy. The cultural factors influencing the decision-making process included the lack of ability to innovate, and a resistance to social change on the part of employees.

Characteristics of management in Arab culture

The studies discussed in the preceding section indicated that the management of Saudi organisation is heavily influenced by traditional culture. The characteristics of Arab management practices can be summarised as follows:

Firstly, managers of companies in Arab countries are either authoritarian (Kaynak, 1986), or consultative (Ali, 1990) to a significant degree, and the management style depends on the various categories of followers, or subordinates. In general, studies have shown that the authoritative style is the dominant style for dealing with subordinates. Moreover, most organisations have been found to have centralised decision-making process, with the potential to be influenced by politics. The nature of the decision-making process was found to be determined by seniority, in terms of the positions involved, and status. In practice, the amount of delegation of power was found to be low when subordinates' level of trust was low (Muna and Bank, 1993; Al-Faleh, 1987). Authority and power can determine an individual's position within a society, and this power and status might originate within the family, the tribe, the position within an organisation, the personal relationship with the management team, or the academic degree titles obtained.

Secondly, the frequent use of 'Wasta' is common in many Arab organisation. Wasta refers to the interpersonal relationship employed to affect action in an organisation (Weir, 2001; Metcalfe, 2007), and which can be used in the selection and recruitment of employees, together with promoting employees within an organisation. Wasta is employed in conjunction with the western style of selection, recruitment, and reward systems, although occasionally, the family and tribal members may receive preferential treatment in a recruitment and selection process (Branine, 2001). The attitude towards Wasta varies according to age group. According to Whiteoak, Crawford and Mapstone (2006), senior managers, who are already established in an organisation, regard Wasta as being less important than younger managers, who regard it as being significant for the development of their career in an organisation and industry.

Thirdly, face-to-face interaction is common in Arab culture, and Mellahi (2006) suggested that people interact concerning business matters in both the marketplace and the mosque. This form of interaction is also common in organisations, where employees and managers tend to prefer direct contact with one another, since it is believed to produce trust, commitment, and support. The preferred means of communication includes personal visits, and speaking directly with the employees and managers, while the use of letters or email is less frequently employed. Face-to-face conversations involve the challenge of conveying negative messages, such as refusing employees' requests. According to Hutchings and Weir (2006), the ability to convey a negative message whilst also maintaining an interpersonal rapport is a feature of a successful manager in Arab countries. Thus, managers should develop the ability to communicate both positive and negative messages during face-to-face conversations.

Finally, Arab culture can be characterised as being collectivist, paternalistic, and highly power-structured. Younger individuals are expected to respect their seniors, and junior managers are expected to respect senior managers. Furthermore, age is considered to provide credibility, acceptability, and authority. In the context of both the tribe and the organisation, older individuals adopt leadership positions, since age is respected in both the community and the organisation.

The discussion presented in this section describes how the practice and influence of Islamic principles varies within Saudi Arabian social and organisational life. The degree of adherence to Islamic principles regarding consultation processes and the role of women varies, to some extent, in practice. The literature review suggests that the role of women in Saudi organisations requires further attention. This is important given that gender is a

major issue in the literature on organisations and organisational culture (Vanderbroeck and Wasserfallen, 2017; Alvesson and Billing, 2009). Therefore, it is imperative to explore the role of Islamic and Arab culture within organisations operating in Saudi Arabia.

As shown in the above discussion, Arab culture and management are influenced by religion, and Arab management practices are also influenced by tradition, and non-Islamic values. The literature includes a limited number of studies focusing on the influence of Islamic management principles in the decision-making process in Saudi Arabia, and specifically in the context of HEIs in the country. Thus, one of the aims of this thesis is to examine the role of Islamic and Arab culture on SDMP in the context of HEIs in Saudi Arabia.

2.13   Higher Education system in Saudi Arabia, UK and USA

UNESCO (1998, 2014) defined an HEI as an establishment responsible for developing best practices in teaching, facilitating learning, disseminating knowledge, and assembling innovative and creative ideas to develop a robust and fair community and society. Although HEIs have a similar purpose around the world, the HE systems in various countries have unique features. The following section reviews the HE systems in Saudi Arabia (SA), the United Kingdom (UK) and the United States of America (USA). Specifically, it focuses on the history of HE, types of HE, growth in HE sectors, sources of funding, the role of state, government, and country, gender diversity, subjects taught, and the mechanisms informing the governance and monitoring of HEIs.

 HE systems in SA

The importance of learning is critical in SA, where the cost of studying in an HEI is subsidised by the Saudi government by order of the King (Alamri, 2011).

Recently, the focus of the education system in SA has shifted towards providing increased access to education for all. Consequently, the literacy level in SA had reportedly increased to 96% in 2013 (Arab News, 2013). In addition, literacy levels have risen due to higher enrolment at HEIs, especially among female students (Alamri, 2011).

HEIs did not exist in the newly formed Kingdom of Saudi Arabia. They were first introduced in 1957 with the establishment of King Saud University in Riyadh, which then had 21 male students and nine members of staff (Saleh, 1986). The HE sector did not receive any further major input or attention until the 1970s, when its expansion became a major focus of the government as the country underwent a period of rapid development. During the expansion stage, considerable attention was paid to HE, with the aim of better preparing the workforce for the changes that arise due to economic development in SA (Royal Embassy of Saudi Arabia, 2013).

The Ministry of Education was responsible for expanding the HE system in SA until 1975. After this time, accountability for managing the HE sector was passed to the Ministry of Higher Education. The government of SA played a critical role; it provided land to HEIs and grants for students to support their studies in HEIs. Moreover, research centres were created by the government to catalyse the expansion of HE (Saudi Arabia Ministry of Higher Education, 2015). It is the HE sector's role as an engine of growth and international success that prompts the government to pay attention to HEIs (Alromi et al., 2008).

Over the past four decades, the number of HEI in SA has increased dramatically (Royal Embassy of Saudi Arabia, 2013). As of December 2017, there were 28 state universities and 10 private HEIs (QSWOWNEWS, 2017). Furthermore, the government increased the budget for education from 24% in 2012 to 25% in 2015 (Oxford Business Group, 2015). Of the new universities, King Abdullah University of Science and Technology was the nation's first co-educational university (Reisberg, 2011). This represented a significant divergence from the national tradition in SA, as men and women are allowed to work and carry out research together. However, there are also universities exclusively for women in the Kingdom, such as Princess Nourah University in Riyadh.

The growth of HEIs in SA has been driven by the desire to expand the younger generation's educational horizons. Instantaneous social change combined with continuous economic growth in SA has extended opportunities within the HE field. For instance, HEIs have begun to teach a wider curriculum, offering an extensive range of subjects to students. Nevertheless, HE systems in SA continue to place great emphasis on religious learning.

The first private university, King Abdul Aziz University, was established in 1967 in Jeddah. However, it was later converted into a public university in 1971 due to funding issues. This had a negative impact on the growth of private universities in SA. The government permitted the formation of a private university in 1998 (Jamjoom, 2012), and Prince Sultan University, a private HEI, was established in 2000. As of today, there are 10 private HEIs in SA. However, the popularity and growth of private HEIs is very slow. There has been a lack of initiatives from the SA government to promote the enrolment of students in private HEIs (Jamjoom, 2012).

Therefore, the growth and acceptance of private universities among students is likely to be a slow process in SA.

Along with the growth of private HEIs, the government of SA has made efforts to reform its HE systems. Historically, HEIs were segregated by gender. However, female students have recently been permitted to study in the major universities in SA. SA has the largest female-only university in the world, the Princess Nourah Bint Abdulrahman University, which has 52,000 female attendees (Royal Embassy of Saudi Arabia, 2013). Thus, although females do not study alongside their male peers, they can access the opportunities afforded by a tertiary education in SA. Moreover, the government of SA has taken the initiative to boost female enrolment in HEIs by establishing additional female-only HEIs and organising conferences to discuss techniques for encouraging more female students to enrol at HEIs (Kingdom of Saudi Arabia Ministry of Education, 2010). Nevertheless, there is still considerable scope for improvements, for example the need to offer a range of subject choices for female students that is comparable with that offered to male students (Abdulaziz University, 2014).

Romani (2009) mentioned that the expansion of HEIs in SA has been driven by social, political and economic factors, and specifically by the desire to reduce dependency on overseas HEIs (Abir, 2002). This development in the SA HE sector has driven a number of changes; in particular increasing the number of HEIs requires additional access for graduates to a range of professions (Sawahel, 2010). There is some imbalance, as the push to expand the HE sector was state-driven (by the intention to create a well-qualified workforce for SA), rather than market-driven.

The governance of HEIs is overseen by the Supreme Council of Higher Education (SCHE) and the Chairman of the SCHE is the highest authority. The role of Chairman is held by the King of SA. The members of the SCHE are eight university rectors at the Ministry of Higher Education, and representatives of other educational sectors. SCHE is primarily responsible for supervising and regulating the HE systems in SA. Moreover, it is also responsible for coordinating HE policies and rules with SA's national strategies and policies (Alkhazim, 2003). The SCHE developed policies and regulations for researchers, teaching staff, and assessors, which HEIs need to follow. A higher council from each HEI is responsible for approving the curriculum, textbooks, and scholarships for students, as well as for appointing teaching staff, determining admission policies, and graduations (Alamri, 2011).

The HE sector in SA operates according to a highly centralised system, controlled by the government. The President of each HEI is appointed by the King of SA for a four-year period. The Dean, on the other hand, is appointed by the Minister of Higher Education for a two-year period. The responsibility for appointing department heads and academic committees belongs to the University Rector. An annual budget is allocated to each HEI by the government, regardless of performance and academic interests (Ministry of Higher Education, 2010). This centralisation slows down the decision- making process and the implementation of a progressive educational policy in SA (Alamri, 2011). This centralised system is also arguably considered a factor contributing to inflexibility with regard to overseas HEIs. Undoubtedly, the system limits academic freedom, and slows down essential progress to upgrade the curriculum to meet the needs of ever-changing labour market demands.

Rugh (2002) observes that despite these inadequacies, remarkable developments have been achieved in terms of the number of HEIs; however, it is notable that the quality of HEIs has not benefitted from similar progress and development. An important area still requiring improvement is the subject variety offered. For instance, there are more management degree options compared with accounting degrees (Maroun et al., 2008). Thus, one of the major challenges in the HE sector is bureaucracy (Bhagat, 1999; Alkhazim, 2003), which slows down decision-making processes and the implementation of policies required to further develop HE systems.

☐ HE Systems in the UK

The history of HE in the UK is a lengthy one. In the context of UK, there are two meanings associated with the term "higher education"; one relates to HEIs themselves and the second to the levels of study and qualifications (Marginson, 2018). With regard to qualifications, HE programmes are generally offered at degree level, and the majority of HEIs are universities.

In the English-speaking world, the University of Oxford is the oldest university; teaching commenced there in 1096. The first universities in Scotland were St Andrews, Glasgow and Aberdeen, which were founded by Papal Bulls in the 15th century. A major expansion of HE took place in the UK in the 19th century, when Durham University, University College London, and Kings College London, alongside others, were founded.

In the latter part of 19th century, a number of additional (also referred to as 'new' or 'redbrick') universities were established, including Birmingham, Bristol, Manchester, Liverpool, Leeds, and Sheffield. Another wave of university formation took place in the

1950s and 1960s, when the government awarded university status to Bath, Aston, Brunel, Bradford, Loughborough, Salford and Surrey. Further major growth in the HE sector took place in 1992, when a number of former polytechnics were granted university status, such as Nottingham Trent University, Manchester Metropolitan University, and Leeds Beckett University. Another 31 new universities were established between 2001 and 2013. In 2014, the government decided that universities were no longer required to carry out research and offer doctoral (for example PhD) degrees to be classed as such (Boliver, 2015, p.611). However, in reality, most universities actively conduct research in the UK.

In recent years, a growing number of institutions have started to offer HE programmes in the England (less so in other parts of the UK). These institutions are referred to as alternative providers, and are diverse in nature. These alternative providers operate outside the external regulatory framework, and as such are not part of the public funding system. The governance and monitoring systems are different and operate on a for-profit and not-for-profit basis. Some alternative HE providers have been awarded degree-granting powers and come under the auspices of a university, whose name they can use.

Governance and regulations from alternative HE providers are connected with access to student loan funding. In the context of England, HEFCE (the funding council) is responsible for inspecting alternative HE providers to judge if they should be granted access to funding from the Student Loans Company. HEFCE also focuses on further developing the monitoring of quality assurance, the sustainability of finance, and corporate governance offered by alternative providers. However, HEFCE does not include some of the requirements placed on those HEIs that receive public funding when sending information to HESA (HE Statistics Agency). Thus, the application of regulations is unevenly distributed in the UK HE sectors (Marginson, 2018). Therefore,

there is a risk of creating an uneven system to monitor and regulate the different types of HE providers in the UK.

The HEIs in the UK are not run or owned by the British government; rather, they are autonomous, independent legal entities (BIS, 2011). The Governing Bodies or Councils are responsible for determining the strategic direction and monitoring the financial performance of HEIs. In the majority of cases, HEIs receive public funding as a percentage of the total income. However, the proportion of public funding varies between one institution and another.

Independent funding councils for Scotland, England and Wales manage government funding for publicly funded HEIs in the UK. One of the major techniques implicated in the external governance of HEIs in the UK involves using terms and conditions when receiving public funding. The legal basis for funding terms and conditions are recorded in the 1992 Higher and Further Education Act. They are linked with the grants offered to HEIs by four UK funding councils. These terms and conditions include requirements related to quality assessment, the governance of institutions and the stability of financial conditions at HEIs. As part of the duty of national funding bodies, HE funding councils carry out reviews of academic standards, such as the Quality Assurance Agency review (QAA, 2019). The key aim of external regulations and bodies is to safeguard the quality and standing of HEIs and to ensure effective controls on using and spending for public investment purposes. HEIs that receive public funding are subject to the requirements imposed on external regulations for the purpose of accessing student support funding through the SLC (Student Loans Company). Governments also play a role by controlling the number of new entrants into the HE sector via Royal Charter and Privy Council.

In conjunction with external regulators, HEIs in the UK are governed by internal self-

directed corporate and professional governance. Specifically, the Committee of University Chairs (CUC) guides the governance of HEIs in the UK according to a code of good governance. The governance codes are formulated according to self and co-regulatory systems. These governance codes include accountability mechanisms that assist HEIs in meeting the required standards related to quality assurance and financial governance. HEIs need to comply with such requirements to ensure access to public funds via grants and student support.

Aside from external quality assessments such as QAA, HEIs in the UK carry out their own internal assessments of course quality. The universities carry out regular assessments to order ensure the courses are contemporary and aligned with the needs of the job markets. This internal assessment helps HEIs provide quality and relevant education to students and helps to better prepare students for the job market.

The discussion above indicates that there are various types of HEIs operating in the UK in terms of size, type, subject focus, research focus and others. UK HEIs have no national or state curriculum. Their curricula are developed independently by each HEI, often in consultation with professional bodies and employers. In this way, variations or heterogeneity are considered a key strength of the UK HE sector, since it is able to meet the varying needs of different groups of students.

☐ HE Systems in the USA

The USA has the largest number of HEIs in the world. According to the US Department of Education (2016), the number of students attending degree-granting HEIs exceeded 20 million in 2016. Approximately 3000 HEIs offered four-year undergraduate degrees to around 13 million students from various countries in 2016 (Casarejos et al., 2017).

However, there are differences among the HE systems operating within the USA.

One of the unique features of HE systems in the USA is that they are either fragmented or integrated. The majority of HEIs offer various majors and faculties under one roof; however, university types vary from public to private, and include profit and non-profit institutions, which are managed and governed by different states according to diverse rules and systems. The oldest HEIs in the USA include Harvard, Dartmouth, and the College of William and Mary, which were established when the USA was an English colony. Therefore, the HEIs were established according to the English faculty structure, in which a number of colleges operate under one degree- granting institution (Thelin, 2011). Today, most HEIs continue to follow this structure, and even if a student is admitted to a college of management, science or engineering, they can move freely without restriction between the colleges and obtain their degree from the university. This suggests an integrated approach to the role of each individual HEI. In contrast, the entire HE system in the USA is fragmented, due to the unique role of the US government, as explained below.

Following the establishment of the United States as a republic, the law of the land shifted from a centralised governance system, to one in which matters excluded from the constitution are governed by individual states. HE and education are not included in the constitution so do not come under the auspices of the federal (national) government. Therefore, unlike in England, where ministers of HE manage quality, goals, and funding at the national (country) level, national oversight or governance is unavailable in the USA. In the context of the USA, individual state charters at each state's HEIs manage the funding of HEIs and set expected targets and outcomes (Thelin, 2011). Moreover, the Supreme Court allowed Dartmouth College to continue operating as private institution

in 1819. Consequently, the federal government had no influence over HEIs, which contributed to the growth of a number of colleges. Thus, the role of the government in HEIs in the USA differs significantly different from HEIs in England and Europe. In contrast to the centralised approach in England, the market approach in the USA allowed HEIs in the USA to orient themselves towards the needs of the community and society.

Moreover, HEIs in the USA were able to offer majors beyond the liberal arts, to include medicine, management, law, science and engineering (Thelin et al., 2002).

In terms of their governance structure, HEIs in the USA operate according to three main governance structures (Lombardi, 2002). The top US research HEI has a single governing board overseeing campus-based research. This single governing body has the authority and responsibility for managing and operating the HEI. The governance system for multi-campus public institutions has a shared state-wide board. Finally, public campus institutions have a governing board that is separate from the state-wide board. The boards can operate in various forms and ways. However, public boards are generally appointed or elected under political systems, and serve to govern HEIs on behalf of public constituencies. Conversely, private boards are usually seen as assisting rather than controlling HEIs. Consequently, a variety of governance structures have been developed due to different government roles, ranging from supporting to controlling and from directly managing to indirectly managing (Lombardi, 2002).

The funding of HEIs in the USA comes from a variety of sources. Typically, the federal (national) government only supplies limited funds for operational and management related costs (Heller, 2009). The bulk of the operational funds for HEIs are provided by the states. Discrepancies in operational costs and state funding are managed by the HEI. The federal government generally awards funding and grants for research related

activities in the form of loans, scholarships, and grants. In addition, the National Science

Foundation, the federal research funding authority in the USA, provides $5.5 billion of

funding to institutions nationwide (Sargent, 2013).

The HE structures vary significantly across states within the USA (Koedel, 2014). Koedel

(2014) mentioned that Iowa, a state with a population of 2.8 million, funded three public

four-year HEIs in 1990. Conversely, Oregon, a state with a population around

2.8 million, funded eight public four-year universities. Moreover, there were more than

12,000 students in each of the three HEIs in Iowa. In contrast, there were fewer than

6,000 students in each of the HEIs in Oregon. This is one example of the large structural

differences in HEIs across the states in the USA.

Moreover, as students receive considerable tuition subsidies when attending in-state

public HEIs, the public HE market is extremely localised at the state level in the USA

(see, for instance, Johnson, 1984; Kane, 1995). This means that individual students are

expected to be influenced by the HE structures of their home state. For example, an

individual student has a higher probability of attending a smaller public HEI if they

come from states with a more-fractionalised HE structure. Such an HE structure is likely

to enhance or reduce attendance at HEIs, as well as to move individual students away

from or toward private HEIs (Koedel, 2014).

☐ **Comparison of HE sectors in SA with UK and USA**

There are some similarities and differences among the HE sectors in SA, the UK and the

USA. Differences exist in terms of sources of funding, corporate governance and

monitoring, assessment of quality, internally and externally, gender diversity, the role of

the state, the government and the country. The first private university was established in

1967 in SA, and there are currently only 10 private HEIs in SA. There are only a handful of private HEIs in the UK, as, much like SA, the UK has a short history of private HEIs (referred to as "alternative providers"). In the context of the USA, private HEIs have existed for a long period of time. Thus, there are notable differences between the USA, the UK, and SA in terms of types of HEIs.

The governance and monitoring of HEIs is carried out by the government of SA with the assistance of various regulators, including the Ministry of Education. In contrast, the HE sectors in the UK and USA are autonomous and individual institutions have academic freedom. UK universities are primarily accountable to self-governing bodies (Marginson, 2018). The HEIs develop their own strategic plans and financial budgets. This differs from Saudi Arabian HEIs, which are governed and controlled by the government of SA.

The enrolment of female students is significantly higher in the UK and USA than in SA. Although a growing number of female students are participating in HE programmes in SA (Al Alhareth et al., 2015), the proportion involved is still lower than in the UK and the USA. Moreover, the opportunities afforded by HE programmes are only available in the major cities of SA, with women in remote parts of SA having very limited access to HE. To address this, the Saudi Arabian government is engaging in a number of initiatives to address the issue of access to HE for women in SA.

The majority of students are offered student loans in the UK to study in HEIs, whereas, most students are offered grants and scholarships to study at SA universities. Moreover, as students receive considerable tuition subsidies for attending in-state public HEIs, the public HE market is extremely localised at the state level in the USA.

In SA, the quality of HEIs is monitored by the government through various government

organisations such as the Ministry of Higher Education. The quality of UK HEIs is monitored by funding councils. However, there is no national authority to monitor or assess quality of HEIs in the USA. Rather, there are independent bodies such as the AACSB.

In the context of the UK and SA, the governance and monitoring of HEIs are similar across the country. However, governance and funding vary between states within the USA. In the context of the USA, individual state charters govern each state's HEIs and manage the funding of HEIs, determining expected targets and outcomes (Thelin, 2011).

Historically, HEIs in SA were segregated by gender, whereas, co-education is common in the UK and USA, where males and females study together. However, female students have recently been allowed to enrol at some of the major universities in SA. Notably, however, SA has the largest female-only university in world, and 52,000 females attend Princess Nourah Bint Abdulrahman University (Royal Embassy of Saudi Arabia, 2013); thus, although females do not study with males they are provided with access to tertiary education.

The universities are considered part of the state in the UK and SA. In contrast, the universities are viewed as outside federal (country level) control in the USA. Each state determines how to fund and govern the universities in the USA. This gives states considerable autonomy in governance-related matters within the HEIs in the USA. In the case of the UK and SA, counties or regions have limited influence over the governance and monitoring of HEIs. The comparisons indicate scope for improvement in HEIs in SA in terms of subjects offered, gender diversity, the location of the HEIs, internal quality control systems, and the decision-making process at the HEIs and by government regulators.

2.14 Conceptual Framework

In order to answers the research questions, a conceptual framework has been developed considering existing theories/models and contextual factors. Research questions 1, 3 and 4 focus on TMT/MMT heterogeneity and how such heterogeneity influences SDMP characteristics, such as speed and comprehensiveness. TMT/MMT heterogeneity includes education level, tenure and subject background heterogeneity. This relationship is represented in the figure 2.1 as P1 (Proposition 1). A specific hypothesis pertaining to the relationship between heterogeneity and SDMP characteristics has been developed in section 2.14.2. Moreover, Research questions 2, 3 and 4 focus on knowledge sharing and knowledge resources and how these factors influence SDMP characteristics. The impact of knowledge sharing and resources on SDMP characteristics is presented in figure 2.1 as P2. Research question 5 focuses on the impact of SDMP speed and comprehensive on organisational performance. This relationship is represented in figure 2.1 as P4.

Research question 6 and 7 focus on the processes that inform SDMP in HEIs in Saudi Arabia and country specific factors, such as Islamic culture and other factors such as bureaucracy and lack of financial resources. This relationship is depicted in figure 2.1 as P3. The complete conceptual framework is depicted in figure 2.1.
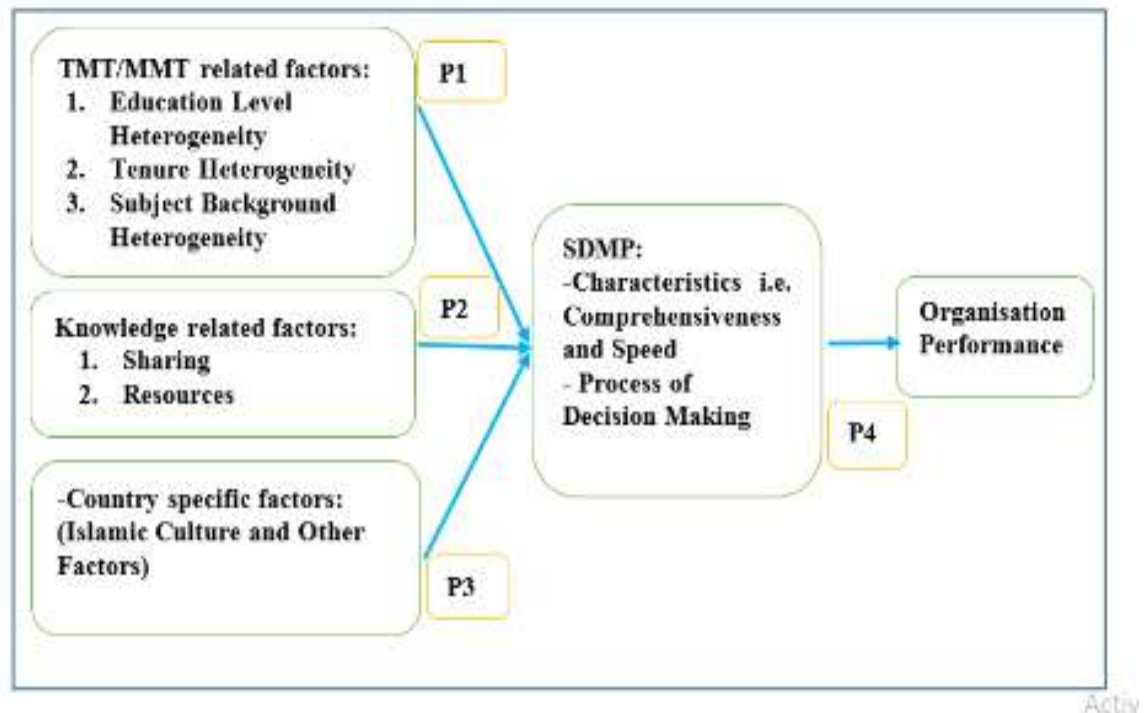
Figure2.1: Conceptual Framework of the study

Prior literature and existing theoretical models support the arguments associated with P1, P2 and P4. For instance, the relationship between heterogeneity and SDMP characteristics could be explained by behavioural decision theory. In addition, the relationship between knowledge sharing/resources and SDMP characteristics could be explained by a knowledge based view. A quantitative approach, therefore, is appropriate to investigate the relationship between SDMP characteristics and heterogeneity, knowledge sharing and knowledge resources. Sections 2.14.2, 2.14.3, 2.14.4 and 2.14.5 provide comprehensive arguments supporting the relationships between the variables.

Arguments associated with P3 are explorative in nature. For example, the process of decision making and culture, including Islamic culture, is harder to measure quantitatively. However, the impact of Islamic culture could be effectively explored in a qualitative research design.

The present study, therefore, employed a qualitative research design to investigate the impact of factors such as Islamic culture on SDMP, and to explore the processes that inform SDMP in HEIs in Saudi Arabia. Chapter 5 presents the findings associate with P3 using an explorative qualitative research design.

2.14.1   Hypotheses Development

The aim of this subsection is to develop specific hypotheses related to propositions 1, 2 and 3; i.e. hypotheses related to heterogeneity, knowledge sharing, knowledge resources, SDMP speed and comprehensiveness and organisation performance. In order to test the relationships, a quantitative questionnaire survey including data were collected. The findings associated with each hypothesis were presented in chapter 4.

Decision comprehensiveness (e.g. Iaquinto and Fredrickson, 1997; Judge and Miller, 1991) and decision speed (e.g. Eisenhardt, 1989) are considered critical aspects of SDMP. SDMP speed refers to the ability to rapidly execute all facets of SDMP, from the preliminary inspection of different paths to the ultimate pledge to act (Forbes, 2005). Fredrickson (1984) defined comprehensiveness as the degree to which a firm is inclusive or exhaustive in making and implementing SDs. Moreover, Atuahene- Gima and Li (2004, p.584) proposed that comprehensiveness also includes the degree to which the manager "searches for information with a wide lens and considers multiple approaches, multiple courses of action, and multiple decision criteria in evaluating and selecting alternative courses of action".

Using behavioural decision theory, this study argues that SDMP comprehensiveness and speed are influenced by the education level, subject background, and tenure heterogeneity of decision makers. Moreover, using the knowledge-based view, this

study proposes that knowledge resources and knowledge sharing directly influence the comprehensiveness and speed of SDMP. Thus, the conceptual framework and hypotheses of this thesis are based on behavioural decision theory (Hitt and Tyler, 1991) and the knowledge-based view (Penrose, 1959; Barney, 1991). The following sections present the theories and hypotheses underlying this thesis in detail.

2.14.2 Behavioural Decision Theory

Prior to the development of behavioural decision theory, researchers assumed that rational individuals had access to all relevant information and would use it to optimise their objective function. However, the proponents of behavioural theory suggest that individual decision makers frequently violate the postulates of the rational model (e.g. Hambrick and Mason, 1984). Behavioural theorists have contended that multifaceted decisions are primarily the result of behavioural factors and not of a complete rational analysis based on complete information. Thus, SDMP can be influenced by human variables. Behavioural decision theory focuses on the characteristics and the role of the TMT and argues that the peculiarities of decision makers are reflected in SDMP (Miller and Toulouse, 1986; Hambrick and Mason, 1984).

The characteristics of decision makers include personality and demographic characteristics. Demographic characteristics refer to the individual attributes of decision makers, such as age, education level, gender, and experience. Demographic diversity indicates the degree to which decision makers are heterogeneous (not homogenous) according to certain demographic attributes, such as age, tenure, or education.

Research has indicated that demographic heterogeneity influences the way decision makers gather and assess information, which in turn affects the decision-making

process (Dutton and Duncan, 1987; Wiersema and Bantel, 1992). Demographic diversity can have a positive influence; for example, a diverse team tends to be more creative than a non- diverse team, which can have a positive impact on output (Hambrick et al., 1996). On the other hand, this can have a negative impact, such as causing conflict and disagreement between team members (McCain et al., 1983; Elbanna, 2009). Consequently, the level of heterogeneity has a direct impact on SDMP. For this reason, this study examines the impact of TMT and MMT demographic heterogeneity on SDMP.

2.14.3   Management Team Heterogeneity

SDs entail substantial financial expenditure and can have a profound, long- term impact on organisations (Shepherd and Rudd, 2014). Comprehensively formulating SDs is an activity for the team and not for individual managers (e.g. Ireland and Miller, 2004). Furthermore, comprehensively formulating SDs imposes extremely high demands on the depth and breadth of knowledge and information required. Such extreme demands usually create bounded rationality, which refers to the limitations of cognitive capacity and knowledge and their impact on decision making (Simon, 1955). As a result of bounded rationality, knowledge and information collection and utilisation become costly tasks. Due to the bounded rationality issue and challenges related to extensively developing strategic issues, individuals are unlikely to possess or to be able to effortlessly gather the wide range of information and knowledge needed to analyse the issue at hand effectively (Newell and Simon, 1972).

Accordingly, to achieve the comprehensive formulation of a strategic issue, teams should be comprised of individuals with dissimilar data sets and diverse reasoning

structures. A heterogeneous team is expected to find solutions that incorporate the main causes of a problem by merging the various sets of cognitive structures and information provided by different team members. Such a process is not possible for an individual or for a homogeneous team. Based on a comprehensive literature review, Shepherd and Rudd (2014) concluded that demographic variables such as tenure and education significantly affect SDMP characteristics such as rationality and comprehensiveness. Therefore, this study examines the impact of education level, subject background, and tenure heterogeneity on decision comprehensiveness and decision speed — two critical aspects of SDMP.

a) Education Level Heterogeneity

Managers' knowledge and skill base are represented by their education level (Hambrick and Mason, 1984). Managers' cognitive preferences influence their SDM, and these depend on the type and level of their educational background. Moreover, the degree of information exploration and investigation pursued by managers is also related to their education level (Dollinger, 1984). For instance, more financial reporting is carried out by highly educated managers (Bantel, 1993; Papadakis et al., 1998). In addition, highly educated managers tend to make more strategic changes (Wiersema and Bantel, 1992) and have a greater ability to grasp external environmental and internal organisational issues from various viewpoints. Finally, highly educated managers are capable of acting in response to complex conditions such as making SDs (Greening and Johnson, 1996).

The education level of TMT and MMT members (e.g. PhD, Master's degree, undergraduate, high school) influences the comprehensiveness and rationality of SDMP

(Shepherd and Rudd, 2014; Goll and Rasheed, 2005; Papadakis and Barwise, 2002).

A well-educated management team affects the "administrative complexity and sophistication of firms" (Hambrick and Mason, 1984, p.201). Increased education level has a positive influence on the analytical ability of management teams (Goll and Rasheed, 2005). Moreover, Papadakis and Barwise (2002) found that highly educated management teams are better at scrutinising circumstances, generating and evaluating alternative options, and assimilating SDs into the overall corporate and business strategy of an organisation.

Heterogeneity among team members represents the potential for more thoughtful decision making. Simons et al. (1999) found that education level heterogeneity in TMTs had a direct and positive impact on decision comprehensiveness. They argued that team members refer to their educational diversity (to reinforce their argument, team members use their divergent knowledge sets) in debates with each other. Moreover, Fredrickson (2001) linked TMT educational diversity and global strategic posture by reasoning that TMT education level diversity leads to the implementation of diverse cognitive processes — managers with diverse education levels can provide different opinions and suggestions. Researchers have also argued that combining perspectives from various domains of educational experience in order to enrich informational debates often results in the generation of multiple attractive ideas and alternatives for addressing focal decision issues (Simons et al., 1999; Van Knippenberg et al., 2004). This indicates that education level heterogeneity encourages team members to draw on their different education levels in order to augment their arguments during SDM. When faced with fresh information from other team members with diverse skills and subject backgrounds, team members are obliged to reconsider their viewpoints and assess factors not previously reflected upon. In this way, a more comprehensive and extensive

decision-making process emerges.

Research has suggested that a team's demographic homogeneity is linked to its ability to maintain the status quo. In addition, that the homogeneity of characteristics leads to the possibility of similar perceptions among team members (Pfeffer, 1981). In the absence of educational heterogeneity, members of TMTs/MMTs are unable to draw on various education levels and backgrounds to consider each strategic option thoroughly. Homogenous TMTs/MMTs may also encourage group thinking, where members are biased towards one particular strategic option and ignore suitable alternative strategic choices. In contrast, educational heterogeneity is likely to prevent group thinking, reduce the possibility of commitment to one option, and encourage consideration of multiple strategic alternatives. Thus, educational heterogeneity should make SDMP more comprehensive. This argument leads to the following hypotheses:

 H1a: A positive relationship exists between education level heterogeneity and decision comprehensiveness.

Social identity theory asserts that people categorise and identify themselves and others according to social groupings, and that the identity of the group determines associated obligations and inspirations (Haslam, 2001). Heterogeneous TMTs/MMTs are increasingly being considered representative of a progressively broader set of social categories (Richard and Shelor, 2002); therefore, it is expected that the number of team members identifying themselves with heterogeneous TMTs/MMTs rather than homogeneous TMTs/MMTs, with an attendant greater willingness to accept their strategic approach, will also increase (Li et al., 2002). Heterogeneous TMTs/MMTs have associations with formal and informal social networks, which can be utilised to

access advice or obtain commitment (Finkelstein and Hambrick, 1996; Jackson, 1992). The social identity argument suggests that job-related heterogeneity has greater relevance in this context than non-job-related heterogeneity, because people are more likely to become categorised into groups as a result of a shared identity based on education and functional backgrounds rather than gender (Hoff, 2001). Thus, heterogeneity based on educational background implies a suitable supply of cognitive resources that positively influence SDMP, such as speed and comprehensiveness.

Souitaris and Maestro (2010, p.25) defined TMT polychronicity as "the extent to which TMT members mutually prefer and tend to engage in multiple tasks simultaneously or intermittently instead of one at a time and believe that this is the best way of doing things". They argued that polychronicity results in a unique decision-making style. Insight is offered by polychronic work according to the quality rather than quality of information. This insight is likely to eliminate unsuitable action alternatives from the beginning of SDMP. Early exclusion of inappropriate substitutes by team members saves time. Furthermore, insightful information pertaining to the critical components that define a decision can focus evaluative efforts; thereby also saving time. Thus, TMT/MMT polychronicity leads to a speedy SDMP (Souitaris and Maestro, 2010).

The present study extends the argument of Souitaris and Maestro (2010), and proposes that education level heterogeneity leads to speedy decision making due to the likelihood of polychronicity among members of TMTs and MMTs. This is because heterogeneous TMTs/MMTs tend to prefer to engage in multiple tasks simultaneously, according to their educational backgrounds. For example, members with undergraduate qualifications may focus on ensuring the reliability of collected data, and members with doctoral degrees may focus on analysing the information. Information obtained in this manner would be insightful, allowing the teams to eliminate inappropriate strategic options early on in the

decision-making process. Consequently, the TMTs/MMTs would be able to save time and make speedy decisions. Thus, the following hypothesis is proposed:

H1b: A positive relationship exists between education level heterogeneity and decision speed: the greater the education level heterogeneity within TMTs/MMTs, the greater the speed of the decision-making process.

b)   Tenure Heterogeneity

Tenure refers to the average length of time executives work together as a team or group (Pfeffer, 1983). A number of social processes begin to influence team behaviour as members start to work together. For instance, as team members begin to organise their workload, teams formulate routines and develop standard patterns of work (Weick, 1979) that the team members are comfortable with and which become predictable. Therefore, teams demonstrate a growing tendency towards behavioural steadiness over time. Furthermore, with increasing team tenure, team members tend to avoid information that would impede or interfere with expected forms of behaviour (Staw, 1977). Thus, tenure leads to dependency on tried and tested decision-making processes (Katz, 1982). This tendency could influence the comprehensiveness of SDMP.

Tenure homogeneity at team level indicates a collective socialisation and team experience that strengthens the cohort effect (Wiersema and Bantel, 1992), leading to a high level of solidarity among the team members. O'Reilly et al. (1989) found that the tenure homogeneity of work groups intensifies team-level social unification, which in turn limits team turnover. In contrast, team tenure heterogeneity indicates that the team members were promoted at different times. Management teams with greater tenure variations tend

to be less socially unified and tend to demonstrate discrepancies in the knowledge and perspectives held by team members on strategic issues (Wiersema and Bantel, 1992).

Internal communications are affected by the length of a team's tenure (Zenger and Lawrence, 1989) and the ways that members interact (Pfeffer, 1983).

Unlike heterogeneous team tenure, homogenous team tenure reveals that members of a team have experienced the same development phases; therefore, they will have a similar understanding of the firm's strategies, and will be familiar with the way that opinions are expressed, which prompts cooperation, communication, and agreement regarding decisions as they are being made. In contrast, heterogeneous team tenure tends to result in less varied information sources and viewpoints, which limits the ability of the management teams to carry out comprehensive analyses of the strategic issues facing the organisation. This argument leads to the following hypothesis:

H2a: A negative relationship exists between tenure heterogeneity and decision comprehensiveness: the greater the tenure heterogeneity within TMTs/MMTs, the less comprehensive the decision-making process.

Demographic heterogeneity such as tenure heterogeneity has a negative impact on TMT/MMT function. Research indicates that demographic heterogeneity may increase conflict within a team (e.g. Ferrier, 2001), reduce communication frequency, and reduce group identification and cohesiveness (Michel and Hambrick, 1992). Consequently, demographic heterogeneity increases the likelihood of a slower decision-making process.

Demographic homogeneity, such as tenure homogeneity, is expected to enhance TMT/MMT agreement and decision speed. Homogeneous teams develop superior consistency in decision making over time (Pfeiffer, 1983), which facilitates a higher

consensus regarding the organisation and organisational goals (Tushman and Romanelli, 1985). Hence, consensus is reached more quickly, as TMT/MMT members are able to unite around a common understanding of the organisation's objectives (Wiersema and Bantel, 1992) and formulate norms of interaction (Chatman and Flynn, 2001). In addition, a shared understanding is created through frequent communication and cooperation (O'Reilly et al., 1989) among the members of the teams. In contrast, TMT/MMT heterogeneity may slow down the development of a shared understanding due to less frequent communication and less cooperation among team members. Consequently, more time would be required to reach agreement regarding strategic issues facing the organisation. Thus, decision speed would be negatively influenced by heterogeneous TMT/MMTs.

Based on this argument, this study proposes that tenure heterogeneity has a negative impact on decision speed. This argument leads to the following hypothesis:

H2b: A negative relationship exists between tenure heterogeneity and decision speed: the greater the tenure heterogeneity within TMTs/MMTs, the slower the decision speed.

c) Subject Background Heterogeneity

The educational diversity of TMTs/MMTs influences the cognitive and social psychology of managers during the SDMP (Zhang, 2007; Amason and Sapienza, 1997; Tihanyi et al., 2001). Hitt and Tyler (1991) argued that the type of academic degree affects the evaluation of acquisition candidates. In addition, Wiersema and Bantel (1992) stated that certain educational fields, such as science and engineering, are more oriented towards change in corporate strategy than others. Recently, Alkaraan and Northcott, (2006) proposed that the decision-making style adopted in UK companies is

influenced by CFOs' educational background. They explained that CFOs are usually former business students who tend to perform highest in analytical decision-making (Alkaraan and Northcott, 2006). This conclusion is not surprising given the emphasis that formal education, particularly business education, gives to developing rational thinking. For instance, courses in accounting, statistics, and finance all focus on rational analysis. This could help to identify how individuals from different educational backgrounds might approach a decision problem in different ways. Furthermore, educational background diversity within TMTs and MMTs could lead to contradictory suggestions and recommendations regarding specific strategic issues.

Previous studies have shown that background diversity in TMTs/MMTs — for example, in terms of field of study — may contribute to further developing the quality of SDM by prompting TMT/MMT members to analyse SD options from a number of perspectives, based on their subject knowledge (Amason and Sapienza, 1997). However, diversity of study backgrounds may also increase the possibility of disagreement between team members; therefore, it may be detrimental to undertaking a comprehensive analysis of strategic options (Zhang, 2007). In this context, prior studies have found that background heterogeneity within TMTs/MMTs can lead to fragmented understanding among the team members, which can in turn reduce the possibility of developing a common foundation for SDM (Michel and Hambrick, 1992). Thus, subject background heterogeneity may lead to a lack of collaboration, thereby impairing joint decision making and increasing the likelihood of less comprehensive decision making. This argument leads to the following hypothesis:

H3a: A negative relationship exists between subject background heterogeneity and decision comprehensiveness.

Subject diversity could also influence the speed of SDMP. Diversity among the members of TMTs/MMTs may lead to arguments regarding optimal strategic options, thereby prompting self-protective behaviour, conflict, disbelief, and unfriendliness (Zenger and Lawrence, 1989). Moreover, a higher level of heterogeneity among team members has been reported to have a negative impact on informal communication (Smith et al., 1994) and rapport building (O'Reilly et al., 1993) among the members of TMTs, leading to a reduction in information exchanges between members of TMTs/MMTs, which impairs their ability to consider all strategic options with full knowledge and information. In this case, members of the management team must invest a lot of time and resources in resolving the issues and disagreements that occur during SDM, which may cause the SDMP to slow down. Thus, a higher level of subject background heterogeneity may lead to a slower decision-making process. Based on this argument, the following hypothesis is proposed:

H3b: A negative relationship exists between subject background heterogeneity and decision speed.

2.14.4 Knowledge-Based Views

Strategic management literature has tended to focus on the knowledge-based view of organisations. The knowledge-based view is based on information and extends the resource-based view of organisations (Penrose, 1959; Barney, 1991). According to the knowledge-based view, knowledge is considered the most critical and strategic resource of an organisation. Multiple entities such as organisational policies, systems, employees, and culture embed and carry knowledge within the organisation.

Researchers including Grant (1996), Kogut and Zander (1992), and Kogut (2000) have expanded on the knowledge-based view of organisations. According to the knowledge-based view, SDMP is influenced by knowledge sharing and knowledge resources (Kogut and Zander, 1992; Kogut, 2000). For instance, if knowledge is not shared among team members, the cognitive resources of the team will continue to be underutilised. This indicates that knowledge sharing is a crucial team process (Argote, 1999), and that management teams would not be able to make the best possible SDMs without it. Moreover, a higher level of knowledge resources would allow managers to access relevant and useful information which would facilitate the comprehensive analyses of strategic issues facing the organisation. This study examines the impact of knowledge sharing and knowledge resources on SDMP.

a)   Knowledge Sharing

Knowledge sharing refers to the sharing of information, relevant ideas, and recommendations among the members of a team. As an important part of knowledge management, knowledge sharing facilitates the effective use of existing knowledge resources in an institution (Liebowitz, 1999). Wah (1999) conducted a study of 2,000 organisations in the USA and reported that approximately 34% were using a knowledge management system. If knowledge is not shared among team members, the cognitive resources of the team will continue to be underutilised. Therefore, knowledge sharing is expected to assist the decision-making process within an organisation.

