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DEVELOPING AN ASSESSMENT MODEL
FOR THE IMPLEMENTATION OF MARKET ORIENTATION
IN SAUDI CONSTRUCTION ORGANISATIONS

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Abstract

Rapid evolution in the internationalisation of developing construction markets (along with increased global competition, technological innovation, and economic and political issues) has led organisations to become more efficient and effective. This has in turn enabled construction organisations to adapt and survive in today's highly competitive business environment. Dealing with such challenges while carrying out ongoing construction work requires the adoption of suitable strategic business approaches, such as the market orientation approach. Market orientation focuses on understanding customers' conflicting desires and needs, staying up-to-date with competitors' activities, and reforming organisational policies and procedures accordingly. Several conceptual and empirical studies have investigated the relationship between market orientation and firm performance. These studies found strong support for the positive impact of market orientation on firm performance in a number of different environments and contexts, especially in developed countries such as the United States, the United Kingdom, and Australia. Studies set in developing countries, such as Saudi Arabia, are still limited.

In recent years, the Saudi economy has experienced marked improvements in many industries, including the construction industry. This reflects Saudi Arabia's successful economic development. In order to retain these improvements, however, the Saudi construction industry has to face a number of economic, cultural, global, and market challenges. Bhuian (1995; 1997; 1998; 2012) has