Knowledge sharing may lead to better team performance, because it facilitates the formulation of common mental processes and the creation of a transactive memory —the knowledge of who knows what within a team.

A transactive memory enables better coordination of members of management teams (Mathieu et al., 2000). Indeed, Stasser and Titus (1985) argued that greater sharing of knowledge leads to a more extensive assessment of substitute options and to a better exploitation of existing knowledge. Consequently, better and improved decision making can take place. Thus, the following hypothesis is proposed:

H4a: A positive relationship exists between knowledge sharing and decision comprehensiveness: the higher the knowledge sharing among the members of TMTs/MMTs, the more comprehensive the decision-making process.

Knowledge sharing may also lead to better harmonisation because of the development of a transactive memory system. When members of a team discover other team members' areas of expertise, a transactive memory system is formed. This has been shown to enhance coordination among the team members, since they can predict each other's behaviour (Wittenbaum et al., 1998). In addition, Lewis (1999) argued that frequent interactions, where members of a team reveal information about their specific knowledge, help other team members learn about their area of expertise. However, although knowledge sharing has a positive impact on the decision-making process in TMTs/MMTs, it should be noted that knowledge sharing takes time, especially if the knowledge bases of the team members are highly diversified.

According to Okhuysen and Eisenhardt (2000), team members start to identify and process data in patterns or blocks instead of discrete units when members of the team share information over time. Furthermore, pattern processing, known as 'intuition', is quicker than the single piece processing of information. Therefore, collective intuition can be developed by sharing information over time, whereby team members are be able

to understand the smallest cues from other members (Isenberg, 1988). Thus, shared mental models are formulated through knowledge sharing which, in turn, help members to be on the same page during the execution of operations and tasks. As a result, teams can process information and make decisions faster. This argument leads to the following hypothesis:

H4b: A positive relationship exists between knowledge sharing and decision speed: the greater the knowledge sharing among the members of TMTs/MMTs, the faster the decision speed.

b)   Knowledge Resources

In recent decades, increased attention has been paid to knowledge resources (Cohen and Malerba, 2001; Leiponen and Helfat, 2004). According to Mentzas et al. (2003, p. 98), a knowledge resource is "a thing that can be located and

manipulated as an independent object. This is based on managing structural capital – document management systems, databases and lessons learned". Knowledge resources include access to information stored on customer and employee databases and other work-related electronic networks. Knowledge resources can be enhanced by attending work-related seminars, workshops, and meetings.

Knowledge resources bring a number of benefits to an organisation, such as facilitating success in a dynamic environment (e.g. Spreitzer, 1995; Leiponen and Helfat, 2004). Moreover, when employees access pertinent knowledge resources and obtain pieces of information, knowledge recombination and exchange occur within the organisation (Smith et al., 2005). In addition, regular seminars and meetings assist employees in identifying new opportunities (Rhyne et al., 2002). Chalmers (1995) conducted a study

of organisations in New Zealand and found that easily accessible and comprehensive information resources were critical to their competitive success. As a result of the study, Chalmers (1995) suggested that information resources should be accessed, used, and managed in decision-making processes.

Knowledge resources also assist managers with the decision-making process. A rational approach to decision making (Simon, 1955) assumes access to a comprehensive supply of information and knowledge, which is used to support the analysis of options to determine the most appropriate for the situation at hand. Based on this argument, greater access to knowledge resources should allow managers to analyse several options, which in turn will make decision making more comprehensive. Thus, the following hypothesis is proposed:

H5a: A positive relationship exists between access to knowledge resources and decision comprehensiveness: the greater the access to knowledge resources, the more comprehensive the decision-making process.

According to the rational approach to decision making (Hambrick and Mason, 1984), optimum information and knowledge should be used in the decision-making process. However, the use of knowledge resources may not always be possible. According to the behavioural model (Simon, 1955), managers may have to use limited knowledge due to the limited time available to obtain and analyse a complete set of information. On the other hand, managers may struggle with too much information obtained via the internet and other information technologies. Here, the problem lies in having access to too much information, from internal and external sources (Brown and Duguid, 2002). Thus, managers may find it difficult to access and assess all the relevant information, even if they are motivated to do so. Alvesson and Willmott (1996) suggested that managers tend

to move from one task to another quickly, which gives them a limited amount of time in which to plan and evaluate all the relevant information before making decisions. In this context, if members of TMTs and MMTs are asked to evaluate all the available information from a knowledge resource, the decision-making process will slow down. Thus, the following hypothesis is proposed:

 H5b: A negative relationship exists between number of knowledge resources and decision speed: the more knowledge resources available to TMTs/MMTs, the slower the decision speed.

The preceding sections have presented the relationships between TMT heterogeneity, knowledge sharing, and knowledge resources on SDMP speed and comprehensiveness. However, previous studies have also indicated that organisational performance could be influenced by SDMP speed (e.g. Judge and Miller, 1991) and SDMP comprehensiveness (e.g. Mitchell et al., 2016). The following section presents the hypotheses on the relationship between organisational performance and the speed and comprehensiveness of the decision-making process.

2.14.5   SDMP Comprehensiveness and Organisational Performance

Decision comprehensiveness is defined as the extent to which a TMT engages in a formal, rational decision process that aims to be exhaustive or inclusive (Fredrickson, 1984; Simons, Pelled, and Smith, 1999). It refers to the synoptic processes of SDM, in contrast to 'best-guess' and incremental decision-making approaches (Forbes, 2007; Fredrickson, 1984). It can occur in any of the four decision stages: diagnosis of a situation or problem; development of alternative approaches and solutions; evaluation

of different options; and integration of a final decision (Fredrickson and Mitchell, 1984). Decision comprehensiveness correspondingly reflects the degree to which an organisation's TMT systematically analyses and assesses information about the internal and external environments in each of these stages (Eisenhardt, 1989; Simons et al., 1999). Decision comprehensiveness is one of the most salient and enduring information- processing constructs in team research (Heavey, Simsek, Roche, and Kelly, 2009). TMTs employing decision comprehensiveness investigate problems or issues with a wide lens, explore multiple alternative approaches and possible choices, and evaluate these using multiple decision criteria (Simons et al., 1999).

The positive impact of decision comprehensiveness on SD quality and organisational performance has been supported across stable and unstable environments (Forbes, 2007; Fredrickson, 1984; Fredrickson and Mitchell, 1984; Heavey et al., 2009). Given that the capacity to process and interpret external information has been argued to largely determine the success of organisational actions and initiatives (Tushman and Nadler, 1978), the effect of decision comprehensiveness on performance is a significant issue (Carmeli, Friedman, and Tishler, 2013). It is also an issue that has yet to be resolved (Forbes, 2007). Although a number of studies have found that decision comprehensiveness plays a positive role in generating better decisions, other studies have found no or a negative impact (Miller and Toulouse, 1998; Walters and Bhuian, 2004).

Bourgeois and Eisenhardt's (1988) study of four micro-computer firms found that in a high-velocity environment comprehensiveness was positively related to organisational performance. However, the results of Fredrickson and Mitchell's (1984) and Fredrickson's (1984) cross-sectional, field-based experiments showed the opposite — that in unstable environments, comprehensiveness exhibited a negative relationship

with organisational performance, but in stable environments, comprehensiveness had a positive effect on organisational performance. Fredrickson and Iaquinto's (1989) longitudinal extension of the Fredrickson and Mitchell (1984) and Fredrickson (1984) studies corroborated these earlier findings, and found that that comprehensiveness had a negative relationship with performance in an unstable environment, and a positive relationship in a stable environment. Aside from the differences between the research design and operationalisation of variables in the Bourgeois and Eisenhardt (1988) and Fredrickson studies, there is an obvious conflict in the findings. Eisenhardt (1989) conducted eight case studies, again in the high-velocity microcomputer sector, to demonstrate how organisations that were able to simultaneously consider multiple SD alternatives and integrate SDs with one another and with tactical plans made speedier SDs, which resulted in superior organisational performance. Another major difference between the Eisenhardt (1989) and Fredrickson ((1984) studies is that (similar to many SDMP studies) Fredrickson et al. did not examine SD speed, which has been shown to be a crucial SDMP outcome in certain environments (Judge and Miller, 1991).

Decision comprehensiveness demonstrates a TMT's approach to information processing during decision making. Specifically, decision comprehensiveness reflects TMT engagement in the systematic analysis of information regarding the external environment, and the deliberation of possible alternative solutions (Eisenhardt, 1989; Simons et al., 1999). Behavioural indicators of decision comprehensiveness include the extent to which the TMT engages in structured decision processes, such as brainstorming, and the number of possible solutions that are considered and the rigor of their assessment. The amount of analytical and investigatory effort that is directed toward decision making is key (Miller, Burke, and Glick, 1998).

Decision comprehensiveness impacts TMT decision-making processes by exposing

members to broad-ranging relevant information on which to base their assessments of possible solutions (Mitchell, Nicholas, and Boyle, 2009). Analysis of cause and effect pathways increases TMTs' understanding of the implications of environmental events, thereby enhancing their capacity to identify strategic opportunities (Callero, 1985; Joseph and Alex, 1972; Timmons and East, 2011). In addition, the process of the continuous analysis of environmental changes and developments also gives TMT members an enhanced capacity to connect different environmental changes, which is likely to increase their ability to predict risks and accurately assess the probability of future events (Joseph and Alex, 1972; Timmons and East, 2011). Furthermore, the extent to which group members assess wide-ranging information and alternative actions positively affects the group's ability to resist conformity pressures, avoids the risk of premature movement to consensus, and assists in overcoming bias towards shared information (Kerr and Scott Tindale, 2004; Nemeth, 1986; Nemeth, Connell, Rogers, and Brown, 2001; Nemeth and Nemeth-Brown, 2003). Consequently, organisational performance could be improved. Based on the above argument and consistent with Fredrickson and Mitchell (1984) and Heavey et al. (2009), the present thesis proposes the following hypothesis:

H6: A positive relationship exists between organisational performance and SDMP comprehensiveness.

2.14.6 SDMP Speed and Performance of the Organisation

Academic discussion of decision speed was initially introduced by Bourgeois and Eisenhardt (1988). There have been few subsequent empirical studies regarding this topic. However, organisational researchers have repeatedly prescribed fast decision making as

a source of competitive advantage (Jones, 1993), and practitioners have claimed that they increasingly make decisions in less time (Ancona et al., 2001; Kepner-Tregoe, 2001). Basically, decision speed refers to how quickly organisations execute all aspects of the decision-making process (Eisenhardt, 1989).

Since the empirical research approach of this dissertation specifically focuses on the observation of the speed of SDs, special emphasis must be placed on this segment of the literature (Bourgeois and Eisenhardt, 1988; Dean and Sharfman, 1996; Eisenhardt, 1989a; Eisenhardt and Bourgeois, 1988; Judge and Miller, 1991; Papadakis, Lioukas and Chambers, 1998; Schilit, 1987; Schilit and Paine, 1987; Wally and Baum, 1994). Decision speed has been found to be a vital factor in influencing firm performance in high-velocity environments (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989a; Eisenhardt and Bourgeois, 1988). This finding — inductively derived in the 1988 study by Bourgeois and Eisenhardt — was deductively tested and quantitatively supported by Judge and Miller (1991, p.450) who argued:

"The conclusion that (decision) speed and performance are associated is certainly in keeping with the experiences of a growing number of corporations that are relying on organisational speed to improve their financial performance. For example, Bower and Hout argued that organisations that make fast decisions 'are like World War II fighter pilots- they win by making faster decisions which pre-empt the opposition's moves" (1988, p. 110).

According to Judge and Miller (1991), it is due to the increasingly global markets and shortened product lifecycles that the attention given to the speed SDM is growing. Stalk from Boston Consulting Group (1988, p.41), Stalk and Hout (1990), stated that the ways leading companies managed time represent the most powerful new sources of competitive advantage. This was echoed by Thomas (1990, p.5), who argued that, "The big don't outperform the small, the fast outperform the slow." Besides the relevance of decision

speed in the practical business environment, the speed of SDs also represents an essential unit of analysis in the theoretical field. Indeed, according to Eisenhardt (1989a, p.543) Although decision speed seems to affect firm performance in high-velocity environments (Bourgeois and Eisenhardt, 1988) and is a key characteristic differentiating SDs (Hickson et al., 1986), there has been little research on fast SDM.

In addition to the established correlation between decision speed and firm performance in high-velocity environments (Bourgeois and Eisenhardt, 1988), another point of discussion in the literature is whether decision speed has implications for the quality of the SDs, which has been shown to affect firm performance (Schwenk, 1990). In this respect, Wally and Baum (1994, p.948) claimed that although fast decisions may not necessarily be better decisions, speedy decision making may not diminish the quality of outcomes.

Fast decision speeds may improve competitive performance across environments because fast SDs lead to (1) early adoption of successful new products or improved business models that provide competitive advantages (Jones, Lanctot, and Teegen, 2000), (2) early adoption of efficiency-gaining process technologies even in established industries (Baum, 2000), and/or (3) pre-emptive organisation combinations that enable economies of scale and knowledge synergies. In short, decision speed may enable firms in dynamic and not-dynamic environments to exploit opportunities before they disappear (Stevenson and Gumpert, 1985). Based on this argument, the following hypothesis is proposed:

H7: A positive relationship exists between organisational performance and SDMP speed.

Based on arguments from the preceding sections, the following conceptual framework has been developed. Figure 2.2 shows the hypotheses of this thesis.
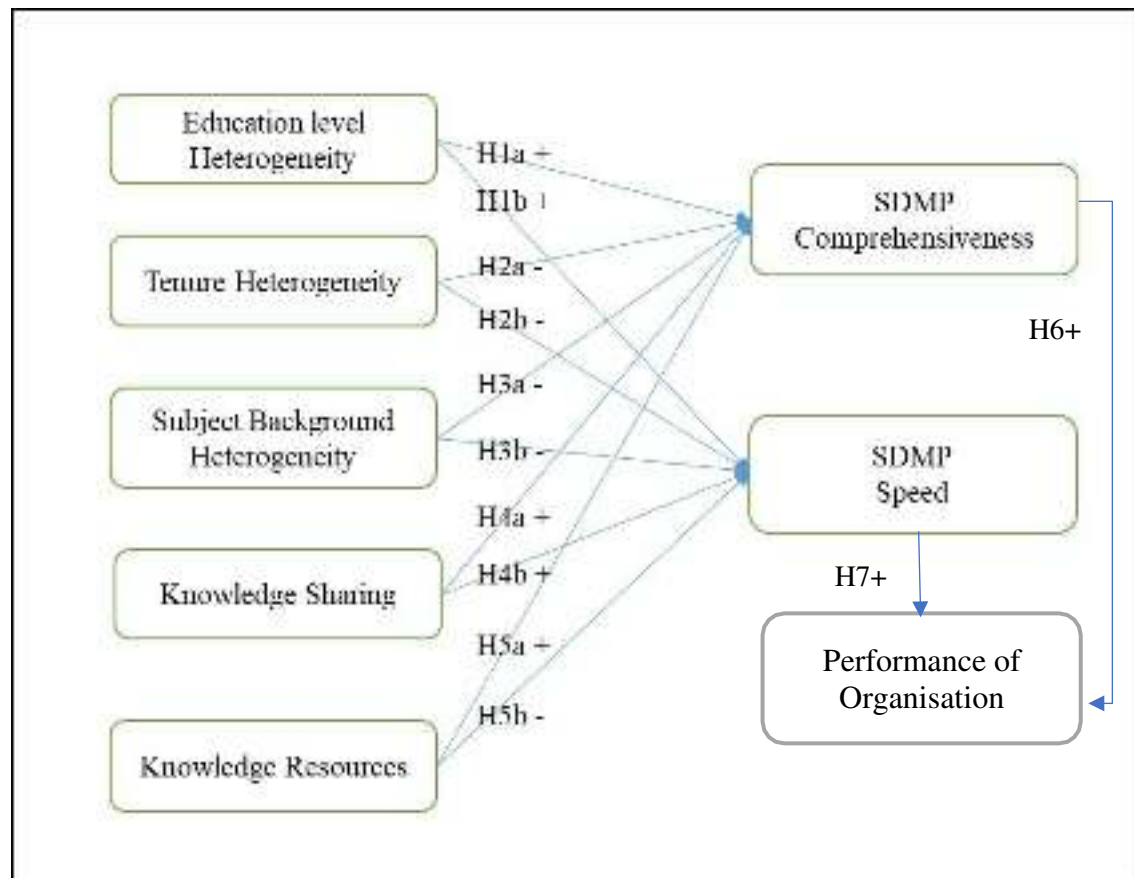
Figure 2-2: Hypotheses of the study

2.15 Conclusion

This chapter reviewed literature on SDMP and highlighted the research gaps. While the literature review indicated advancements in SDMP research, some gaps still remain. Heterogeneity of the management team can be considered as a desirable characteristic of TMTs and MMTs. Prior literature, however, does not provide much evidence of the extent of TMT and MMT heterogeneity in HEIs in Saudi Arabia. This research study attempts to address this gap.

However, there is limited research examining the impact of educational subject background on SDMP comprehensiveness and speed. Finally, little research has been

carried out into the management practices and philosophies of organisations operating in Arab regions. The present study aims to address this research gap by examining the influence of Islamic culture on SDMP in HEIs in Saudi Arabia.

In addition, the chapter a review of the literature associated with SDMP, and the factors influencing that process. It also presents a review of the literature concerning the two characteristics of SDMP of comprehensiveness and speed, and the impact of comprehensiveness and speed on the performance of SDMP. The chapter also reviews literature on the factors that can influence SDMP, such as TMT demographic heterogeneity, knowledge sharing, knowledge resources, and Islamic culture and the role of the MMT in SDMP. The chapter concludes with the HE system in Saudi Arabia and followed by a discussion of the conceptual framework and hypotheses.

Chapter 3   RESEARCH METHODOLOGY

3.1   Introduction

This chapter describes the research methodology used in this study and the underlying philosophies that justify the choices made. It presents the processes used to select the research methodology, identify the population and the sample to be used and collect, analyse and present the data. It also outlines the measures taken to ensure that no harm comes to the research subjects as a result of the research activities. Finally, it presents the limitations and delimitations of the study.

3.2   Methodology

A mixed methods methodology was used to investigate the research questions posited by this thesis. Mixed methods research discards the major claims of the irreconcilability proposition (Howe, 1988). The idea that various data types and associated research methods are incompatible with one another has been rejected by the proponents of mixed methods research (e.g. Creswell and Plano Clark, 2007).

Contemporary social issues, such as the SDMP, are complex in nature. Consequently, researchers need a multifaced approach to address and investigate contemporary social issues. In order to examine contemporary social issues, innovative approaches should be employed by researchers that use a variety of data types and analytical techniques to address the research questions set. Consequently, social science researchers need to be

equipped with the necessary skills to employ a variety of research methods. It should be noted that the practice of gathering various data types is not new but was not explicitly labelled as "mixed" in the past (Olsen, 2004). Nowadays, the distinctive aspect of this research approach is the intentional and explicit mingling of various data types and analytical tools which has emerged as a discrete methodological approach to social science research (Creswell and Plano Clark, 2007).

The following section discusses the philosophical foundation of the chosen methodology and the main process in social science research. The research methodology and research design chosen for this study will also be discussed and justified.

3.2.1 Methodology in the Social Sciences

Two paradigms generally dominate social science research – the constructivist and the positivist paradigm. In general, the constructivist and positivist approaches, both of which are used in attempts to apprehend the social world and issues faced in social world, are considered to be incompatible; they differ in their definition of truth and in their description of how truth is acquired (Cherryholmes, 1992). The difference is partly rooted in the early fascination with the empirical research design in the social sciences, where quantitative methods were prioritised over qualitative research methods (Olsen, 2004, p5).

The irreconcilability of the approaches to analysing different types of data is so entrenched in social science research (Teddlie and Tashakkori, 2003, p.6) that it has been referred to as the war of paradigms (Howe, 1988). Alternative research designs emerged

(Creswell and Plano Clark, 2007) as social science research became more mature and social science started dealing with more complex social issues, among them, pragmatism accompanied with mixed methods.

The major paradigms and their implications for social science research are presented in Table 3.1. Although the conceptualisation of each paradigm can be considered as being distinct, the paradigms should not be considered as being inflexible and mutually exclusive.

Table 3.1: Summary of the Four Philosophies

Definition	Interpretivism	Positivism	Realism	Pragmatism
Epistemology The perceptions of the research on what constitutes acceptable and tenable knowledge on the subject	Meanings are subjective and drawn from social phenomenon	Only observable and recordable phenomena is considered credible as acceptable knowledge	Phenomena that can be observed provides data and facts that are credible enough to be considered as constituents of knowledge	A blend of observable and subjective meanings that can be proven
Ontology The perceptions of the research on reality	Dependent on the social construction by the subjects, thus making it dynamic	Independent on the social actors thus it is objective in nature	Objective in nature, and exists independent of human thought	Extrinsically determined based on the most application responses to the phenomena
Axiology The perceptions of the influence or role of ethics and value in the research	The research is based on values and ethical norms which determine all the processes	The research is performed free of values and the researcher maintains a stance that is objective	Research is laced with values based on the views and cultural artefacts	Values and ethics plays a major role in the research and the research adopts a subjective and objective perspective
Techniques in used of data collection	Unstructured or semi-structured techniques, that mostly focused on qualitative data, that can be transformed into quantitative for analysis	Highly structured with large samples used to collect quantitative data, sometimes with qualitative data collected	The methods selected fit the approach used in the study whether qualitative or quantitative	Mixed methods approach, that involves the sequential or simultaneous methods

Source: Bergman, (2008), Göran (2012) and Bryner and Srtibley (2010)

A number of arguments can be made to support specialisation in a specific research approach. It would be unreasonable to expect social science researchers to be skilled in an extensive range of methodologies (Hammersley, 2011). Researchers, generally, develop expertise on a particular methodology by specialising on a specific paradigm.

However, a limitation of specialisation is that it could lead to partial understanding or a one-dimensional insight into complex social issues, such SDMP. The pragmatic paradigm evolved as a way to address the limitations of the mono- method, specific approach. The pragmatic worldview or paradigm provides the social science researcher with the opportunity to combine insights and processes from both the positivist and the interpretivist approach to generate a better product (Johnson and Onwuegbuzie, 2004, p.17). It should be noted that the emergence of the pragmatic paradigm did not completely eliminate the philosophical debate. However, the pragmatic worldview provides a middle-way between philosophy and methodology that allows the researcher to investigate and provide answers to research questions in the context of the real world (Johnson and Onwuegbuzie, 2004).

The subsequent section presents an overview of the pragmatic paradigm along with the research process associated with pragmatic paradigm.

3.2.2   The Pragmatic Paradigm

The pragmatic paradigm has drawn ontological and epistemological deliberation. Specifically, the debate has focused on what and how one can know the social world. By putting aside this debate, a pragmatic researcher identifies the value and benefit of employing dissimilar but complementary research approaches to investigate social science related research questions.

Pragmatism is based on a pluralistic assumption. The research design and process of pragmatism are based on "what works best" to answer the research questions (Creswell and Plano Clark 2007, p.23). Pragmatist researchers are able to address the

methodological dualism and think beyond it. By overcoming the methodological dualism, pragmatist researchers could carry out innovative research that is adaptable and flexible.

The following section presents the major parts of the pragmatic paradigm and discusses how the pragmatic views are applied in this thesis.

Pragmatism and key foundations

Research paradigms have six elements, namely: ontology, epistemology, methodology, axiology, rhetoric, and research methods. The paradigms vary by world view, since each paradigm is philosophically determined. The design and implementation of research is influenced by each element, since each element governs how and what we can know of the social issues faced in the world (Creswell and Plano Clark, 2007). The following paragraphs discuss each element in connection with this thesis's research process.

Ontology is the first element which focuses on the nature of the reality. Ontology is relevant to this thesis in two pertinent areas. This thesis agrees with the claim of objectivism. In doing so, this thesis agrees that an independent external reality exists and that it can be discovered via testing of hypotheses. However, this thesis also acknowledges the limitations of objective assertion since researchers cannot determine if a specific explanation of the external reality is better than any other explanation. This limitation of objectivism has led to this thesis taking a constructivist view and supporting the view that truth about external reality is difficult to determine. In this context, a possible way forward for the researcher is to offer multiple perspectives of the social phenomena that collectively constitutes the subjective experience of agents in a social situation (Cherryholmes, 1992; Teddlie and Tashakkori, 2009). In this thesis, ontology is re-conceptualised in less rigid and flexible terms, thus enabling this research to explore

the actual process and reality of SDM in HEIs Saudi Arabia that goes past contingent interests and beliefs.

The second key element is epistemology. Epistemology focuses on the nature of knowledge. In general, social scientists have addressed epistemology with an epistemological dualism that separates research using the subjective-objective approach (Bryman, 1998). In epistemological dualism, objectivism has been associated with the positivist approach and subjectivism has been associated with the constructivist approach. This thesis supports the efforts of pragmatists to substitute epistemology with a practicality principle (Creswell and Plano Clark, 2007, p.24) in order to counter the epistemological dualism. The principles of practicality focus on gathering, scrutinising and assimilating whatever types of data that are needed to answer the questions of any research study. In this context, Teddlie and Tashakkori (2009) suggest that it is practical to consider epistemology as functioning on a continuum and not as operating on two differing sides.

Axiology is the third key element of the research process. Axiology refers to the role of values in shaping social science research (Creswell and Plano Clark, 2007). It is important for two reasons: firstly, the entire research process is influenced by axiology; secondly, axiology permits meaningful interpretations and deductions in research. Positivists and interpretivists have different values. Positivists are generally considered to produce unbiased research as they control for any bias. On the contrary, interpretivists view evidence collected as being dependent on the explanation of the researcher carrying out the study. This thesis considers both values as being valid instead of viewing the values as being irreconcilable. This thesis acknowledges that both values need to be reflexively

and explicitly identified in the research process as possible factors impacting the manner and outcome of the research study.

The fourth key element is methodology. Methodology can be defined as the philosophy behind the scientific research and research design (Creswell and Plano Clark, 2007). In general, social science researchers consider qualitative and quantitative methods as being irreconcilable at the reasoning level. Deductive reasoning is the basis of quantitative methodologies and methods where researchers attempt to test and refine existing theories. Inductive reasoning is the basis of qualitative methodologies and methods where researchers strive to generate theories. By employing the pragmatist view, this thesis strives to counter the connection between methods and methodology, addressing the issue with plurality of method and the problem centred method (Olsen, 2004). Therefore, this thesis will use whatever data and analytical method is needed to investigate and generate a reply to the research questions under investigation. As such, the thesis attempts to obtain holistic answers to research questions that are grounded in multi-dimensional accounts.

Rhetoric is the sixth key element. Rhetoric refers to the language and presentation of findings obtained in social science research (Creswell and Plano Clark, 2007). In general, positivist researchers tend to use official language and employ approved definitions when presenting research findings. In contrast, constructivist researchers tend to use an informal style and put forward views and meanings which are subjective when presenting the research findings. This thesis will employ both informal and formal language to present the research findings, in line with the view of the pragmatist researcher.

Criticism of pragmatic paradigm

Pragmatists have come a long way in their attempt to set up the mixed method as a discrete methodology (Mason, 2006). They made great attempts to place the mixed method in a

philosophical framework. Research studies based on the pragmatist paradigm can now be critically assessed on the basis of the key foundations of the social science research process. However, as with any research method, the mixed research method has drawn criticism from supporters of the specific research method, e.g. purists, for whom merging different data types and methods still remains a highly contentious issue as the purist finds such a combination confusing (Johnson and Onwuegbuzie, 2004). The issue is compounded by the fact that pragmatist researchers do not agree on what constitutes a valid mixed method (Tashakkori and Creswell, 2007). There is even disagreement about basic terminology. In addition, there are arguments about the value and benefits of the mixed method and an issue about how a researcher should extract implications (Teddlie and Tashakkori, 2003). However, this disagreement is not unexpected given the general lack of consistency in the research method literature regarding how best to undertake social science research.

Justifying the research methodology

Despite the criticism, a research design capable of exploiting different data types provides the best prospect to investigate and generate answers. This argument is grounded in the view that social science research does not appear to function in segregation from the world that the social scientist is attempting to apprehend. In fact, the research process and the outcome of the research are moulded by the actors, institutions and issues it takes as the major units of analysis. Consequently, the research studies are impacted by social issues and the actors involved, as well as the opinions and values of the researchers carrying out the research investigations. This argument forms the basis of the methodology and research design chosen for this thesis.

3.3   Research Design

This section discusses the research design, including the data collection techniques used and the sample selection and access to participants. This section also considers the ethical aspects of the research project.

3.3.1   Research Aim, Research Questions and Research Design

The aim of this study is to investigate the impact of TMT / MMT heterogeneity on SDMP and the factors influencing the process of SDM in HEIs in Saudi Arabia. Specifically, the research questions are:

1. What is the extent of TMT/MMT heterogeneity at HEIs in Saudi Arabia?

2. What is the extent of knowledge sharing and access to knowledge resources at HEIs in Saudi Arabia?

3. Are there significant differences between the extent to which TMTs and MMTs share knowledge, and have access to knowledge resources?

4. What is the impact of TMT/MMT heterogeneity, knowledge sharing, and knowledge resources on SDMP at HEIs in Saudi Arabia?

5. What is the impact of the speed and comprehensiveness of SDMP on the performance of an HEI in Saudi Arabia?

6. How does SDMP usually work at HEIs in Saudi Arabia?

7. What are the critical factors, such as Islamic culture, and the role of TMTs and MMTs, that influence SDMP, for example, in terms of its comprehensiveness and speed, at HEIs in Saudi Arabia?

In line with the assumptions and principles of the pragmatic worldview, the research questions have been positioned centre-stage, while the epistemological and ontological argument about the status of knowledge and reality have been placed to one side, metaphorically speaking.

3.3.2   The Research Design Process

The mixed-method design requires a careful collection of qualitative and quantitative data. This is not an arbitrary process; each data type informs the researcher about a different aspect within a given social issue. This approach of data triangulation has popular in research method literature.

The Sequential Explanatory Design

The approach taken in this research study has two sequential phases. Generally, a researcher employing the mixed method approach starts out with a quantitative method followed by a qualitative method. In the literature however there are various examples where the qualitative phase takes priority over the quantitative method or both methods are given equal treatment (Creswell, 2003).

The aim of the sequential explanatory research design undertaken in this research was to gather and examine quantitative data to obtain a general understanding of the relationship between SDMP and heterogeneity, knowledge sharing and knowledge resources. The second phase gathered and analysed supporting numeric data to improve, elucidate or contest the findings of the quantitative analysis.

There are specific reasons for conducting a quantitative study followed by a qualitative study. In order to answers the research questions, a conceptual framework has been

developed considering existing theories/models and contextual factors. Research questions 1, 3 and 4 focus on TMT/MMT heterogeneity and how such heterogeneity influences SDMP characteristics, such as speed and comprehensiveness. TMT/MMT heterogeneity includes education level, tenure and subject background heterogeneity. This relationship is represented in Figure 2.1 as P1 (Proposition 1). Moreover, Research questions 2, 3 and 4 focus on knowledge sharing and knowledge resources and how these factors influence SDMP characteristics. The impact of knowledge sharing and resources on SDMP characteristics are presented in figure 2.1 as P2. Research question 5 focuses on the impact of SDMP speed and comprehensive on organisation performance. This relationship is represented in figure 2.1 as P4. Research questions 6 and 7 focus on the processes that inform SDMP in HEIs in Saudi Arabia and country specific factors, such as Islamic cultures in Saudi Arabia and other factors such as bureaucracy and lack of financial resources. This relationship is depicted in figure 2.1 as P3.

Prior literature and existing theories models support the arguments associated with P1, P2 and P4. For instance, the relationship between heterogeneity and SDMP characteristics could be explained by behavioural decision theory. In addition, the relationship between knowledge sharing/resources and SDMP characteristics could be explained by a knowledge based view. A quantitative approach, therefore, is appropriate as a tool to investigate the relationship between SDMP characteristics and heterogeneity, knowledge sharing and knowledge resources. Sections 2.14.2, 2.14.3, 2.14.4 and 2.14.5 provide comprehensive arguments supporting the relationships between variables.

Arguments associated with P3 are explorative in nature. For instance, the process of

decision making and culture is harder to measure quantitatively, as is Islamic culture. However, a qualitative research design would be appropriate. The present study, therefore, employed a qualitative research design to explore the SDMP the impact of Islamic culture on SDMP at HEIs in Saudi Arabia. Chapter 4 presents the findings associate with P1, P2 and P4 using a quantitative research design. Chapter 5 presents the findings associated with P3 using an explorative qualitative research design.

Strengths and Weaknesses of the Sequential Explanatory Research Design

Sequential explanatory research designs have certain strengths and weaknesses. One of the advantages of using a sequential explanatory design is the possibility of implementing the design in a straightforward and simple manner (Creswell and Plano Clark, 2007; Creswell, 2003). However, in order to keep the phases separate, and perform them in a sequential order, the researcher needs to allocate extra time and resources, which may not always be available. In this thesis, the researcher spent a great deal of time and resources collecting data in a sequential format. Another weakness of the sequential explanatory design is that the second phase cannot be planned in detail until the first phase of the research design has been completed (Creswell and Plano Clark, 2007, p.75). This research study addressed this issue by preplanning and proactively responding to the quantitative findings as they appeared.

3.4   Connection between Mixed Method and Case Study

This thesis employed a mixed method research approach in order to examine SDMP in a HEI in Saudi Arabia. A mixed method research study requires various approaches to data collection and data analysis and interpretation. In this context, the case study method

fits in well with a mixed method research design since the case study approach allows the researcher to gather rich empirical data about one particular case. Moreover, the case study method allows the researcher to employ qualitative and quantitative methods to the data. In addition, combining both quantitative and qualitative methods increase the legitimacy of the research findings, since the quantitative analysis confirms mathematical accuracy and the qualitative analysis entails descriptive accuracy (Creswell and Clark, 2011).

For the reasons discussed above, the case study approach was selected to investigate SDMP in a HEI in Saudi Arabia. The following section presents arguments in favour of selecting a specific HEI in Saudi Arabia as a case study.

3.4.1   Why a Single Case

The present study employed an embedded single-case study, utilising several units of analysis of the case (Yin, 1994). This is because the present study aims to analyse specific aspects of HEIs, such as SDMP and heterogeneity of gender, tenure, and other factors. Thus, a single case study should be adequate to examine the research issues.

According to Siggelkow (2007), a single case study provides extremely convincing data to test theories, as long as the single firm possesses the unique features or attributes needed to meet the study objectives. The selected HEI has the requisite attributes to meet the study objectives; such as presence of TMTs and MMTs, and diversity in terms of gender, age, experience among TMTs and MMTs. Therefore, a single case study could be used to address the research questions.

Single case studies have been frequently criticised, because they are incapable of

providing generalised conclusions (Tellis 1997). Hamel et al. (1993) and Yin (2009) argue that the relative size of the sample used, regardless of size, does not transform a single or multiple case into a macroscopic study. A single case could be considered acceptable, assuming it meets the objectives established for the study. In the present thesis, a single case study assisted in meeting the established objectives, such as exploring SDMP and additional factors influencing SDMP.

According to Yin (2003), the case study method could encompass one or more case studies and, thus, the researcher must decide whether a single or multiple case study is suitable for their research. There are different views given concerning this in the literature. According to Yin (2003) and Stake (1995), a multiple case study allows researchers to analyse data within each case as well as to compare and contrast cases. Eisenhardt (1991) suggests that any assessment regarding the number of cases to include in a study should be based on how much could be garnered from a single case, and how much novel information any additional cases would bring. Moreover, multiple cases are well suited to testing existing theories (Eisenhardt, 1991).

Carrying out a multiple case study, however, generates difficulties that a researcher should consider when assessing the suitability of multiple case studies. From a practical perspective, implementing a study involving multiple cases could prove expensive and time-consuming (Baxter and Jack, 2008). Moreover, arguably a multiple case study affords a less in depth understanding of a situation than a single case study (Dyer and Wilkins, 1991). Although, Gerring (2004) argues the reverse; i.e. that more case studies can lead to greater representativeness of the research context. However, more case studies require the researcher to devote less time to observing and analysing each case.

Employing a single case study does afford some advantages. According to Siggelkow (2007), a single case study can provide a rich and deep understanding of the phenomenon under investigation. Moreover, Yin (2013) suggests that a single case study allows the researcher to question prior theoretical relationships, and explore new explanations and

relationships. Siggelkow (2007) argues that a single case study can be powerful if selected carefully. In this thesis, the study of a single case in depth (i.e. one HEI) allowed the researcher to collect extensive data as a way to help understand the dynamics of SDMP in Saudi Arabia.

Some studies (e.g. Drori et al., 2011) criticise the single case study approach, claiming that it limits generalisation. However, this would not affect the researcher's ability to meet the aim of this thesis. The justification for choosing a single case study is summarised below:

Firstly, a single case study allows a thorough exploration of the process of SDM to generate new theoretical and practical insights based on the study data (Siggelkow, 2007; Eisenhardt and Graebner, 2007).

Secondly, in terms of governance, all public and private colleges and universities are now under the supervision of the Ministry of Higher Education (or MOHE) (the name of which has now been changed to be Ministry of Education (or MOE). Consequently, the characteristics and governance of public universities are similar in all HEIs in Saudi Arabia. Therefore, it was deemed reasonable to select one HEI in Saudi Arabia in which to conduct the research.

Finally, it was judged pragmatic for the researcher to study a single representative case, gathering both quantitative survey-based data and in-depth qualitative interview-based data, to manage the cost and time aspects of the study.

3.4.2   National Context of the Study: HEI in Saudi Arabia

The present thesis selected one HEI based in Saudi Arabia. The selection of one HEI from a specific country is expected to have minimum effect on the findings, since the context and institutional environment of HE is similar across the different cities within the country. All public HEIs function under identical regulations and rules in Saudi Arabia. In addition, all public HEIs are influenced by Islamic and Saudi culture. Consequently, there is a high degree of homogeneity among the HEIs in Saudi Arabia. Therefore, a single HEI can effectively represent all HEIs in Saudi Arabia.

Saudi Arabian HEIs provide a suitable context in which to examine SDMP process. While the formulations and execution of SDs is undertaken by the TMT within the HEI, these individuals still need to comply with the rules and regulations set out by the Ministry of Higher Education (MOHE) and need to obtain approval for any SDs. Thus, this HEI differs from other HEIs in the UK and USA, where individual universities act autonomously when making SDs. Hence, the HEIs of Saudi Arabia provides a good context in which to examine the strategic making process in the broader Arab context.

Saudi Arabia was selected as the context in which to investigate strategic decision making processes in HE, for the following reasons.

Firstly, the researcher is a female student in a country dominated by the masculine model in the fields of education, economics and politics. This is reflected in part throughout the thesis, because it is an influencing factor related to female educational development and the development of the Saudi nation. Therefore, decision making is an essential consideration when promoting equality and diversity in relation to management practices. Al-Rasheed (2013) believes, resulted from the journey of female emancipation which

has gradually spread across the nation. The researcher suggests that women are becoming more empowered in Saudi Arabia; therefore, it is both important and timely to undertake a study exploring the impact of SDM across management tiers in the HE sector, and to address vital factors informing this relationship, such as Islamic culture.

The researcher considered all the available options regarding which institution to select, and finally decided to choose an institution with which she was culturally and linguistically familiar, and where she was likely to encounter the least amount of resistance to her research from the macho culture that pervades many Saudi organisations. She believed she would encourage cooperation more easily and prompt respondents to participate more readily in this way. Furthermore, this topic had not be researched in Saudi Arabia previously; therefore, there were a number of unknown factors relating to how management and institutions respond to requests for cooperation.

Secondly, Hakimian and Yousef (2009) wrote that Saudi Arabia has developed into, and become, an important player, being the only Arab State to be a member of the G20, as an important partner with China, Russia, the EU and America. This status also helps to improve the country's national economy. Accordingly, HE and management decision making processes play an important role in the promotion of partnerships and outcomes for the country. This point was factored into the decision to select respective institutions as a case study. However, for ethical reasons, the researcher is unable to reveal the identity of the university, as this would breach the confidentiality requirements, which demand preservation of the anonymity of this university.

3.5   Research Design Implementation

In keeping with the typical formulation of the mixed method design, the research was

conducted in two phases: a quantitative Phase One, followed by a qualitative Phase Two.

Two types of data were used to highlight different dimensions of SDMP. The first
phase was designed to examine the impact of TMT/MMT heterogeneity, knowledge
sharing and resources on SDMP in a HEI in Saudi Arabia. The second phase was designed
to explore the process of SD making in a HEI in Saudi Arabia and the influence of factors
such as the Islamic culture on the process of SD. Equal weighting was given to the two
phases, with neither being privileged over the other.

3.6   Research Setting

The research setting comprises the geographical location where the research took place,
as well as the environment where the study was carried out. According to Serakan and
Bougie (2016), identification of the research setting contextualises the importance of the
research topic since it provides sufficient background on the respondents who participate
in the study. The practical aspects of the research are also dependent upon the research
setting, since the ability of the respondents to provide correct responses to the questions
in the research instrument is dependent on their experience during the data collection
exercise. As a result, it is not recommended that the data collection exercise is carried out
in a research setting that is not relevant to the research topic (Dominguez and Hollstein,
2014). This research is set within the context of one institution selected from among 34
institutions within the Saudi Arabian HE system (according to the website of the
Ministry of HE in 2015). The identification of the research setting influences the cultural
dimensions and strategies applied at the organisation.

3.7   Population, Sample Size and Sample Selection

The population is the collection of people who are perceived as being relevant to the study due to their ability to provide suitable and valuable information about the research topic (Tracy, 2012). In most instances, the population is comprised people who are directly affected by the phenomena being researched. As a result, the population is mostly drawn from the research setting. In order to enhance the chances of getting a balanced and non-partisan response, the research process should be based on a large population. Accordingto Newman (2008), a large population reduces the chances of bias in a research project. However, there are limitations to the selection of a population, since the members must also be knowledgeable about the subject being researched. Consequently, a moderately sized population enhances the possibility of the selection of a reliable sample that is comprised people who are well-versed with the subject matter under research.

Since this study employed a sequential mixed method approach, the selection of the population was done in an iterative manner: first, one university was randomly selected out of a possible 34 institutions in Saudi Arabia; then all the members of the population, comprising 385 top and MMT members of staff from the various departments within that institution, were selected to participate in the study. The response rate is determined by the proportion of questionnaires that were returned by the time the data analysis process has commenced. The completed questionnaires were returned through the HEI in order to facilitate collection. The second, qualitative, phase of the research comprised semi-structured interviews with 31 participants. By sampling the whole population, the research was able to collect the perceptions of all individuals during the data collection process. Similarly, the approach was preferred since only one institution was selected to

represent the whole sector. As a result, the researcher stood a better chance of obtaining a comprehensive picture from the population about the phenomenon being studied.

3.8   Questionnaire and Instrumentation

The design of the questionnaire is guided by research questions and constructs used in previous literature on SDMP. The initial research questions focused on TMT/MMT heterogeneity. Therefore, a number of questions were included in the survey referring to the demographic characteristics of the respondents, such as education level, tenure, and subject background. Research question two focuses on knowledge sharing and knowledge resources at HEIs. Nine items based on prior studies (Okhuysen and Eisenhardt, 2000; Stasser and Titus, 1985) were included in the questionnaire, in order to measure knowledge sharing and resources. In addition, five items based on prior studies (e.g. Fredrickson and Mitchell, 1984 and Heavey et al., 2009) were included to measure SDMP comprehensiveness and speed.

The questionnaire survey, which was translated from English into Arabic (see Appendix A for English version and Appendix B for Arabic version), was distributed to the entire population of 385 TMT and MMT members between April and June 2016 (see Table 3.2). 28.05% of the sample were high level executives, with 71.95% being academic level staff. The combination of the two categories provided an intricate picture of the management processes in the HE sector in Saudi Arabia, due to the differences in responsibilities and roles.

Similarly, the differences in the professional experiences of the respondents was a fundamental constituent of accessing balanced views in the responses. In total, 244 questionnaires were completed and returned, giving a response rate of 63.37%.

Table 3.2: Population Characteristics

TMTs	TEAMS	MEMBERS	PROPORTION
High level executives(administrative roles)	8	108	28.05%
Academic level (Colleges)	23	277	71.95%
Total	31	385	100%

Source: Author (2016).

The questionnaire comprised five parts. Part 1 contained questions relating to the demographic information of the respondents. This information was considered to be integral to the classification of the respondents since it indicates the distribution of the sample based on their experience in the current institution, position and educational background. Part 2 dealt with the comprehensiveness of decisions and the speed with which decisions are made. These variables were sourced from Chen and Chang (2012) and Talaulicar et al. (2005) (Table 3.3). Part 3 dealt with questions relating to knowledge resources and knowledge transfer, which are variables selected from Zhang and Begley (2011). Part 4 included the importance of the decision drawn from Dean and Sharfman (1993) and SDMP performance selected from Lechner and Floyd (2012).

Part 5 dealt with questions relating with Islamic cultures. By drawing the measurement scales and variables from different studies that are relevant to the subject, the researcher sought to reduce the bias towards a single methodology, as well as differentiate the approach used in this study from that used in past studies. The variables chosen are relevant to the study.

Table 3.3: Variables and Scales Applied in the Study

Variables	Valid Scale
Decision importance	Dean and Sharfman (1993)
Knowledge resources and Knowledge transfer	Zhang and Begley (2011)
SDMP performance	Lechner and Floyd (2012)
Decision speed	Chen and Chang (2012)
Decision comprehensiveness	Talaulicar et al. (2005)
Islamic culture (dimensions of national culture)	Hofstede (1983), van Oudenhoven (2001)
Newly adapted scales for the semi- structured interviews	Vassilopoulos (2011)

The dimension of national culture is based on the research by Hofstede (1983) that concluded that there was evidence that management and organisation styles were dependent on culture. The study concluded that there were a dynamic nature of management practices especially in relation to symbols that represent the antecedents to culture. As a result, since the people who are managed are influenced by culture, the outcome of management processes cannot be fully defined or understood without integrating the effects of culture. In Table 3.4 identifies how the research by Hofstede in 1983 differs from the conclusions drawn by Hofstede, Hofstede and Minkov in 2010,

since the earlier research only adopted four dimensions, while the later research focused

on six dimensions, as indicated hereunder.

Table 3.4: Cultural Dimensions by Hofstede

Cultural Dimensions under Hofstede 1983	Cultural Dimensions under Hofstede 2010
1. Masculinity versus femininity	1. Masculinity versus femininity
2. Uncertainty avoidance	2. Uncertainty avoidance
3. Power distance	3. Power distance
4. Individualism versus collectivism	4. Individualism versus collectivism
	5. Long-term orientation
	6. Indulgence

Source: Hofstede (1983) and Hofstede, Hofstede and Minkov (2010)

This study adopts power distance, individualism versus collectivism and uncertainty

avoidance as the relevant cultural dimensions. The three dimensions, that were part of the

initial four dimensions, were selected due to their relevance to the national culture and

organisational management. Hofstede (1983) used factor analysis in the classification of

countries based on cultural dimensions. This study overlooks the masculinity versus

femininity dimensions, as described by Hofstede (1983), since the dimension is linked to

the role of genders in society. In the study, masculinity and femininity was restricted to

procreation, although this perception was later changed by Hofstede, Hofstede and

Minkov (2010) to imply preference for material rewards, heroism and assertiveness.

However, this dimension was excluded from the study due to the fact that this study was

neither inclined to the gender-oriented description used in 1983 nor the heroism and

assertiveness-oriented definition used in the 2010 framework.

The study perceives the three dimensions (power distance, individualism versus collectivism and uncertainty avoidance) as being relevant to the study on the impact of TMT / MMT heterogeneity on SDMP in a HEI in Saudi Arabia. Power distance relates to the degree to which the less powerful employees in the organisation expect and accept that there is inequality in the distribution of power (Hofstede et al., 2010). The relevance of power distance originates from the fact that the study revolves around determination of the effects of heterogeneity between the members of the TMT / MMT.

Individualism versus collectivism is an indication of the extent to which members of a society are integrated into two groups (Hofstede et al., 2010). Essentially, a high level of individualism indicates that persons in the country perceive themselves as being sufficient in their singularity. The relevance of this dimension is the fact that the study focuses on the group and team dynamics within a higher institution at the departmental level.

Uncertainty avoidance defines the extent to which the members of a society can tolerate ambiguity (Hofstede et al., 2010). Uncertainty and ambiguity are part of the SDM; thus, this dimension is a key determinant of the effects of culture in the study. The dimensions were used in the development of the interview-based questionnaire that was separated into three sections (see Appendix A).

The use of a simplified scale and clearly defined items under each variable is important in the successful collection of data using the self-administered approach. Self-administered questionnaires are completed by the respondents with limited input from the researcher (Newman, 2008). Since the quantitative data collection instrument was closed-ended, the respondents were able to provide the responses without the intervention of the researcher.

The responses were coded using a 5-point Likert scale with the following values:

1   Strongly Disagree

2   Disagree

3   Neither Agree nor Disagree

4   Agree

5   Strongly Agree

3.9   The Interview Questions

Qualitative data was collected via semi-structured interviews. The use of semi-structured interviews made it possible for the researcher to follow a predetermined approach to the collection of data and adjust the questions to seek clarifications on previous answers. According to Mitchell and Jolley (2009, p. 277), "like the structured interview, the semi- structured is constructed around a core of standard questions. Unlike the structured interview, however, the interview may expand on any question in order explore a given response in greater depth". The semi-structured approach is dynamic in nature since it ensures that the questions during the interviews do not deviate from the objectives, while focusing on the research problem and research objectives. In this study, the adjustments were aimed at integrating the views of the respondents to the core standards, since some of the responses introduced new perspectives to the norms on management in the HEIs (see Interview Questions in Appendix C for English version and Appendix D for the Arabic version)

.

The interviewees were selected using purposive sampling, with approaches being made face-to-face and by phone to the members of top and MMTs. Initially, the researcher's intention was to carry out face-to-face interviews only; but practical constraints meant that this plan had to be abandoned. Some interviewees struggled to find time for face-to-face interviews and the geographical dispersion of the interviewees (some were located far from the researcher's office) made this technique impractical (Sedgwick and Spiers, 2009). Finally, cultural expectations meant that as a female researcher, the researcher was not permitted to interview male counterparts in person. Consequently, she had to look for alternative ways to carry out the interviews. Fortunately, some interviewees were willing to be interviewed by telephone.

The synchronous communication offered by face-to-face interviews (Bryman, 2008) allows the interviewer to take advantage of social cues. The value of these social cues depends on what the interviewer wants to know from the interviewee (Chris and Stewart, 2000). In this study, since the main concern was to gather the interviewees' experience and opinions regarding SDMP, social cues were less important, and telephone interviews were a suitable alternative data collection method.

The interviews were conducted between 20 June 2016 and 9 August 2016. 31 interviews were conducted; 12 with women and 19 with men (7 face-to-face and 24 telephone interviews). 13 participants were members of TMTs while 18 were members of MMTs. The interviews, each of which lasted about an hour, were conducted in Arabic and audio recorded with notes, with the exception of 4 interviews which were not recorded in accordance with the wishes of the interviewees. The recordings were transcribed and translated into English.

3.10 Validity, Reliability and Generalisability

The process of testing validity, reliability and generalisability focuses on the determination of whether the study can be duplicated under similar circumstances and whether the results reflect the intrinsic and extrinsic differences in the research process (Exadaktylos and Radaeli, 2012).

3.10.1 Validity of Quantitative Research

Validity of quantitative research is mostly assessed at the construct validity level. According to Serakan and Bougie (2016), construct validity denotes the extent to which the testing processes measure what they are expected or claimed to test. Gideon (2012) defined construct validity as part of the criterion and content validity, which makes it easier for measurement and assessment. There are seven main types of validity (Tashakkori and Teddie, 2010; Creswell et al., 2014) and they are discussed below:

1.   Face validity

This type of validity refers to how valid the results seem at face value. It is not scientific validity method since it is not quantified in any manner using statistical methods. This method is about judging whether it seems like the researcher has done what they started out to do. Face validity has some use in cases where different approaches are being assessed to identify the most suitable one.

2. Content validity

This type of validity is concerned with making sure that all the content which was supposed to be measured has actually been measured. In another words, to ensure that the tests used are appropriate. The real advantage of using content validity is with the

researcher is using experts in the field or individuals that are part of the target population. With the application of statistical techniques and tests, content validity can be made more objective. For example, the researchers could employ a content validity study to establish the extent to which the research survey is representative of the content domain, and how well it maintains the theoretical structure being assessed in the factor analysis.

3. Construct validity

This type of validity is concerned with whether the tests used within the research actually measure the concepts or hypotheses that they are intended to. This validity is about the ideas or image created from a collection of associated behaviors in a meaningful manner. Construct validity is the depth and detail in which the construct is measured, as compared to things that are outside of the construct. A construct can also refer to a characteristic or concept that cannot be directly observed, except through the observation of other indicators related with it that can be measured. Construct validity can be established by providing evidence that the data supports the theoretical structure and also that the theory is related to reality. For example, convergent validity is the extent to which an activity is similar to other activities or operations that it theoretically should be similar to. Discriminative validity refers to the amount by which a scale does or does not differentiate itself from other groups, based upon theoretical reasoning or the findings of previous research.

4. Internal validity

Internal validity is about being able to tell that the research works within a research setting and whether or not changing a given variable within the study affects the variable that is being studied. Internal validity is related to the measure of the independent variable being accurately stated in order to produce the observed result or

effect. Internal validity is achieved if the effect on the dependent variable is occurring solely as the result of the independent variable(s). This can be the degree to which a result can be manipulated.

5. External validity

External validity is the extent to which results of the study can be generalised beyond the sample used within the research. In other words, can the findings of the study be applied to other people or settings. A research setting has few variables and is normally a controlled setting, external validity is whether the results hold true with all other variables being present.

6. Statistical conclusion validity

This type of validity measures whether a relationship between cause and effect exists. Statistical conclusion validity is about ensuring that adequate sampling procedures have been followed, relevant and appropriate statistical tests have been applied and that reliable measurement procedures have been used. This all results in the credibility and believability of the conclusion.

7. Criterion-related validity

This type of validity is about assessing the quality of the measurement methods used within the study. The results are compared with known and valid results to demonstrate accuracy. If the results are highly correlated with other known measures or previous research, then the criterion-related validity is achieved. The criterion must have been well measured for this validity to work. it must be noted that appropriate criteria do not always exist. The different approaches that would be applied would be based upon the criteria used as the standard of judgement i.e. predictive validity is the ability to predict what can be predicted theoretically and the extent to which the expected outcomes are predicted. The researcher depends on the mind set and attitude of the respondent to give

them the valid data. That is, the researcher depends upon the respondents to provide them with the data by answering all the questions honestly and conscientiously. It is also important that the respondents are able to understand and comprehend the questions. If they are unable to understand what is being asked, the data collected may not reflect what the researcher thinks it does.

In the context of the quantitative part of the present thesis, validity refers to the extent to which the variables measured by the questionnaire actually measure the variables under consideration.

In order to check *discriminant validity*, the researcher conducted a Pearson's Correlation tests between the dependent and independent variables. The correlations show a low positive relationship between variables. Therefore, the measurement of variables has sufficient discriminant validity.

In order to check **convergent validity**, a Cronbach's Alpha was performed for each variable, and the items associated with each variable. All variables have a Cronbach's Alpha of 0.70 or higher. Therefore, the variables have convergent validity.

In order to check **face validity**, a pilot test was carried out with PhD students taking a non-management subject.

In order to check **content validity**, a pilot test was carried out with PhD supervisors who are also experts in the management research.

3.10.2 Validity of Qualitative Research

According to Gideon (2012), the procedures for establishing validity are not rigidly defined and do not follow strict guidelines. In contrast with the procedural and

experimental design that guides quantitative research that relies on statistical significance, qualitative approaches are less definitive. However, this does not nullify their effectiveness and suitability to meet the objectives. Essentially, qualitative research methods are inclined towards intrinsic validity and reliability (Marczykv et al., 2010). Essentially, the concerns about validity in qualitative research originate from the need to achieve transferability, credibility, dependability, authenticity and conformability. Lapan et al. (2011) expanded the authenticity dimension by specifying that it depends on balance and fairness, educative/academic authenticity, tactical authenticity, ontological authenticity and catalytic authenticity.

According to Hammond and Wellington (2012), touch-point validity is linked to the determination of whether the findings connect with the theory and with other studies in a productive way. Are previous understandings affirmed, reconciled, nuanced, corrected or expanded? Touch-point validity is ensured through the utilisation of findings from the literature review in the development of the research question and the questions for data collection during the interview. According to Noble and Smith (2015), the embedment of the ideas from the literature review into the data collection and analysis process ensures touch-point validity. In this study, touch point validity will further be applied during the discussion process.

Witness validity relates to the determination of whether the readers of the data and findings, following the researcher's methodology, arrive to basically similar impressions. Witness validity is based on the fact that, for the findings to be reliable, they should mirror the perception of people. Gideon (2012) challenged the importance of witness validity based on the fact that people have different perceptions and that they may not necessarily agree with the findings. Similarly, due to the disparity in professional skills and philosophical inclinations, it is not possible to ensure absolute witness validity.

Resonance validity relates to the question of whether the data and findings resonate with readers' lives, both from the perception of familiarity and personal implication (Scruggs and Mastropieri, 2006). The resonance validity is drawn from the elements of pragmatism which relate to the value of the research. According to Noble and Smith (2015), this research resonates with the lives of the individuals and has a higher possibility of success since members of the community have a higher motivation to participate. Similarly, the responses are expected to be relevant, thus reducing the possibility of incongruence between the theories discussed in the literature review and the inferences from the discussion in the findings.

Revisionary validity relates to whether the findings aid the readers to revise or re-vision prior understandings, either on an academic or personal level (Johnson and Christensen, 2010). The revision may be a sense of greater affirmation or, more usually, a change in the conception or depth of understanding. Revisionary validity is connected to resonance validity, although it is also linked to an adjustment in the perceptions of the individuals in relation to the new information that originates from the research.

Efficacy validity depends on whether the findings are useful and whether they make a difference in theory and practice. The usefulness of research was discussed by Exadaktylos and Radaeli (2012) as part of the value dimensions.

The concept of validity is described by a wide range of terms in qualitative studies. This concept is not a single, fixed or universal concept, but "rather a contingent construct, inescapably grounded in the processes and intentions of particular research methodologies and projects" (Winter, 2000, p.1).

Although some qualitative researchers have argued that the term validity is not applicable to qualitative research, they have realised the need to add some kind of qualifying check or measure in their research. For example, Creswell and Miller (2000) suggest that validity is affected by the researcher's perception of validity in the study and his/her choice of paradigm assumption.

In this study, the 31 participants' responses were supported by the responses received from the members of TMTs/MMTs. The coherence of the responses and the consistency within the responses provided credibility and, therefore, dependability, to the analysis. The semi-structured interviews yielded a consistency within the answers that were received from both TMTs/MMTs. Furthermore, credibility (internal validity) was achieved through triangulation of the responses received from TMTs/MMTs. In addition, member checks were carried out to ensure credibility of the findings. The typed up semi-structured interview notes and responses were given to the participants to enable them to review how their responses had been recorded (member checking) and to verify their interpretative accuracy, thus helping to increase reliability. The verification of the respondents' responses provided uniformity, and triangulation provided a construct through which to test the instrument's reliability with respect to the interview questions. In addition, the similarity of the responses obtained from the participants throughout the interviewing process justified the research methodology used and highlighted the accuracy of the responses.

3.10.3 Generalisability

The importance of generalisability is reflected in the fact that the study findings are based on the population. There are two dimensions of generalisability in this study: the study

model and the choice of respondents and data collected for the study (Creswell and Clark, 2011). The study model is based on the theories identified during the literature review. The use of empirically-tested and shared variables and measurement scales from previous research reveal that it is possible to compare the findings from this research with the findings from similar research. Under the second dimension, generalisability is achieved through the following ways. The sample was selected from a population drawn from an institution that is part of the HE system in the country. The HEI faces similar circumstances as other institutions in the country. As a result, the findings can be applied in the other institutions within the country. Finally, although the cultural differences might have varied influences, it is expected that the findings can be generalised to institutions of higher learning in other locations. The cultural aspects are based on the dimensions identified by Hofstede (1988) as presented in Table 3.4.

3.11   Pilot Study

The pilot study is normally carried out prior to the actual study as a way of testing the suitability of the research methodology in the achievement of the research objectives (Johnson and Christensen, 2010). The key concerns in a pilot study include the suitability of the research instrument, the data analysis process as well as the ability to access the respondents selected from the population. According to Hammond and Wellington (2012), the successful completion of the pilot study reveals that the study is viable and provides the research with evidence-based information on any necessary changes to the research instrument, sample size and other integral constituents of the research methodology.

The pilot study was carried out for both research approaches used under the mixed

methodology approach. First, 10 individuals who were sampled from the population were selected for the pilot study. All 10 participants completed the pilot questionnaire and returned it, representing a 100% response rate. The participants were provided with the data collection instrument and asked to provide responses and indicate whether any of the constructs was not clearly stated. The outcome of the pilot study was that the survey instrument was viable as it was and the following changes were made.

Firstly, adjustments were made to the SPSS file in the values labels for Question 7 (How many times does your team meet annually?). The adjustment was done in order to reflect the correct scales for the measurement of frequency and this did not affect the validity of the responses from the survey. There was also a change made to the type of value labels for Question 9 (What is the highest qualification in your team?) since there were none in the SPSS value labels. The value labels were included in order to provide codes for the respondents to select. The value labels used were drawn from those used in Question 1. Secondly, in the contextual variables in Part 4, the Likert scale was adjusted from "Least 1, 2, 3, 4 and Most 5" to "Very Low, Low, Neutral, High and Very High". The adjustment was done in order to remove the ambiguity in the labels for the Likert scale. The change did not in any way affect the interpretation of the results and neither did it distort the responses in any way.

The pilot study for the qualitative study was performed with two respondents, one from top management and the other from middle-level management, mainly to test the suitability of the semi-structured interviews. There were no changes made to the fundamental questions, though minor adjustments were made during the main interviews in order to obtain responses to emergent questions, such as the effects of Islamic culture and the choices at the HEI al level.

The fundamental lesson from the pilot study with regard to the interview was that the researcher needed to focus on a reliable data capture method. As a result, during the actual data collection, the interviewees were informed that the interview would be audio-recorded. Four of the interviewees did not wish to be audio- recorded, so the interviewer took notes instead. This reduced the need for note taking and summation of the responses during the study, and the researcher was able to focus on articulating the questions.

3.12 Data Collection

The process of collecting data for analysis is an integral step in the research process. All research projects are carried out to test variables or investigate the specified topics, and these two objectives are achieved through processes that utilise data (Dominguez and Hollstein, 2014). As a result, the quality of the data collected for the study determines the characteristics of the inferences and whether the research fulfills the objectives as stated. The research process also always raises concerns about the sufficiency of the data, based on the sample selected, the success rate and the risk of the respondents who get the questionnaire first influencing those who receive the questionnaire last. In this study, two processes were carried out to avoid leakage of the questionnaire that would compromise the quality of the responses, in line with the suggestions made by Camerino et al. (2014). A test for late response bias was also carried out, as described below. These two processes (e.g. compare early and late response and comparing characteristics of respondents and non-respondents) were deemed sufficient to ensure the authenticity of the data collection process during this study.

3.12.1 Primary versus Secondary Data

Two types of data were collected for the purposes of this study, including both primary and secondary data. Secondary data is normally sourced from existing literature and publications. According to Bray, Adamson and Mason (2007), secondary data plays an important role in research on variables that cannot be measured by the researcher at the time of the research. Data that has already been collected and stored is subjected to new tests under unique research methodologies based on the prevailing methodology for the study being carried out. Although the data is not current and may have been used for past studies, the fact that the methodology and objectives of the study being carried out are unique means that the findings will differ. Bryner and Srtibley (2010) indicated that secondary data is best suited for confirmatory studies that are designed to test existing theories. Such studies are performed to test the effects on a theory based on changes in the characteristics of the methodology.

According to Nagy et al. (2015), primary data is comprised in the responses of the participating individuals based on the questions in the research instrument. Primary data is normally collected directly from the target sample, thus making it highly relevant and customised to the research in hand. Bray et al. (2007) pointed out that primary data is challenging to collect since it involves a complex process that involves accessing the respondents and collecting their views. However, the researcher has the ability to decide whether the data collected is sufficient and whether there is the need to collect additional data. In this research, the qualitative and quantitative data were sufficient following the first round of data collection. From the sample of 385 who received questionnaires, 244 returned the questionnaires within the stipulated duration, making the response rate 63.37%.

3.12.2 Data Collection Processes

Quantitative data was collected through a self-administered questionnaire. The questionnaires were distributed personally and electronically ways across the HEIs that were sampled, and the respondents were asked to complete the contents and return the questionnaire via the same mechanism. Quantitative methods were used to analyse the raw data obtained through the questionnaire survey, the objective of which was to investigate the practices and opinions of the respondents. The questionnaire survey, which was translated from English into Arabic, was distributed to the entire sample population of 385 TMT and MMT members between April and June 2016. The questionnaire was administered personally by hand and through email. 244 questionnaires were completed and returned, giving a response rate of 63.37%.

Qualitative data was collected via semi-structured interviews. Members of TMTs and MMTs were approached face-to-face and by phone. The interviews were conducted between 20 June 2016 and 9 August 2016 in order to accommodate the scheduling needs of the interviewees. 31 interviews were conducted; 12 with women and 19 with men (7 face-to-face and 24 telephone interviews). 13 interviewees were members of TMTs while 18 were members of MMTs. The interviews, each of which lasted about an hour, were conducted in Arabic and audio recorded with notes, with the exception of 4 interviews which were not recorded in accordance with the wishes of the interviewees. The recordings were transcribed and translated into English.

3.12.3 Data Coding and Processing

Data coding and processing is a key step in the preparation of the data for analysis. The codes utilised were initially introduced through the Likert scale. However, due to the characteristics of the mixed methods study, there is a need for a post-research data coding. This includes the processing of data, which is performed to ensure that the data collected is suitable for analysis.

3.13 Quantitative Data Processing

Data processing is justified in order to weed out missing or duplicated data, inaccurate or unsuitable inputs and ambiguous elements (Saunders et al., 2009). In this study, the need for processing was minimised through the provision of specific guidelines on how to complete the questionnaire and the use of a simplified approach where all that was needed was for the respondents to tick the preferred reply. As a result, the respondents were able to respond without complications and errors.

The second step in the process relates to the handling of the missing data. The process of cleaning the data was performed through Multiple Imputation (regression approach) using SPSS 23. According to Cleophas and Zwinderman (2012), multiple imputation is an effective approach for the analysis of incomplete data in a specific data set. The analysis is followed by a random filling in of the missing data in a manner that does not influence the results. Multiple imputation was carried out in order to avoid the need for multiple regression runs for each output.

3.14   Qualitative Data Processing

The procedures for processing qualitative data are less mechanical than the multiple imputations used to process the quantitative data. Flexibility in the analysis of the data was assured, since the researcher oversaw the collection of data. As a result, the qualitative data was more organised and easier to work with than the data gathered through the self-administered questionnaire. The researcher used Nvivo software to organise and analyse the interviews using thematic analysis. Nvivo facilitates the identification of the subtlest trends in qualitative data through the recognition of words that imply specific themes. As a result, the data analysis comprising responses from 31 individuals was effectively analysed. In addition to identifying the connections between the data and ideas, Nvivo provides tools for graphical visualisation of the data, including models, charts and maps. Although this process transforms qualitative data into quantitative data, it is preferred since it facilitates the analysis of the data without losing the objectives of the exploratory study.

3.15   Testing for Late-Response Bias

Wallace and Mellor (1988) suggest that one way to check for the existence of late-response bias is to compare early and late respondents by using tests such as t-tests. The results of such tests undertaken for this study indicate (as seen in Table 3.5) that there is no statistically significant difference between the means of the early and late respondents. It may, therefore, be concluded that late-response bias is not an issue in this research project. The 193 individuals returned their questionnaires before the end of April, while the remaining 51 send their questionnaires thereafter. After the first month, the researcher sent a reminder to the respondents.

The researcher, therefore, considered the 193 as early respondents while the rest were considered late respondents.

Table 3.5: T-test: Comparing early and late respondents

	Early/late Respondents	N	Mean	Std. Deviation	t-values
Education Level Heterogeneity	Early Respondents	193	0.558	0.103	0.210
	Late Respondents	51	0.554	0.100	
Tenure Heterogeneity	Early Respondents	193	0.665	0.078	1.444
	Late Respondents	51	0.648	0.068	
Subject Background Heterogeneity	Early Respondents	193	.111	.0142	1.546
	Late Respondents	51	.114	.0149	
Knowledge Resources	Early Respondents	193	4.137	.769	0.623
	Late Respondents	51	4.211	.719	
Knowledge Sharing	Early Respondents	193	.317	.894	0.912
	Late Respondents	51	.443	.808	
Decision Comprehensiveness	Early Respondents	193	-0.022	0.976	-0.634
	Late Respondents	51	.008	1.091	
Decision Speed	Early Respondents	193	-0.012	0.968	-0.354
	Late Respondents	51	0.048	1.119	
SDMP Performance	Early Respondents	193	0.011	0.974	0.178
	Late Respondents	51	0.039	1.023	

Note: N = 244; p-values for 2-tail test; ***p < 0.01, **p < 0.05, *p < 0.10

3.16   Concepts of Data Analysis

The analysis of data gathered through mixed methods features the thematic (qualitative) and statistical (quantitative) processes (Teddie and Tashakori, 2009). Essentially, the data analysis process is a back and forth approach that seamlessly transitions from the thematic to statistical processes and back. However, some researchers feel that it is preferable to

analyse the findings separately in order to eliminate mix up due to the differences in the two analysis processes (Trend, 1979; Nagy et al., 2015). By separating the two until the last stages of the analysis process, the researcher is able to avoid the confusion arising from the interpretation of the findings. The writer also avoids the effects of cross-purposing two approaches that are methodologically different but with similar objectives. In any study, data analysis is a fundamental step in the fulfillment of the research objectives, since it is at this stage that the hypotheses of the research are tested.

Tashakkori and Teddie (2010) point out that when there are differences in the inferences obtained through the two methodologies, the researcher must explain the disparity in light of the findings of existing literature. A conflict in the outcomes does not mean that the research process was unsuitable or erroneous; it could mean that the phenomenon under study warrants further research, or that the findings of the research are new. This is possible, whether the research design adopted is exploratory or confirmatory in nature.

3.16.1 The Unit of Analysis

The unit of analysis is the unit of the entity that is being analysed in the study It represents the 'whom' or 'what' that is being studied in the research. Creswell and Clark (2011) indicate that the identification of the unit of analysis is an important and complex concept since it is also implicated in the definitions of the targeted groups or individuals in the research. The unit of analysis is the team level. This is consistent with the findings of Hambrick and Mason (1984) who suggest that a CEO rarely makes SDs alone. SDM is shared between TMT / MMT members. Therefore, unlike an individual CEO, the TMT / MMT as a unit of analysis has far more explanatory power. Thus, individual level

responses were aggregated to the team level. For instance, 244 responses were grouped into 31 teams – 8 TMTs and 23 MMTs.

3.16.2 Frequency Tests

The data collected through the questionnaire was analysed using the SPSS (Statistical Package for Social Sciences) software. Prior to analysis, each question was coded in SPSS and correlation tests were conducted between the variables in the study. The analysis also included descriptive tests (mean, standard deviation, frequency, percentage), and regression analysis was employed to identify the impact of certain variables on SDM. The reliability of the questionnaire was checked using Cronbach's Alpha (0.81). Scruggs and Mastropieri (2006) indicated that a Cronbach's alpha of 0.7 is considered to be a sufficient indication of construct validity in quantitative data.

The frequency tests were performed for each variable. Frequency tests are commonly applied to determine the item-level responses and indicate the number and proportion of individuals who selected each item in the Likert scale under each question. As a result, it is possible to identify the type of responses that were given for each question. The importance of frequency tests is to indicate the choices made by the respondents in relation to each question since these indicate the perceptions of the respondents. They also offer a general view of the responses under each variable. However, frequency tests focus only on measuring central tendencies.

3.16.3 Inferential Statistics

The inferential statistics used in this study were designed to test inter-item and intra-

variable relationships. According to Cleophas and Zwinderman (2012), inferential statistics are designed to determine the intrinsic changes and trends in the variables within a study. Inferential statistics are designed to test similarities and differences in the data. They are effective in testing hypotheses in the study. The inferential statistics adopted in this study are Pearson's correlation tests and linear regression tests.

3.16.3.1   Pearson's Correlation Tests

Pearson's correlation tests are designed to test the strength and direction of the correlation between two items in order to determine whether the changes in one variable are caused by the other variable. The outcome is reported in the form of the correlation (r), which can be either positive or negative. A high r value indicates that the change in one item results in a higher change in the other item. In this study, the correlation also indicates the causation by revealing the statistical significance between the two variables. The r is measured on a six-point scale that indicates the strength of the relationship between the constructs under each variable, as indicated hereunder.

± 1=Linear

± 0.8-0.99= Very Strong

± 0.6-0.79= Strong

± 0.4-0.59= Moderate

± 0.2-0.39= Weak

± 0.01-0.19= Very weak.

The second measure under the correlation tests is the statistical significance which is measured at a 99% confidence level (p=0.01). Statistical significance indicates whether

the correlation between the variables is caused by the variable of comparison. When

p<0.01, there is causation between the two items, since the changes in one variable are

caused by the change in the other variable. The findings of this research are thus presented

in terms of statistical significance and the strength of the correlation.

3.16.3.2   Regression Tests

Regression analysis is a statistical process for testing the strength of the relationship

between one variable (the dependent) and the independent variable or variables (Gomm,

2008). The regression model aims to determine the rate of change in the independent

variables when the dependent variable changes by 1 unit. In this study, regression analysis

was based on the variables identified through a factor analysis that was performed through

the principal component analysis (PCA).

PCA is defined as a technique for reduction of variables that share numerous similarities

under the exploratory research (Cleophas and Zwinderman, 2012). The aim is to reduce

a large set of constructs or variables to a smaller set of variables that are artificial in nature

and are commonly referred to as principal components. Rovai et al. (2013) note that PCA

results in the identification of the components that account for the largest variances in the

original variables, especially if the constructs being measured are similar. As a result, the

principal components are lesser that the variables, but are essentially representative of the

views of the respondents on the original variables used during the analysis. Five

assumptions were applied during the factor analysis as indicated hereunder.

First, there were multiple variables measured at the continuous level, as was indicated in

the coding used for the Likert's scale. Second, there is a linear relationship between all

variables. This assumption is accommodated by the fact that the variables are designed to

test a single phenomenon, as indicated in the research aim. Third, sampling adequacy guidelines were observed. Although there is a disparity on what constitutes a sufficient sample, Cleophas and Zwinderman, (2012) noted that a sample of 150 is considered sufficient. Fourth, there is suitability for reduction of data, given the existence of correlation between the variables. Bartlett's test of sphericity was applied during the study to determine the suitability for reduction. Last, there are no significant outliers that can cause disproportionate influence on the outcome. The process was measured through identification of the standard deviations during the PCA. The data met the five assumptions, after which PCA was performed. The process used during the PCA is as outlined hereunder.

The PCA was performed for the constructs under each variable in order to generate a component for each variable. The generated components were then applied in the linear regression analysis. Hypothesis testing was performed through regression tests. Regression tests indicate the extent to which the changes in the dependent variables are influenced by the independent variables, when the other independent variables are held constant. The regression model also reveals the constant effects between the dependent and independent variables, since most of the constructs in a study are related. The regression model also tested the statistical significance at 99%, which reveals whether the change between the two variables originates endogenously or exogenously. The variables for the regression analysis were identified through factor analysis. Factor analysis was applied at the variable level, in order to identify the constructs that were sufficiently representative of each variable.

3.17 Ethical Concerns

Ethical concerns in research arise from the participation of human subjects in the process (Jackson, 2014). These concerns are important since they guide the planning, implementation, and evaluation of the research. They are designed to highlight the sources of risk, as well as determine ways through which such risks can be avoided or minimised. The participation of human subjects in this study is limited to the data collection processes within the qualitative and quantitative methodologies. According to Gomm (2008), it is the role of the researcher to design a methodology that does not compromise the interests of the human participants in any conceivable manner. Essentially, the ethical concerns relate to the possibility of exposure to adverse outcomes, as well as failure to meet the expectations of the participants. In the case where individuals are expected to provide information that is specific to their identity, it is important that measures are taken to protect their identity from exposure. This is evident from scenarios where private information can be deductively collated from the results.

Lapan et al. (2011) theorised that there are three dimensions of ethical concerns. First, beneficence, which indicates that researchers should focus on optimisation of favourable outcomes for humanity and science while minimising the harm of risk to the human participants. Second, respect, which dictates that the research process should be guided by courtesy and respect for all individuals, especially vulnerable ones, such as children, the needy, the disabled and the aged (Biber, 2010). Last, justice, which dictates that the researcher should focus on ensuring that the respondents reap optimal benefits or minimal losses from the research. This occurs through the use of processes that are non-exploitative and show reasonable care, skill and fairness in administration.

In order to avoid these emergent ethical concerns, especially the events that have an adverse outcome, the following measures were put in place during and after the study. Avoidance of harm to participants is the fundamental objective of identification of the ethical concerns in a research process. Avoidance of harm is a broad description of the processes that the researcher engages in in order to ensure that any adverse impacts of the research are eliminated. The possible sources of harm include exposure to traumatising information, loss of professional or social status due to participation in the research and misrepresentation of the information with the deliberate or accidental possibility that it will be misconstrued. The diversity of circumstances that can cause harm to participants is broad (Plowright, 2010). However, the researcher focused on outcomes within their control and took the measures described below.

3.17.1 Privacy and Confidentiality

Researchers are obliged to take reasonable care and skill to protect the identities of the participants. Confidentiality is related to protection of information stored in any medium, recognition of the limits and upholding of confidentiality as regulated by law.

Privacy and confidentiality objectives were achieved through the following steps. First, the data collection instruments were designed in a manner that does not necessitate the inclusion of identifiers, including the name or designation of the individual. Any information that can be used to identify the individual was collected in a manner that reduced the possibility of identification, including clustering of individuals into groups in terms of age, departments or genders. These general identifiers are considered as

acceptable as descriptions for demographic information and do not compromise the identity of the participants.

Second, the objective of the data analysis is not the identification of the responses but the determination of the views under each construct. Since the research aim and objectives are distantly related to the roles of the respondents, it is expected that the findings will be relevant, but not compromising to their daily lives at the social and professional level. Third, during the collection of the qualitative data, the participants were referred to as 'Respondent A, B or C' and not by their name. Although the researcher audio-recorded the discussion, confidentiality and privacy were maintained as described below. Last, the whole process was designed to ensure confidentiality in a manner that makes it impossible for the findings to be attributed to any of the participants individually.

3.17.2 Acquisition of Informed Consent

Informed consent means that the respondents agree to participate without undue influence or threat (Lapan et al., 2011). Voluntary participation is preferred in research since it is aligned with all aspects of validity as outlined above. In addition to avoidance of litigation regarding the use of the content, voluntary participation facilitates the access to data that is accurate based on the circumstances (Jackson, 2014). The pre-research briefing and post-research de-briefing provided the participants with sufficient information on the research as a way of dispelling any misconceptions. Since the research collects findings from adults, they are legally allowed to participate in the study without a letter of consent from third-parties.

3.17.3 Storage of Data and Protection from Damage

Data was stored using a number of secure processes. First, hard copy questionnaires were sealed in an envelope when they were delivered to respondents. The individuals contacted through online means were covered through normal online security measures relating to the protection of data. The responses to the questionnaires were kept under lock and key and used only for the purposes of this study. The study provided summative findings with the original content being retained by the researcher.

3.17.4 Plagiarism

In order to avoid plagiarism, the following measures were put into place. First, the researcher only takes credit for the information that is obtained. As a result, the declaration in the study indicates that this is the work of the researcher. Second, the researcher has referenced all content that is sourced from existing literature using in-text referencing and a bibliography. Throughout the study, the researcher has relied on peer-reviewed content that is reliable, thereby enhancing the quality of assertions.

3.18 Conclusion

The aim of the chapter was to discuss the research methodology and to evaluate and rationalise the research questions selected. It justified the adoption of a pragmatic approach, which combines positivism and interpretivism (Saunders et al., 2012). The chapter also justified the reasons for choosing a mixed methods approach that combines the qualitative and quantitative methods and, specifically, a sequential mixed methods approach. The subsequent section discusses the population of the study, the sampling

method applied, the sample size and the development of the interview questions and survey questionnaire. The steps undertaken to enhance the reliability, validity and generalisability of the study are then discussed followed by a description of the data collection process, the data coding and data analysis techniques. The remaining section presents the ethical approval process and addresses plagiarism issues.

Chapter 4   Analysis of the Quantitative Data

4.1   Introduction

SDs have deep and enduring impacts for the firm concerned (Mintzberg et al., 1976). SDMP can be defined as a sequence of actions (Goll and Rasheed, 2005) that includes information gathering and then developing and choosing between different alternatives. This process may be further described in terms of a range of attributes, such as rationality and comprehensiveness. It is crucial that the SDM process is rational and comprehensive, because SDs involve the pledge of considerable resources (Papadakis and Barwise, 1997). Moreover, SDs are difficult to reverse and have long- term implications. SDMP research can provide important insights which can enhance the usefulness of the SDs developed by executives, and can thereby have a positive influence on organisational achievement (Shepherd and Rudd, 2014).

The ability to develop superior quality SDs is vital to an organisation's long-term health and survival. Since TMTs are generally responsible for making SDs, the focus of this study is on TMT members. Hambrick and Mason (1984) argued that understanding top managers' behaviour is crucial to understanding SDMP; accordingly, prior researchers focused on exploring the actions of top managers and the impacts they have on SDs. This strategic or management choice perspective emphasised how SDs have a behavioural element and echo the decision maker's personal characteristics (Cyert and March, 1992). Some studies further extended the argument and suggested that the composition

of the TMT plays a vital role in determining the process and content of strategy (Hambrick and Mason, 1984).

The objectives of the research in this chapter are:

- to investigate the impact of TMT/MMT heterogeneity on SDMP in an HEI in Saudi Arabia.

- To investigate the extent of TMT/MMT heterogeneity in an HEI inSaudi Arabia.

- To explore the impact of TMT/ MMT heterogeneity, knowledge sharing, and resources on SDMP in an HEI in Saudi Arabia.

- To examine the impact of the comprehensiveness and speed of SDMP on the performance of the organisation at one HEI in Saudi Arabia.

   The research questions addressed in this chapter are :

   1   What is the extent of TMT/MMT heterogeneity at HEIs in Saudi Arabia?

   2   What is the extent of knowledge sharing and access to knowledge resources at HEIs in Saudi Arabia?

   3   Are there significant differences between the extent to which TMTs and MMTs share knowledge, and have access to knowledge resources?

   4   What is the impact of TMT/MMT heterogeneity, knowledge sharing, and knowledge resources on SDMP at HEIs in Saudi Arabia?

   5   What is the impact of the speed and comprehensiveness of SDMP on the performance of an HEI in Saudi Arabia?

The rest of this chapter is organised as follows. The second section discusses the methodology employed, and the third section reports the findings of the study. The fourth section discusses and analyses the findings of the study. Finally, the fifth section presents the conclusions.

4.2   Research Methodology

4.2.1 Data Collection

A survey using a structured questionnaire was employed to gather the primary data required to perform the analysis. A total of 385 questionnaires were distributed to high- and mid-level managers at a university in Saudi Arabia; of these, 244 responses were received, representing a 63.37% response rate, which is deemed to be very satisfactory. Since the questionnaires were filled out by top- and middle-level managers who had been directly involved in SDM, the survey responses can be assumed to be reliable. The characteristics of individual participants were analysed in order to assess respondent diversity.

The respondents were asked to indicate their highest qualification. Table 4.1 presents the findings in terms of the highest academic qualification of the individual managers.

Table 4.1: Highest academic qualification of individual managers.

	Frequency	Percent
Doctorate degree	106	43.4
More than one Master's degree or professional certification	7	2.9
Master's degree	87	35.7
More than one Bachelor's degree	1	.4
Bachelor's degree	43	17.6
Total	244	100

The analysis revealed that approximately 43.4% of the respondents had a Doctoral degree

and approximately 35.7% had a Master's degree. Just 2.9% of the respondents had

more than one Master's degree and 17.6% of the managers had a Bachelor's degree.

This finding indicates that members of TMTs/MMTs are generally very well educated.

The respondents were asked to indicate the subject background of their degree, i.e.

medicine, social science, science, and the arts. The responses are presented in table 4.2.

The highest percentage subject background for the respondents was social science

(44.3%) followed by science (31.6%). A significant percentage of respondents had

medicine as their subject background (17.2%), and only 7% respondents had the arts as

their subject background. Thus, the dominant subject background was social science, as

indicated in Table 4.2.

Table 4.2: Subject background of individual managers

	Frequency	Percent
Medicine	42	17.2
Social Science	108	44.3
Science	77	31.6
Arts	17	7.0
Total	244	100

The respondents were asked to indicate the number of years they had worked at the

university. Table 4.3 reports the findings, which show that approximately 20% of the

respondents had more than 20 years' work experience at the university, approximately

35% of the respondents had 15 to 20 years' work experience at the university,

approximately 30% had 10 to 15 years' experience, approximately 10% had 5 to 10 years'

experience, and 5% had less than 5 years' experience. Overall, approximately 85% of the

respondents had 10 or more years' work experience at the university. These findings

indicate that most of the TMTs and MMTs had worked at the university for a reasonably long time, but some had only worked there for a short time, revealing a level of diversity in the characteristic relating to work experience at the university.

Table 4.3: Number of years working at the university.

	Frequency	Percent
Less than 5 years	13	5.3
From 5 years to less than 10 years	24	9.8
From 10 years to less than 15 years	73	29.9
From 15 years to less than 20 years	86	35.2
More than 20 years	48	19.7
Total	244	100

Respondents were also requested to indicate the number of years they had been part of a management team (whether TMT or MMT). The findings, which are reported in Table 4.4, show that 36.1% of the respondents had been on a management team for 10 to 15 years, 27.5% had been on a team for 15 to 20 years, and 34% had less than 10 years' experience on a management team.

Table 4.4: Number of years on a management team

Years of experience	Frequency	Percentage (%)
Less than five years	44	18
From 5 years to less than ten years	39	16
From 10 years to less than 15 years	88	36.1
From 15 years to less than 20 years	67	27.5
More than 20 years	6	2.5
Total	244	100

Only 2.5% of the respondents had more than 20 years' experience of being part of a management team. Overall, approximately 67% of the respondents had more than 10 years' experience as members of TMTs or MMTs. However, there was some experience heterogeneity among the members of TMTs and MMTs.

4.2.2 The Unit of Analysis

The unit of analysis was the team level. This is consistent with Hambrick and Mason's (1984) finding that an organisation's CEO rarely makes SDs alone. SDM is a process in which all TMT/MMT members participate. Therefore, unlike the individual CEO, the TMT/MMT as a unit of analysis has far greater explanatory power. For the purposes of the current study, responses at the individual level were aggregated at the team level. For instance, 244 responses were grouped into 31 teams – 8 TMTs and 23 MMTs.

In order to carry out statistical analysis, aggregate responses were reported based on 31

teams and their respective members. As indicated in Table 4.5, 57 TMT members and

187 MMT members participated in the survey.

Table 4.5: Member of TMT or MMT

	Frequency	Percent
TMT	57	23.4
MMT	187	76.6
Total	244	100

A cross tabulation using the 31 teams and TMT/MMT memberships revealed that there

were 8 TMTs and 23 MMTs, as shown in Table 4.6. For example, Team 1 was a TMT

and Team 2 was an MMT. There were 9 TMT members in Team 1 and 12 MMT members

in Team 2. The decisions made by Team 1 affected the entire university so Team 1 was

classified as a TMT, whereas the decisions made by Team 2 affected other areas of the

university, such as specific academic departments; therefore, Team 2 was classified as a

MMT. Other teams were similarly categorised.

Table 4.6: Cross tabulation for teams and TMT/MMT level.

		Member of TMT or MMT		Total
		TMT	MMT	
Serial number of TMT/MMT	Team 1	9	0	9
	Team 2	0	12	12
	Team 3	0	8	8
	Team 4	0	9	9
	Team 5	5	0	5
	Team 6	0	8	8
	Team 7	4	0	4
	Team 8	0	9	9
	Team 9	0	4	4
	Team 10	8	0	8
	Team 11	0	8	8
	Team 12	0	12	12
	Team 13	0	8	8
	Team 14	0	6	6
	Team 15	0	9	9
	Team 16	0	5	5
	Team 17	0	7	7
	Team 18	0	6	6
	Team 19	9	0	9
	Team 20	0	10	10
	Team 21	0	6	6
	Team 22	5	0	5
	Team 23	0	5	5
	Team 24	0	6	6
	Team 25	0	12	12
	Team 26	11	0	11
	Team 27	0	7	7
	Team 28	0	5	5
	Team 29	0	9	9
	Team 30	6	0	6
	Team 31	0	16	16
Total		57	187	244

For this stage, the aggregate function of SPSS software was used. For the purposes of this analysis, aggregate variables were added to the active dataset. For the cases with the same value as the break variable (disaggregated variable), the same values for the new aggregate variables were produced. For example, where Team 1 was the break variable, the members of Team 1 received a value of 4.56 for a new aggregate variable to represent the average decision importance applied to the questionnaire items. Similarly, all the members of Team 2 received a value of 4.33 for a new aggregated variable that represented the average decision importance given to the questionnaire items. Thus, the team-level decision importance variable was constructed as the average individual-level importance of the items.

Table 4.7 shows part of the aggregate values generated by the SPSS. All the variables were aggregated at team level in this manner. These aggregate values were used in the subsequent statistical analysis.

Table 4.7: Aggregate values for decision importance according to team.

Team number	TMT or MMT	Decision Importance
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
1	TMT	4.56
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33
2	MMT	4.33

4.2.3 Measurement of Variables

This section describes the measurement of the dependent, independent, and control variables. The full conceptual model consisted of 5 independent variables and 3 dependent variables. Since the sample size was 31, the regression analysis was carried out in three separate regression models.

In Regression Model 1, the independent variables were *education level heterogeneity*, *tenure heterogeneity*, *subject background heterogeneity*, *knowledge sharing,* and *knowledge resources*. The dependent variable was *SDMP comprehensiveness*.

In Regression Model 2, the independent variables were *education level heterogeneity*, *tenure heterogeneity, subject background heterogeneity*, *knowledge sharing,* and *knowledge resources*. The dependent variable was *SDMP speed*.

In Regression Model 3, the independent variables were *SDMP comprehensiveness* and *SDMP speed*. The dependent variable was *performance of the organisation*.

a) Dependent Variables in Regression Models 1 and 2

The first dependent variable used was *SDMP comprehensiveness*. The questionnaire presented the respondents with items assessing decision comprehensiveness. The items were adapted from Talaulicar et al. (2005) and included "In my team, every option is considered and evaluated extensively" and "We apply multiple criteria to evaluate the options". The respondents were requested to indicate the extent of their agreement or disagreement (1 = strongly disagree; 5 = strongly agree).

Factor analysis is a statistical technique in which multiple variables (items) are

statistically clustered to deliver a few factors. This reduction in the number of items makes

it easier to understand the results. One of the benefits of using exploratory factor analysis

(EFA) is that it can serve as a solution to the multicollinearity problems associated with

multiple regression (Field, 2000, p.431). Factor scores are more reliable than taking the

average of each item.

In this study, an EFA with varimax rotation was used to extract underlying factors. The

EFA revealed 1 factor for the 2 SDMP comprehensiveness items, as reported in Appendix

E.

When the factor analysis was completed, the factor scores were saved as a new variable.

Thus, a new variable was created, namely *decision comprehensiveness*, which

represented 2 items related to decision comprehensiveness. This new variable was used

in the regression analysis.

The second dependent variable used was *SDMP speed*. The questionnaire presented the

respondents with items assessing their perspectives of decision speed. The items

measuring decision speed included, "Our team is able to integrate ideas and make

decisions speedily" and "In the implementation of decision-making, our speed is very

fast." The respondents were asked to indicate the extent of their agreement or

disagreement (1 = strongly disagree; 5 = strongly agree).

Due to potential conceptual and statistical overlap, an EFA with varimax rotation was

used to generate the underlying factors. The EFA produced 1 factor for the 2 SDMP speed

items, as reported in Appendix F.

When the factor analysis was completed, the results were saved as a new variable. Thus,

a new variable was created, namely *decision speed*, which represented 2 items related to

decision speed. This new variable was used in the regression analysis.

Since *decision comprehensiveness* (2 items) and *decision speed* (2 items) were multi-item constructs, Cronbach's alpha was calculated for the variables (as 0.814 and 0.69, respectively). Since both Cronbach's alpha values were greater than 0.70, decision comprehensiveness and speed were deemed to be statistically reliable measurements.

b) Dependent Variables in Regression Model 3

Respondents were asked to assess the performance of the focal decision and the related strategic initiative, regarding each of the following dimensions, on a 5-point Likert Scale (where 1 means very unsuccessful and 5 means very successful):

1. Meeting time expectation

2. Meeting quality parameters

3. Meeting cost parameters

4. Meeting efficiency parameters

Due to potential conceptual and statistical overlap, an EFA with varimax rotation was used to generate the underlying factors. The EFA produced 1 factor for 4 performance of organisation items, as reported in Appendix I.

When the factor analysis was completed, the results were saved as a new variable. Thus, a new variable was created, namely *performance of organisation*, which contained 4 items related to performance. This new variable was used in the regression analysis.

c) Independent Variables in Regression Models 1 and 2

The first three independent variables used were *education level heterogeneity*, *tenure heterogeneity*, and *subject background heterogeneity*. Blau's (1977) index was used to calculate team diversity regarding education level, subject background, and tenure. Blau's (1977) index measures the number of groups in a distribution and the diffusion of the team members within these categories. Since education level was a categorical variable, Blau's (1977) index of heterogeneity was an appropriate index to use. The formula for Blau's (1977) index is as follows:

$$1-\sum(p_i)^2$$

Where *p* represents the proportion of group members from a particular category and *i* represents the number of different categories found in the team. The data from the spreadsheet were imported into SPSS software to calculate the descriptive statistics for education level, subject background, and tenure heterogeneity.

The Fourth independent variable used was *knowledge sharing*. The respondents were asked to indicate the extent of their agreement or disagreement with the following statements (1 = strongly disagree; 5 = strongly agree):

1. We actively share our knowledge about our work with other team members.

2. Members of my team freely and actively express their opinions with one another.

3. Members of my team proactively share best practices with one another.

4. Members of my team exchange information about their daily social lives and informal meetings with one another.

5. Members of my team interact with other team members to share what we learn concerning work.

Due to potential conceptual and statistical overlap, an EFA with varimax rotation was used to generate the fundamental factors. The EFA produced 1 factor for 5 items, as reported in Appendix G.

When the factor analysis was completed, the results were saved as a new variable. Thus, a new variable was created, namely *knowledge sharing*, which contained 5 items related to knowledge sharing. This new variable was used in the regression analysis.

The fifth independent variable was *knowledge resources*. The respondents were requested to indicate the extent of their agreement or disagreement with the following statements (1 = strongly disagree; 5 = strongly agree):

1. We have to attend work-related academic seminars, workshops, and professional meetings.

2. We can access the relevant and most up-to-date information.

3. We can access relevant customer and employee databases.

4. We can access the most advanced work-related personnel documents and electronic networks.

The results of the principal component factor analysis for *knowledge resources* (4 items) are presented in Appendix H.

When the factor analysis was completed, the result was saved as a new variable. Thus, a new variable was created, namely *knowledge resources*, which contained 4 items related to knowledge resources. This new variable was used in the regression analysis.

d) Control Variables

Apart from the variables related to heterogeneity and knowledge sharing and resources, two additional variables that might impact comprehensiveness and speed were identified. These were control variables, and their measurements are discussed below.

The first control variable used was *decision importance*. Other researchers have found that SD importance affects the features of SDMP, including comprehensiveness and speed (Papadakis et al., 1998). The respondents were asked to indicate the best and worst possible impact of the decision taken by the team on the university, on a scale ranging from 1 = devastating negative impact to 5 = tremendous improvement.

The second control variable used was *the length of time to make a decision*. This variable indicated the amount of time that the top and middle management assigned to the team

for making a decision. A longer time-period would have allowed TMTs and MMTs to carry out a more comprehensive analysis; however, it would also have slowed down the decision-making process. The respondents were asked to indicate the length of time their team took to make a focal decision (expressed in number of months). Higher numbers indicated lengthy time-periods and vice versa.

4.2.4 Analysis of Data

This section discusses the reasons for choosing the parametric tests. According to Brombin et al. (2016), a parametric test as one that requires data from a normally distributed variable. Indeed, Brombin et al. (2014) stated that parametric statistical procedures rely on the assumption of normal distribution. Parametric tests are often robust, and therefore require less data to derive a valid conclusion than is needed when performing nonparametric tests (Neideen and Brasel, 2007).

Moreover, Pallant (2001, p.255) indicated that nonparametric tests are usually used when the data are tested on both the nominal and ordinal scale. However, whether a parametric test can be used depends on the assumption of normal distribution.

Kolmogorov-Smirnov (K-S) tests were carried out to assess if the distribution as a whole diverged from normal distribution (Field, 2005, p.93). The test results indicated that the data was normally distributed. Therefore, parametric tests could be used for the purposes of this study.

4.2.5 Addressing Common Method Bias

Since the dependent and independent variables were measured using the same method, the occurrence of common method bias (CMB) was possible. In order to check for the presence of CMB, Harman's single-factor tests were carried out (Podsakoff et al., 2003). The un-rotated factor analysis resulted in 3 factors when the independent and dependent variables were included. The presence of CMB is low if the largest factor explains less than 50% of the total variance (Podsakoff et al., 2003). In this case, 38.37% of the total variance could be explained by the greatest factor (out of 4). Therefore, the results of the Harman's tests showed that severe CMB was absent.

4.3   Findings

This section reports the findings of the statistical analyses, including descriptive statistics, cross tabulations, correlation coefficients, and regressions. The findings related to TMT/MMT heterogeneity, knowledge sharing, and knowledge resources are presented. In addition, the findings regarding the relationship between SDMP and heterogeneity, and knowledge sharing and resources are also reported.

4.3.1 TMT/MMT Heterogeneity in HEIs in Saudi Arabia

The first research question focuses on the extent of TMT and MMT heterogeneity in HEIs in Saudi Arabia. To answer this question, the education level, tenure, and subject

background heterogeneity of 31 TMTs/MMTs were examined. The findings, based on Blau's (1977) index, are reported in Table 4.8.

Table 4.8: Descriptive Statistics – education level, subject background, and tenure heterogeneity.

	Mean	Std. Deviation	Minimum	Maximum
Education level heterogeneity	0.56	0.102	0.28	0.66
Heterogeneity in tenure	0.66	0.076	0.32	0.75
Subject background heterogeneity	0.023	0.090	0.00	0.47

A high score on Blau's (1977) index indicates variability (i.e. heterogeneity in various categories among team members), whereas a low score represents greater homogeneity. In this research, Blau's (1977) index had a mean value of 0.56, indicating a high level of heterogeneity in the education level of each of the 31 teams working at the HEI in Saudi Arabia.

The fluctuating nature of the workforce and the popularity of work teams encourage people to work with others who differ in their demographic backgrounds (Jackson et al., 2003; Joshi and Roh, 2010). It is this increased diversity that presents a major challenge in modern organisations (Harrison et al., 2002). Heterogeneity can have both a positive (van Knippenberg et al., 2004) and a negative impact on performance (Harrison and Klein, 2007). Naranjo-Gil et al. (2008) reported a heterogeneity index of 0.56 (standard deviation 0.09) for education level among the TMTs in public hospitals in Spain — an index which comes close to the education level heterogeneity in the TMTs/MMTs in the Saudi Arabian HEI investigated in the current study. In

contrast, Ping (2007) identified a comparatively lower level of educational heterogeneity (Blau's 1977 index of 0.45) among top managers from Chinese listed companies.

Table 4.8 shows that Blau's (1977) index for tenure had a mean value of 0.66, revealing a high level of heterogeneity in the tenure of each of the 31 teams (8 TMTs and 23 MMTs). This finding suggests that the degree of tenure heterogeneity in TMTs/MMTs is relatively high in Saudi Arabian HEIs. However, the level of tenure heterogeneity identified in this study is similar to the level (0.65) reported by Naranjo- Gil et al. (2008) for TMTs in a Spanish hospital.

Table 4.8 also shows that Blau's (1977) index for subject background had a mean value of 0.023, denoting a low level of subject background heterogeneity in each of the 31 Teams (8 TMTs and 23 MMTs). This finding indicates that the degree of subject background heterogeneity in TMTs/MMTs in Saudi Arabian HEIs is relatively low.

4.3.2 Comparing TMT and MMT Levels

The third research question focuses on whether there are significant differences between TMTs and MMTs, and the extent to which team members share knowledge, have access to knowledge resources, and make comprehensive and speedy decisions.

Floyd and Lane (2000, p.159) argued that a TMT exercises the strategic role of ratifying, recognising, and directing during SDMP. An MMT communicates and transmits information from the bottom to the top level, as defender and synthesiser, and from the top level to the bottom, as facilitator and implementer. Therefore, the role of MMTs is important in SDMP, because their involvement and contributions facilitate knowledge

sharing and the formulation of knowledge resources, which could increase SDMP comprehensiveness and speed.

T-tests were carried out in this study to examine whether knowledge resources, knowledge sharing, decision comprehensiveness, and decision speed vary according to management team types. Since TMTs and MMTs are two separate groups, an independent sample t-test was conducted in which the significance value of the statistic was 0.00 for knowledge resources. As this value is smaller than 0.10, an assumption could be made that the groups did not possess equal variance. Therefore, the second test was useful — i.e., equal variance was not assumed.

The t-tests revealed that the mean education level heterogeneity was slightly higher for the MMTs. However, there was no statistically significant difference between the TMTs and MMTs in terms of education level heterogeneity. This suggests that there is a limited difference between MMTs and TMTs in terms of education level heterogeneity in HEIs in Saudi Arabia. Table 4.10 shows that the mean tenure heterogeneity was higher for the MMTs than the TMTs. Furthermore, that the t-value for tenure heterogeneity was statistically significant ($p < 0.05$). This finding suggests that a higher tenure heterogeneity exists at MMT level when compared to TMT level in Saudi Arabian HEIs.

The t-test results are reported in Table 4.9. The findings presented show that there was no difference between the TMTs and MMTs in terms of knowledge resources, and that the t-value was statistically insignificant ($p > 0.10$). This means that members of the TMTs and MMTs had equal access to knowledge resources. However, the table shows that the t-value for knowledge sharing was statistically significant ($p < 0.01$), which indicates that the TMT members shared more knowledge with each other than the MMT members.

Table 4.9: T-tests comparing the TMTs and MMTs.

	Member of TMT or MMT	N	Mean	Std. Deviation	t value
Education Level Heterogeneity	TMT	8	0.545	0.110	-0.994
	MMT	23	0.561	0.100	
Tenure Heterogeneity	TMT	8	0.647	0.054	-2.016**
	MMT	23	0.666	0.082	
Subject Background Heterogeneity	TMT	8	0.041	0.133	1.30
	MMT	23	0.017	0.071	
Knowledge Resources	TMT	8	0.042	0.643	0.473
	MMT	23	-0.012	1.086	
Knowledge Sharing	TMT	8	0.422	0.759	4.39***
	MMT	23	-0.128	1.030	
Decision Comprehensiveness	TMT	8	0.074	0.274	1.077
	MMT	23	-0.022	1.132	
Decision Speed	TMT	8	0.568	0.404	7.86***
	MMT	23	-0.173	1.062	
SDMP Performance	TMT	8	0.181	0.896	1.683*
	MMT	23	-0.055	1.025	

Notes: $N = 31$; significant at ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$; the t-test was two-tailed.

The findings also show a statistically insignificant t-value ($p > 0.10$) for decision comprehensiveness, demonstrating that there was no difference between the TMTs and MMTs. This suggests that both TMTs and MMTs in HEIs in Saudi Arabia carry out a comprehensive decision-making process. However, decision speed varied between the TMTs and MMTs investigated. The t-value presented is statistically significant ($p < 0.01$), revealing that the TMTs tended to make decisions more quickly than the MMTs.

4.3.3 Knowledge Sharing and Knowledge Resources in HEIs in Saudi Arabia

The second research question focuses on the extent of knowledge sharing and access to knowledge resources in HEIs in Saudi Arabia. In order to examine these factors, mean and standard deviation were calculated, as reported in Table 4.10.

The mean values for items related to knowledge resources (1 to 4) ranged from 4.29 to 4.11. This finding indicates that access to knowledge resources is high for members of TMTs and MMTs in HEIs in Saudi Arabia. In addition, the mean values for items related to knowledge sharing (5 to 9) ranged from 4.09 to 3.91. This finding suggests that knowledge sharing among the members of TMTs and MMTs is moderately high in HEIs in Saudi Arabia. Higher levels of knowledge sharing and greater access to knowledge resources are expected to assist SDMP in HEIs in Saudi Arabia.

Table 4.10: Descriptive statistics.

		Mean	Std. Deviation
1.	We have to attend work-related academic seminars, workshops and professional meetings	4.29	0.334
2.	We can access the relevant and most up-to-date information.	4.22	0.313
3.	We can access relevant customer and employee databases.	4.14	0.378
4.	We can access the most advanced work-related personnel and electronic networks.	4.11	0.288
5.	We actively share our knowledge about our work with other team members.	4.09	0.363
6.	Members of my team freely and actively express their opinion with one another	4.03	0.289
7.	Members of my team proactively share best practices with one another.	4.03	0.365
8.	Members of my team exchange information about their daily social life and informal meetings with one another.	3.97	0.460
9.	Members of my team interact with other team members to share what we learned concerning work.	3.91	0.397

Notes: N = 31

The first 4 items (1 to 4) presented in Table 4.10 relate to knowledge resources. The table shows that the mean (average) for the first item ("We have to attend work-related academic seminars, workshops and professional meetings") was 4.29 — the highest of all the knowledge resource items. This suggests that members of the management teams had more opportunities to create knowledge resources through seminars, workshops, and professional meetings. The table also shows that the second item ("We can access the relevant and most up-to-date information") had a mean of 4.22; the third item ("We can access relevant customer and employee databases") had a mean of 4.14; and the mean for the item "We can access the most advanced work-related personnel and electronic

networks" was 4.11. Thus, all the results indicate a high level of knowledge resources available to TMTs and MMTs in HEIs in Saudi Arabia.

The last 5 items (5 to 9) presented in the table relate to knowledge sharing among the members of TMTs and MMTs. The table shows that the first item ("We actively share our knowledge about our work with other team members") had a mean of 4.09. This indicates that the members of the TMTs and MMTs actively shared knowledge about work with one other. A higher level of knowledge sharing is expected to enhance decision comprehensiveness. The table also shows that the second item ("Members of my team freely and actively express their opinion with one another") had a mean of 4.03, which indicates a high level of knowledge sharing among the members of the TMTs and MMTs. The means presented in the table are also high for the remaining 3 items related to knowledge sharing — "Members of my team proactively share best practices with one another", "Members of my team exchange information about their daily social life and informal meetings with one another", and "Members of my team interact with other team members to share what we learned concerning work".

4.3.4 Impact of Heterogeneity and Knowledge Resources and Sharing

The fourth research question focuses on the impact of education level heterogeneity, subject background heterogeneity, tenure heterogeneity, knowledge sharing, and knowledge resources on SDMP comprehensiveness and speed. In order to explore the impact of education level heterogeneity (continuous variable) and the heterogeneity of TMT/MMT tenure on decision comprehensiveness (scale data) and decision speed (scale data), a multiple regression analysis using SPSS software was carried out.

Decision comprehensiveness and *decision speed* were two dependent variables. Education level heterogeneity, subject background heterogeneity, tenure heterogeneity, knowledge resources, and knowledge sharing were five independent variables. Moreover, two control variables were included in the regression models, such as decision importance and length of time to make a decision. These control variables were included since the dependent variables (decision comprehensiveness and decision speed) could also be influenced by decision importance and length of time to make a decision.

The descriptive statistics are reported in Table 4.11, which shows that decision importance had a mean value of 4.25. This indicates that decisions made by the TMTs and MMTs had the best possible effects on the university; i.e., they led to significant improvements. This suggests that the decisions made by TMTs and MMTs are very important for HEIs in Saudi Arabia. The mean value presented in the table for length of time to make a decision is 5.76 with a standard deviation of 1.56, which shows that the TMT and MMT members took an average of six months to make SDs. This suggests that it takes a long time to make SDs in HEIs in Saudi Arabia.

Table 4.11: Descriptive Statistics.

	Mean	Std. Deviation
Decision Importance	4.26	0.36
Length of Time to Make Decision	5.76	1.56
Education Level Heterogeneity	0.55	0.10
Tenure Heterogeneity	0.66	0.07
Subject Background Heterogeneity	0.02	0.09
Knowledge Resources	0.00	1.00
Knowledge Sharing	0.00	1.00
Decision Comprehensiveness	0.00	1.00
Decision Speed	0.00	1.00
SDMP Performance	0.00	1.00

Note: N = 31

Pearson correlation tests were carried out before the regression tests. Table 4.12 shows the test results.

In order to determine the direction and strength of the link between two ordinal or scale variables, bivariate correlations can be employed.

In this study, all variables were scale variables or ordinal variables. Therefore, a bivariate Pearson correlation was suitable.

Table 4.12 reports the Pearson correlation for all variables. The table shows that the correlation between knowledge resources and decision comprehensiveness was a positive 0.51 with a p value of less than 0.01. This indicates a moderate positive correlation between knowledge resources and decision comprehensiveness.

Similarly, the correlation between knowledge sharing and decision comprehensiveness was a positive 0.47 with a p value of less than 0.01, indicating a moderate positive relationship between knowledge sharing and decision comprehensiveness.

Table 4.12: Pearson correlation.

	1	2	3	4	5	6	7	8	9	10
1. Decision Importance	1									
2. Length of Time to Make Decision	0.15*	1								
3. Education Level Heterogeneity	0.08	0.14*	1							
4. Tenure Heterogeneity	-0.09	-0.22**	0.28**	1						
5. Subject Background Heterogeneity	0.15*	-0.31**	0.11	0.04	1					
6. Knowledge Resources	0.47**	0.04	0.34**	-0.06	-0.02	1				
7. Knowledge Sharing	0.53**	0.38**	0.34**	-0.20**	-0.09	0.76**	1			
8. Decision Comprehensiveness	0.45**	0.10	0.29**	-0.11	-0.03	0.51**	0.47**	1		
9. Decision Speed	0.44**	0.21**	0.46**	-0.13*	0.00	0.53**	0.77**	0.54*	1	
10. SDMP Performance	0.07	0.0	0.2**	.060	-.08	.330**	.24**	1.0**	.25**	1

Note: N = 31; p-values for 2-tail test; **p < 0.01, *p < 0.05

The table shows that a positive and significant correlation of 1.00 between SDMP performance and Comprehensiveness. This indicates a strong positive relationship between SDMP performance and Comprehensiveness.

The table also shows that tenure heterogeneity had a negative correlation of -0.11. This is not statistically significant since the p value is greater than 0.10, which indicates a weak negative correlation between tenure heterogeneity and decision comprehensiveness.

However, the correlation between education level heterogeneity and decision comprehensiveness was positive and statistically significant. Thus, there was a positive relationship between these two variables.

One of the limitations of the Pearson correlation is that it fails to indicate causal relationships and the strength of such relationships. Therefore, a regression analysis must be carried out to examine the causal relationship between dependent and independent variables.

In order to examine the relationship between TMT/MMT heterogeneity and SDMP comprehensiveness and speed, the following regression models were tested, in which decision importance and length of time to make decision were added as control variables, since comprehensiveness and speed is also influenced by decision importance.

Regression One: Decision comprehensiveness = f (education level heterogeneity, tenure heterogeneity, subject background heterogeneity, knowledge resources, knowledge sharing, decision importance, length of time to make decision)

Regression Two: Decision speed = f (education level heterogeneity, tenure heterogeneity, subject background heterogeneity, knowledge resources, knowledge sharing, decision importance, length of time to make decision).

4.3.5 Model Summary

Overall, the regression was suitable for modelling decision comprehensiveness. The nearly 37% variation in decision comprehensiveness is explained by the model for decision comprehensiveness presented in Table 4.13. The approximate 70% variation in decision speed is explained by the model for decision speed presented in Table 4.14.

Table 4.13: Model summary (decision comprehensiveness)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.608[a]	0.369	0.351	0.805	0.295
a. Predictors: (Constant), Knowledge Resources, Length of Time to make decision, Tenure Heterogeneity, Decision Importance, Education level heterogeneity, Knowledge Sharing					
b. Dependent Variable: Decision Comprehensiveness					

Table 4.14: Model summary (decision speed)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.834[a]	0.696	0.687	0.559	0.451
a. Predictors: (Constant), Knowledge Resources, Length of Time to make decision, Tenure Heterogeneity, Decision Importance, Education level heterogeneity , Knowledge Sharing					
b. Dependent Variable: Decision Speed					

4.3.6 Collinearity Diagnostics

Tolerance refers to the percentage of the variance of a predictor that cannot be explained by another predictor. Where multicollinearity is high, this will cause inflation in the standard error of the regression coefficients when tolerances are close to 0. All tolerance values were far away from 0 in the model detailing decision comprehensiveness and decision speed.

Table 4.15 shows a variance inflation factor (VIF) of less than 10, which is typically considered non-problematic. The collinearity test revealed that the highest VIF was 3.917. The collinearity diagnostics revealed that no serious problems occur with multicollinearity. Several eigenvalues were far from 0. Similar values were obtained for the model measuring decision speed. Collectively, these findings suggest that multicollinearity was not a serious issue in either of the two regression models.

Table 4.15: Collinearity tests – decision comprehensiveness and decision speed.

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Decision Importance	0.681	1.468
	Length of Time to Make Decision	0.674	1.484
	Tenure Heterogeneity	0.781	1.281
	Subject Background Heterogeneity	0.790	1.266
	Education level heterogeneity	0.707	1.414
	Knowledge Sharing	0.255	3.917
	Knowledge Resources	0.327	3.060

Table 4.16 presents the results of the regression analyses. As the table shows, Model 1 and Model 3 used only the control variables. In Model 1, decision importance had a significant positive impact on decision comprehensiveness (p <0.01). Moreover, decision importance had a significant positive impact on decision speed. In Model 1, the length of time to make a decision had an insignificant relationship with decision comprehensiveness. However, in Model 3, length of time had a significant positive impact on decision speed.

Table 4.16: Multiple Regression Analyses

	Model 1 Comprehensiveness	Model 2 Comprehensiveness	Model 3 Speed	Model 4 Speed
Control variable:				
Decision importance	0.447***	0.321***	0.422***	0.115**
Length of time to make decision	0.034	-0.046	0.152***	-0.217***
Explanatory variables				
Education level heterogeneity		0.241***		0.312***
Tenure Heterogeneity		-0.142**		-0.093**
Subject Background Heterogeneity		-0.108*		-0.039
Knowledge Sharing		-0.032		0.909***
Knowledge Resources		0.296***		-0.317***
The model				
R^2	0.206	0.369	0.221	0.696
F value	31.21***	19.74***	34.24***	77.023***

Notes: N = 31; Standardised beta coefficient; significant at ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$; the t-test on each regression coefficient is two-tailed.

Model 2 and Model 4 used explanatory variables and control variables. The table shows a significant *F* value ($p < 0.01$) for Model 2. Furthermore, that approximately 37% of the variation in decision comprehensiveness is explained by education level heterogeneity, subject background heterogeneity, tenure heterogeneity, knowledge sharing, and knowledge resources. Model 4 is also shown to have a significant *F* value ($p < 0.01$), and approximately 70% of the variation in decision speed is explained by education level

heterogeneity, subject background heterogeneity, tenure heterogeneity, knowledge sharing, and knowledge resources.

The coefficient for heterogeneity of education level presented in the table is positive and statistically significant (p < 0.01) for Model 2 (comprehensiveness) and Model 4 (speed). Thus, the findings provide support for Hypothesis 1a, indicating that the higher the education level heterogeneity within TMTs and MMTs, the higher the comprehensiveness of SDMP. The findings also provide support for Hypothesis 1b, suggesting that the higher the education level heterogeneity, the higher SDMP speed.

The coefficient for tenure heterogeneity is shown as negative and statistically significant ($p < 0.05$) for Model 2 (decision comprehensiveness) and Model 4 (decision speed). Thus, the findings provide support for Hypotheses 2a and 2b, indicating that the more heterogeneous TMT/MMTs tenure is, the less comprehensive and less speedy SDMP will be.

The coefficient for subject background heterogeneity presented as negative and statistically significant ($p < 0.10$) for Model 2. However, for Model 4 the coefficient is negative but statistically insignificant ($p > 0.10$). Thus, the findings provide support for Hypothesis 3a but not for Hypothesis 3b, suggesting that the more heterogeneous the subject background of the TMTs/MMTs is, the less comprehensive SDMP will be.

The coefficient for knowledge sharing is negative but statistically insignificant ($p < 0.10$). This indicates that knowledge sharing has no influence on decision comprehensiveness. However, the coefficient for knowledge sharing is positive and statistically significant ($p < 0.01$) for decision speed. This suggests that the higher the level of knowledge sharing among the members of TMT and MMT, the quicker the decision-making process will be. Therefore, Hypothesis 4a is not supported but Hypothesis 4b is strongly supported.

The coefficient for knowledge resource is positive and statistically significant ($p < 0.01$). Thus, Hypothesis 5a is supported, indicating that the greater the knowledge resources, the more comprehensive the decision-making process. In addition, the coefficient for knowledge resources in Model 4 is negative and statistically significant ($p < 0.01$). Therefore, Hypothesis 5b is supported, indicating that the greater the knowledge resources, the slower the decision-making process.

The control variables used in the study related to decision comprehensiveness and speed. The coefficient for decision importance presented in the table is positive and statistically significant ($p < 0.01$) for Model 1 with decision comprehensiveness. Moreover, the coefficient for decision importance is positive and statistically significant ($p < 0.05$) for Model 3 with decision speed. These findings suggest that decision comprehensiveness and decision speed are positively influenced by decision importance.

The coefficient for length of time to make a decision is shown as negative but statistically insignificant. This indicates that length of time has no impact on decision comprehensiveness. However, the coefficient is negative and statistically significant ($p < 0.01$) for Model 2 with decision speed, which suggests that more time taken by TMTs and MMTs will make the decision-making slower.

4.3.7 Model Summary

Regression Three: Performance of organisation = f (SDMP speed, SDMP comprehensiveness, decision importance, length of time to make decision).

Overall, the regression was suitable for modelling decision comprehensiveness, as shown in Table 4.17. Nearly 12.3% of variation in performance of the organisation is explained by the model with performance.

Table 4.17: Model summary (performance of the organisation).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.350ª	.123	.108	.944	1.880

a. Predictors: (Constant), decision comprehensiveness, length of time to make decision, decision importance, decision speed
 b. Dependent variable: SDMP performance

4.3.8 Collinearity Diagnostics

Tolerance refers to the percentage of the variance of a predictor that cannot be explained by another predictor. Where multicollinearity is high, this will cause inflation in the standard error of the regression coefficients when tolerances are close to 0. All tolerance values were far away from 0 in the model detailing performance of the organisation.

Table 4.18: Collinearity tests- performance of the organisation

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Length of Time to make decision	.948	1.055
	Decision Importance	.792	1.263
	Decision Speed	.748	1.337
	Decision comprehensiveness	.926	1.080

A variance inflation factor (VIF) of less than 10 is typically seen as being non-problematic. The collinearity test revealed that the highest VIF was 1.337. The collinearity diagnostics showed that there were no serious problems with multicollinearity. Several eigenvalues were far from 0. Similar values were obtained for the model when measuring decision speed and decision comprehensiveness. Collectively, these findings confirmed that multicollinearity was not a serious issue in the regression model.

Table 4.19 shows a significant F value ($p < 0.01$) for Model 5, and that approximately 12.3% of the variation in the performance of the organisation is explained by SDMP speed and SDMP comprehensiveness.

Table 4.19: Multiple Regression Analyses

	Model 5 Dependent Variable: Performance of the organisation
Control variable:	
Decision importance	0.041
Length of time to make decision	0.188***
Explanatory variables	
SDMP Comprehensiveness	0.197***
SDMP Speed	0.081
The model	
R^2	0.123
F value	8.367***

Notes: N = 31; Standardised beta coefficient; significant at ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$; the t-test on each regression coefficient is two-tailed.

The coefficient for SDMP comprehensiveness in Table 4.19 is positive and statistically significant (p < 0.01). Thus, the findings provide support for Hypothesis 6, indicating that the greater SDMP comprehensiveness, the higher the performance of the organisation will be.

The coefficient for SDMP speed is positive but statistically insignificant (p > 0.10). Thus, the findings provide no support for Hypothesis 7.

4.3.9 Discussion

The findings provide support for Hypothesis 1a, suggesting that the more heterogeneous the education level of TMTs/MMTs is, the more comprehensive SDMP will be. These findings are consistent those obtained by Goll and Rasheed (2005) and Papadakis and Barwise (2002), who identified strong positive relationships between education level heterogeneity and SDMP comprehensiveness. Moreover, the results provide evidence that extent of information search and analysis is also positively related with education level (Dollinger, 1984). For instance, financial analyses are conducted by highly educated directors while carrying out SDs (Bantel, 1993; Papadakis et al., 1998). Moreover, highly educated directors are more likely to make strategic alterations (Wiersema and Bantel, 1992). Furthermore, the findings support the claim of Simons et al. (1999), who stated that TMT education level heterogeneity has a direct and positive impact on decision comprehensiveness.

Simons et al. (1999) also claimed that team members are expected to draw on their education diversity, by using their divergent knowledge sets to reinforce their arguments in debates with one another. In this way, they are obliged to reconsider their viewpoints and assess factors not previously reflected upon when faced with fresh information from other team members with diverse backgrounds. Thus, a more comprehensive and extensive decision-making process emerges. Indeed, the findings of the current study indicate the education level heterogeneity positively influences the extent of SDMP comprehensiveness.

However, the findings from this research contradict those reported in some previous studies (e.g. Miller et al., 1998). Some prior have studies argued that TMT heterogeneity,

such as education diversity, can have a negative influence on SDMP comprehensiveness, because heterogeneity obstructs understanding between individuals in a team (Miller et al., 1998). Furthermore, previous research has demonstrated that although cognitive conflicts can be stimulated by diversity, leading to a possible increase in comprehensiveness when preparing for decisions, task-related arguments (which are cognitive) can lead to a conflict in effective relationships, which are dysfunctional with regard to group performance (Amason, 1996; Ensley et al., 2002). Thus, this paper argues that trust among group members is vital to benefitting from heterogeneity and cognitive conflicts without having to suffer from the problems that can arise in a group of this composition (Mayer et al., 1995; Simons and Peterson, 2000).

The findings also indicate that education level heterogeneity within TMTs and MMTs positively influences SDMP comprehensiveness in HEIs in Saudi Arabia. The implications of this finding are that HEIs in Saudi Arabia should make a continuous effort to ensure educational diversity within TMTs and MMTs. This is because education level heterogeneity within TMTs and MMTs prompts members to draw on their education diversity to present and reinforce their arguments. Consequently, members of TMTs/MMTs are likely to thoroughly consider each option by examining the merits and demerits of each strategic choice. On the other hand, homogeneity of education among the members of TMTs/MMTs is likely to lead to similar perceptions with other members of the team. This may create a group thinking, where members are biased towards one particular strategic option and therefore less likely to carefully consider viable alternatives. Consequently, education homogeneity makes the decision-making process less comprehensive, whereas education level heterogeneity is likely to encourage more comprehensive and thorough analysis of each strategic option, which is preferable,

because comprehensive SDMP is likely to improve the decision-making process within HEIs in Saudi Arabia.

The findings of this study also support Hypothesis 1b, suggesting that greater education level heterogeneity leads to greater SDMP speed. This finding extends the argument of Souitaris and Maestro (2010), and suggests that education level heterogeneity among TMTs/MMTs encourages polychronicity, which can speed up SDMP. Polychronic work offers insightful information that frequently eliminates alternative actions early in the process and saves time. Thus, if education level heterogeneity creates polychronicity in TMTs/MMTs, it will enable speedy SDM (Souitaris and Maestro, 2010). In the context of HEIs in Saudi Arabia, the results of the current study suggest that education level heterogeneity among TMTs/MMTs speeds up SDMP. Thus, apart from SDMP comprehensiveness, education level heterogeneity provides additional benefits to HEIs in Saudi Arabia in the form of speedy SDM. This is critical, given that competition among the HEIs is growing, as well as the pressure to improve the quality of education provided. A speedy decision is required in order to take advantage of opportunities and address any challenges facing HEIs in Saudi Arabia.

The findings of this study also support Hypothesis 2a, suggesting that the more heterogeneous TMT/MMT tenure is, the less comprehensive SDMP will be. This could be explained by the fact that a longer tenure team tends to stay away from information that affects or interrupts their established and expected forms of behaviour (Staw, 1977). Indeed, research has shown that tenure tends to nurture a dependence on tried and verified decision procedures (Katz, 1982). Such a tendency could influence the comprehensiveness of the SDMP. This could be further understood by the fact that longer tenured TMTs/MMTs in the changing HE sector in Saudi Arabia may be

reluctant to consider 'new' relevant information. A number of government-controlled universities, along with private HE institutions, have been operating in Saudi Arabia in recent years. The external environment and competition in the HE sector has gradually changed, and new challenges are emerging every year. However, although it is important to consider all strategic options thoroughly in order to address these new challenges, longer tenured TMTs/MMTs are sometimes reluctant to consider all available information and options. This may lead to a situation where TMTs/MMTs are not carrying out comprehensive analysis during SDM. A lack of SDMP comprehensiveness may not create any immediate issue, but continuous reluctance to carry out comprehensive SDM may lead to longer term challenges and issues for HEIs in Saudi Arabia. Therefore, it is recommended that long tenured TMTs/MMTs in HEIs in Saudi Arabia adjust and adapt to the new external environment, and participate in more comprehensive SDM.

The results of this study support Hypothesis 2b, indicating that more heterogeneous TMT/MMT tenure causes slower SDM. This is similar to the argument made by Ferrier (2001), that demographic heterogeneity such as tenure may increase conflict within a team. Moreover, in line with Michel and Hambrick (1992), the findings indicate that tenure heterogeneity may reduce communication frequency and reduce group identification and cohesiveness (Michel and Hambrick, 1992). A lack of communication and cohesiveness within a team may increase the chance of a slower decision-making process within an organisation.

The findings of the present study provide moderate support for Hypothesis 3a, indicating that the more heterogeneous the subject background of a TMT/MMT is, the less

comprehensive SDMP will be. This finding is consistent with Zhang (2007) and Tihanyi et al. (2001), who found a strong relationship between subject background and SDMP. This suggests that subject background may lead to lack of agreement among team members regarding strategic options, which could increase the possibility of considering all options thoroughly. Thus, less heterogeneous TMTs/MMTs are more likely to carry out more comprehensive SDs.

This finding also indicates that greater knowledge sharing among TMT/MMT members leads to a quicker decision-making process (H4b). Knowledge sharing allows members of TMTs and MMTs to have all the relevant information at hand, which in turn enables them to make quicker decisions. Thus, HEIs in Saudi Arabia should create opportunities for members of the TMTs and MMTs to share knowledge. This would lead to enhanced decision speed. This finding is consistent with Okhuysen and Eisenhardt (2000)'s argument that team members develop a capability to identify and process data in patterns or blocks instead of discrete units when members of the team share information over time. In addition, pattern process, known as intuition, is quicker than single piece processing of information. Collective intuition can be developed through sharing information over time, whereby members of a team become able to comprehend the smallest cues from the other group members and fill in the blanks as a result of knowledge sharing (Isenberg, 1988). Thus, shared mental models are formulated through knowledge sharing, which in turn puts members on the same page during the execution of operations and tasks. As a result, teams can process information faster and make decisions in a speedy manner. Thus, knowledge sharing leads to speedy SDM.

Hypothesis 5a is also supported by the research findings, indicating that greater knowledge resources lead to a more comprehensive decision-making process, because

they allow members of the TMT and MMT to access relevant information, which in turn enables them to make a comprehensive decision. Therefore, HEIs in Saudi Arabia should create opportunities for the sharing of knowledge resources. This finding is consistent with the argument proposed by Simon (1955), that access to a comprehensive supply of information and knowledge which is used to support an analysis of options to determine the most appropriate solution to a specific situation is useful. Thus, a higher level of knowledge resource access is expected to help managers consider several options, which in turn will facilitate more comprehensive decision making.

In addition, the findings of this study indicate that greater knowledge resources lead to a slower decision-making process (H5b). This is interesting, because it suggests that increased access to knowledge resources affects decision speed negatively. In the context of HEIs in Saudi Arabia, increased knowledge resources may lead to a situation in which TMT and MMT members find it difficult to consider all available information, which will slow down the decision-making process. This finding supports the view of Alvesson and Willmott (1996), who argued that managers tend to move from one task to another quickly, which gives them a limited time to plan and evaluate all the relevant information before making decisions. In this context, if members of TMTs and MMTs are asked to evaluate all available information from a knowledge resource, the decision-making process will slow down. Therefore, the greater the amount of knowledge resources available to TMTs and MMTs, the slower the decision-making process will be.

The findings provide strong support for Hypothesis 6, indicating a strong positive relationship between SDMP comprehensiveness and SDMP performance. This is consistent with studies carried out by Fredrickson and Mitchell (1984) and Fredrickson

(1984), which demonstrated that comprehensiveness has a positive impact in a stable environment.

HEIs in Saudi Arabia are generally more stable and less uncertain compared to business organisations. Whereas prior studies have identified a positive impact of decision comprehensiveness on organisational performance across certain environments (Fredrickson, 1984; Fredrickson and Mitchell, 1984), the present study has identified a positive association in a comparatively stable environment. The findings of the present thesis extend the findings of prior studies by providing evidence of positive relationship between SDMP comprehensiveness and performance in a stable environment. Thus, the research contributes to the small but growing body of literature which has reported the positive association of SDMP comprehensiveness in a stable environment (e.g. Heavey et al., 2009).

The findings of the present study contradict Miller and Toulouse (1998) and Walters and Bhuian (2004), who argued that SDMP comprehensiveness has no or a negative influence on organisational performance.

The study has not found any statistically significant relationship between SDMP speed and organisational performance; therefore, Hypothesis 7 is not supported. In addition, the study has not found any evidence to support the claim made in previous studies that decision speed is crucial to firm performance in high-velocity environments (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989a; Eisenhardt and Bourgeois, 1988). A reason for this could be related to the environment of the organisation. HEIs are generally stable, but prior studies have found a strong relationship between SDMP speed and performance in the context of unstable and volatile environments. Thus, SDMP speed could be less influential in stable environments such as HEIs in Saudi Arabia.

4.4 Conclusions

The aim of this chapter was to examine the extent of education level heterogeneity, Subject background heterogeneity, tenure heterogeneity, knowledge sharing, and knowledge resources within TMTs and MMTs in a Saudi Arabian HEI. The findings indicated that education level heterogeneity in TMTs and MMTs is moderately high in HEIs in Saudi Arabia. Moreover, that TMT/MMT tenure heterogeneity is higher in Saudi Arabian HEIs than elsewhere.

In addition, the results demonstrated that access to knowledge resources may be higher for members of TMTs and MMTs in HEIs in Saudi Arabia than elsewhere, which implies that knowledge sharing among TMT and MMT members is also moderately high in this context. Furthermore, the research revealed no statistically significant difference between the TMTs and MMTs studied in terms of education level heterogeneity, although greater tenure heterogeneity was identified at the MMT level when compared to the TMT level in the Saudi Arabian HEI investigated. This suggests that TMTs and MMTs in HEIs in Saudi Arabia have equal access to knowledge resources. However, a statistically significant difference between the TMTs and MMTs in terms of knowledge sharing was identified. The members of the TMTs investigated shared more knowledge with each other than the members of the MMTs.

Both the TMTs and MMTs carried out comprehensive decision-making processes, which indicates that there is no difference between TMTs and MMTs in HEIs in Saudi Arabia in terms of decision comprehensiveness. However, decision speed varied between the TMTs and MMTs.

One of the key objectives of this chapter was to examine the impact heterogeneity and knowledge sharing and resources have on SDMP comprehensiveness and speed. The analysis revealed that education level heterogeneity positively influenced SDMP comprehensiveness in the teams studied. The implications of this finding are that HEIs in Saudi Arabia should make a continuous effort to ensure educational diversity within TMTs and MMTs. Moreover, that greater education level heterogeneity will lead to increased SDMP speed.

The findings also showed that greater tenure heterogeneity in the TMTs/MMTs led to a less comprehensive and slower SDMP. This is because tenure heterogeneity can lead to a lack of communication and cohesiveness within a team, which in turn can increase the chances of a slower decision-making process within the organisation.

The analysis results revealed that a higher level of knowledge sharing among the members of the TMTs and MMTs was related to a quicker decision-making process, as knowledge sharing allowed the TMT/MMT members to have all relevant information in hand, which enabled them to make quicker decisions. In addition, greater access to knowledge resources was shown to cause a more comprehensive the decision-making process, because the TMT and MMT members could access a large amount of relevant information, which enabled them to make more comprehensive decisions. Therefore, HEIs in Saudi Arabia should create opportunities for enhanced access to knowledge resources.

However, greater access to knowledge resources had a negative effect on decision speed in the TMTs/MMTs studied. This may have been because more knowledge resources led to a situation in which the TMT and MMT members found it difficult to consider all the

available knowledge resources, which indicates that too many knowledge resources slow down the decision-making process.

Finally, the findings showed that greater SDMP comprehensiveness led to higher organisational performance in the teams analysed. Therefore, the management teams of HEIs in Saudi Arabia should provide opportunities for greater levels of SDMP comprehensiveness.

Chapter 5   Analysis of the Qualitative Data

5.1   Introduction

SDMP is an essential part of any organisation. The process of decision making begins with the existence of an issue or problem, followed by recognition and acknowledgement of the issue, the development of alternative courses of action and the selection of the best solution (Mintzberg et al., 1976). Ozer (2005) suggested that the process of SDM could be influenced by a number of factors, such as decision makers' personalities, the condition of the organisation and external and internal factors. Strategy process research focuses on the various activities that lead a firm to select a specific course of action (Papadakis and Barwise, 2002) and the relevant factors that influence the process of strategic actions (Schwenk, 1995). Researchers are becoming increasingly interested in exploring how management teams make decisions (Dean and Sharfman, 1996; Elbanna, 2006; Papadakis et al., 2010) and the factors influencing SDMP.

The research objectives for this chapter are:

- To investigate the process of SDM at one HEI in Saudi Arabia;

- To examine the critical factors, such as Islamic culture, and support from senior management, that influence SDMP, specifically in terms of its comprehensiveness and speed, at one HEI in Saudi Arabia.

These objectives engender the following research questions:

- How does SDMP usually work at HEIs in Saudi Arabia?

- What are the critical factors, such as Islamic culture, and the role of TMTs and MMTs, that influence SDMP, for example, in terms of its comprehensiveness and speed, at HEIs in Saudi Arabia?

The importance of SDMP was highlighted by Dean and Sharfman (1996, p.389) who concluded that: "decision processes influence the strategic choices managers make, which in turn influence the outcomes affecting a firm." These processes may be characterised in terms of a range of dimensions (Brouthers et al., 2000; Papadakis, 2005) including comprehensiveness, rationality (Hough and White, 2003) and speed (Baum and Wally,

2003; Kownatzki et al., 2013). Comprehensiveness refers to the management team's ability to search for information and consider multiple approaches, multiple decision criteria and multiple courses of action (Miller et al., 2008). It is thought that such comprehensiveness improves performance by providing opportunities for decision makers to develop insights into their environment (Miller, 2008; Talaulicar et al., 2005). In high-velocity environments, TMTs/MMTs must make SDs quickly in order to remain competitive and successful (Cheng et al., 2010; Eisenhardt, 1989; Kownatzky et al., 2013). Thus, the speed of decision making is also critical to SDMP.

While previous literature identifies the importance of rationality and comprehensiveness, knowledge of how TMTs/MMTs make SDs in HEIs in Saudi Arabia is limited. Influenced by changes and demands from political, economy and social spheres, as well as the impacts identified above, the HE system contains much complex decision making with far-reaching consequences. Furthermore, the HEIs have autonomy but also more responsibility (Zechlin, 2010). An understanding of SDMP in HEIs is important in terms of improving the reliability and efficacy of SDM within the HE sector in Saudi Arabia.

This research, therefore, seeks to extend this understanding by asking how TMTs/MMTs in these institutions make SDs.

In addition, the working culture of Saudi Arabia is influenced by the Islamic tradition. According to Hofstede's (1988) cultural index, unlike the individualistic culture of the USA, populations of Arab states have a collectivistic culture (Rice, 2003). A collective Arab society uses social connections to influence important decisions. Zakaria et al. (2003) notes that, "Arabic cultures tend to know more about each other than Westerners" (p.17), therefore, socialising and connections are an important part of any Saudi Arabian organisation. People in Arab states tend to use their connections in the various facets of life – this is called wasta or mediation. Weir (2006) suggests that wasta is an integral part of Arab culture. The Islamic religion encourages wasta only to support good acts, such as to recommend the right person for the right position. Wasta must not be used in nefarious ways, such as to recommend an unqualified individual for a job in order to achieve personal gain. Thus, Islamic religion differentiates between the negative wasta and the positive one. Furthermore, in the context of conflict resolution, Kabasakal and Bodur (2002) observe that, while Arabs tend to resolve conflict through a mediator, Western society primarily resolves conflict through direct and open confrontation. Direct confrontation is not likely to work in Arab society.

Although the Islamic culture undoubtedly influences decision making processes within organisations, there is a lack of research that explores its full impact. This study aims to address this by examining the relationship between Islamic culture and SDMP.

5.2   Literature Review

5.2.1   Process of Strategic Decision making

The literature concerning the SDMP is generally based on a model developed by Mintzberg et al. (1976) who defined SDMP as a set of actions commencing with the recognition of an impetus for action and concluding with a definite commitment to a course of action. According to Mintzenberg et al. (1976), the three vital steps of SDMP are: recognition of the issue or problem, formulation of alternative options and selection of a suitable strategic option. Baker et al. (2001) identify eight steps in SDMP: defining the issue, determining the requirements, determining the goals the problem solving should achieve, recognising alternative courses of action, developing assessment standards based on the goals, selecting decision making tools, selecting an alternative course of action by applying the tools and reviewing the solution to verify the problem being solved.

 In the course of a systematic decision making process, some factors are influential, such as identifying a problem or selecting an appropriate course of action. These factors include the personality of the decision maker, the state of the organisation, internal and external situations in the organisation as well as the accessibility of information (Ozer, 2005).

SDMP is based on the principle that managers have limits and may not be involved in a multi-step process (Hambrick, 2007; Mintzberg et al., 1976; Simons et al., 1999). This suggests that the values and reasoning of managers are reflected in the SDs made by the organisations they form part of through the ways they evaluate data. In this context, Ocasio and Joseph (2005) assert that organisational decisions depend on the problems and

solutions decision makers focus upon. Based on these arguments, an increasing body of research on decision making emphasises the internal and external environments that affect what is decided, how the decisions are executed, and the factors affecting the process (Child, 1972). Elbana and Child (2007) argue that the conceptualisation of SDMP as a set of elements might simplify the examination of probable interrelationships with contextual variables such as national culture and other firm-specific and environmental factors.

5.2.2   Impact of Islamic Culture on SDMP

Cultural features play a critical role in determining and guiding the behaviour and actions of individuals (Galanou and Farrag, 2015). According to Connor and Becker (2003), the relationship between culture and behaviour points to the existence and importance of cultural values in creating the attitudes and actions of managers. Extensive research has shown that an individual's performance and behaviour are the consequence of their society's culture and values (Hofstede, 1980). Moreover, the outcomes of many studies on the behaviours and personalities of individuals have demonstrated that individuals follow the principles of their inherent cultures and ethnicities closely and cannot be easily detached from them (Aaron and Renier, 1996; Ali and Gibbs, 1998; Hofstede, 1997).

The cultural values of managers have received extensive consideration due to their impact on the processes of decision making (Schneider and Meyer, 1991). Certainly, some researchers (Jackson, 2001; Triandis and Eunkook, 2002) familiarised typologies that utilise diverse cultural factors to identify and rationalise the management practices of individuals. Moreover, these researchers have provided recommendations of the values of individuals, such as individualism–collectivism, universalism–particularism, and

power–distance (Hofstede, 1980, 1997; Trice and Beyer, 1993).

It is commonly recognised that there is a lack of scholarly theory and studies that seek to understand and explain the managerial practices of Arab-based organisations (Al-Hamadi et al., 2007; Ali, 1990) including those in Saudi Arabia. Arab management practices are categorised by importance, based on uncertainty avoidance and preservation of in-group harmony (Hofstede, 1980, 1997; Ouchi, 1981) and the ability of managers to moderate any documented open conflicts (Dawes and Massey, 2005). As such, managers tend to follow company policy to decrease risks and uncertainty while taking part in less rational decision making. In an effort to dismiss the pressure of making important decisions, and to decrease their own feelings of uncertainty, Arab managers position themselves within social conventions such as wasta (connections). Nevertheless, these "caste system" activities affect the rationality of decision making, for example through managers' interference in the normal SDM process, and lack of dependable and timely information (Omar, 1984). These practices may be reinforced by the fact that religion and inherited cultural norms and traditions lead to a sense of cultural identification, dispensing a social control in order to accomplish growth and transition. It has been argued that these elements exercise significant authority within the organisation, which decreases problem-solving dissension (Budhwar and Mellahi, 2006; Weir, 2001). However, this means that it takes longer to accomplish targets.

In addressing the specific issue of managerial behaviour and decision making style in the Arab world, Hickson and Pugh (1995) identified four major influences: foreign rule, the Western quest for oil, tribal traditions and Islam. The extent to which each factor hinders management thought in the region relates to the acceptance of firm codes based on a top-down authoritative structure, often referred to as a bureaucratic managerial style. The bureaucratic managerial style refers to a highly centralised decision making process in

which the top managers exclusively make decisions and their subordinates follow their guidance.

Polychronic cultures are characterised by individuals' ability to do multiple things at the same time. Scholars investigating the perception of polychromic time-based cultures (Schneider and Barsoux, 2003; Trompenaars and Hampden-Turner, 2007) observed that Arab managers work on many diverse tasks at once, are flexible and are not annoyed by disruption. Similarly, Walker et al. (2003) notes that Arabs are motivated to undertake several assignments at the same time. Hence, their idea of time is fluid and flexible, but beyond a certain point becomes difficult to manage exactly. This underpins the hypothesis that Arab managers belong to a culture that employs a holistic approach to management practices (Adler, 2002). However, these practices have also been portrayed as fragmented and directionless (Ali, 1990, 1995), and could, therefore, reduce the speed and rationality of the decision making process.

Arab managers are commonly less inclined to delegate authority, are likely to avoid responsibility and risk taking, prefer a stable lifestyle to rewarding but challenging work and give priority to friendships and personal considerations over organisational goals and performance (Ali, 1996; Sabri, 2004). In fact, it has been indicated that relationship-building and cordiality are integral to the Arab culture, where respect, trust and personal relations are key features of the business approach and strategy (Saif, 2009). In terms of a historical focus of human activity, Dedoussis (2004) stated that Arabs' relationships tend to be hierarchical and collectivist.

In a study of the cultural and business environments in Arab nations and Japan, Dedoussis (2004) found that Arab executives demand loyalty, obedience, and compliance from subordinates, which indicates a social distance between managers and employees that could be attributed to notions of authority within traditional societies. This is supported

by the respect for seniority and authority as determined by age, family, sex, and preference for binding people within systems of traditional and personalised authority structures (Abdalla, 2000; Ali, 1993; Rugh, 1997). Such findings were also substantiated by Al-Rasheed (2001), who argued that Arab managers are authoritarian decision makers who follow an autocratic style of management due to the dominant nature of traditional elder leaders in the wider community. Thus, despite the nature of the society and the strong emphasis on consultative practice within religious teachings, decisions are generally made jointly with, or delegated to, subordinates.

Arab culture is largely influenced by Islamic culture but some parts of Arab culture may not fully match with the teachings of Islam. The literature review indicates that Islamic culture plays an important role in SDM in organisations in Saudi Arabia. However, there is limited knowledge about the impact of Islamic culture on the process of SDM in HEIs in the country.

5.3   Research Method

Due to the lack of literature on the subject of SDMP in HEIs in Saudi Arabia, data was derived from comprehensive qualitative interviews (Foster, 1962). Interviews with management team members were considered to be an appropriate method to explore the topic because they enabled the researcher to gain an in-depth understanding of SDMP and the factors influencing it in HEIs in Saudi Arabia. The flexibility of an interview enabled the researcher to probe for answers that are more specific and tackle different issues with the participants.

In an interview, most procedural problems result from the interviewees' inability to respond appropriately, in some cases because they do not understand the question and in

other cases because they understand the question but either cannot, or choose not to, respond (Briggs, 1986). Moreover, as Lawrance (1988) states, one critical pervasive problem with interviewing is that interviewees are reticent to share discrediting data about individuals or organisations. To overcome this problem, the researcher used two different techniques. Firstly, by following Lawrance (1988) and explaining how they had come across certain phenomena in another Saudi university, and asking if this was a problem the participants experienced within their own organisation. Secondly, if this did not work, by following Pezeshkpur (1978) and explaining how vital the frank participation of the interviewee was to the study.

The interviews were carried out between June 2016 and August 2016. A total of 31 interviews were conducted. Of these, 7 interviews were face-to-face and 24 were conducted over the telephone. 13 TMT members and 18 MMT members were interviewed.

A thematic analysis of the qualitative data (interview data) was conducted (Boyatzis, 1998) to explore SDMP in HEIs and the factors influencing it in depth. Memos, coding cards, or diagrams are used by researchers to analyse qualitative data (Corbin and Strauss, 2008). In this study, major themes and sub themes were coded in order to identify the sequence of SDMP and the causal effect of factors on it.

5.4   Findings

This section presents the findings related to the strategy decision making process in HEIs in Saudi Arabia and the factors influencing it. A discussion of the findings is also presented.

Specifically, this section presents the findings related to the stages of SDMP, which are

then compared and contrasted with the findings of previous studies to inform the discussion. Secondly, the challenges faced by TMTs/MMTs during the SDMP are explored through the findings obtained through the interviews. Finally, the factors influencing the success and failure of SDMP in HEIs in Saudi Arabia are identified.

5.4.1   Process of Strategic Decision making

The process of SDM involves the consideration of a variety of aspects found in any educational environment, such as the managerial, pedagogical, organisational and technological aspect, which contribute to the development of top/middle management strategies that focus on the quality enhancement of HEIs. Understanding the process of SDM could reveal critical factors that have a significant impact on the overall decision making process. To understand the process of SDM in HEIs in Saudi Arabia, several stages should be examined. In the following sections, the stages of SDMP are identified and analysed.

5.4.1.1   Stages of SDMP in HEIs in Saudi Arabia

An examination of the interview data revealed that SDM in HE institutions in Saudi Arabia undergoes five stages, which are presented in Figure 5.1. The activities within each stage are discussed in the following section.

A. *Identification of problem*

All the respondents indicated that SDMP starts with the identification of the problem. The problem could initially be identified by the members of TMT or MMT members. For instance, according to the interviewee in Interview T, one MMT member raised questions about the curriculum of a Master's programme at the university and suggested that a complete update was required in order to make each subject curriculum more relevant to the times. Thus, a need was identified by a member of the MMT with the desired outcome being an updating of all Master's programmes. However, a careful evaluation and assessment was required before such a major change could be implemented. Therefore, the top and middle management must carefully consider all options as part of SDMP.
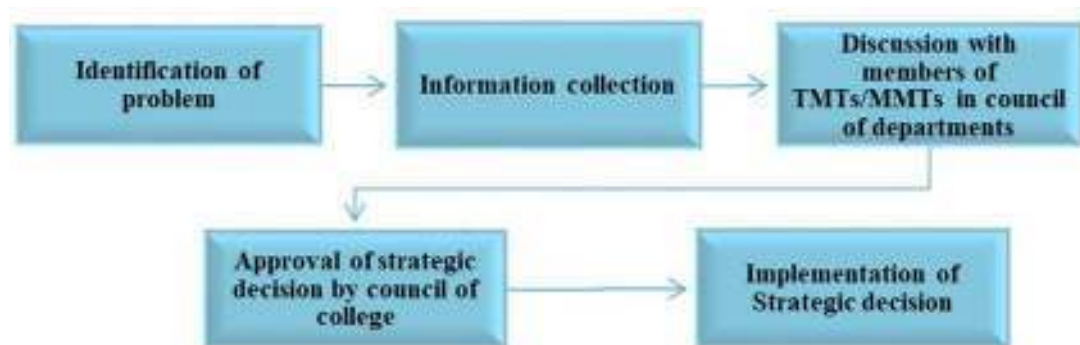
Figure 5-1: Stages of SDMP in HEI in Saudi Arabia

B. *Information collection*

The next stage of SDMP is collecting information related to the strategic issues facing the HEI. In the aforementioned case, information about the current curriculum of each Master's programme was needed, as well as where and which changes were required, and how they would be implemented. Thus, relevant information collection

plays a critical role in SDMP of HEIs in Saudi Arabia. This was reinforced in Interview F as follows:

> *We will do some research, benefiting from the others' experiences, and collect information and analyse positive and negative aspects. We also share our knowledge and experience with one another. Finally, we store relevant information and knowledge so that we can refer to stored knowledge and information in future decision making. (Interview F)*

Extensive research and analysis of collected information and opinions assists in assessing various aspects of the strategic issue. Relevant and accurate information is essential for an appropriate assessment of suitable strategic options. The importance of information collection and analysis was also discussed in Interview Q:

> *All decision making depends on the availability of reliable and accurate data. Information helps in accurately assessing alternative options and assessing the impact of each option. Therefore, ensuring the reliability and accuracy of data is also critical for the decision making process. (Interview Q)*

C.   Discussion with members of TMTs/MMTs in the council of departments

The majority of participants highlighted the fact that conducting a discussion or meeting with their team members is one of the critical stages of any SDMP in a HEI in Saudi Arabia. The initial discussion and meetings are carried out by the members of TMTs/MMTs in the council of departments.

First, members of TMTs/MMTs brainstorm in order to generate ideas. This process enables them to come up with possible solutions and consider the various aspects of the issues under consideration. Some interviewees indicated the significance of the brainstorming stage, as demonstrated in the following statement:

> *Generally, we start the discussion about the decision making process with brainstorming. During the brainstorming stage, we write down all possible elements of the strategic decision. Every member of the management team participates in the brainstorming process so that we get more ideas and more perspectives. (Interview N)*

Interviewees highlighted the fact that the discussion takes place between the members of TMTs/MMTs and all members actively participate in the conversation. This suggests that a SD is not an individual choice made by one member of a department, but in fact relies on the collective participation of all members in a team. This was highlighted in Interview Z:

> *All relevant members participate in the decision making process, and individuals alone can't make any decision. The decision making doesn't depend on one person; but it depends on all members of the management committee. (Interview Z)*

The discussions between the members of the TMTs/MMTs appear to be beneficial and give everyone the opportunity to offer alternative suggestions and courses of action. Participants described how team discussions provide an opportunity for each person to convince the others of their point of view, which makes the decision making process more comprehensive.

It is interesting that respondents from top management generally consider their role in the discussion process as the most important stage of SDM. For instance, one top manager indicated:

> *During the decision making process, I serve as motivator, mediator, or initiator. I orient the team with the situation that we need to decide with them. (Interview V)*

Members of the council of departments carefully assess the suitability and feasibility of each recommended strategic option. The council of departments also checks if the strategic option is consistent with the overall strategic vision of the HEI. For example, updating a curriculum should incorporate modules and opportunities that enhance the employability of graduates. Thus, the council of members ensures that the strategic option is aligned with the strategic vision and mission of the university. The interviewee participating in Interview P revealed that:

> *The purpose of the strategic plan of the university is reaching the mission and strategic vision of the university by accomplishing the targets and initiatives. In the case of the strategic decision, it shall be referred to the strategic plan, the mission, and the vision of university. (Interview P)*

At the end of the discussion and meeting, members of TMTs/MMTs in the council of departments must select one strategic option from several. In general, the selection is based on a majority vote and the chosen option is then recommended to the council of departments.

During the voting process, members with a ranking above assistant professors are provided with the right to vote. However, the remaining members are permitted to express

their opinions about the new SDs, for instance adding to or changing the curriculum or adding new books. Some respondents mentioned that other team members (with ranks below assistant professor) are allowed to contribute to the discussion of the strategic options; however, they are not allowed to participate in the voting. Sometimes departments have teaching staff or a curriculum committee that participate in the beginning of discussions and make suggestions about the topic, and each committee then submits their recommendations. It is important that the voting is conducted by the council of departments. Finally, the results of the votes and recommendations regarding the strategic option are submitted to the college council. According to the participant of Interview CQ:

> *Voting should be carried out by the council of each department, after*
> *which the result of the vote and recommendations shall be submitted to*
> *the council of college. (Interview CQ)*

Thus, the next step of SDMP is to submit the recommendation to the college council, which will approve the decision.

D. *Approval of the strategic decision*

The college council reviews the strategic option recommended by the council of departments. It also requests expert opinions about the recommendation and ensures that the proposed strategic option aligns with the regulations of the Saudi Arabian Ministry of Education. The college council checks the consistency of the option with the rules and standards of The Ministry of Education regulations in Saudi Arabia. For example, if there are rules pertaining to admission tests for college applicants, the head of the examination committee is responsible for the tests. If the SDs relate to the tests, the aim must be fully comprehensive in order to submit the request to the college council and the decisions

should be based on the Ministry of Education regulations. According to the participant in Interview P:

> *We, as a top management team, evaluate strategic options and recommend a specific strategic option. However, our recommendation is reviewed and approved by the council of the college. The council of the college needs to strictly follow the guidelines and regulations of the Ministry of Education. We need to satisfy the requirements and regulations of the Ministry of Education. Thus, our strategic decision making process is very rigorous and thorough. (Interview P)*

The college council carefully appraises the strategic option by considering the vision of the university and regulations of the Ministry of Education. Finally, it approves the SD and sends instructions to the college and departments to commence the implementation process.

E. Implementation of the strategic decision

An official instruction is sent, by the deans of each college to each department, to implement the strategic option. The deans and councils of the college are responsible for monitoring the progress of each SD. The council of departments reports the progress to the deans and the college council. Members of MMTs play a crucial role in implementing SDs within HEIs. MMTs interact with TMTs, lower level managers and employees in order to execute the SD. MMTs consider the steps and actions required to make the desired strategic changes in order to effectively implement the SDs, as indicated in Interview D:

While both top managers and middle managers contribute to the development and formulation of strategic decisions, middle managers make a major contribution to ensure proper implementation of the strategic decision. For instance, the decision to change the curriculum of all Master's programmes was successfully achieved because middle managers explained the importance of a curriculum change to lecturers, professors and administrative staff so that everyone contributed to the change in the curriculum. Middle managers also coordinated with top managers while actively working with lower level managers. (Interview D)

The overall SDMP could be summarised as follows: Identification of a problem, followed by relevant information collection. Then, the members of TMTs/MMTs in the council of departments discuss the strategic issues, commencing with brainstorming. The council of departments selects a strategic option through voting and recommends the selection to the college council, which evaluates and approves it. Finally, the college council sends the approved strategic options to the dean and departments for implementation.

SDM in Saudi Arabia goes through a structured, step-by-step process. Thus, SDM also follows a procedure in HEIs in Saudi Arabia. This finding is consistent with Harrison's (1996), who found six, real-world examples of a process approach to SDM. He argued that a process perspective of SDM should achieve a successful result. Therefore, a process approach to SDM in a HEI in Saudi Arabia is a suitable technique.

The following sections discuss the findings related to the factors influencing SDMP in HEIs.

5.4.2   Exploring the factors influencing SDMP in a HEI

One of the research objectives is to explore the factors influencing SDMP in the HEIs in Saudi Arabia. Nvivo 12 software was used to carry out the analysis of the qualitative interview data.

At first, all interview transcripts were analysed using the "word frequency query" with an option to search for the top 50 most frequently used words in the interviews. The findings are displayed in the Infographic "Word Frequency: All interviews". The analysis revealed that the top 5 most frequently mentioned words in 31 interviews were "teamwork", "Islamic culture" and "information", SDM "process", and "subject" heterogeneity.

Word Frequency: All interviews

In this thesis, the unit of analysis is the team level. There are two types of teams in the sample – the TMT and MMT. As the unit of analysis is the team level, the word frequency query was carried out for

each of the two team levels. First, the interview transcripts of TMT were analysed using

the "word frequency query" with an option to search for the top 50 most frequently used words. Then, the interview transcripts of MMT were analysed using the "word frequency query". The findings are displayed in the following Infographics.

| **Word Frequency: TMT interviews** | **Word Frequency: MMT interviews** |

The findings revealed that the top five most frequently mentioned words in the interviews with TMTs were "teamwork", "Islamic culture", "information", SDM "process", and "meeting". In contrast, the top five most frequently mentioned words in interviews with MMTs were "teamwork", "information", SDM "process", "Islamic culture" and "challenges". The findings indicate that there are similarities between the words used to describe and characterise SDMP by TMTs and MMTs in HEIs in Saudi Arabia. On the other hand, there are dissimilarities in the order and emphasis placed on the words used by TMTs and MMTs to describe and characterise the process of SDMP in HEIs in Saudi Arabia.

The above analysis identified the major themes i.e. key factors referred to in the interviews carried out with members of the TMTs and MMTs. Below is an in-depth

analysis of key themes (i.e. factors) identified in the word frequency query along with a comparison between the views expressed by the TMTs and MMTs.

5.4.2.1 Influence of Islamic Culture on SDMP

Islamic culture is the second most frequently used phrase by TMTs and the fourth most frequently used phrase by MMTs to describe and characterise the influence on SDMP in HEIs in Saudi Arabia. This finding indicates that the influence of Islamic culture may vary according to management level. Therefore, further analysis was carried out in Nvivo to identify how TMTs and MMTs described and characterised the influence of Islamic culture on SDMP.

Based on the responses of the respondents, a large majority believe that Islamic culture has an enormous effect on the process of making SDs in HE in Saudi Arabia. The Nvivo word frequency feature was used to identify the key sub- themes within the Islamic culture. All interviews were analysed using the word frequency query. The analysis revealed that the most frequently used words to describe and characterise different dimensions of the Islamic culture were "teamwork" and "degree of adherence to Islamic principles", "consultation and participation", "gender separation", "role of women" and "extent of delegation of authority". The top six most frequently used words by TMTs and MMTs are presented in Table 1. The subsequent section presents an in-depth analysis to explore the influence of each dimension of culture on SDMP.

Table 5. 1: Words used to characterise the influence of Islamic Culture on SDMP

		TMT Frequency	**MMT Frequency**
I.	Extent of adherence to Islamic principles	12	18
II.	Teamwork	11	7
III.	Consultation and participation	3	4
IV.	Gender separation	4	3
V.	Role of women	2	5
VI.	Extent of power delegation	0	4

I. Extent of Adherence to Islamic Principles

Both TMTs (12 out of 13) and MMTs (18 out of 18) emphasised the importance of adherence to Islamic principles in SDMP. This is indicated in Interview F by one of the TMT team members:

> *The Islamic customs and traditions must be respected. In the case of prohibited rules, we don`t implement them, such as mixing between women and men. Any decision must be acceptable from a cultural and religious point of view; otherwise this would lead to many social problems. (TMT Interview F)*

Moreover, the responses of some respondents indicate that SDs can be approved or accepted based on technical aspects rather than other processes involved in achieving a SD and any decision that violates the Islamic religious traditions are rejected. This is indicated in the interviews with two TMT members:

> *We settle all the successful decisions according to the tradition of Islamic religion on the academic aspect and also on all aspects of life. (TMT Interview P2)*

> *We are living by Islamic values and culture. When we are making the decision, we consider whether the decision is acceptable in our religion*

> *or not. All decisions comply with Islamic tradition. Anything that contravenes with Islamic sharia will be avoided. (TMT Interview O)*

Similar opinions were expressed by MMT members during the interviews. In fact, all MMT members (18) remarked that there is a strong emphasis on complying with Islamic principles and values when making and implementing SDs. This is indicated in the interviews by two MMT members.

> *Our values are based on our religion and we mustn`t reject these traditions. So, we seek to reinforce our culture and our transaction must be clear and not based on nepotism. Our Islamic culture aims at justice in any decision. (MMT Interview B)*

> *Surely, the Islamic culture is considered a factor that affects decisions. All decisions must comply with the policy of the country and Islamic culture. Any decision must serve the interest of the country and coincide with our Islamic culture. It must be taught to our sons and must be removed from fraud and deceit. (MMT Interview I)*

Prior studies (Hassan and Lewis, 2014; Robertson et al., 2001) indicate that the attitude and behaviour of managers in Saudi organisations and the way in which Saudi organisations operate are significantly influenced by Islamic values. Anastos et al. (1980) show that management practice and attitudinal behaviour towards business in Saudi Arabia is influenced by Islamic values. Managers and employees in Saudi organisations are, thus, expected to maintain superior moral standards when conducting business.

II.   Teamwork

Teamwork is the most frequently mentioned word during the interviews by TMTs and MMTs. An analysis revealed that 11 TMT members and 7 MMT members emphasised

the importance of teamwork during the process of SDM. The interviews also indicated the connection between teamwork and Islamic culture. This is indicated in the interviews by the following members of the TMT and MMT.

> *Teamwork is an essential part of the decision making process due to the importance of collective society in Islamic culture. Team members are very cooperative and the atmosphere within the team is excellent. (TMT Interview F)*

> *We have to work as a team. My team is studying the subject at university, analysing the performance of the team, giving the recommendations to the deputy and then taking the appropriate decision based on the recommendation of the team. (TMT Interview J)*

> *We need to work as part of a team. The dean of college often chooses the team and team members. The dean is chosen based on the experience and qualification of the team members. The team members should cooperate with one another and collectively make decisions. This is consistent with Islamic teachings. (MMT Interview B)*

Arab cultures focus on group work settings (Steensman et al., 2000; Morris et al., 1994; Griffith et al., 2006). Cooperation is also part of the Islamic culture. Components of cooperation can likewise be followed in Hofstede's examination (1994), in which it is argued that collectivistic nations such as Saudi Arabia are characterised by useful correspondence between people and divisions and solid, strong social systems are a persuasive channel of data to satisfy hierarchical objectives. The findings of this thesis are consistent with the findings of previous studies regarding the collective nature of Arab culture.

In the context of the Arab culture, relationship building and elements of warmth have been found to be necessary, and trust, respect, and individual relationships are key

elements of business (Saif, 2009). The findings of this study have revealed similar characteristics such as respect, friendliness and trustworthiness with teamwork.

III.   *Consultation and Participation*

One of the characteristics of Islamic culture is the consultation based decision making process. 3 TMTs and 4 MMTs highlighted the significance of consultation and participation as part of SDMP, as in the interviewee quotes below:

> *The strategic decision should not violate the principles of Islamic culture. Any strategic decision needs to satisfy the rules and guidance of Islamic culture such as consultation process in strategic decision making. (MMT Interview M)*

> *I believe that the participation and consultation on decision making are important factors for our organisation since participation and consultation are encouraged by the Islamic religion. (TMT Interview F)*

According to Dadfar (1990), the Islamic system of management is rooted in consultation, participation, dissemination of wisdom and knowledge and the equal elevation of opportunity.

In the city of Medina, in present-day Saudi Arabia, the Prophet Mohammed established the first principles of an Islam-based management style, a major feature of which was consultation or Shura. The Prophet regularly consulted with his followers on various issues related to state management and policy development, formalising the consultation process by creating an official consultative council, consisting of knowledgeable, pious,

and wise individuals. The consultative council participated in decision making concerning matters affecting the community of Muslims. The successors of Prophet Mohammed were the Caliphs, who followed Prophet Mohammed's example by employing consultative councils and consulting with their followers (Al-Hirrawi, 1986). Therefore, consultation with followers encompasses a part of Arab culture that was originally employed and promoted by Prophet Mohammed.

As noted previously, the principle of Shura constitutes the foundation upon which the consultative rules within organisations in Arab countries are usually derived. The root of Shura is Islamic governance and Arabic tradition (Ali, 1998). However, some studies have indicated that the practice of consultation within Arab organisations differs from the Arab tradition. For instance, Bjerke and Al-Meer (1993) suggested that the process of consultation is conditional and is limited to select employees, or committees. Thus, the consultation process is well recognised conceptually within Arab countries, but the practice itself varies across organisations.

The Islamic religion develops guidance by consensus and consultation in decision making processes in politics (see Moran et al., 2014; Al-Twaijri and Al-Muhaiza, 1996). Similarly, the consultation process is expected in organisations in Arab countries, including Saudi Arabia. In addition, Islam promotes noble virtues and social aspects of behaviour, such as honesty, generosity, hard work and time-management (Deresky, 2014; Al-Twaijri and Al-Muhaiza, 1996).

IV.   Gender Separation

4 TMTs and 3 MMTs highlighted the importance of maintaining gender separation, which is influenced by Islamic culture. This is indicated in the interviews by the following TMTs:

> *According to Islamic culture, men and women should not meet together for strategic decision making process. Only men with men or women with women could meet together and make strategic decisions. The separation of men and women is part of Islamic religion and should be respected in the decision making process. (TMT Interview U)*

> *The Islamic customs and traditions must be respected. In the case of prohibited rules … we don`t implement them, such as mixing between women and men. Any decision must be acceptable from a cultural and religious point of view; otherwise this would lead to many social problems. (TMT Interview F)*

The interviewees indicate that the separation of male and female employees is an integral part of the Islamic culture and should be followed while carrying out SDMP.

In response to considerations of gender in Islamic faith and education, some respondents also said that some colleges had no female departments and had no female teaching staff, but the college has held worldwide conferences where participants included a number of male and female teaching staff from various universities. In these instances, the consideration was whether to set up a common hall, where men and women both delivered their talks on the same stage. Eventually, a decision was made to select a location with two different halls – one for women and one for men – and to set up a voice connection between the two.

V.   Role of Women

The role of women in the SDMP was mentioned by 5 MMTs but only 2 TMTs. MMTs were clearly more concerned about the role of women. An analysis of the interviews by MMTs and TMTs revealed that there was a lack of participation by women in SDMP due to the Islamic culture requirement regarding gender separation. This is indicated in the interviews by the following MMTs:

> *There is a lack direct participation by females in the strategic decision making process due to the restriction imposed by Islamic culture on females and males working together. (MMT Interview E)*

> *Undoubtedly, part of the strategic decision making process depends on the culture. The Islamic culture has a huge impact. Sometimes the process of decision making is influenced by Islamic teaching, for example, the fact that men and women cannot attend a meeting together. Consequently, there is a lack of participation of females in the strategic decision making process. (MMT Interview Q)*

Some TMTs also highlighted the role of women during the interviews as in the following interview with a TMT.

> *It is a huge factor and requires a strict system. It may be taken as a negative aspect, as it generally excludes women. However, our community is conservative and should comply with Islamic culture. (TMT Interview J)*

The role of women in Saudi Arabia has been increasing. The interviewees indicated that there are a number of women who are working at the university. This is consistent with the progress mentioned in the previous studies, such as Abalkhail and Allan (2015) and Qureshi (2014). However, the findings of this thesis indicate that the role of women in SDM should also be promoted and supported in Saudi Arabia. Thus, in addition to the efforts being made by the Saudi Government to increase the opportunity for women to work (Alhareth et al., 2015), more effort should be made to include women in SDMP process in HEIs and other organisations.

As mentioned in the literature review section, there is a lack of empirical research that investigates the role of women in the workplace as well as the role of women in the decision making process in organisations. This thesis contributes by exploring the role of the role of women in an HEI in the context of Saudi Arabia.

VI.   *Delegation of Authority*

According to the 4 MMTs who were interviewed, the extent of delegation of authority in SDM is limited. TMTs did not even mention the concept of delegation of authority. The limited extent of delegation of authority to middle management was highlighted in the interviews by the following MMT:

> *The delegation of power to middle management is limited. In general,*
> *the top management involves middle management in consultation.*
> *However, the final decision is made by the top management teams.*
> *(MMT Interview C)*

Organisations in Arab countries use the directive form of management, which means that, although followers or subordinates are consulted during the decision making process, the ultimate decision making power remains with the leaders or managers of an organisation.

Managers in Arab organisations do not delegate authority or power to their employees and, although employees frequently participate as a group in the consultation process, the managers alone make the ultimate decisions. As a result, the managers do not transfer their powers and their employees are generally disinterested in obtaining power and its associated responsibilities (Mendonca and Kanungo, 1994; Muna, 1980; Saigie and Zeynep, 2003). The findings of this thesis are consistent with prior studies indicating that the delegation of power to middle management is limited in HEIs. While consultation and participation are encouraged and practiced in HEIs, the decision making power stays with the senior management team.

5.4.2.2 Influence of Information on SDMP

The word frequency query revealed that 'information' is the second most cited word in interviews with MMTs and the third most cited word in interviews with TMTs. The following subsection presents the findings of the in-depth investigation on the role of information on various aspects of SDMP in a HEI in Saudi Arabia.

A. *Access to Information*

The majority of the respondents stated that the provision of clear information was extremely influential on the success of the decision. They explained how clear and transparent information is vital for successful SDM. The participants in interviews I and J indicated that:

> *We have made many successful decisions that were based on relevant and clear information about the strategic decision. Team members need to have information about the rules and regulations affecting the strategic decision. (MMT Interview I)*

> *Access to and availability of data greatly helps in making strategic decisions. We can assess the likely impact of a decision by analysing relevant information and data. So, information and data are critical for making strategic decisions. (TMT Interview J)*

B. Information Sharing

Discussions and consultation appear to be the most important ways to share information related to decision making with the team. The discussion is especially important when performing community-related activities and research. Information is shared through discussion and weekly meetings about progress, because participation is considered ongoing and the dialogue useful.

> *In our university, we have an electronic system, called the councils Majales system that allows the head of the meeting (Dean of University) to update all documents important to any decision that will be made by the council maybe three or four days ahead of the meeting and the head of meeting will be responsible for the recommendations. This is easing the process of making decisions … for example when the committee was discussing the subject of certain students and asking "Do we have the right to remove the deficiency or not?" All the information pertaining to the student in question was on the website and could be reviewed at any time. In order to prevent time wasting during the discussion, these documents would be made available to the team before the meeting and any member has the right to comment. Thus, when we hold the discussion, no time is wasted on reading through documents and the discussion is restricted to the points of differences and comments of each member. So the electronic councils Majales system at the university makes it easy to create an effective social environment and simplifies all matters. (Interview CQ)*

> *We have teamwork and we have a system at the university called the*
> *councils Majales. All members are part of the team and when we hold*
> *meetings we discuss all these subjects and information which will be*
> *available to all persons before the meeting. (TMT Interview J)*

Another important way to share information is via email, which each member of the university has access to. The deanship of development is responsible for the quality of connections between colleges. The information is updated automatically on the system or university email in order to ease the connection and this helps to bring students, staff and other employees closer together through chatting and exchanging of emails and WhatsApp messages. Sharing information through WhatsApp is useful because it allows information to be shared quickly within the team and a specific group of college employees and enables decisions to be made quickly.

A further, widely used, method of communication is *the councils Majales system,* which allows the creation of groups who participate and share information using the electronic system available at the university. This Majales system, where all information and documents are available for each member of a team to view, allows information to be shared widely between the members of the university.

> *We are working on a tasks system. If I want to discuss decisions that*
> *relate to academic affairs through the tasks system, I send an official*
> *letter to academic affairs. This letter is already found on the system and*
> *the secretary is responsible for sending this letter. (TMT Interview AQ)*

In addition, a large majority of the respondents mentioned workshops, seminars and lectures as an opportunity to share information among team members, especially when the work is referred to committee, as some of the decisions require special workshops.

On the other hand, some topics and decisions require high level opinions but the administrative regulations mean that a workshop must be held so that everyone is aware of the full scope of the subject and suggestions regarding any decision. Thus, if the committee makes a definite recommendation about a project, all opinions can be taken into account. This is a vital step that reaps the benefit of the diversity among specialisations thus adding value to the project.

5.4.2.3 Challenges Faced During SDMP in HE in Saudi Arabia

The word frequency query indicated that one of the most frequently mentioned words in the interviews with TMTs and MMTs was "challenges". It was, in fact, the fifth most used word by MMTs in the interviews. An analysis of the interview data revealed a number of challenges related with SDMP in HEIs in Saudi Arabia. The challenges related with SDMP are presented below.

A. *Lack of Information*

Among the most frequently mentioned challenges was the lack of information. The interviewees explained that employees are not given adequate information about issues and scant information is available to them. The majority looks for further information outside the university before making any recommendations regarding a decision. They indicated that relevant information is extremely important, because SDM is a significant responsibility and therefore should be based on comprehensive and relevant data. This was indicated by the participants in Interviews O and L:

> *Sometimes a lack of information is considered to be one of the most critical obstacles. We take more time to get the information. The lack of information is considered to be the most important challenge facing*

> *the decision maker. A lack of information means we can't make the decision quickly. (TMT Interview O)*

> *Sometimes, we suffer from a shortage of information or inadequate information. So, we use a survey to collect the information. If we have all relevant information with full statistics, we can make the decision. (TMT Interview L)*

Thus, a lack of relevant information is one of the critical challenges faced during SDMP in HEIs in Saudi Arabia. Some respondents referred to the issue of false and inappropriate information given by team members, which significantly affects the decision making process, because any decision based on inappropriate information will ultimately be unsuccessful. In order to carry out a comprehensive SDM, access to relevant and reliable information is vital. The findings of this study reinforce the importance of information and support the views of Frishammar (2003), Tushman and Nadler (1978), and Milliken (1987), who highlighted the crucial role of information and data in SDMP.

4.3.10 Bureaucracy

Governmental institutions tend to be heavily bureaucratic with a long list of regulations to follow. Consequently, the process of decision making within a government body is more difficult than within a private institution. According to the participant in Interview B:

> *The second matter is that there are some restrictions from government bodies limiting information release. In order to access information about the university, we sometimes need to get permission from the Ministry of Education. Getting permission from a government office is*

> *really time consuming and involves multiple steps. This bureaucracy*
> *slows down the decision making process. (MMT Interview B)*

Bureaucracy slows down the decision making process. This indicates that the speed of SDMP is negatively influenced by bureaucratic procedures in HE sectors in Saudi Arabia. Prior studies have suggested that a fast SDMP is beneficial for private sector organisations operating in unstable and competitive environments (Bourgeois and Eisenhardt, 1988; Judge and Miller, 1991). However, in the context of HEIs in Saudi Arabia, TMTs and MMTs are unable to instigate rapid SDM due to the high level of bureaucracy.

C. Lack of Financial Resources

The majority of the respondents consider a lack of financial resources as being one of the major challenges faced by a team when making SDs. This is indicated in Interviews I and J:

> *Yes, we need more support and we need financial support because we*
> *are a public university and we have one supporter only. (MMT*
> *Interview I)*

> *Sometimes the project or the strategic decisions may be suspended*
> *because there is a lack of financial resources. (TMT Interview J)*

The findings highlight the importance of financial resources for developing and implementing SDs within HEIs in Saudi Arabia.

D. Competency of Decision Makers

Another important challenge discussed by the respondents is the competence of decision makers. The interview participants indicated that decisions are not always made by the

most competent person. The competency of decision makers could be determined by examining the qualifications, experiences, and capabilities of members of the management team in HEIs. An incompetent person would fail to consider the pros and cons of each strategic option effectively. Consequently, there is the risk of creating a less comprehensive and less thorough SDMP. Therefore, the incompetency of decision makers negatively influences SDMP in HEIs in Saudi Arabia.

E. Lack of Competent Employees

Some interviewees considered the lack of human resources as another obstacle facing the team during SDM. Some consider this to be a serious problem. This relates mostly to the less qualified members of staff, with low level qualifications, or poor English language and computer skills. In addition, the participant in Interview Y said:

> *It is planned that the appropriate employee will be appointed in the appropriate position, but unfortunately the appointment is sometimes based on personal relationships. (MMT Interview Y)*

Other challenges related to human resources as identified by the interviewees are: a) the gap between the qualifications and experience required; b) difficulty in finding full-time administrative assistants and the qualified team's requirement of high salaries; c) the retirement of teaching staff members and the need to select an individual from the department to fill the vacancies created; and, d) the issues with timing caused by the process of new education and bureaucracy requirements. In addition, one of the most important challenges in the human resources field is the difficulty of finding Saudi women with degrees to teach in the female departments. As indicated in Interview AQ:

At the same time, it is rare to find Saudi women holding Bachelor's or Doctoral degrees in this field. In order to improve the situation, some women were offered scholarships to study overseas and some studied within the country. Gradually, there has been some improvement. (TMT Interview AQ)

F. Support from Senior Management

Support from senior management during the process of SDM is vital. The majority of respondents who referred to senior management believe that they usually fully support SDMP. The findings indicate that support from senior management is one of the most important factors that affect the success of the decision.

Yes, the senior management welcomes all new ideas. It welcomes working as a cooperative team. But some resources affect the decision, such as the limitation of subject knowledge and limitation of qualifications that may affect the management team's ability to offer new ideas. (TMT Interview P2)

The senior management of the university is working according to procedures and clear systems on every level at the university. So, from the beginning, we follow this method. So, the management team has never taken a decision without following this procedure, if the procedures and systems are thorough. (TMT Interview P1)

It is interesting that the participants who consider that senior management fully supports the process of making SDs are themselves from top and middle management.

The very few respondents who identified a lack of support from senior management emphasised changes in the system, the difficulty of obtaining financial approval, or objection from senior management as reasons for their opinion.

5.4.2.4 Other Factors influencing SDMP in HEIs

SDMP in HEIs in Saudi Arabia is influenced by a number of factors, which are presented in the following section.

a. Impact of TMT / MMT heterogeneity

To investigate the impact of TMT's and MMT's heterogeneity on SDMP in the context of HE in Saudi Arabia, it is necessary to explore the respondents' attitudes and experiences about the effect of heterogeneity on SDMP in HEIs. The interview results show that a large majority of the respondents perceives diversity in experience and qualifications within the team as being positive and believes that diversity is linked to the opportunity to gain a variety of experience, qualifications or skills.

> *The team that is working has new and different scientific backgrounds, such as the person who was working on the engineering colleges, who has engineering opinions and graduated from a US university. Also, one of the consultants specialises in the department of higher education and development and has graduated from France and there are specialists in health management. (TMT Interview H)*

Another important factor which influences the positive approach to diversity is the opportunity to share different ideas with team members. Having different specialisations and experiences within a team means having access to different points of view that benefits the making of SDs within the agency. In addition, differences in specialisations enable a team to view the subject from multiple aspects.

> *This person specialises in management… this person specialises in prophet statements… this person specialises in human resources, this*

person specialises in legal sciences… this person specialises in natural science… when we meet, there are many points of view or different visions that have a hugely positive impact on the final decision. (TMT Interview O)

Another important reason why diversity is positive is again linked to the consideration of different ideas, which is especially important during the renewal process, when the different approaches are vital, as one respondent explained:

Because the changes cannot be implemented through one vision. (MMT Interview S)

The respondents emphasised the advantages of having different ideas, skills and opinions within the team. To achieve maximum benefit from a team, one must have individuals with different skills or employees with different personalities. In a diverse team, where one employee has the ability to interact with complex administrative cases and another employee has the ability to manage new ideas, each person has a particular advantage and a unique vision or strength and the combination of these leads to success.

Some respondents clarified why they have a positive attitude towards the diversity of experience and qualifications within a team. Among the reasons listed was helpfulness during decision making. This is because the diversity of qualifications and experience can generate a good discussion that takes all dimensions into consideration. In addition, it increases openness to different cultures, which means that members of diverse teams become better able to adapt to changes that mirror the diversity they encounter through coworkers who have different traditional practices and philosophies in life. Moreover, if the university has team members from different countries, this enlarges the professional network of the university. Furthermore, it increases opportunities for establishing mentor-mentee relationships because diversity in professional experience and diversity in ducational degrees may foster seniority.

> *However, in my team, this creates a better mentor-mentee relationship where the well-experienced members share their knowledge and skills with the rest of the team members. Despite the diversities, we are all united with one common goal, that is, to produce quality ... graduates. (TMT Interview V)*

Both male and female respondents consider diversity to be positive because of the opportunity to utilise various experiences and qualifications or share different ideas.

The majority of the interviewed team members consider their teams to possess a cooperative, harmonious and positive dynamic. Some respondents emphasised the importance of having different approaches to instigate a discussion in a professional manner. Other respondents emphasised participation, enthusiasm, initiative, flexibility, ability to express opinions, and interaction as the key concepts that describe the atmosphere within the team.

b. *Facilities provided by the university to help in SDMP*

Facilities provided by the university can play a vital role during the process of making SDs. A large majority of respondents emphasised that financial resources and information are important facilities provided by the university.

> *.....Offering financial resources to support workshops and training to enhance the skills of managers in making strategic decisions. The university also provides external consultants and experienced employees in order to facilitate the decision making process. The university also helps us make contact other universities so that we can learn from other universities and their strategic decision making. (TMT Interview H)*

The electronic archives and access to information are provided by the university. This information helps us in the process of making decisions. (MMT Interview K)

For large projects, the university provides financial support to recruit outside consultants. The external consultants are responsible for reviewing the subject, assessing the department, and then submitting the report. There are some technical facilities and provisions of information to assist in making the strategic decisions. (MMT Interview G)

The majority of the respondents stated that the primary facilities provided by the university are the electronic systems, which are very useful.

One of the electronic systems used is the system of councils, through which it is possible to submit all transactions or proposals with all appendixes, so all members have the ability to review them before meetings. This allows the employees to discuss topics with the college council in order to review the subjects, rather than discussing them beforehand, as sometimes there are attempts to influence the decision. (MMT Interview G)

Other respondents stated that the university provides access to computers, experiences, emotional support, internet laboratories and meeting halls and help with organising workshops, appointing experts and providing special courses. Thus, the university appears to provide a supportive team environment for employees during the process of making SDs.

5.5 Conclusion

The aim of the chapter was to explore the process of SDM and the factors influencing SDMP process in HEIs in Saudi Arabia. Semi-structured interviews were carried out with TMTs and MMTs, in order to investigate the research topic.

According to the findings, SDMP in the selected HEI in Saudi Arabia has five stages. First a problem is identified and the relevant information is collected. Then, the members of TMTs/MMTs in the council of departments discuss the strategic issue and recommend a specific strategic option through voting. In the fourth stage, the college council evaluates and approves the recommended option, before sending instructions to the deans and departments to implement the new SD.

The interview data analysis revealed a number of features of SDMP in the HEI. Firstly, it is influenced by a wide range of international external stakeholders, both directly by the Ministry of Education and indirectly by the general population through aspects of public accountability. Due to the scrutiny of the Ministry of Education and the college council, TMTs/MMTs attempt to make rational, comprehensive, and systematic SDs. Consequently, SDMP of a HEI in Saudi Arabia tends to be more comprehensive and rational. Secondly, information and data collection plays a critical role in SDMP in a Saudi Arabian HEI. Analysis of the interview data revealed that effective SDM must be supported by relevant information and data. Thirdly, both TMTs and MMTs play a crucial role in developing the strategy. However, MMTs are more significant in the implementation of the SDs. They are responsible for ensuring the actual implementation of a SD, such as a curriculum review, in colleges, departments, programmes and modules. The MMTs also communicate with the TMTs to update them about the progress in the implementation. Finally, SDMP in a HEI in Saudi Arabia is comprehensive due to

the external scrutiny and participation of TMTs and MMTs in its various stages. However, this study has found speed and comprehensiveness to be mutually exclusive and comprehensiveness is prioritised over speed in SDMP.

An analysis of the interview data using Nvivo 12 revealed the factors that influence SDMP in HEIs in Saudi Arabia. As the unit of analysis is the team level, a word frequency query was carried out at the two team levels i.e. the TMT and MMT. The findings revealed that the top 6 most frequently mentioned words in interviews with TMTs were teamwork", "Islamic culture", "information", SDM "process", and "meeting". In contrast, the top 5 most frequently mentioned words in interviews with MMTs were the "teamwork", "information", SDM "process", "Islamic culture" and "challenges". The findings show that there are similarities between the words used to describe and characterise SDMP by the TMTs and MMTs in HEIs in Saudi Arabia. However, TMTs and MMTs differ in terms of the order of frequency and the emphasis they place on the words they use to describe and characterise the process of SDMP within a HEI in Saudi Arabia.

'Islamic culture' is the second most frequently used phrase by TMTs to describe and characterise the influence on SDMP in the HEI in Saudi Arabia but is the fourth most frequently used phrase by MMTs. This finding indicates that the influence of Islamic culture may vary according to management level. Therefore, further analysis was carried out in Nvivo to identify how TMTs and MMTs described and characterised the influence of Islamic culture on SDMP.

Based on the responses of the interviewed respondents, a large majority believes that Islamic culture has an enormous effect on the process of making SDs in HE in Saudi Arabia. The analysis revealed that the most frequently used words to describe and

characterise the different dimensions of Islamic culture were "teamwork" and "degree of adherence to Islamic principles", "consultation and participation", "gender separation", "role of women" and "extent of delegation of authority".

Chapter 6   DISCUSSION

6.1   Introduction

This chapter discusses the findings of the present research study in terms of the data analysis, also employing the existing research in the field. The chapter is organised according to the research objectives. The first section discusses the extent of TMT/MMT heterogeneity at the target HEI in Saudi Arabia. The second section discusses the impact of TMT/MMT heterogeneity, knowledge sharing, and resources on SDMP. The third section presents the process and characteristics of SDMP at the target HEI, and the final section presents the factors influencing SDMP, and the challenges faced by TMTs/MMTs during the employment of SDMP.

6.2   Research objective 1: Extent of TMT/MMT heterogeneity

The existing research concerning upper echelons argued that the demographic characteristics of management teams, such as gender, education, and tenure, reflect the fundamental affective and cognitive characteristics of managers; these demographic characteristics can predict the effectiveness and direction of behaviour of management teams (Hambrick and Mason, 1984; Papadakis and Barwise, 2002). Previous studies indicated that a team with members who possess a variety of competencies and backgrounds, namely more heterogeneous teams, are better at developing and managing

SDs, such strategic change (see for example Finkelstein and Hambrick, 1996; Golden and Zajac, 2001). Thus, the heterogeneity of competencies in management teams can be considered to be a desirable characteristic for TMTs and MMTs.

However, the extant literature did not provide much evidence of the extent of TMT and MMT heterogeneity in HEIs in Saudi Arabia. Thus, the first objective of the present study was to examine the extent of TMT and MMT heterogeneity at a single Saudi HEI, thereby contributing to the management literature.

The education, tenure, and subject background heterogeneity of 31 TMT/MMT teams at an HEI in Saudi Arabia was examined. The findings indicated that TMT/MMTs at Saudi Arabian HEIs have a high level of educational heterogeneity. In addition, the findings indicated a high level of heterogeneity in the tenure of each of the 31 teams examined. However, the findings also indicated a low level of heterogeneity in the subject heterogeneity of each of these teams.

It was anticipated that the TMT/MMT heterogeneity at the target HEI would have positive benefits for SDMP, as heterogeneity provides TMTs with different types of information and decision making styles, as well as with a greater diversity of professional viewpoints. This diversity is beneficial in SDMPs that require substantial judgement and creative thinking (Jackson, 1992; Milliken and Martins, 1996). Differences in viewpoint also extend the scope of the information collected, and inspire variation in the interpretation of situations, and in the solutions proposed for strategic issues facing the organisation (Knight et al., 1999; Pitcher and Smith, 2001). Thus, heterogeneity is assumed to influence a SDMP in a positive way.

The present study contributed to the extant management literature by examining the job-related heterogeneity at the target HEI. According to Naranjo-Gil et al. (2008), job

related heterogeneity, for example in relation to tenure and education, is more critical in SDM than non-job-related heterogeneity, such as gender and age. Job-related heterogeneity is therefore assumed to be a more important aspect of cognitive resources in complex decision making processes (Carpenter, 2002; Stewart, 2006). In contrast, aspects of non-job-related heterogeneity, such as age and gender differences, are more likely to produce a variety of visions and opinions within a management team, regarding specific issues, thus fuelling conflict (Milliken and Martins, 1996). According to social identity theory, job related heterogeneity is more pertinent than non-job-related heterogeneity, as it is anticipated that the educational backgrounds and areas of specialism, rather than the age or gender, of team members will be used to group them into specific identity sharing groups (Hoff, 2001).

Following the suggestion of Naranjo-Gil et al. (2008), the present study explored the extent of job-related heterogeneity, such as tenure, education, and subject background at the Saudi HEI in question. According to Naranjo-Gil et al. (ibid.), it is useful to distinguish between job-related and non-job-related forms of heterogeneity. One explanation for the lack of a cohesive body of findings in upper echelon research is that the extant studies failed to identify meaningful dimensions of heterogeneity, and to analyse the effects of these dimensions separately (Webber and Donahue, 2001). However, Naranjo-Gil et al. (2008) analysed job-related and non-job-related heterogeneity separately, and found that only job-related heterogeneity moderated the relationship between strategic change and operational performance. The effects of job-related heterogeneity were more salient for the present study, because the set of valuable cognitive resources available was larger, and the number of social groups represented in the TMT higher, even if the educational, functional, and tenure backgrounds differed, compared with the age or gender diversity.

6.3   Research objective 2: Impact of heterogeneity, knowledge sharing, and resources

The second research objective was to investigate the impact of TMT/MMT heterogeneity, knowledge sharing, and resources on the comprehensiveness and speed of SDMP in the context of HEIs in Saudi Arabia. Three types of heterogeneity were examined: education level, tenure, and subject background. The findings are discussed in the following sub-sections.

A. *Impact of education level heterogeneity on SDMP*

Drawing on behavioural decision theory, the present study proposed that educational level heterogeneity is likely to make SDMP more comprehensive (Hypothesis 1). A regression analysis was conducted to examine the relationship between educational level heterogeneity and the comprehensiveness of SDMP. In support of the hypothesis, the findings indicated that the higher the educational level heterogeneity among the members of TMTs and MMTs, the more comprehensive SDMP. This also meant that, conversely, a low level of heterogeneity reduced the degree of comprehensiveness in SDMP.

The findings of the present study supported the view of Carpenter and Fredrickson (2001), who considered the subject background of the management team to be an important indicator of skills, cognitive processes, and knowledge, and found that educational heterogeneity was positively correlated with an organisation's global strategic position. The implications of this finding are that HEIs in Saudi Arabia should make a continuous effort to ensure the presence of educational diversity within their TMTs and MMTs, as

such heterogeneity will cause the members to employ their educational diversity to develop and reinforce their arguments. In addition, the members of TMTs/MMTs should thoroughly consider each strategic option available to them by examining its merits and weaknesses, in order to make their SDMP more comprehensive.

The findings of the present study contradicted those of certain previous studies (for instance, Finkelstein and Hambrick, 1996; Pitcher and Smith, 2001). While the positive relationship between increased heterogeneity and SDMP was generally supported by both the theory and the empirical findings, a small number of studies reported contradictory findings (Carpenter, 2002; Carpenter et al., 2004; Pitcher and Smith, 2001). This potentially indicated that, although heterogeneity could help the management of an organisation to recognise strategic issues more easily (Hambrick and Mason, 1984), and to formulate strategic options (Murray, 1989), homogeneous management teams may be more effective in strategy implementation (Finkelstein and Hambrick, 1996; Pitcher and Smith, 2001). However, the present study found that educational heterogeneity positively influenced the comprehensiveness of SDMP, as the findings indicated that educational heterogeneity is likely to prevent 'group thinking', and to reduce the chances of commitment to one option, instead encouraging the consideration of multiple strategic alternatives. Thus, educational heterogeneity is likely to make SDMPs more comprehensive.

Moreover, the present study contradicted the argument of Souitaris and Maestro (2010), who found a negative relationship between educational heterogeneity and the speed of decision making as a result of the likelihood of polychronicity among the members of a TMT, as the regression analysis employed in the present study indicated that educational heterogeneity among TMTs/MMTs enhanced the pace of the decision making process,

and therefore increased the speed of SDMP. This was due to the tendency of heterogeneous TMTs/MMTs to prefer to engage in multiple tasks simultaneously, based on their educational backgrounds. Thus, educational heterogeneity was found to provide additional benefits to HEIs in Saudi Arabia, in the form of speedy SDMPs. This is critical, given that competition between such institutions in Saudi Arabia is growing, and there is increased pressure to improve quality HE.

Moreover, the making of rapid decisions is required to take advantage of opportunities, and to address any challenges facing HEIs in Saudi Arabia. Heterogeneous TMTs/MMTs with diverse educational backgrounds were found to positively influence the speed of SDMP at the target HEI. The team members with undergraduate degrees tended to focus on ensuring the reliability of the data collected, while the members with doctoral degrees tended to focus on analysing the information. Thus, the information obtained was likely to be more insightful, allowing the team members to eliminate inappropriate strategic options early in the decision making process, which should consequently enable the TMTs/MMTs to save time and to make rapid SDs.

B. *Impact of tenure heterogeneity on SDMP*

The present study hypothesised that tenure heterogeneity would negatively influence SDMP comprehensiveness (Hypothesis 2a), and the findings supported this hypothesis, suggesting that the more heterogeneous the TMT/MMT tenure, the less comprehensive SDMP. Homogenous team tenure indicates that the team members have experienced the same developmental phases of the firm, possess a similar understanding of the firm's status quo and strategies (Smith et al., 1994), and are familiar with the appropriate manner in which to express opinions, all of which facilitate communication, cooperation, and agreement when making decisions. As a result, teams that are heterogeneous in terms of

their members' length of tenure tend to have less varied information sources and viewpoints, which limits the ability of the management team to conduct comprehensive analyses of the strategic issues facing the organisation. Therefore, the higher the degree of tenure heterogeneity within TMTs/MMTs, the less comprehensive the decision making process.

In the context of Saudi Arabian HEIs, longer-tenured TMTs/MMTs may be reluctant to consider 'new' relevant information in the changing HE sector in the country. In contrast, short-tenured TMTs and MMTs may be more willing to consider relevant new information. A number of government controlled universities, along with private HE providers, have operated in Saudi Arabia in recent years. The external environment and competition in the HE sector has gradually changed, and new challenges emerge every year. While it is important to consider all strategic options thoroughly, in order to address these new challenges, TMTs/MMTs with longer tenures are sometimes reluctant to consider all available information and options, compared with short-tenured TMTs/MMTs, who are more willing to do so. This may produce a situation in which TMTs/MMTs do not conduct a comprehensive analysis during SDMP. The lack of comprehensiveness in a SDMP may not create any immediate issues, although a continuous reluctance to conduct comprehensive SDMPs may cause longer term challenges and issues for HEIs in Saudi Arabia. Therefore, it is recommended that TMTs/MMTs with a long tenure in HEIs in Saudi Arabia adjust and adapt to the new external environment, and participate in more comprehensive SDMPs.

The findings of this study also supported Hypothesis 2b, indicating that the more heterogeneous the tenure of the TMT/MMT, the slower SDMP. This finding was similar to that of Ferrier (2001), who argued that demographic heterogeneity, such as tenure,

may increase conflict within a team. A lack of communication and cohesiveness within a team may increase the chance of a slower decision making process within an organisation. Thus, tenure heterogeneity was expected to negatively influence the speed of SDMP.

It is likely that tenure homogeneity enhances TMT/MMT agreement, and the speed of their decision making. Homogeneous teams develop a superior consistency in decision making over time (Pfeffer, 1983), which facilitates a greater consensus regarding the organisation and its goals (Tushman and Romanelli, 1985). Hence, a consensus is reached more quickly, as TMT/MMT members are able to unite around a common understanding of the organisation's objectives (Wiersema and Bantel, 1992), and the members of TMT/MMTs formulate norms of interaction (Chatman and Flynn, 2001). In addition, a shared understanding is created through frequent communication and cooperation among the members of the teams (O'Reilly et al., 1989). In contrast, heterogeneity of TMT/MMT tenure may slow the development of a shared understanding, since there would have been less frequent communication, and less cooperation among the members of the TMT/MMT. Consequently, more time would be required to reach an agreement regarding strategic issues facing the organisation, and the speed of decision making would thus be negatively influenced.

Some previous studies examined the impact of tenure heterogeneity on various management issues. For instance, Wei and Lau (2012) investigated the impact of tenure heterogeneity on organisational innovation, and He et al. (2016) examined the relationship between tenure heterogeneity and organisational performance in the context of China. The present study contributed to this existing research by examining the impact of tenure heterogeneity on the comprehensiveness and speed of SDMP at an HEI in

Saudi Arabia.

C. *Impact of subject background heterogeneity*

Due to its self-reinforcing choice and training procedure, educational subject background can be used to measure cognition directly (Holland, 1985). Thus, managers with a similar subject background are expected to be fairly homogenous in terms of their professional attitudes and viewpoints. Management teams with diverse educational backgrounds are likely to benefit from their access to a variety of viewpoints, however the integration of various viewpoints can be detrimental in the decision making process (Pfeffer, 1983). The present study argued that homogeneity of educational subject background is likely to have a negative influence on both the comprehensiveness of SDMP (Hypothesis 3a), and its speed (Hypothesis 3b).

The findings of the present study indicated that the more heterogeneous the subject background of TMT/MMTs, the less comprehensive SDMP. The educational subject diversity of TMT/MMTs influences the cognitive and social psychology of managers during the SDMP (Zhang, 2007; Tihanyi et al., 2001), and the diversity of subject background may increase the possibility of team members disagreeing with one another, and could therefore be detrimental when conducting a comprehensive analysis of strategic options (Zhang, 2007). Previous studies found that heterogeneity in terms of the subject background within TMTs/MMTs can cause a fragmented understanding among their members, which can in turn reduce the possibility of a common premise for SDM (Michel and Hambrick, 1992). Thus, heterogeneity in subject background impairs joint decision making, and increases the possibility of less comprehensive decision making.

The implications of these findings are that HEIs in Saudi Arabia should include team members with less heterogeneity in terms of their educational subject background, in order to avoid disagreement, and a lack of collaboration among the members of TMTs and MMTs. However, a homogenous educational subject background among the members of a management team will enhance the comprehensiveness of SDMP, thus TMTs and MMTs should comprise of members with a broadly similar subject background, such as sciences or the arts.

Moreover, some previous studies examined the impact of educational background heterogeneity on various aspects of an organisation. For instance, Wiersema and Bantel (1993) investigated the negative impact of educational background diversity on turnover, and Wiersema and Bantel (1992) examined the positive impact of educational background on strategic change and innovativeness. The present study contributed to the existing literature by examining the impact of educational subject background on the comprehensiveness and speed of SDMP, and the findings provided support for ensuring that the members of TMTs and MMTs have a homogenous educational subject background, as this has a positive impact on the comprehensiveness of SDMP. While some previous researchers explored the impact of educational subject background in the context of a developed country, the Saudi Arabian context differs from developed countries, because of cultural differences. Thus, this research project also contributed to the existing management literature by examining the impact of educational subject background in a new context, namely that of Saudi Arabian HE.

D. *Impact of knowledge sharing and resources on SDMP*

Knowledge is a crucial asset for organisations if they are to gain a sustainable competitive edge (Grant, 1996; Zheng, 2017). Organisational competitiveness is rooted in the mobility

of knowledge, which is realised through knowledge sharing and transfer. Knowledge sharing can provide individuals, work teams, and organisations with the opportunity to improve work performance, and to develop new ideas and innovations (Cumming, 2004). Knowledge sharing is an important component of knowledge management, as it helps to codify the repository of available knowledge in an organisation, and to increase it over time (Liebowitz, 1999). Moreover, Renzl (2008) demonstrated that knowledge sharing among team members is essential if firms are to achieve a sustainable competitive advantage.

The present study argued that knowledge sharing among the members of TMTs and MMTs positively influences the speed of SDMP (Hypothesis 4b), since the higher the degree of knowledge sharing among the members of the TMT and MMT, the quicker the decision making process. Knowledge sharing allowed the members of the TMT and the MMT at the target HEI in Saudi Arabia to possess all the relevant information, which, in turn, allowed them to assess alternative options faster. Consequently, the process of decision making was accelerated. Thus, HEIs in Saudi Arabia should create opportunities to enable the members of their TMTs and MMTs to share knowledge between them, as this will engender faster decision making.

Some previous studies examined the factors influencing knowledge sharing. For example, Zheng (2017) found that information technology (IT) can facilitate knowledge sharing among the members of an organisation, and Lin (2007) noted that the personal characteristics of employees, such as age and gender, can influence knowledge sharing among the members of an organisation. The present study contributed to the field by examining the impact of knowledge sharing on the speed of SDMP in the context of HEIs in Saudi Arabia.

The findings of the present study were consistent with the argument that knowledge sharing assists in the creation of shared mental models, and in the development of transactive memory, thereby enabling better coordination among team members (Mathieu et al., 2000). Given their experience in sharing knowledge, team members are able to understand even small cues from the others, and to 'fill in the blanks' (Isenberg, 1988). Thus, knowledge sharing assists in the formation of shared mental models that enable people to be 'on the same page' during task execution, and to achieve a higher team performance. Knowledge sharing may also create improved coordination, because of the development of transactive memory, which is defined as the knowledge of 'who knows what' in a team (Wegner, 1987). Transactive memory begins to form when individuals learn something about the domains of expertise of the other team members. With the formation of transactive memory, coordination is likely to improve, because workers can anticipate one another's behaviour (Wittenbaum et al., 1998). Therefore, the higher the degree of knowledge sharing among the members of TMTs and MMTs, the quicker the process of SDM.

In addition, the findings of the present study indicated that the greater the access to knowledge resources, the more comprehensive the decision making process. A greater access to knowledge resources allows the members of a TMT and MMT to access relevant information, which, in turn, allows them to make a comprehensive decisions. Therefore, HEs in Saudi Arabia should take the initiative to create opportunities to share knowledge resources.

Previous studies also indicated the importance of knowledge resources in the decision making process (Cohen and Malerba, 2001). Such resources present a number of benefits to an organisation, such as helping it to be successful in a dynamic environment (for

example, Spreitzer, 1995). Moreover, when employees access pertinent knowledge resources, and obtain information, knowledge recombination and exchange occurs within the organisation (Smith et al., 2005). In addition, regular seminars and meetings help employees to identify new opportunities (Rhyne et al., 2002).

The present study argued that knowledge resources have a positive impact on the comprehensiveness of SDMP (Hypothesis 5a), and the findings suggested that the greater the access to knowledge resources, the more comprehensive the decision making process. A greater access to knowledge resources allow members of the TMT and MMT to access relevant information, which, in turn, allows them to make comprehensive decisions. Moreover, a higher level of access to knowledge resources is likely to allow the members of TMTs and MMTs to analyse several options which, in turn, will make their decision making more comprehensive. Therefore, the HE sector in Saudi Arabia should take the initiative to create opportunities to facilitate the sharing of knowledge resources.

The present study also argued that a negative relationship exists between knowledge resources and the speed of SDMP (Hypothesis 5b), and the findings indicated that higher knowledge resources create a slower decision making process. This is an interesting finding, since the possession of increased access to knowledge resources seems to negatively affect the speed of decision making. In the context of HEIs in Saudi Arabia, an increase in knowledge resources may produce a situation in which the members of the TMT and MMT find it difficult to incorporate all of the resources, which may slow the decision making process. In addition, Alvesson and Willmott (1996) suggested that managers tend to move quickly from one task to another, which gives them only limited time to plan and evaluate all the relevant information before making

decisions. Therefore, if the members of TMTs and MMTs are asked to evaluate all of the available information from a knowledge resource, the decision making process will be slowed.

E. *Impact of comprehensiveness and speed on performance*

The present study found a strong positive relationship between the comprehensiveness and speed of SDMP on performance. This finding was consistent with that of Fredrickson and Mitchell (1984), and Fredrickson (1984), demonstrating that comprehensiveness and performance have a positive association with SDMP in a stable environment. HEIs in Saudi Arabia are generally more stable and less uncertain than business organisation in the country. While previous studies found that a positive impact of decision comprehensiveness on organisational performance exists across uncertain environments (Fredrickson, 1984; Fredrickson and Mitchell, 1984), the present study also reported evidence of a positive association in a comparatively stable environment. The findings of the present thesis therefore extended those of previous studies by providing evidence of a positive relationship between the comprehensiveness and speed of SDMP on performance in a stable environment, thereby contributing to a small but growing body of literature reporting the positive association of the comprehensiveness of SDMP in a stable environment (for instance, Heavey et al., 2009).

6.4 Research objective 3: The current state of SDMP at the target HEI in Saudi Arabia

Due to the influence of changes, and political, economic, and social demands, as well as the impacts identified previously, the HE system requires a large amount of complex

decision making with far-reaching consequences. Furthermore, while HEIs have autonomy, they also have greater responsibility than other organisations (Zechlin, 2010). Obtaining an understanding of the process of SDM at the target HEI was important if the reliability and efficacy of the SDM within the HE sector in Saudi Arabia is to improve. Therefore, the third research objective of the present study was to examine how TMTs/MMTs at this institutions make SDs.

Semi-structured interviews were conducted with the members of the TMTs and MMTs at the HEI in question, and the findings suggested that SDMP in Saudi Arabia undergoes a step-by-step, structured process. Thus, the SDM at the target HEI followed a process perspective, demonstrating that this approach to SDMP in HE institutions in Saudi Arabia in general is considered to be suitable for use in SDM. The process of SDM at HEIs in Saudi Arabia shares both similarities and differences with SDMP employed by other organisations in developing and developed countries, and a number of distinctive features are apparent in SDMP in Saudi Arabia. SDMP in public-sector organisations in the US typically has several stages; in contrast, HEIs in Saudi Arabia have five stages in their SDMP.

The present study indicated that the number of stakeholders who directly or indirectly influence SDMP is higher in certain public sectors organisations than in private sector organisations. The stakeholders in private sector organisations generally include owners, managers, customers, and employees. In contrast, HEIs in Saudi Arabia are responsible for and/or accountable to the country's Ministry of Education, the general public, and their students, and their SDMP is therefore directly influenced by the Ministry of Education, and indirectly influenced by the general public, as well as public accountability. Because of the scrutiny of the Ministry of Education and the college

council, TMTs and MMTs attempt to make rational, comprehensive, and systematic SDs. Consequently, SDMP at the target HEI in Saudi Arabia tended to be comprehensive and rational.

An analysis of the interview data revealed that an effective SDMP must be supported by relevant information and data. Relevant and reliable information increases the ability to predict the probable outcomes of a decision (Duncan, 1972). Moreover, the use of relevant and reliable information helps to reduce uncertainty, which is defined as the difference between the information processed, and the information required to complete a decision making process (Tushman and Nadler, 1978). In this case, relevant and reliable information helps to predict the likely impact of SDM (Milliken, 1987). Most interviewees from the target HEI in the present study mentioned the importance of information and data in SDMP, illustrating the crucially important role played by the availability of, and access to relevant and reliable information in SDMP at the HEI.

The findings suggested that both the TMTs and MMTs played a crucial role in developing strategy, although the MMTs played a more significant role in implementing SDs, such as curriculum reviews in colleges, departments, programmes, and modules. The MMTs liaised with lecturers, professors, and administrative teams to conduct these reviews, and to revise the programmes and modules accordingly. They also communicated with the TMTs, and updated them regarding the process of the implementation. Thus, MMTs should be integrated in both strategy development, and the implementation process.

An analysis of the interview data also revealed that SDMP was comprehensive at the target HEI, as a result of the external scrutiny and participation of the TMTs and MMTs in the various stages. While SDMP at HEIs in Saudi Arabia in general is comprehensive, the process is also slower, due to the multiple stages of the review, and the approval

process it involves. The interview data showed that discussion between the TMTs and MMTs in the councils of departments was followed by the recommendation of strategic options. The next stage was the review and approval of these options by the college council, which may request expert views regarding them. Finally, the college council was required to ensure that the strategic options complied with the rules and regulations of the Ministry of Education in Saudi Arabia. The entire process of SDM, prior to the implementation of the strategy, could therefore be lengthy, and overall, the speed of SDMP was therefore slow at HEIs in Saudi Arabia.

In conclusion, while the findings suggested that the comprehensiveness of SDMP at the target HEI slowed the decision making process, they also indicated that comprehensiveness and speed influenced one another, as the greater SDMP comprehensiveness, the slower the decision making process. In other words, there was an inverse relationship between the two. In a relatively stable environment, such as HEIs, comprehensiveness in SDMP, at the expense of speed, is appropriate and beneficial (Fredrickson, 1984).

6.5   Research objective 4: Critical factors influencing SDMP

The fourth research objective explored the factors that influence SDMP by firstly examining the challenges faced by TMTs and MMTs during the process, and then the factors influencing SDMP at the target HEI in Saudi Arabia.

6.5.1   Challenges faced during SDMP

According to the interviewees in the present study, one of the major challenges faced by TMTs and MMTs during their SDMP was a shortage of information. They explained that the employees were not given adequate information, and that little information was

available in general. The majority of the respondents stated that they sought further information resources from outside the university before making any decision recommendations, and they indicated that obtaining relevant information was extremely important, since SDM is a significant responsibility, and should therefore be based on comprehensive and relevant information data. Thus, the lack of relevant information was reported to be one the critical challenges of SDMP at the target HEI.

Moreover, some of respondents identified issues of false and inappropriate information being provided by their team members, which significantly affected the decision making process, since any decisions taken that were based on inappropriate information would ultimately be unsuccessful. Therefore, in order to ensure that a comprehensive SDMP is conducted, relevant and reliable information is required at HEIs throughout Saudi Arabia.

Governmental institutions tend to be heavily bureaucratic, and to employ lengthy lists of regulations. Consequently, the decision making process within government bodies is more difficult than at private institutions. This bureaucracy slows the decision making process, thereby negatively influencing the speed of SDMP in the HE sector in Saudi Arabia. Previous researchers suggested that a rapid speed for SDMP is beneficial for private sector organisations operating in an unstable and competitive environment (Bourgeois and Eisenhardt, 1988). However, in the context of HEIs in Saudi Arabia, TMTs and MMTs are unable to conduct a rapid SDMP because of the aforementioned high level of bureaucracy.

The majority of the respondents in the present study considered that a lack of financial resources was another major challenge they faced when making SDs, thereby highlighting the importance of financial resources for developing and implementing SDs within HEIs

in Saudi Arabia.

Another important challenge discussed by the respondents was the competence of the decision-makers, and the interview participants indicated that decisions were not always made by the most competent person. The competency, or otherwise, of the decision-makers can be determined by examining the qualifications, experience, and capabilities of the members of the management team at the target HEI. An incompetent individual is likely to fail to consider the pros and cons of each strategic option, and consequently, there is a risk of that a less comprehensive and thorough SDMP will be conducted. Therefore, the competency of decision-makers could negatively influence SDMP at the target HEI.

In addition, some of the interviewees considered human resources to be another obstacle facing them during SDM, believing that a lack of competent human resources was a serious problem. This issue primarily related to less qualified members of staff. For example, some of the respondents described certain members of staff as having low-level qualifications, or a lack of proficiency in foreign languages and computer skills.

Support from the senior management during SDMP is vital, and the majority of the respondents who mentioned senior management believed that they usually fully supported SDMP. While the findings indicated that support from senior management was one of the most important factors affecting the success of the process, it was interesting to note that the participants who considered that the senior management fully supported SDMP were themselves employed in the top and middle management. Meanwhile, the very few respondents who identified a lack of support from the senior management mainly cited changes in the system process, the difficulty of obtaining financial approval, or objection from senior management, as reasons for their opinion.

6.5.2   Factors influencing SDMP

A number of factors were found to be critical for an effective SDMP at the target HEI. These are discussed below.

A.   *Impact of Islamic culture on SDMP*

Previous studies indicated that Islamic culture influences the decision making process in an Arab organisation (Galanou and Farrag, 2015). In contrast to the individualistic culture of the US, according to Hofstede's cultural index, Arab states have a collectivistic culture (Rice, 2003). A collective Arab society uses social connections to influence important decisions, and Zakaria et al. (2003) stated that Arab cultures tend to know more about one another than Westerners. Therefore, socialising and making connections are an important aspect of any Saudi Arabian organisation. Moreover, the executives in Arab organisations are generally less willing to entrust power to their subordinates, and prioritise personal factors and friendship over corporate performance and goals (Sabri, 2004). According to Dedoussis (2004), the relationship between managers and employees in Arab organisations is collectivist, but also hierarchical. In addition, Mohamed et al. (2008) stated that Arab culture is generally based on verbal conversation and nonverbal communication. In the case of nonverbal communication, the members of an organisation are required to 'read between the lines'. Thus, Arab culture, which is influenced by Islamic culture, has an impact on the management and the decision making process in an organisation.

The present study examined the impact of Islamic culture on SDMP. A large majority of the respondents interviewed believed that Islamic culture has a major effect on the

SDMP in HE in Saudi Arabia. Among the respondents who considered Islamic culture to have either an enormous, moderate, or no effect on the process of SDM, there were no differences between the genders, or their level of management in HE. Moreover, the responses of some of the respondents indicated that SDs are more likely to be approved or accepted based on their technical aspects than on other processes, and suggested that any decision that violates Islamic religious traditions should be rejected. In addition, some of the respondents stated that certain topics relating to public status and society can be defined through Islamic religion and culture. Furthermore, the respondents emphasised that Islamic culture is the culture of community, and that each project must therefore adhere to the Islamic tradition. Only a small number of the respondents considered Islamic culture to have no effect on the decision making process, and argued that public interest and transparency are more important.

The present study contributed to the existing research in the field by examining the influence of Islamic culture on SDMP at the target HEI in Saudi Arabia. Some of the existing research examined the management practices and philosophies of organisations operating in Arab regions (Al-Hamadi et al., 2007; Ali, 1990), and found that organisations based in Arab countries are influenced by social, cultural, and religious factors that contradict the philosophies and paradigms of western-based organisations (Wilkins, 2001). For example, as the UK and US have low power distances, employees are expected to participate in the decision making process. However, in Saudi Arabia, which has a high power distance, employees are not expected to do so. This suggests that Arab and Islamic culture can influence SDMP. Although Islamic culture unquestionably influences decision making processes within organisations, there is currently a paucity of research examining the impact of this on SDMP. The present

study therefore attempted to address this by examining the relationship between Islamic culture and SDMP.

B. *Impact of TMT/MMT heterogeneity*

Previous studies examined the impact of heterogeneity on organisational performance. According to Yang and Wang (2014), gender, experience, and age heterogeneity within TMTs may lead an organisation to employ strategies that help to advance organisational performance. However, Fan and Jiao (2011) found that age and tenure heterogeneity in TMTs were negatively associated with organisational performance in the context of China. The present study examined the impact of TMT and MMT heterogeneity on SDMP, and explored the reasons for the apparently positive impact of heterogeneity on SDMP by conducting semi-structured interviews. The interview results revealed that a large proportion of the respondents perceived diversity in experience and qualifications within the team to be positive, and believed that diversity is linked to the opportunity to gain a variety of experience, qualifications, or skills.

Another important factor that influenced the positive attitude to diversity was the opportunity to share different ideas between team members. The possession of different specialisations and experiences within a team enables access to different points of view, which assists with SDM within a team. In addition, differences in specialisations enable a team to see a subject from multiple angles. The respondents also noted that the inclusion of team members with different ideas, skills, and opinions is advantageous. Therefore, achieving the maximum benefit from a team means the inclusion of individuals with different skills, or employees with different personalities. In a diverse team, in which one employee is able to deal with complex administrative cases, and another is able to manage

new ideas, the combination of these particular advantages and a unique visions or strengths, engenders success.

C. Impact of knowledge sharing and resources

Previous studies emphasised the importance of knowledge management and knowledge sharing for SDMP. According to Ipe (2003), knowledge can create a long-term competitive advantage for an organisation, and knowledge sharing is a critical component of the knowledge management process in an organisation. Indeed, some organisations make active efforts to extract the benefits of knowledge sharing (Zheng, 2017). Therefore, knowledge sharing is an important element of organisational management.

The present study contributed to the existing research by exploring the impact of knowledge sharing and resources on SDMP in the context of Saudi Arabian HEIs. Previous studies examined the impact of knowledge sharing and resources in the context of developed and emerging markets. For instance, Srivastava et al. (2006) examined the impact of knowledge sharing on team performance in the context of US hotel entrepreneurs, while Peng (2010) examined the influence of contextual performance on knowledge sharing in the context of China. The present study added to the growing body of literature regarding knowledge management and SDMP with its study of the subject in the context of Saudi Arabia. The interviewees discussed the methods and techniques employed in knowledge sharing among the members of the TMTs and MMTs at the target HEI in Saudi Arabia. The findings revealed that discussion and consultation were the most important ways of sharing information related to decision making with the interviewees' teams, with discussion being especially important when conducting community-related activities and research. Information was shared through

discussion and weekly meetings about successful performance, with participation considered to be important, and dialogue useful. According to the interviewees, another important means of sharing information was via email, to which each member of the university had access. The deanship of development was responsible for the quality of the connections between colleges, and information was updated automatically on the system, or via the university email, in order to facilitate these connections, and to assist with forging closer connections between the students, staff, and other employees through chatting and exchanging emails and WhatsApp messages.

A further method of communication cited by the interviewees was the council's 'Majales' system, which allowed the creation of groups, who then participated and shared information using the electronic system available at the university. This system, in which all information and documents was available for every member of a team, allowed information to be shared widely between the members of the university.

In addition, the majority of the respondents noted that workshops, seminars, and lectures provided the opportunity to share information between team members, especially when the work was referred to a committee, as some of the decisions involved required special workshops. Indeed, when the topic or decisions concerned necessitated a wide range of opinions, the administrative regulations required a workshop to be held, in order to ensure that everyone was aware of the full scope of the subject, and were able to make suggestions about any decision to be taken. In order for the committee to reach a definite recommendation about a matter, all of the opinions offered would be considered, therefore the process benefitted from the diversity in the specialisations of the employees, which added to the value of the project.

6.6 Facilities provided by the university to help with SDMP

The facilities provided by a university can play a vital role in SDMP, and a large majority of the respondents in the present study highlighted the fact that financial resources and information are important facilities provided by their university. The majority of the respondents stated that the primary facilities provided by their university are the electronic systems, which they considered to be extremely useful. Meanwhile, the respondents noted that the university also provides computers, experience, emotional support, internet laboratories, meeting halls, and special courses, together with help with organising workshops, appointing experts. Thus, the university appeared to be supportive of its employees during SDMP.

6.7   Contributions to knowledge and practice

An understanding of the contextual contribution of the present study was achieved by applying the upper echelon theory developed by Hambrick and Mason (1984) in a new national cultural context, namely Saudi Arabia. The methodology proposed by Eisenhardt (1989) allows the process of decision making to be examined in a new national context. The present study responded to Menz (2012) by examining SDMP in a new context, namely Saudi Arabia, thereby contributing to the growing literature regarding upper echelon theory and SDMP.

The present study also contributed to the existing body of management literature by examining job-related heterogeneity at the target HEI in Saudi Arabia. According to Naranjo-Gil et al. (2008), aspects of job-related heterogeneity, such as

tenure and education, are more critical in SDM than aspects related to non-job related heterogeneity, such as gender and age. Job-related heterogeneity is assumed to constitute an important basis of cognitive resources in complex decision making processes (Carpenter, 2002; Stewart, 2006). In contrast, non-job related heterogeneity, such as age and gender differences, are more likely to produce a variety of views and opinions within a management team, regarding certain issues, thus fuelling conflict (Milliken and Martins, 1996). According to social identity theory, job-related heterogeneity is more important than non-job-related heterogeneity, as the subject and educational background of the team members are more likely to group them into specific identity-sharing groups than their age or gender (Hoff, 2001).

Certain previous studies examined the impact of heterogeneity on organisational performance. According to Yang and Wang (2014), gender, experience, and age heterogeneity in TMTs lead an organisation to employ strategies that help to advance organisational performance. The present study examined the impact of TMT and MMT heterogeneity on SDMP at an HEI in Saudi Arabia, and explored the reasons for the positive impact of heterogeneity on SDMP in this context.

Previous studies examined the impact of educational background heterogeneity on various aspects of an organisation. For instance, Wiersema and Bantel (1983) investigated the negative impact of educational background diversity on turnover. The contribution of the present research study was to examine the impact of educational subject background on the comprehensiveness and speed of SDMP, and the findings provided support for ensuring that the members of TMTs and MMTs have a homogenous educational subject background, because of the positive impact this has on the comprehensiveness of the

SDMP. While previous researchers examined the impact of educational subject background in the context of developed countries, the Saudi Arabian context differs, because of its cultural differences. Therefore, this research project contributed to the existing management literature by examining the impact of educational subject background on SDMP in a new context, namely that of Saudi Arabian HE.

The present study also contributed to the extant literature by examining the influence of Islamic culture on SDMP at the target HEI in Saudi Arabia. Scant research exists regarding the management practices and philosophies of organisations operating in Arab regions (Al-Hamadi et al., 2007). Organisations based in Arab countries are influenced by social, cultural, and religious factors that contradict the philosophies and paradigms employed in western-based organisations (Wilkins, 2001). For example, as previously noted, since the UK and US have low power distances, employees are expected to participate in the decision making process. However, in Saudi Arabia, which has a high power distance, employees are not expected to do so. This suggests that Arab and Islamic culture influences SDMP. Although Islamic culture unquestionably influences decision making processes within organisations, there is a current paucity of research examining the impact of this on SDMP. The present study therefore attempted to address this gap by examining the relationship between Islamic culture and SDMP.

In addition, the present study contributed to the existing body of research by exploring the impact of knowledge sharing and resources on SDMP in the context of Saudi Arabian HEIs. Previous studies examined the impact of knowledge sharing and resources in the context of developed and emerging markets. For instance, Srivastava et al. (2006) examined the impact of knowledge sharing on team performance in the context

of US hotel entrepreneurs, while Peng (2010) examined the influence of contextual performance on knowledge sharing in the context of China. Due to the lack of research in the context of Saudi Arabia, this study added to the growing body of literature regarding knowledge management and SDMP in this arena.

This study has implications for practitioners. Firstly, the findings suggested that diversity in TMTs and MMTs can facilitate the comprehensiveness and rapidity of SDMP. The findings also provided further evidence in favour of ensuring a high level of heterogeneity in TMTs and MMTs. Thus, Saudi Arabian organisations should take steps towards ensuring a higher level of heterogeneity in tenure, education, and subject background. Secondly, the present study evidenced the fact that support from senior management is essential for an effective SDMP, and that senior management should therefore provide appropriate financial and human resources to support the decision making process. Thirdly, the study argued that Saudi Arabian organisations should ensure a high level of knowledge sharing among the members of TMTs and MMTs. This could be achieved by providing opportunities for communication via email, WhatsApp, meetings, and seminars. Finally, the study demonstrated the value of organisations ensuring access to reliable and valid information to support the decision making process. This could be achieved by creating a dedicated team with responsibility for ensuring the reliability and validity of any information collected.

6.8   Conclusion

The aim of this study was to explore SDMP, and the factors influencing it, at an HE institution in Saudi Arabia. Survey questionnaires and semi-structured interviews were conducted with members of the TMTs and MMTs, in order to explore SDMP at the target HEI. The findings suggested that SDMP at the HEI typically underwent five stages, commencing with problem identification, and followed by the collection of relevant information. In the third stage, the members of the TMTs or MMTs in department councils discussed the strategic issues, and voted to recommend a specific strategic option. In the fourth stage, the college council evaluated and approved the strategic option. Finally, the college council sent the approved strategic options to the dean and the departments, in order to implement the new SD.

The analysis of the interview data revealed a number of features of SDMP at the target HEI. Firstly, it revealed that a wide range of internal and external stakeholders influence SDMP at Saudi Arabian HEIs, with the process directly influenced by the Ministry of Education, and indirectly by the general public through aspects of public accountability. Secondly, an analysis of the interview data demonstrated that an effective SDMP must be supported by relevant information and data, and thirdly that both TMTs and MMTs play a crucial role in developing strategy. However, the study found that MMTs play a more significant role in implementing SDs, such as curriculum reviews in colleges, departments, programmes, and modules. Fourthly, the analysis revealed that SDMP at the target HEI was comprehensive, due to the external scrutiny and participation of the TMTs and MMTs in its various stages. While the present study found that speed and comprehensiveness were mutually exclusive in the context of SDMP, comprehensiveness was prioritised over speed in HEIs in Saudi Arabia.

The analysis also revealed that a number of factors influenced SDMP at the HEI in question, including the engagement and participation of the relevant employees, the diversity of TMTs and MMTs, knowledge resources and sharing, and cultural and Islamic values. This chapter demonstrated that Islamic culture influences the decision making process at the HEI studied, and provided strong support for the view that Islamic cultural values shape and influence the decision making process of TMTs and MMTs at HEIs in Saudi Arabia in general.

The findings also indicated that educational heterogeneity within TMTs and MMTs is moderately high at HEIs in Saudi Arabia, and that tenure heterogeneity in TMTs and MMTs is relatively high in Saudi Arabian HEIs. In addition, the findings indicated that access to knowledge resources was high for the members of the TMTs and MMTs at the target HEI, suggesting that knowledge sharing among the members of TMTs and MMTs is relatively high at HEIs in Saudi Arabia in general.

One of the key objectives of this chapter was to examine the impact of heterogeneity and knowledge sharing and resources on the comprehensiveness and speed of SDMP at HEIs in Saudi Arabia. The findings indicated that educational heterogeneity within the TMTs and MMTs at the HEI in question positively influenced the comprehensiveness of its SDMP. The implications of this finding are that HEIs in Saudi Arabia should make a continuous effort to ensure educational diversity within their TMTs and MMTs. Moreover, the findings of this study indicated that the higher the educational heterogeneity, the greater the speed of SDMP, but suggested that the more heterogeneous the TMT/MMT tenure, the less comprehensive SDMP will be. In addition, the findings indicated that the more heterogeneous the TMT/MMT tenure, the slower SDMP will be. This may be because tenure heterogeneity may engender a lack of communication and

cohesiveness within a team, which, in turn, may increase the chances of a slower decision making process within the organisation.

The findings of this study indicated that the greater the degree of knowledge sharing, the more rapid the decision making process, since the sharing of knowledge provides the members of TMTs and MMTs with all of the relevant information, which, in turn, facilitates the speed of their decision making. In addition, the findings suggested that the greater the access to knowledge resources, the more comprehensive the decision making process, as this access to resources allows the members of TMTs and MMTs to obtain relevant information, which facilitates the making of more comprehensive decisions. Therefore, HEIs in Saudi Arabia should take the initiative to create opportunities for accessing knowledge resources.

Finally, this study produced the interesting finding that greater access to knowledge resources can reduce the speed of the decision making process. In the context of HEIs in Saudi Arabia, increased knowledge resources may create a situation in which the members of the TMT and MMT find it difficult to incorporate all of the resources available to them, which slows their decision making process.

Chapter 7 CONCLUSION

7.1 Introduction

This chapter presents the conclusions of this study, along with the key findings, contributions and limitations of the study, and considerations for future research. It is divided into three sections. The first section reiterates the study's aims and objectives. The second presents the key findings, followed by the theoretical and practical contributions of the study. Finally, the limitations of the study, and directions for further research are outlined.

7.2 Aims and objectives

The purpose of this study was to investigate the impact of TMT/MMT heterogeneity on SDMP in HEIs in Saudi Arabia, in order to explore the process of SDM in Saudi Arabian HEIs, and to identify the factors that influence SDMP, and the performance of organisation. Specifically, the objectives were:

1. To investigate the extent of TMT/MMT heterogeneity at one HEI in Saudi Arabia;

2. To explore the impact of TMT/MMT heterogeneity, knowledge sharing, and resources on SDMP at one HEI in Saudi Arabia;

3. To examine the impact of the comprehensiveness and speed of SDMP on theperformance of the organisation at one HEI in Saudi Arabia.

4. To investigate the process of SDM at one HEI in Saudi Arabia;

5. To examine the critical factors, such as Islamic culture, and support from senior management, that influence SDMP, specifically in terms of its comprehensiveness and speed, at one HEI in Saudi Arabia.

7.3   Key research findings

The key findings of the study are summarised in the following sections.

1. Extent of TMT/MMT heterogeneity

The first research question concerned the extent of TMT and MMT heterogeneity at HEIs in Saudi Arabia, and the findings indicated a high level of educational heterogeneity (Blau's (1977) index value = 0.56), as well as the fact that the degree of heterogeneity in tenured TMTs/MMTs in HEIs in Saudi Arabia is relatively high (Blau's (ibid.) index value = 0.66). In contrast, the findings indicated that the degree of heterogeneity in the subject backgrounds of TMTs/MMTs in Saudi Arabian HEIs is relatively low (Blau's (ibid.) index value = 0.023). While there was no statistically significant difference between TMTs and MMTs in terms of education level heterogeneity, a greater tenure heterogeneity was found to exist at MMT level in Saudi Arabian HEIs.

2. Impact of heterogeneity, knowledge sharing, and resources on SDMP

One of the key objectives of this study was to examine the impact that heterogeneity, knowledge sharing, and resources have on the comprehensiveness and speed of SDMP. The conceptual framework and hypotheses of the outcomes were presented in the relevant chapter.

The findings provided support for Hypothesis 1a, suggesting that the more heterogeneous the educational level of TMTs/MMTs, the more comprehensive SDMP will be. This was consistent with the arguments posed by Goll and Rahseed (2005), and Papadakis and Barwise (2002), who found strong positive relationships between educational level heterogeneity and comprehensive SDM. The implications of this finding are that HEIs in Saudi Arabia should make a continuous effort to ensure the presence of educational diversity within their TMTs and MMTs, because such heterogeneity will ensure a range of views and understanding that will enable the advantages and disadvantages of each strategic choice to be thoroughly examined, and successful decisions to be made.

The findings of this study also supported Hypothesis 1b, suggesting that the greater the educational level heterogeneity, the higher the speed of SDMP. This extended the theory proposed by Souitaris and Maestro (2010), and suggested that educational level heterogeneity among TMTs/MMTs encourages polychronicity, which can facilitate a rapid SDMP. Polychronic work offers insightful information that frequently eliminates alternative choices early in the process of decision making, and thus saves time.

Therefore, if educational level heterogeneity creates polychronicity in TMTs/MMTs, it will enable a speedy SDMP (Souitaris and Maestro, 2010). In the context of HEIs in Saudi Arabia, educational level heterogeneity among their TMTs/MMTs was found to

be currently facilitating the rapidity of their SDMP, thereby demonstrating that HEIs in Saudi Arabia are benefitting from their educational level heterogeneity, as it facilitates both the comprehensiveness and the rapidity of their SDMP. This is critical for HEIs, given that the competition between them is growing, as well as the pressure to improve the quality of the education provided. The ability to make swift decisions is crucial for taking advantage of opportunities, and addressing any challenges facing HEIs in Saudi Arabia.

The findings of this study also supported Hypothesis 2a, suggesting that the more heterogeneous the TMT/MMT tenure, the less comprehensive SDMP will be. This might be explained by the fact that a longer tenured team tends to avoid information that affects, or interrupts, established and expected forms of behaviour (Staw, 1977). Thus, a lengthy tenure nurtures a dependence on tried and tested decision making procedures (Katz, 1982). Several government-controlled universities, as well as private HEIs, have been operating in Saudi Arabia in recent years. The external environment, and competition in the HE sector, has gradually changed, and new challenges emerge every year. While it is important to consider all strategic options thoroughly, in order to address these new challenges, longer tenured TMTs/MMTs are sometimes reluctant to consider all of the information and options available, which may engender a situation in which TMTs/MMTs do not conduct comprehensive analyses during SDMP. A lack of comprehensiveness in SDMP may not create any immediate issues, but a continuous reluctance to conduct a comprehensive SDMP may create longer-term challenges and issues for HEIs in Saudi Arabia. Therefore, it is recommended that TMTs/MMTs in HEIs in Saudi Arabia with a long tenure adjust and adapt to the new external environment, and participate in more a comprehensive SDMP.

The findings of this study also supported Hypothesis 2b, indicating that the more

heterogeneous the TMT/MMT tenure, the slower SDMP. This finding reflects the argument posed by Ferrier (2001), whereby demographic heterogeneity, such as tenure, was found to potentially increase conflict within a team. Moreover, Michel and Hambrick (1992) found that tenure heterogeneity may reduce communication frequency, and therefore group identification and cohesiveness. A lack of communication and cohesiveness within a team may increase the chance of a slower SDMP within an organisation.

The findings of the present study provided moderate support for Hypothesis 3a, indicating that the more heterogeneous the subject background of the TMTs/MMTs, the less comprehensive SDMP. This finding was consistent with that of Zhang (2007), and Tihanyi et al. (2001), who discovered a significant relationship between subject background and SDMP. This suggested that a diverse subject background may cause lack of agreement between the team members regarding the strategic options, which could increase the possibility of considering all options thoroughly. Thus, less heterogeneous TMTs/MMTs are more likely to conduct more comprehensive SDs. Moreover, the findings of the present study indicated that the greater the knowledge sharing among the members of TMTs and MMTs, the quicker the decision making process(H4b), since knowledge sharing provides the team members with all the relevant information, which facilitates more rapid decision making. Thus, HEIs in Saudi Arabia should create opportunities in which the members of their TMTs and MMTs can share their knowledge, in order to facilitate a rapid decision making process.

The findings of this study supported Hypothesis 5a, indicating that the greater the access to knowledge resources, the more comprehensive the decision making process. Greater access to knowledge resources enables members of TMTs/MMTs to obtain relevant information, which helps them to make comprehensive decisions. Therefore, HEIs in

Saudi Arabia should create opportunities for accessing of knowledge resources. This finding was consistent with the theory proposed by Simon (1955), who argued in favour of the usefulness of access to a comprehensive supply of information and knowledge that can be used to support an analysis of options, in order to determine the most appropriate solution to a specific situation. Thus, greater access to knowledge resources helps managers to consider a range of options, which facilitates a more comprehensive SDMP.

Finally, the findings of this study indicated that greater access to knowledge resources can also cause a slower decision making process(H5b). This was an interesting finding, because it implied that increased access to knowledge resources affects decision speed negatively. In the context of HEIs in Saudi Arabia, more knowledge resources may create a situation in which the members of the TMTs and MMTs find it difficult to incorporate all of the information into their SDM, which thus slows the decision making process. This finding supported the view of Alvesson and Willmott (1996), who argued that managers tend to move quickly from one task to another, which gives them a limited time to plan and evaluate all the relevant information before making decisions. As such, if members of TMTs and MMTs are asked to evaluate all available information from a knowledge resource, the decision making process will be slowed, since the greater the amount of knowledge resources available to TMTs and MMTs, the slower the decision making process.

3.   The process of SDM in HEIs in Saudi Arabia

The third objective of the present study was to explore the process of SDM, and the factors influencing SDMP in HEIs in Saudi Arabia. Semi-structured interviews were conducted with members of TMTs and MMTs, in order to investigate this topic, and the findings

suggested that, at the select HEIs in Saudi Arabia, SDMP underwent five stages. Firstly, a problem was identified, then the relevant information was collected, after which, the members of the TMTs/MMTs on the councils of departments discussed the strategic issue, and recommended a specific strategic option through voting. In the fourth stage, the college council evaluated and approved the recommended option, before sending instructions to the deans and departments to implement the new strategy that had been decided upon.

The analysis of the interview data revealed a number of features of SDMP at the HEI in question. Firstly, it was found to be influenced by a wide range of external stakeholders, both directly by the Ministry of Education, and indirectly by the general population through aspects of public accountability. Due to the scrutiny of the Ministry of Education and the college council, the TMTs/MMTs attempted to make rational, comprehensive, and systematic SDs. Consequently, SDMP employed by HEIs in Saudi Arabia tended to be comprehensive and rational. Secondly, information and data collection played a critical role in SDMP in Saudi Arabian HEIs, and the analysis of the interview data revealed that effective SDM must be supported by relevant information and data. Thirdly, the analysis revealed that both TMTs and MMTs played a crucial role in developing strategies, although MMTs were more significant in the implementation of SDs, such as curriculum reviews in colleges, departments, programmes, and modules. The MMTs also communicated and provided updates the progress of implementation to the TMTs. Finally, SDMP in HEIs in Saudi Arabia was found to be comprehensive, as a result of the external scrutiny and the participation of TMTs and MMTs in its various stages. In addition, this study found that speed and comprehensiveness were mutually exclusive, and that comprehensiveness was prioritised over the speed of SDMP in HEIs in Saudi Arabia.

4. Factors influencing SDMP

The SDMP in HE institutions in Saudi Arabia was found to be influenced by a number of factors. Previous studies indicated that Islamic culture influences the decision making process in an Arab organisation (Galanou and Farrag, 2015). In contrast to the individualistic culture of the US, according to Hofstede's cultural index, Arab states have a collectivistic culture (Rice, 2003). A collective Arab society uses social connections to influence important decisions, and Zakaria et al. (2003) stated that Arab cultures tend to know more about one another than Westerners. Therefore, socialising and making connections are an important aspect of any Saudi Arabian organisation. Moreover, the executives in Arab organisations are generally less willing to entrust power to their subordinates, and prioritise personal factors and friendship over corporate performance and goals (Sabri, 2004). According to Dedoussis (2004), the relationship between managers and employees in Arab organisations is collectivist, but also hierarchical. In addition, Mohamed et al. (2008) stated that Arab culture is generally based on verbal conversation and nonverbal communication. In the case of nonverbal communication, the members of an organisation are required to 'read between the lines'. Thus, Arab culture, which is influenced by Islamic culture, has an impact on the management and the decision making process in an organisation.

'Islamic culture' is the second most frequently used phrase by TMTs to describe and characterise the influence on SDMP in the HE institution in Saudi Arabia but is the fourth most frequently used phrase by MMTs. This finding indicates that the influence of Islamic culture may vary according to management level. Therefore, further analysis was carried out in Nvivo to identify how TMTs and MMTs described and characterised the influence of Islamic culture on SDMP.

Based on the responses of the interviewed respondents, a large majority believes that Islamic culture has an enormous effect on the process of making strategic decisions in higher education in Saudi Arabia. The analysis revealed that the most frequently used words to describe and characterise the different dimensions of Islamic culture were "teamwork" and "degree of adherence to Islamic principles", "consultation and participation", "gender separation", "role of women" and "extent of delegation of authority".

The majority of the respondents in the present study stated that the provision of clear information was extremely important for the success of the ultimate decisions taken, explaining the vital nature of clear and transparent information for a successful SDMP. A large majority of the respondents believed that Islamic culture has a significant effect on the SDMP in HE in Saudi Arabia.

This study examined the impact of knowledge sharing on SDMP process, and the interviews conducted explored the methods and techniques used for knowledge sharing by the members of the TMTs/MMTs at the target institution. The results revealed that discussion and consultation were the most important methods of sharing information related to decision making with teams. Discussion was considered to be especially important when performing community-related activities and research. At the HEI in question, information was shared through discussion and weekly meetings about successful performance, at which participation was considered to be vital, and dialogue useful. Another important means of sharing information was via email, to which each member of the university had access. The deanship of development was responsible for the quality of connections between colleges. The information involved was updated automatically on the system, or via the university email, in order to facilitate the

connections, which assisted in forging closer connections between the students, staff, and other employees through chats, and exchanging emails and WhatsApp messages.

A further method of communication was the council's 'Majales' system, which allowed for the creation of groups, who shared information within them using the electronic system available at the university. This system made all information and documents available to every member of a team, allowing information to be shared widely between individuals at the university.

In addition, the majority of the respondents described workshops, seminars, and lectures as further opportunities for sharing information between team members, especially when the work was referred to a committee, as some of the decisions required specialist workshops. Moreover, when the topics and decisions necessitated the sharing of group opinions, administrative regulations required workshops be held, in order to ensure that everyone understood the full scope of the subject, and were able to make suggestions concerning the decisions made. In order for the committee to reach a definite recommendation about a matter, all of the opinions offered would be considered, therefore the process benefitted from the diversity of specialisations, which usually added value to the project.

5. The impact of comprehensiveness and speed on performance

This study found that there was a strong positive relationship between the comprehensiveness of a SDMP and performance, which was consistent with the findings of Fredrickson and Mitchell (1984), and Fredrickson (1984), which demonstrated that comprehensiveness and performance have a positive association in a stable environment. HEIs in Saudi Arabia are generally more stable, and less uncertain than business organisations. While previous studies found that decision comprehensiveness has a

positive impact across uncertain environments (Fredrickson, 1984; Fredrickson and Mitchell, 1984), the present study also reported evidence of a positive association in a comparatively stable environment. The findings of the present study therefore extended the extant research by providing evidence of a positive relationship between the comprehensiveness of SDMP and performance in a stable environment.

The present study did not find any evidence to support the claim in the extant literature regarding the relationship between the speed of SDMP and performance. Some studies found that decision speed is a vital factor influencing the performance of a firm in high velocity environments (Bourgeois and Eisenhardt, 1988; Eisenhardt, 1989a; Eisenhardt and Bourgeois, 1988). However, the present study found no such evidence. One of the reasons for this may be related to the environment of the organisation, as HEIs are generally more stable.

 Therefore, although previous studies found that there was a strong relationship between the speed of SDMP and performance in the context of unstable and volatile environments, since HEIs in Saudi Arabia are more stable, this factor was less influential.

7.4   Academic contributions

The contextual contribution of this study was achieved by applying the upper echelon theory developed by Hambrick and Mason (1984) in a new national cultural context, namely Saudi Arabia. The methodology of Eisenhardt (1989) allows the process of decision making to be examined in a new national context, and this study responded to Menz (2012) by examining SDMP in a new context, namely Saudi Arabia, thereby adding to the growing body of literature concerning upper echelon theory and SDMP.

The present study contributed to management literature through its examination of job-related heterogeneity at the target HEI in Saudi Arabia. According to Naranjo- Gil et al. (2008), aspects of job-related heterogeneity, such as tenure and education, are more critical in SDM than aspects of non-job-related heterogeneity, such as gender and age. Thus, job-related heterogeneity may be a more important basis of cognitive resources in complex decision making processes (Carpenter, 2002; Stewart, 2006). In contrast, non-job related heterogeneity can sometimes generate contradictory views and visions regarding certain issues among the members of TMTs and MMTs, triggering clashes (Milliken and Martins, 1996). Social identity theory suggests that job-related heterogeneity is likely to be a more critical consideration than non-job-related heterogeneity, and the findings of the present study supported this view, thereby contributing to the theory.

Some previous studies examined the impact of heterogeneity on organisational performance. According to Yang and Wang (2014), gender, experience, and age heterogeneity in TMTs lead an organisation to employ strategies that help to advance its organisational performance. The present study examined the impact of TMT and MMT heterogeneity on SDMP, and explored the factors that have a positive impact on the process.

In addition, the extent literature examined the impact of educational background heterogeneity on various aspects of an organisation. For instance, Wiersema and Bantel (1983) investigated the negative impact of educational background diversity on turnover. The purpose of the present research study was to examine the impact of educational background on the comprehensiveness and speed of SDMP, and the findings indicated

that that the members of TMTs and MMTs should possess educational background homogeneity, because this has a positive impact on the comprehensiveness of a SDMP. While some of the previous research examined the impact of educational background in the context of developed countries, the Saudi Arabian context represents a new field of study, due to its different culture. Thus, this research project contributed to the existing management literature by examining the impact of educational background in a new context, namely that of Saudi Arabian HE.

The present study also contributed to the existing cross-cultural management literature, and its key contribution in this field was to provide an appreciation of the role of culture in the process of SDM in a previously under-explored cultural context in the domain of management literature. The economic importance of Saudi Arabia is growing, therefore additional knowledge of SDMP in this context is expected to help local TMTs and future companies planning to conduct business in Saudi Arabia. This study also afforded academic researchers an understanding of the role of culture in this society. The present study contributed to the topic by examining the influence of Islamic culture on SDMP at the target HEI in Saudi Arabia. Scant research exists regarding the management practices and philosophies of organisations operating in Arabian regions (Al-Hamadi et al., 2007). Organisations based in Arab countries are influenced by social, cultural, and religious factors that contradict the philosophies and paradigms employed in western-based organisations (Wilkins, 2001). For example, as the UK and US have low power distances (Hofstede, 1980), employees are expected to participate in the decisionmaking process. However, in Saudi Arabia, which has a high power distance, employees are not expected to participate. This suggests that Arabic and Islamic culture influences their SDMP. Although Islamic culture certainly influences decision making processes within organisations, there is a relative lack of research examining the impact of this on SDMP.

This study therefore attempted to address this gap by examining the relationship between Islamic culture and SDMP.

The current study also contributed to the existing research in the field by exploring the impact of knowledge sharing and resources on SDMP, in the context of Saudi Arabian HEIs. Previous studies examined the impact of knowledge sharing and resources in the context of developed and emerging markets. For instance, Srivastava et al. (2006) examined the impact of knowledge sharing on team performance in the context of hotel entrepreneurs in the US, and Peng (2010) investigated the influence of knowledge sharing on performance in the context of China. As a result of the lack of research conducted in the Saudi Arabian context, the present study added to the growing body of literature regarding knowledge management and SDMP in this area.

7.5 Implications for practice

The findings of the present study are useful for TMTs and MMTs at various HEIs in Saudi Arabia, and in other Arab countries, such as Kuwait and Oman. The TMTs and MMTs in these countries who are involved in SDM should find the outcomes helpful. This study has a number of implications for practitioners. Firstly, the findings suggested that diversity in TMTs and MMTs facilitates the comprehensiveness and rapidity of SDMP, thus Saudi Arabian HE organisations should take steps towards ensuring a greater level of heterogeneity in tenure, education, and subject background.

Secondly, the findings revealed that support from the senior management is essential for an effective SDMP. Thus, senior management should provide appropriate financial and human resources to support the decision making process, because continuous support from senior management helps to provide TMTs and MMTs with the necessary resources

to develop and implement SDs effectively.

Thirdly, Saudi Arabian organisations should ensure a high level of knowledge sharing among the members of their TMTs and MMTs. This could be achieved by providing opportunities for communication via email, WhatsApp messenger, meetings, and seminars.

Fourth, organisations should ensure access to reliable and valid information to support the decision making process. This could be achieved by creating a dedicated team with responsibility for ensuring the reliability and validity of the information collected.

Fifth, this study examined the factors influencing the comprehensiveness and speed of SDMP, and the findings indicated that the greater the knowledge resources available, the more comprehensive the decision making process, because greater access to knowledge resources enables the members of TMTs and MMTs to access relevant information, which facilitates a comprehensive decision making process. Therefore, the managers of HEIs in Saudi Arabia should create opportunities for the sharing of knowledge resources. By providing explanations concerning how and why knowledge resources affect the comprehensiveness of SDMP, the findings of this study can assist TMTs and MMTs to manage their knowledge resources in such a manner that SDMP

becomes more comprehensive.

Finally, the findings of this study indicated that greater access to knowledge resources can cause a slower decision making process. In the context of the HEIs in Saudi Arabia, greater access to more knowledge resources may create a situation in which the members of the TMTs and MMTs find it difficult to incorporate all of the information into SDMP, and if they are asked to evaluate all of the available information included in a knowledge resource, the decision making process will be slowed. Therefore, the higher the number of knowledge resources available to TMTs and MMTs, the slower the

decision making process will be, which is a negative consequence. This finding contributed to management practice by specifying a potential reason for a slow SDMP, and by providing managers with the opportunity to proactively manage the speed of their SDMP by ensuring that sufficient knowledge resources are available to facilitate a comprehensive decision, while avoiding an excess of knowledge resources that might create a slower decision making process.

7.6   Limitations of the study

The current research study collected data from a government-funded university in Saudi Arabia, therefore the research sample excluded private and non-profit organisations. In order to conduct the current research study effectively, access to both interview-based qualitative data and questionnaire-based quantitative data was crucial. This would have been difficult in private or non-profit organisations, because of the sensitivity of the data, and the nature of the research.

The data collection method employed in this study included semi-structured interviews conducted over the phone and face-to-face. The data obtained in these interviews may have suffered from reliability issues, such as potential losses of memory on the part of the respondents. In addition, the interviews were conducted in the Arabic language, and then translated and transcribed into English. Although a careful approach was adopted to this process, the present study acknowledges that a few words may have lost their full meaning after being translated from Arabic to English.

The present study examined the impact of TMT/MMT heterogeneity, knowledge resources, and transfer on the speed and comprehensiveness of SDMP.

However, additional factors could potentially influence the speed and comprehensiveness of SDMP, such as those in the external environment, for example, velocity and stability, and firm-related characteristics, such as size and firm structure (Elbanna and Child, 2007; Papadakis and Barwise, 1998).

7.7   Directions for future research

SDMP has been claimed to possess a long-term impact on organisations (for example, Eisnhardt and Zbaracki, 1992). The respondents of the survey conducted for the present study provided answers based on specific SDs taken while working for HEIs in Saudi Arabia. This study focused on the process of SDM at HEIs, therefore future studies could explore the impact of SDs on the performance of HEIs in Saudi Arabia five to 10 years in the future.

The present study also examined the impact of Islamic culture on SDMP in the context of Saudi Arabian HE. The findings could be used as a baseline from which future researchers could explore research questions associated with an Islamic cultural framework in the Middle Eastern region, such as the United Arab Emirates, or Kuwait. It would be useful to extend the present study to examine SDMP in other Middle Eastern areas, and to explore how SDMP is influenced by the culture in these regions.

Aside from organisational level units, future researchers could explore corporate involvement and the speed of SDMP at Strategic Business Unit (SBU) level. Future researchers could also investigate how the perceptions of compassion and control influence SUB units. Thus, future researchers could then define corporate involvement in the context of SBU units and the speed of SDMP. Such an examination would extend the understanding of the impact of the speed of SDMP.

Another useful area of further research is the option to control for various contingency

factors, including industry specific factors, in order to examine the impact of knowledge sharing on the speed and comprehensiveness of SDMP. A number of quantitative methods can be applied to focus on the importance of moderating variables and contingency factors. Extant studies employed the competitive environment as a control variable when examining the moderating effects of external contingencies on SDMP (Miller and Friesen, 1983), or 'industry membership' (Amurgey and Miner, 1992), and a number of previous researchers evaluated complexity, dynamism, and munificence as control variables when controlling for industry environment within an organisation (Dess and Beard, 1984; Dess et al., 1990). In addition, several researchers also controlled for internal contingency factors, such as internationalisation (Sullivan, 1994), and degree of diversification (Palepu, 1985). Meanwhile, Fredrickson and Mitchell (1984) recommended using firm size as a control variable when testing internal contingency factors.

Finally, future researchers could explore matters related to SDMP a single in-depth case study, in order to ensure that any theory development is empirically grounded. This type of in-depth case study might be expected to reveal the complex relationship between specific characteristics of firms and features of SDMP, such as speed and comprehensiveness.

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Appendices

Appendix A: The Questionnaire (English version)

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

The questionnaire is designed for my doctoral research project "Examination of top management teams strategic decision-making process: case study Higher education sector in Saudi Arabia"

Researcher: Huda AlShehri

Dear Sir/Madam,

This letter is to invite you to participate in a questionnaire survey. The evidence I gather will provide me with the data for my Doctoral degree in Business from Nottingham Trent University in the United Kingdom. My academic interests relate to the above-mentioned topic. The aim of this study is to explore the role management teams play in the strategic decision-making process, in the context of the higher education sector in Saudi Arabia. The purpose of this questionnaire is to examine the effect of factors, such as educational qualifications, experience, and functional diversity on team members. In addition, it aims to study the impact of external and internal factors on the strategic decision-making process.

Due to the massive progress and ongoing development at _____ University, the university offers me an ideal environment in which to conduct the proposed case study. Determining the roles played by teams in formulating strategies will add value to the study. You have been contacted as a member of the management team at the University, and if you consent to participate in the study your opinions and experiences will be very valuable to my research.

The uniqueness of this study arises from the context. Many foreign studies have dealt with this topic in Western environments, but very few Arabic studies exist that have addressed it within an Islamic context. Therefore, the study strives to enrich both theoretical and practical understanding.

This research is a case study to be conducted at _____ University. To protect your anonymity I will not mention the university's name (_____) in my thesis or when writing up the study. Therefore, the location of the study will be anonymous, and it will be referred to simply as "at a Saudi University out of the total of 29 universities".

Your name is not required when completing the questionnaire. Your responses will be handled securely and confidentiality is assured. I will make every effort possible to protect your identity when using the data and information collected. Study participants' identities will not be disclosed, and no

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Appendices

information identifying you or the other participants will be released. The copies of the questionnaire and all associated data will be destroyed after completion of the research project. Each copy of the questionnaire will be given a unique code to ensure it is trackable and anonymous.

In addition, anything you mention in your questionnaire that could be used to identify you will not be included in the study. I will also meet with my supervision team to discuss the data and request their opinion before analysing the data and writing up my thesis. No persons will have access to data other than the researcher and the research supervisors.

Participation in this study is voluntary; if you wish to withdraw from the study after completing the questionnaire, you should inform the researcher of the unique code identifying your questionnaire. Any withdrawal requests must be made within six weeks of the questionnaire distribution, i.e. 4 April 2016. It will not be possible to remove any data after the analysis has been completed.

Completing the questionnaire should take no more than 20 minutes of your time. In addition, all data collected will be stored confidentially.

We hope that you will be able to assist me by completing the questionnaire. If you would like to discuss anything further, please contact me at: (huda.alshehri2012@my.ntu.ac.uk).

Yours faithfully,

Researcher

Huda AlShehri

Supervisors

Dr. Michael Zhang

(michael.zhang@ntu.ac.uk)

Dr. Marco Furlotti

(marco.furlotti@ntu.ac.uk)

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Informed Consent Form

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

This Consent Form is for the questionnaire designed for my doctoral research project: "Examination of top management teams strategic decision making process- case study: Higher education sector in Saudi Arabia"

Researcher: Huda AlShehri

Dear Sir/Madam,

Please read this form, and confirm your consent to participate in the questionnaire by signing and dating it.

1. I confirm that the purpose of the project has been explained to me, that I have been given information about it in writing, and that I have had the opportunity to ask questions about the research

2. I understand that my participation is voluntary, and that I am free to withdraw at any time without giving any reason and without any implications for my legal rights

3. I understand that all data will be handled with strict confidentiality so as to protect my identity, and no names will be mentioned.

4. I understand that I have the right not to answer every question.

5. I agree to take part in this project

Respondent's signature:_____   Date: _____

Thank you very much indeed for taking the time to read this sheet, and for your interest in my research. If you would like to discuss anything further, please contact me at (huda.alshehri2012@my.ntu.ac.uk).

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PART ONE

Personal information

This section contains questions about your background; please choose the option that is most applicable to you, and explain if necessary:

1. What is your highest qualification?

    ☐ Doctorate degree.

    ☐ More than one Master's degree or professional certification.

    ☐ Master's degree.

    ☐ More than one Bachelor's degree

    ☐ Bachelor's degree

Other ....

2. What is your total work experience in the university?

    ☐ Less than 5 years

    ☐ From 5 years to less than 10 years

    ☐ From 10 years to less than 15 years

    ☐ From 15 years to less than 20 years

    ☐ More than 20 years

3. What is your total tenure in your current position? (This question asks about the number of years you have spent in their current position. For example, you may have been a department head or an administrative manager for 6 years, but have only been a member of the team for 4 years, and the opposite could be true; indeed, you may have spent less than 5 years in their current position, but been a member of a management team for longer than that. This explains why this question differs from the following one.)

    ☐ Less than 5 years

    ☐ From 5 years to less than 10 years

    ☐ From 10 years to less than 15 years

    ☐ From 15 years to less than 20 years

    ☐ More than 20 years

4- For how long have you been a member of the management team you are currently part of?

4

☐ Less than 5 years

☐ From 5 years to less than 10 years

☐ From 10 years to less than 15 years

☐ From 15 years to less than 20 years

☐ More than 20 years

5. There are 23 colleges in KSU which college are you in?

☐ Applied Medical Science

☐ Applied Studies and community Service

☐ Arabic Language Institute

☐ Architecture and Planning

☐ Arts

☐ Business Administration

☐ College of Medicine and University Hospitals

☐ Community College in Al-Riyadh

☐ Computer and Information Sciences

☐ Dentistry

☐ Education

☐ Engineering

☐ Food and Agricultural Sciences

☐ Health Science

☐ Languages and Translation

☐ Law and Political Science

☐ Nursing

☐ Pharmacy

☐ Prince Sultan College for emergency medical services

☐ Sciences

☐ Sport Sciences and Physical Activity

☐ Teachers

☐ Tourism & Antiquities

6. Please specify your department:

....

7. How many times does your team meet annually?

5

☐ Less than 4 times

☐ 4 -6 times

☐ 7-9 times

☐ 10-12 times

☐ More than 12 times

8. Which level in the organisation is affected by the decisions that your team makes?

☐ The entire university

☐ The colleges

☐ The administrative departments

☐ The academic departments

9. What is the highest qualification in your team?

☐ Doctorate degree.

☐ More than one Master's degree or professional certification.

☐ Master's degree.

☐ More than one Bachelor's degree

☐ Bachelor's degree

Other ....

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PART TWO

Decision comprehensiveness and decision speed

The following statements describe the way the management team you are part of makes decisions. Please indicate how strongly you agree or disagree with each statement by ticking the appropriate option. In the following questions 'team' and 'we' refers to the management team you are a member of.

No	Statements	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1	In my team, when strategic decisions have to be made, several options are considered					
2	In my team, every option is considered and evaluated Extensively					
3	We apply multiple criteria to evaluate the options.					
4	Our team is able to integrate ideas and make decisions speedily.					
5	In the implementation of decision-making, our speed is very fast.					

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PART THREE

A- Organisational climate

Please indicate how strongly you agree or disagree with each statement by ticking the appropriate option.

In the following questions 'team' and 'we' refers to the management team you are a member of.

No	Statements	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1	We have considerable independence in determining how we do our job.					
2	In my team, all members share information rather than keeping it to themselves.					
3	In my team there is a culture of a 'we are in it together'.					
4	Members of my team influence each other.					
5	My team members keep each other informed about work-related issues.					
6	Members of my team feel understood and accepted by one another.					
7	In my team everyone's views is listened to even if it is a minority view.					
8	There are real attempts to share information throughout the team.					
9	In my team, there is a lot of give and take.					

- Regarding to Organisational rewards on your university, please indicate how strongly you agree or disagree with each statement by ticking the appropriate option.

No	Statements	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1	I have a high level of job security					
2	I am satisfied with my salary					
3	There are good opportunities for promotion within the company.					
4	My working conditions are good					
5	Working for this company increases my social status.					

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B- Knowledge resources and Knowledge transfer

Please indicate how strongly you agree or disagree with each statement by ticking the appropriate option.

In the following questions 'team' and 'we' refers to the management team you are a member of.

No	Statements	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
1	We have to attend work-related academic seminars, workshops and professional meetings.					
2	We can access the relevant and most up-to-date information.					
3	We can access relevant customer and employee databases.					
4	We can access the most advanced work-related personnel and electronic networks.					
5	We actively share our knowledge about our work with other team members.					
6	Members of my team proactively share best practices with one another					
7	Members of my team exchange information about their daily social life and informal meetings with one another.					
8	Members of my team freely and actively express their opinion with one another					
9	Members of my team interact with other team members to share what we learned concerning work.					

9

PART FOUR

Think of the most important decision that your team made in the last twelve months. What was the content of such decision? (e.g., buying a new suite of computer programs for university-student interaction; launching a new degree course; forging an alliance with another academic institution; introducing a peer review system, etc.)

Contextual variables:

Relative to the strategic decisions typically taken in your university, how would you rate the focal decision on the following characteristics

	Least 1	2	3	4	Most 5
Urgency	☐	☐	☐	☐	☐
Importance	☐	☐	☐	☐	☐
Skills of staff involved in decision	☐	☐	☐	☐	☐
Resources assigned to decision	☐	☐	☐	☐	☐
Initial support from the top management	☐	☐	☐	☐	☐

- Decision importance:

On the following scale please indicate what you think are the best and worst possible effects on the university from the decision above?

Devastating negative impact	**1**	☐
	2	☐
Maintenance of status quo	**3**	☐
	4	☐
Tremendous improvement	**5**	☐

Decision adoption:

What happened to the focal decision, after your team made it? (Check all that apply)

The decision was adopted, in its entirety	☐
The decision met with initial resistance, which held up adoption, but ultimately was carried out	☐
The decision was initiated, but later withdrawn	☐
A part of the decision was adopted	☐
The decision was never adopted	☐

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Others (please explain)

How long did your team take to make the focal decision?

————————— months

Initiative performance:

Please assess the performance of the focal decision, and of the strategic initiative it associates with, on each of the following dimensions

	Very unsuccessful		Neither successful nor unsuccessful		Very successful	Not applicable
	1	2	3	4	5	
Meeting time expectation	☐	☐	☐	☐	☐	☐
Meeting quality parameters	☐	☐	☐	☐	☐	☐
Meeting cost parameters	☐	☐	☐	☐	☐	☐
Meeting efficiency parameters	☐	☐	☐	☐	☐	☐

If "Not Applicable" chosen for any item, please explain why:

....

....

....

....

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PART FIVE

Islamic culture

1- Please select the one that applies best to your university (select just one):

(a) Decision making within the organization always takes place after consulting with employees involved.
(b) Managers regularly consult their employees before they make decisions.
(c) When decisions are being made, employees can express their opinion.
(d) Employees have little opportunity to express their opinion with regard to important decisions.
(e) All decisions are made by the top of the organization.

2- Please select the one that applies best to your university (select just one):

(a) One can hardly speak of organization rules: employees work autonomously.
(b) Strict rules hardly exist and they may be broken if necessary. One adheres only to general rules of behaviour.
(c) Clear organization rules do exist. However, it is possible to complete tasks in your own way provided that this is in accordance with the organisation's policy.
(d) Within the organisations there exist clear instructions which have to be followed.
(e) Organization rules are very strict and have to be adhered to rigorously.

3- Please select the one that applies best to your university (select just one):

(a) Work and personal life are hardly separated; one likes to do work which serves the organisation's interest.
(b) Although work and personal life are intertwined, employees do appreciate a certain degree of privacy. Their behaviour is very much oriented towards the organization's interest.
(c) Employees want a considerable degree of privacy. They pursue their own interests but not at the expense of the organization.
(d) Work and personal life are separated to a great extent. Employees pursue their own interest; that of the organization is of minor importance.
(e) Work and personal life are strictly separated. Employees only pursue their own interests; the organization's interest hardly plays a role.

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Appendix B: The Questionnaire (Arabic version)

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

صـمم هذا الإستبيان لغرض مشروعي البحثي لمرحلة الدكتوراه: **"دراسة عملية اتخاذ القرار الاستراتيجي لفرق الإدارة العليا. حالة دراسية: قطاع التعليم العالي في المملكة العربية السعودية"**

الباحثة: هدى الشهري.

عزيزي / عزيزتي ،

أدعوكم في هذا الخطاب للمشاركة في هذا الإستبيان. علماً بأن ما سأجمعه من البيانات من متطلبات درجة الدكتوراه في إدارة الأعمال بجامعة نوتنغهام ترينت بالمملكة المتحدة. وترتبط اهتماماتي الأكاديمية بالموضوع المذكور أعلاه. وتهدف هذه الدراسة إلى إستكشاف الدور الذي تلعبه فرق الإدارة العليا في عملية صنع القرارات الإستراتيجية في سياق قطاع التعليم العالي في المملكة العربية السعودية. الغرض من هذا الإستبيان هو اختبار أثر العوامل ، مثل المؤهلات الأكاديمية والخبرة والتنوع الوظيفي على أعضاء فريق العمل. إضافة إلى ذلك ، تهدف إلى دراسة أثر العوامل الخارجية والداخلية على عملية اتخاذ القرارات الإستراتيجية.

ونظراً للتقدم الكبير والتطورات المستمرة في جامعة .... ، تقدم لي الجامعة البيئة المثالية لكي أجري فيها دراسة الحالة المقترحة. وتحديد الأدوار التي تلعبها فرق العمل في صياغة الإستراتيجيات والذي سوف يضيف القيمة على الدراسة. لقد تم الإتصال بكم كعضو لفريق الإدارة بالجامعة ، وفي حالة موافقتكم للمشاركة في الدراسة سوف تكون أراؤكم وخبراتكم مفيدة جداً لبحثي.

يظهر تقرد هذه الدراسة في السياق الذي سوف تدرسه. فلعديد من الدراسات الأجنبية تناولت هذا الموضوع في البيئات الغربية ، غير أن القليل جداً من الدراسات العربية الموجودة تناولتها ضمن السياق الإسلامي. لذا ، تسعى الدراسة إلى إثراء القيم النظري والعملي على حد سواء.

البحث عبارة عن دراسة حالة ستطبق في جامعة .... ، ولحماية إسمكم لن أذكر إسم الجامعة (........) في أطروحتي أو عند صياغة الدراسة. لذا ، سيكون مكان الدراسة مجهولاً ، وسوف يشار إليه ببساطة " جامعة سعودية من مجموع 34 جامعة ".

مع العلم بأن إسمك غير مطلوب لتعبئة الإستبيان. سوف تتم معاملة إجاباتكم بأمان وسرية. وسوف أبذل كل الجهود الممكنة لحماية هويتكم عند إستخدام البيانات والمعلومات التي تم جمعها. ولن يتم الإفصاح عن هويات المشاركين في الدراسة ، كما أن يتم نشر أية معلومات تكشف هويتك أو هويات المشاركين الآخرين. سيتم اتلاف نسخ الإستبيان وجميع البيانات بعد إكمال مشروع البحث.

إضافة إلى ذلك ، لن يتم إدراج أي شيء تذكرونه في إستبيانكم والذي يمكن إستخدامه لتحديد هويتكم في الدراسة. كما أنني سأجتمع بفريق إشرافي لمناقشة البيانات وطلب رأيهم قبل تحليل البيانات وصياغة أطروحتي. لن تكون هناك حرية لأي أفراد للدخول إلى البيانات خلاف الباحثة ومشرفي البحث.

المشاركة في هذه الدراسة طوعي ، وإذا كنت ترغب الإنسحاب من الدراسة بعد تعبئة الإستبيان ، فإنه ينبغي عليك إشعار الباحثة عن الرمز الفريد الذي يحدد إستبيانك (والذي يكتبه المشارك بنفسه على الاستبيان الخاص به ويحدد للباحث في حال الرغبة في الانسحاب من المشاركة). مع العلم أن أية طلبات انسحاب تتم في غضون ستة أسابيع من توزيع الإستبيان ، ابتداء من تاريخ 4 ابريل 2016م. ولا يمكن إزالة أية بيانات بعد إكمال التحليل.

لن تستغرق تعبئة الإستبيان أكثر من 20 دقيقة من وقتك. إضافة إلى ذلك ، سيتم تخزين جميع البيانات التي تم جمعها بسرية.

نأمل أن تكون قادراً على مساعدتي بتعبئة الاستبيانات. إذا كنت ترغب بمناقشة أي شيء آخر ، يرجى التواصل على البريد الالكتروني
(huda.alshehri2012@my.ntu.ac.uk) .

وتقبلوا خالص تحياتي ..

الباحثة

هدى الشهري

المشرفون

Dr. Michael Zhang

micahel.zhang@ntu.ac.uk

Dr. Marco Furlotti

marco.furlotti@ntu.ac.uk

استمارة موافقة مسبقة

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

يعد نموذج الموافقة هذا من أجل الاستبيان المتعلق بمشروع رسالة الدكتوراه الخاصة بـ: "دراسة عملية اتخاذ القرار الاستراتيجي
لفرق الإدارة العليا. حالة دراسية: قطاع التعليم العالي في المملكة العربية السعودية"

الباحثة: هدى الشهري

عزيزي / عزيزتي:
يرجى قراءة هذا الاستمارة وتأكيد موافقتك على المشاركة في الاستبيان بالتوقيع و التاريخ.

1. أؤكد لكم أنه قد اتضح لي الغرض من المشروع؛ وقد تم إعطائي معلومات عنه كتابياً، وأتيحت لي الفرصة لطرح الأسئلة حول
البحث
2. تعد مشاركتي طوعية، ولي الحرية في الانسحاب في أي وقت دون إبداء أي سبب وبدون أي آثار مترتبة على حقوقي القانونية
3. أعلم أنه سيتم التعامل مع كافة البيانات بسرية تامة وذلك لحماية هويتي، ولن يتم ذكر أي أسماء.
4. أعلم أن لدي الحق في عدم الإجابة على كل سؤال.

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5. أوافق على المشاركة في هذا المشروع

توقيع المشارك: .... التاريخ: ....

نشكر كم بكل تأكيد على تخصيص الوقت الكافي لقراءة هذه الورقة، وكذلك على اهتمامكم ببحثي. إذا كنت ترغب في مناقشة أي شيء، آخر،
يرجى التواصل على البريد الالكتروني (huda.alshehri2012@my.ntu.ac.uk).

الجزء الأول
المعلومات الشخصية
يحتوي هذا القسم على أسئلة عن خلفيتك، الرجاء اختيار الأنسب بالنسبة لك، واشرح إذا كان ضروري:

1. ما هو أعلى مؤهلاتك؟
   ☐ درجة الدكتوراه
   ☐ أكثر من درجة ماجستير ومدة أو شهادة احترافية
   ☐ درجة ماجستير
   ☐ أكثر من بكالوريوس واحد
   ☐ درجة بكالوريوس

   أخرى ....

2. كم عدد إجمالي سنوات خبرتك في العمل في الجامعة؟
   ☐ أقل من 5 سنوات
   ☐ من 5 سنوات إلى أقل من 10 سنوات
   ☐ من 10 سنوات إلى أقل من 15 سنة
   ☐ من 15 سنة إلى أقل من 20 سنة
   ☐ أكثر من 20 سنة

3. كم عدد سنوات توليك وظيفتك الحالية؟ (يسأل هذا السؤال عن عدد السنوات التي قضيتها في وظيفتك الحالية. على سبيل
المثال، يمكن أن تكون رئيس قسم أو مدير إدارة لمدة 6 سنوات ولكن عضو في الفريق فقط منذ 4 سنوات والعكس يمكن أن
يكون صحيح. في الواقع، يمكن أن تكون قد قضيت أقل من 5 سنوات في وظيفتك الحالية ولكن عضو في فريق الإدارة منذ
مدة أكثر من ذلك، وهذا يفسر الفرق بين هذا السؤال والسؤال الذي يليه).
   ☐ أقل من 5 سنوات
   ☐ من 5 سنوات إلى أقل من 10 سنوات
   ☐ من 10 سنوات إلى أقل من 15 سنة

<div align="center">3</div>

<div dir="rtl">

☐ من 15 سنة الى أقل من 20 سنة

☐ أكثر من 20 سنة

٤. منذ كم سنة وأنت تعتبر عضو من فريق الإدارة الذي تنتمي إليه حاليا؟

☐ أقل من 5 سنوات

☐ من 5 سنوات الى أقل من 10 سنوات

☐ من 10 سنوات الى أقل من 15 سنة

☐ من 15 سنة الى أقل من 20 سنة

☐ أكثر من 20 سنة

٥. يوجد عدد 23 كلية في KSU الى أي كلية تنتمي؟

☐ علوم الطب التطبيقية

☐ الدراسات التطبيقية والخدمة الاجتماعية

☐ معهد اللغة العربية

☐ التخطيط والهندسة المعمارية

☐ الآداب

☐ إدارة الأعمال

☐ كلية الطب ومستشفيات الجامعة

☐ الكلية الاجتماعية

☐ علوم الحاسب ومعلومات

☐ طب الأسنان

☐ التعليم

☐ الهندسة

☐ دراسات الزراعة والأطعمة

☐ علوم الصحة

☐ اللغات والترجمة

☐ العلوم السياسية والقانون

☐ التمريض

☐ الصيدلة

☐ كلية الأمير سلطان لخدمات الطوارئ الطبية

☐ العلوم

☐ علوم الرياضة والنشاط الجسدي

☐ المعلمين

☐ السياحة والآثار

٦. برجاء تحديد القسم الخاص بك

....

٧. كم عدد مرات اجتماع فريقك سنويا؟

☐ أقل من 4 مرات

</div>

4

<div dir="rtl">

□ 4 - 6 مرات
□ 7-9 مرات
□ 10-12 مرة
□ أكثر من 12 مرة

8. أي مستوى في المؤسسة يتأثر بالقرارات التي يتخذها فريقك؟
□ الجامعة بأكملها
□ الكليات
□ الأقسام الإدارية
□ الأقسام الأكاديمية

9. ما هي أعلى المؤهلات في فريقك ؟
□ درجة الدكتوراه
□ أكثر من درجة ماجستير واحدة أو شهادة احترافية
□ درجة ماجستير
□ أكثر من بكالوريوس واحد
□ درجة بكالوريوس

أخرى ....

الجزء الثاني

شمولية القرار وسرعة القرار

تصف الجمل التالية طريقة اتخاذ فريق الإدارة الذي تنتمي له القرارات. الرجاء الإشارة الى مدى موافقتك أو اختلافك مع كل جملة من خلال اختيار الخيار المناسب. وفي الأسئلة التالية تعود كلمة "فريق" و "نحن" على فريق الإدارة الذي تنتمي أنت إليه.

رقم	الجمل	أوافق بشدة	أوافق	لا أوافق ولا أختلف	اختلف	اختلف بشدة
1	في فريقي ، عند اتخاذ القرارات الإستراتيجية يجب اعتبار العديد من الخيارات					
2	في فريقي، يتم اعتبار كل خيار وتقييمه بتوسع					
3	نحن نطبق معايير متعددة لتقييم الخيارات					
4	يستطيع فريقنا توحيد الأفكار واتخاذ القرارات بسرعة					
5	لدينا سرعة عالية جدا في تنفيذ اتخاذ القرار					

</div>

5

الجزء الثالث

1. المناخ المؤسسي

الرجاء الإشارة الى مدى موافقتك أو اختلافك مع كل جملة من خلال اختيار الخيار المناسب.
في الأسئلة التالية تعود كلمة "فريق" و "نحن" على فريق الإدارة الذي تنتمي أنت إليه.

رقم	الجمل	أوافق بشدة	أوافق	لا أوافق ولا اختلف	اختلف	اختلف بشدة
1	لدينا استقلالية هامة في تحديد كيفية تنفية مهامنا					
2	في فريقي، يتشارك جميع الأعضاء المعلومات بدلا من الاحتفاظ بها لأنفسهم					
3	في فريقي، نطبق مبدأ "نحن في السفينة معا"					
4	يؤثر أعضاء فريقي على بعضهم					
5	يطلع أعضاء فريقي بعضهم البعض على الأمور المتعلقة بالعمل					
6	يشعر أعضاء فريقي بأنهم مقبولين ومفهومين بواسطة كل منهم تجاه الآخر					
7	في فريقي يتم إدراج وجهة نظر كل عضو حتى لو كانت وجهة نظر الأقلية					
8	توجد محاولات حقيقية لمشاركة المعلومات بين أعضاء الفريق					
9	في فريقي يوجد العديد من العطاء والأخذ					

– بخصوص المكافآت المؤسسية في جامعتك ، برجاء الإشارة الى مدى موافقتك أو اختلافك مع كل جملة من خلال اختيار الخيار المناسب.

رقم	الجمل	أوافق بشدة	أوافق	لا أوافق ولا اختلف	اختلف	اختلف بشدة
1	لدي مستوى عالي من التأمين الوظيفي					
2	أشعر بالرضا عن مرتبي					
3	توجد فرص جيدة للترقي داخل الشركة					
4	أحوال العمل لدي جيدة					
5	العمل في هذه الشركة يزيد من مكانتي الاجتماعية					

2. مصادر المعرفة ونقل المعرفة

الرجاء الإشارة الى مدى موافقتك أو اختلافك مع كل جملة من خلال اختيار الخيار المناسب.
في الأسئلة التالية تعود كلمة "فريق" و "نحن" على فريق الإدارة الذي تنتمي أنت إليه.

رقم	الجمل	أوافق بشدة	أوافق	لا أوافق ولا اختلف	اختلف	اختلف بشدة
1	نحن ملزمين بحضور سيمنارات أكاديمية مرتبطة بالعمل وورش عمل واجتماعات مهنية					
2	نستطيع الوصول الى المعلومات المحدثة والمرتبطة بالعمل					
3	نستطيع الوصول الى قاعدة بيانات العميل والعاملين المرتبطة بالعمل					

6

					نستطيع الوصول الى شبكات العاملين و الشبكات الالكترونية الخاصة بالعمل الأكثر تطورا	4
					نحن نشارك بفاعلية معلوماتنا عن العمل مع أعضاء الفرق الأخرى	5
					يتشارك أعضاء فريقي مع بعضهم البعض أفضل الممارسات في العمل بنشاط	6
					يتبادل أعضاء فريقي معلومات عن حياتهم الاجتماعية اليومية و اجتماعاتهم الغير رسمية مع بعضهم البعض	7
					يعبر أعضاء فريقي بحرية ونشاط عن آرائهم مع بعضهم البعض	8
					يتفاعل أعضاء فريقي مع أعضاء الفرق الأخرى لمشاركة ما تطلبوه بخصوص العمل	9

الجزء الرابع

فكر بآخر قرار اتخذه فريقك خلال اثني عشر شهرا الماضية. ما هو محتوى هذا القرار؟ (على سبيل المثال، شراء مجموعة جديدة لبرامج الكمبيوتر لتفاعل طلاب الجامعة ، أو إطلاق دورة تدريبية جديدة أو تشكيل تحالف مع معهد أكاديمي آخر أو تقديم نظام مراجعة ...الخ)

....

....

....

....

المتغيرات المقترنة بسياق القرار :

في ضوء القرارات الإستراتيجية النموذجية المتخذة في الجامعة ، كيف تقيم القرار المتخذ في ضوء الخصائص التالية :

على الأكثر 5	4	3	2	على الأقل 1	
☐	☐	☐	☐	☐	الضرورة
☐	☐	☐	☐	☐	الأهمية
☐	☐	☐	☐	☐	مهارات الفريق العامل في صنع القرار
☐	☐	☐	☐	☐	المصادر المعينة للقرار
☐	☐	☐	☐	☐	الدعم الأولي من الإدارة العليا

أهمية القرار :

الرجاء الإشارة على حسب المعدل التالي ، من وجهة نظرك ما هي التأثيرات الأفضل والأسوأ الممكنة في الجامعة بسبب القرار المتخذ أعلاه ؟

7

☐	1	تأثير سلبي مدمر
☐	2	
☐	3	استمرار الوضع الراهن
☐	4	
☐	5	تحسن هائل

تبني القرار :

ما الذي حدث للقرار المذكور أعلاه بعد أن اتخذه فريقك؟ (تحقق من كل ما ينطبق)

☐	تم تبني القرار كليا
☐	تم اعتراض القرار مبدئيا مما تسبب في تعليق تبنيه ولكن في النهاية تم تنفيذه
☐	تم البدء في تنفيذ القرار ثم لم سحبه لاحقا
☐	تم تبني جزء من القرار
☐	لم يتم تبني القرار أبدا
	أخرى (برجاء الشرح)

....
....
....
....

ما مدة الوقت الذي استغرقه فريقك في اتخاذ القرار المذكور؟

.... شهر

الأداء الأولي للقرار :

الرجاء تقييم أداء القرار المتخذ والمبادرة الإستراتيجية المرتبطة به على كل من الأبعاد التالية.

لا يطبق	ناجح جدا	ناجح	لا ناجح ولا فاشل	فاشل	فاشل جدا	
	5	4	3	2	1	
☐	☐	☐	☐	☐	☐	توقع وقت الاجتماع
☐	☐	☐	☐	☐	☐	معايير جودة الاجتماع
	☐	☐	☐	☐	☐	معايير تكلفة الاجتماع
☐	☐	☐	☐	☐	☐	معايير كفاءة الاجتماع
☐	☐	☐	☐	☐	☐	توقعات الرضا عن الاجتماع لدى المعنيين بالقرار

في حالة اختيار "لا يطبق" لأي بند ، الرجاء الشرح لماذا :

....
....

الجزء الخامس

الثقافة المحلية وفرق الإدارة:

1. الرجاء اختيار الأنسب لجامعتك (اختر واحد فقط) :

8

أ- اتخاذ القرار داخل المؤسسة دائما يتم بعد استشارة العاملين المختصين

ب- يستشير المدراء موظفيهم باستظلام قبل اتخاذ القرار

ت- عند اتخاذ القرارات ، يمكن للموظفين التعبير عن آرائهم

ث- للموظفين فرصة قليلة للتعبير عن آرائهم بخصوص القرارات الهامة

ج- يتم اتخاذ جميع القرارات بواسطة الإدارة العليا

2. الرجاء اختيار الأنسب لجامعتك (اختر واحد فقط)

أ- بالكاد أستطيع التحدث عن قواعد المؤسسة؛ الموظفين يعملون بشكل مستقل

ب- بالكاد توجد قواعد صارمة ويمكن كسرها في حالة الضرورة، تخضع فقط لقواعد السلوك العامة

ت- توجد قواعد مؤسسة واضحة، ولكن من الممكن أن تنفذ مهامك بطريقتك بشرط الالتزام بسياسة المؤسسة

ث- توجد تعليمات خروج واضحة بالمؤسسة والتي يجب إتباعها

ج- قواعد المؤسسة صارمة جدا ويجب إتباعها بحزم وصرامة

3. الرجاء اختيار الأنسب لجامعتك (اختر واحد فقط)

أ- يصعب الفصل بين العمل والحياة الشخصية ، أفضل القيام بالعمل الذي يحقق فائدة المؤسسة

ب- بالرغم من تداخل العمل مع الحياة الشخصية يهتم الموظفين بدرجة معينة من الخصوصية ، وسلوكهم يصب في اتجاه فائدة المؤسسة

ت- يرغب الموظفين في درجة معينة من الخصوصية ، حيث يلاحقون اهتماماتهم الخاصة ولكن ليس على حساب المؤسسة

ث- العمل والحياة الشخصية تنفصلين بشكل كبير ، ويلاحق الموظفين اهتماماتهم الخاصة والتي تعتبر ذات أهمية صغيرة بالنسبة للمؤسسة

ج- العمل والحياة الشخصية تنفصلين تماما بشكل صارم، ويلاحق الموظفين اهتماماتهم الخاصة فقط و يلعب اهتمام المؤسسة بالكاد دورا

9

Appendix C: The Interview (English version)

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

The interview is designed for my doctoral research project: "Examination of top management teams strategic decision making process- case study: Higher education sector in Saudi Arabia"

Researcher: Huda AlShehri

Dear Sir/Madam,

This letter is to invite you to participate in an interview. The evidence I gather will provide me with the data for my Doctoral degree in Business from Nottingham Trent University in the United Kingdom. My academic interests relate to the above-mentioned topic. The aim of this study is to explore the role management teams play in the strategic decision-making process, in the context of the higher education sector in Saudi Arabia.

Due to the massive progress and ongoing developments at .... University, the university offers me an ideal environment in which to conduct the proposed case study. Determining the roles played by teams in formulating strategies will add value to the study. You have been contacted as a member of the management team at the University, and if you consent to participate in the study your opinions and experiences will be very valuable to my research.

The uniqueness of this study arises from the context. Many foreign studies have dealt with this topic in Western environments, but very few Arabic studies exist that have addressed it within an Islamic context. Therefore, the study strives to enrich both theoretical and practical understanding.

The research is a case study to be conducted at .... University. To protect your anonymity I will not mention the university's name (.............) in my thesis or when writing up the study. Therefore, the location of the study will be anonymous, and it will be referred to simply as 'at a Saudi University out of the total of 34 universities '.

The interviewer will not record your name. The study will not include the names or any personal details of any interviewees anywhere in the study. As stated above, all personal details

†

will be replaced by codes and fictitious names, which means that only the researcher will be able to identify yourself and the other participants. Your responses will be handled securely and in the strictest confidence, and as stated, I will make every effort possible to protect your identify when using the data and information collected. All the data collected will be stored confidentially. All files (digital audio and textual) containing data will be stored securely in a password-protected file. Your name will be removed from all reported data included in the study results and codes will be fully anonymised.

In addition, anything you mention in your questionnaire that could be used to identify you will not be included in the study. I will also meet with my supervision team to discuss the data and request their opinion before analysing the data and writing up my thesis. No persons will have access to data other than the researcher and the research supervisors.

The interview transcripts will not be included in the appendices of the thesis and they and the recordings will be destroyed at the end of the research project. Participation in this study is voluntary, and should you wish to withdraw at any time, for a period of up to six weeks following participation in the interview, you are free to do so and I guarantee not to include your data.

The points raised previously will be covered in the main questions asked during the telephone or personal interviews, as will any other secondary questions. The interview will last between 60 and 90 minutes, and the main interview questions are attached to this information sheet, as is as a consent form to be completed prior to the interview.

We hope that you will be able to assist in this study. If you would like to discuss anything further, please contact me at: (huda.alshehri2012@my.ntu.ac.uk).

Yours faithfully,

Researcher

Huda AlShehri

Supervisors

Dr. Michael Zhang

(michael.zhang@ntu.ac.uk)

2

Dr. Marco Furlotti

(marco.furlotti@ntu.ac.uk)

Informed Consent Form
NOTTINGHAM TRENT UNIVERSITY
NOTTINGHAM BUSINESS SCHOOL

This Consent Form is for the interview designed for my doctoral research project: "Examination of top management teams strategic decision making process- case study: Higher education sector in Saudi Arabia"

Researcher: Huda AlShehri

Dear Sir /Madam,

Please read this form, and confirm your consent to participate in the interview by signing and dating it.

1. I confirm that the purpose of the project has been explained to me, that I have been given information about it in writing, and that I have had the opportunity to ask questions about the research

2. I understand that my participation is voluntary, and that I am free to withdraw at any time without giving any reason and without any implications for my legal rights

3. I understand that all data will be handled with strict confidentiality so as to protect my identity, and no names will be mentioned.

4. I give permission for the interview to be voice-recorded by the researcher, on the understanding that the recording will be destroyed at the end of the project

5. I understand that I have the right not to answer every question.

6. I agree to take part in this project

3

Respondent's signature: _____   Date: _____

Thank you very much indeed for taking the time to read this sheet, and for your interest in my research. If you would like to discuss anything further, please contact me at (huda.alshehri2012@my.ntu.ac.uk).

4

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

The interview questions are designed for my doctoral research project "Examination of top management teams strategic decision making process- case study: Higher education sector in Saudi Arabia"

Researcher: Huda AlShehri

Interview questions:

Heterogeneity in the team:

1- Please describe the atmosphere within your team? Can you give me examples?

2- Do you find the diversity in experience and qualifications within your team a positive matter? If yes, please explain giving more detail.

Strategic decision making process (success/ failure):

1- Please explain the procedure followed within your team for adopting any strategic decision.

2- How did the team behave and interact during the decision-making process?

3- What challenges or obstacles did the team face in making the decision?

Successful decision

1- Can you give details of a successful decision taken by your team? Please describe the process for this decision.

2- When you took this successful decision was your team aware of all the alternatives relating to this decision? Please explain in detail.

3- In your opinion, what factors affected the success of this decision?

5

4- What were the outcomes of implementing this decision? For example, was it implemented by the University? Did it achieve the outcomes you expected?

Failed decision

1- Can you describe a case when the decision taken by your team was a failure? Please describe the process for this decision.

2- Was your team aware of all the alternatives relating to this decision? Please explain in detail.

3- In your opinion, what reasons (factors) led to such a failure? How can you judge the failure of this decision? Are there specific criteria for this evaluation?

Knowledge resource and knowledge transfer :

1- How is information relating to decision-making shared within your team?

2- What facilities are provided by the university to your team that help in the speed and comprehensiveness of taking any decision?

General Questions
- Is there anything you think I should know?
- Is there anything you would like to ask me?

6

Appendix D: The Interview (Arabic version)

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

صممت هذه المقابلة لغرض مشروعي البحثي لمرحلة الدكتوراه: "دراسة عملية اتخاذ القرار الاستراتيجي لفرق الإدارة العليا. حالة دراسية: قطاع التعليم العالي في المملكة العربية السعودية"

الباحثة: هدى الشهري

عزيزي / عزيزتي ،

أدعوكم في هذا الخطاب للمشاركة في المقابلة. علماً بأن ما سأجمعه من البيانات من متطلبات درجة الدكتوراه في إدارة الأعمال بجامعة نوتنغهام ترينت بالمملكة المتحدة. وترتبط أهتماماتي الأكاديمية بالموضوع المذكور أعلاه. وتهدف هذه الدراسة إلى إستكشاف الدور الذي تلعبه فرق الإدارة العليا في عملية صنع القرارات الإستراتيجية في سياق قطاع التعليم العالي في المملكة العربية السعودية.

ونظراً للتقدم الكبير والتطورات المستمرة في جامعة .... ، تقدم لي الجامعة البيئة المثالية لكي أجري فيها دراسة الحالة المقترحة. وتحديد الأدوار التي تلعبها فرق العمل في صياغة الإستراتيجيات سوف يضيف القيمة على الدراسة. لقد تم الإتصال بكم كعضو لفريق الإدارة بالجامعة ، وفي حالة مو افقتكم المشاركة في الدراسة سوف تكون أراؤكم وخبراتكم مفيدة جداً لبحثي

يظهر تفرد هذه الدراسة في السياق الذي سوف تدرسه. فالعديد من الدراسات الأجنبية تناولت هذا الموضوع في البيئات الغربية ، غير أن القليل جداً من الدراسات العربية الموجودة تناولتها ضمن السياق الإسلامي. لذا ، تسعى الدراسة إلى إثراء الفهم النظري و العملي على حد سواء.

البحث عبارة عن دراسة حالة ستطبق في جامعة .... ولحماية إسمكم فإنني لن أذكر إسم الجامعة (.........) في أطروحتي أو عند صياغة الدراسة. لذا ، سيكون مكان الدراسة مجهولاً ، وسوف يشار إليه بسيطة " جامعة سعودية من مجموع 34 جامعة ".

لن يقوم الشخص الذي يجري المقابلة بتسجيل إسمك. ولن تشمل الدراسة الأسماء أو أي تفاصيل شخصية لأي من الأشخاص الذين تجرى معهم المقابلة في أي مكان في الدراسة. وكما تم التنويه أعلاه ، فإنه سيتم إستبدال جميع التفاصيل الشخصية بالرموز والأسماء المستعارة ، ما يعني بأن الباحثة فقط ستكون قادرة على تعيين هويتك و هوية المشاركين الأخرين. وسوف تتم معاملة إجاباتكم بأمان وسرية. وسوف أبذل كل الجهود الممكنة لحماية هويتكم عند إستخدام البيانات والمعلومات التي تم جمعها. كما سيتم تخزين جميع البيانات التي تم جمعها بسرية وسيتم تخزين جميع الملفات (السمعية والنصية الرقمية) التي تحتوي على البيانات بأمان وفي ملف محمي بكلمة المر . وسيتم نزع إسمك من جميع البيانات الواردة في نتائج الدراسة كما ستكون الرموز مجهولة تماماً.

إضافة إلى ذلك ، لن يتم إدراج أي شيء تذكرونه في إستيباناتكم والذي يمكن إستخدامه لتحديد هويتكم في الدراسة. كما أنني سأجتمع بفريق إشرافي لمناقشة البيانات وطلب رأيهم قبل تحليل البيانات وصياغة أطروحتي حتى أن تكون هناك حرية لأي أفراد للدخول إلى البيانات خلاف الباحثة ومشرفي البحث.

1

لن يتم إدراج نصوص المقابلة في ملاحق الأطروحة وسيتم إتلاف التسجيلات في نهاية مشروع البحث المشاركة في هذا الدراسة طوعية ، وإذا كنت ترغب الإنسحاب في أي وقت ، لمدة ستة أسابيع بعد المشاركة في المقابلة ، فلديك الحرية للقيام بذلك و إنني أضمن عدم إدراج بياناتك.

سيتم تغطية النقاط المذكورة سابقاً في الأسئلة الرئيسية أثناء المقابلة عبر الهاتف أو المقابلة الشخصية ، وكذلك أية أسئلة ثانوية أخرى سوف تستمر المقابلة لمدة تتراوح ما بين 60 إلى 90 دقيقة ، مرفق لكم الأسئلة الرئيسية للمقابلة مع صفحة المعلومات هذه ، وكذلك نموذج موافقة تتم تعبئته قبل المقابلة

تأمل أن تكون قادرا على مساعدتي في هذه الدراسة. إذا كنت ترغب مناقشة أي شيء آخر ، يرجى التواصل على البريد الالكتروني: (huda.alshehri2012@my.ntu.ac.uk).

وتقبلوا خالص تحياتي ..

الباحثة

هدى الشهري

المشرفون
Dr. Michael Zhang
micahel.zhang@ntu.ac.uk
Dr. Marco Furlotti
marco.furlotti@ntu.ac.uk

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استمارة موافقة مسبقة

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

يعد نموذج الموافقة هذا من أجل المقابلة المخصصة لمشروع رسالة الدكتوراه الخاصة بـ: "دراسة عملية اتخاذ القرار الاستراتيجي لفرق الإدارة العليا. حلقة دراسية: قطاع التعليم العالي في المملكة العربية السعودية" الباحثة: هدى الشهري

عزيزي/ا عزيزتي:

برجى قراءة هذه الاستشارة، وتأكيد موافقتك على المشاركة في المقابلة بالتوقيع والتاريخ.

1. أؤكد لكم أنه قد اتضح لي الغرض من المشروع، وقد تم إعطائي معلومات عنه كتابياً، و أتيحت لي الفرصة لطرح الأسئلة حول البحث.

2. تعد مشاركتي طوعية، ولي الحرية في الانسحاب في أي وقت دون إبداء أي سبب وبدون أي أثر مترتبة على حقوقي القانونية.

3. أعلم أنه سيتم التعامل مع كافة البيانات بسرية تامة وذلك لحماية هويتي، ولن يتم ذكر أي أسماء.

4. منحت الإذن بالتسجيل الصوتي للمقابلة من قبل الباحث، على أساس أنه سيتم تدمير التسجيل في نهاية المشروع.

5. أعلم أن لدي الحق في عدم الإجابة على كل سؤال.

6. أوافق على المشاركة في هذا المشروع.

توقيع المستلم: ....   التاريخ: ....

نشكركم بكل تأكيد على تخصيص الوقت الكافي لقراءة هذه الورقة، وكذلك على اهتمامك ببحثي. إذا كنت ترغب في مناقشة أي شيء آخر، برجى التواصل على البريد الإلكتروني، (huda.alshehri2012@my.ntu.ac.uk).

3

NOTTINGHAM TRENT UNIVERSITY

NOTTINGHAM BUSINESS SCHOOL

تم إعداد الأسئلة التي ستطرح في المقابلة من أجل مشروع رسالة الدكتوراه الخاصة بـ: "دراسة عملية اتخاذ القرار الاستراتيجي لفرق الإدارة العليا. حالة دراسية: قطاع التعليم العالي في المملكة العربية السعودية"

الباحثة: هدى الشهري

الأسئلة التي سيتم طرحها في المقابلة:

الاختلافات بين الفريق:

1- يرجى وصف الأجواء داخل فريقك؟ هل تستطيع أن تعطيني أمثلة؟

2- هل تجد التنوع في الخبرة والمؤهلات داخل فريقك أمراً إيجابياً؟ (إذا كانت الإجابة بنعم، يرجى التوضيح وإعطاء مزيد من التفاصيل.

عملية اتخاذ القرارات الاستراتيجية (النجاح/ الإخفاق):

1- الرجاء توضيح الإجراءات المتبعة في فريقك لاعتماد أي قرار استراتيجي.

2- كيف يمكن للفريق التصرف والتفاعل أثناء عملية صنع القرار؟

3- ما هي التحديات أو العقبات التي يواجهها الفريق في اتخاذ القرار؟

القرار الناجح

1- هل يمكنك إعطاء تفاصيل عن قرار ناجح اتخذه فريقك ؟ يرجى وصف العملية لهذا القرار.

2- عندما اتخذت هذا القرار الناجح كان فريقك على علم بجميع البدائل المتعلقة بهذا القرار؟ يرجى الشرح بالتفصيل.

3- في رأيك ما هي العوامل التي تؤثر على نجاح هذا القرار؟

4- ما هي نتائج تنفيذ هذا القرار؟ على سبيل المثال، تم تنفيذها في الجامعة؟ و هل حقق النتائج التي توقعها؟

القرار غير الموفق

1- هل يمكنك وصف أحد القرارات غير الموفقة المتخذة من قبل فريقك؟ يرجى توضيح العملية لهذا القرار

2- هل كان فريقك على علم بجميع البدائل المتعلقة بهذا القرار؟ يرجى إعطاء المزيد من التفاصيل.

3- في رأيك، ما هي الأسباب (العوامل) التي أدت إلى مثل هذا الإخفاق؟ كيف يمكنك الحكم على هذا القرار؟ هل هناك معايير محددة لهذا التقييم؟

مصادر المعرفة ونقل المعرفة:

1- كيف يتم مشاركة المعلومات المتعلقة باتخاذ القرارات داخل فريقك؟

2- ما هي التسهيلات التي تقدمها الجامعة لفريقك والتي تساعد في سرعة وشمولية اتخاذ أي قرار؟

أسئلة عامة

- هل هناك أي معلومات أخرى تود إضافتها؟

- هل هناك أي أسئلة تود طرحها؟

4

Appendix E: Factor Analysis of Decision Comprehensiveness

According to Table 1, the KMO measure is 0.50 which is reasonably high and indicates that factor analysis is useful for decision comprehensiveness data. According to Table 1, the significance level is less than 0.05. Therefore, a factor analysis is useful for decision comprehensiveness data. Table 2 reports the communalities for decision comprehensiveness items. Small values indicate variables that do not fit well with the factor solution and which should possibly be dropped from the analysis. The extraction communalities for decision comprehensiveness are acceptable since all values are greater than 0.50.

Table 1: KMO and Bartlett's Test – Decision Comprehensiveness

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.500
Bartlett's Test of Sphericity	Approx. Chi-Square	327.476
	Df	1
	Sig.	0.000

Table 2: Communalities – Decision comprehensiveness

	Initial	Extraction
In my team, every option is considered and evaluated extensively	1.000	0.931
We apply multiple criteria to evaluate the options	1.000	0.931
Extraction Method: Principal Component Analysis.		

Table 3 reports the total variance explained by each component. Only one factor in the initial solution have eigenvalues greater than 1. One factor accounts for almost 93% of the variability in the original variables. The second section of this table shows the variance explained by the extracted factors before rotation. The cumulative variability explained by this one factor in the extracted solution is about 93%. Therefore, the higher percentage of variation is explained by one factor.

Table 3: Total Variance Explained – Decision comprehensiveness

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.862	93.079	93.079	1.862	93.079	93.079
2	0.138	6.921	100.000			
Extraction Method: Principal Component Analysis.						

Table 4 reports the component Matrix. The first factor is associated with all items of Decision comprehensiveness. Factor loadings for all are greater than 0.70. Therefore, all items could be kept as a measure of decision comprehensiveness.

Table 4: Component Matrix - Decision comprehensiveness

	Component 1
In my team, every option is considered and evaluated extensively	0.965
We apply multiple criteria to evaluate the options	0.965
Extraction Method: Principal Component Analysis. 1 components extracted.	

Appendix F: Factor Analysis of Decision Speed

Factor analysis was carried out with 2 items representing decision speed. According to Table 5, the KMO measure is 0.50, which is reasonably high and indicates that factor analysis is useful for decision speed data. According to Table 5, the significance level is less than 0.05. Therefore, a factor analysis is useful for decision speed data.

Table 5: KMO and Bartlett's Test – Decision Speed

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.500
Bartlett's Test of Sphericity	Approx. Chi-Square	162.449
	Df	1
	Sig.	0.000

Table 6 reports the communalities for decision speed items. Small values indicate variables that do not fit well with the factor solution and should possibly be dropped from the analysis. The extraction communalities for decision speed are acceptable since all values are greater than 0.50.

Table 6: Communalities – Decision Speed

	Initial	Extraction
Our team is able to integrate ideas and make decisions speedily.	1.000	0.850

In the implementation of decision-making, our speed is very fast.	1.000	0.850
Extraction Method: Principal Component Analysis.		

Table 7 reports the total variance explained by each component. Only one factor in the initial solution has eigenvalues greater than 1. One factor accounts for almost 85% of the variability in the original variables. The second section of this table shows the variance explained by the extracted factors before rotation. The cumulative variability explained by this one factor in the extracted solution is about 85%. Therefore, a higher percentage of variation is explained by one factor.

Table 7: Total Variance Explained – Decision Speed

Compone nt	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.700	84.988	84.988	1.700	84.988	84.988
2	0.300	15.012	100.000			
Extraction Method: Principal Component Analysis.						

Table 8 reports the component Matrix. The first factor is associated with all items of decision speed. Factor loadings for all are greater than 0.70. Therefore, all items could be kept as a measure of decision speed.

Table 8: Component Matrix – Decision Speed

	Component 1
In the implementation of decision-making, our speed is very fast.	0.922
Our team is able to integrate ideas and make decisions speedily.	0.922
Extraction Method: Principal Component Analysis. 1 components extracted.	

Appendix G: Factor Analysis of Knowledge Sharing

Principle component factor analysis has been carried out for the 5 items representing knowledge sharing. The results of the factor test are reported below.

According to Table 9, the KMO measure is 0.78, which is moderately high and indicates that factor analysis is useful for knowledge sharing data. Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that variables are unrelated and therefore unsuitable for structure detection. According to Table 9, the significance level is less than 0.05. Therefore, a factor analysis is useful for knowledge sharing data.

Table 9: KMO and Bartlett's Test – Knowledge Sharing

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.780
Bartlett's Test of Sphericity	Approx. Chi-Square	575.131
	Df	10
	P-value	0.000

Table 10 reports the communalities for knowledge sharing items. Small values indicate variables that do not fit well with the factor solution and should possibly be dropped from the analysis. The extraction communalities for knowledge sharing are acceptable since all values are greater than 0.50.

Table 10: Communalities – Knowledge Sharing

	Initial	Extraction
We actively share our knowledge about our work with other team members.	1.000	0.697
Members of my team proactively share best practices with one another.	1.000	0.698
Members of my team exchange information about their daily social life and informal meetings with one another.	1.000	0.605
Members of my team freely and actively express their opinion with one another.	1.000	0.545
Members of my team interact with other team members to share what we learned concerning work.	1.000	0.589
Extraction Method: Principal Component Analysis.		

Table 11 reports the total variance explained by each component. Only one factor in the initial solution has eigenvalues greater than 1. One factor accounts for almost 63% of the variability in the original variables. The second section of this table shows the variance explained by the extracted factors before rotation. The cumulative variability explained by this one factor in the extracted solution is about 63%. Therefore, the higher percentage of variation is explained by one factor.

Table 11: Total Variance Explained   Knowledge Sharing

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.134	62.688	62.688	3.134	62.688	62.688
2	.878	17.560	80.248			
3	.424	8.487	88.735			
4	.313	6.253	94.988			
5	.251	5.012	100.000			
Extraction Method: Principal Component Analysis.						

Table 12 reports the component Matrix. The first factor is associated with all items of knowledge sharing. Factor loadings for all are greater than 0.70. Therefore, all items could be kept as a measure of knowledge sharing.

Table 12: Component Matrix - Knowledge Sharing

	Component 1
Members of my team proactively share best practices with one another.	0.835
We actively share our knowledge about our work with other team members.	0.835
Members of my team exchange information about their daily social life and informal meetings with one another.	0.778
Members of my team interact with other team members to share what we learned concerning work.	0.767
Members of my team freely and actively express their opinion with one another.	0.739
Extraction Method: Principal Component Analysis. 1 component extracted.	

Appendix H: Factor Analysis of Knowledge Resources

Table 4.20 shows two tests that indicate the suitability of data for structure detection.

Table 4.20: KMO and Bartlett's Test – Knowledge resources

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.706
Bartlett's Test of Sphericity	Approx. Chi-Square	661.1 33
	Df	6
	P-value	0.000

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with data. If the value is less than 0.50, the results of the factor analysis will probably not be very useful. According to Table 10, the KMO measure is 0.706, which is moderately high and indicates that factor analysis is useful for knowledge resources data.

Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with data. According to Table 4.20, the significance level is less than 0.05. Therefore, a factor analysis is useful for knowledge resources data.

Table 4.21 reports the communalities for knowledge resources items. Initial communalities are, for correlation analyses, the proportion of variance accounted for in each variable by the rest of the variables. Extraction communalities are estimates of the variance in each variable accounted for by the factors in the factor solution. Small values indicate variables that do not fit well with the factor solution and should possibly be dropped from the analysis. The extraction communalities for knowledge resources are acceptable since all values are greater than 0.50.

Table 4.21: Communalities – Knowledge Resources

	Initial	Extraction
We have to attend work-related academic seminars, workshops and professional meetings.	1.000	0.628
We can access the relevant and most up-to-date information.	1.000	0.855
We can access relevant customer and employee databases.	1.000	0.810
We can access the most advanced work-related personnel and electronic networks.	1.000	0.682
Extraction Method: Principal Component Analysis.		

Table 4.22 reports the total variance explained by each component. Only one factor in the initial solution has eigenvalues greater than 1. One factor accounts for almost 75% of the variability in the original variables. The second section of this table shows the variance explained by the extracted factors before rotation. The cumulative variability explained by this one factor in the extracted solution is about 75%. Therefore, the higher percentage of variation is explained by one factor.

Table 4.22: Total Variance Explained – Knowledge resources

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	2.97 4	74.348	74.348	2.97 4	74.348	74.348
2	.634	15.847	90.195			
3	.262	6.557	96.752			
4	.130	3.248	100.000			
Extraction Method: Principal Component Analysis.						

Table 4.23 reports the component Matrix. The first factor is associated with all the items of knowledge resources. Factor loadings for all are greater than 0.70. Therefore, all items could be kept as a measure of knowledge resources.

Table 4.23: Component Matrix – Knowledge resources

	Component 1
We can access the relevant and most up-to-date information.	0.924
We can access relevant customer and employee databases.	0.900
We can access the most advanced work-related personnel and electronic networks.	0.826
We have to attend work-related academic seminars, workshops and professional meetings.	0.792
Extraction Method: Principal Component Analysis. 1 component extracted.	

Appendix I: Factor Analysis for SDMP Performance

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in variables that might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with data. If the value is less than 0.50, the results of the factor analysis will probably not be very useful. According to Table 10, the KMO measure is 0.706, which is moderately high and indicates that factor analysis is useful for performance data.

Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with data. According to Table KMO and Bartlett's Test, the significance level is less than 0.05. Therefore, a factor analysis is useful for performance data.

Table communalities reports communalities for knowledge resources items. Initial communalities are, for correlation analyses, the proportion of variance accounted for in each variable by the rest of the variables. Extraction communalities are estimates of the variance in each variable accounted for by the factors in the factor solution. Small values indicate variables that do not fit well with the factor solution and should possibly be dropped from the analysis. The extraction communalities for knowledge resources are acceptable since all values are greater than 0.50.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.766
Bartlett's Test of Sphericity	Approx. Chi-Square	314.859
	df	6
	Sig.	.000

Communalities

	Initial	Extraction
Initiative performance	1.000	.734
p2	1.000	.708
p3	1.000	.765
p4	1.000	.778

Extraction Method: Principal Component Analysis.

Table total variance explained reports the variance explained by each component. Only one factor in the initial solution has eigenvalues greater than 1. One factor accounts for almost 62.11% of the variability in the original variables. The second section of this table shows the variance explained by the extracted factors before rotation. The cumulative variability explained by this one factor in the extracted solution is about 62.11%. Therefore, the higher percentage of variation is explained by one factor.

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.485	62.117	62.117	2.485	62.117	62.117
2	.735	18.387	80.504			
3	.453	11.329	91.833			
4	.327	8.167	100.000			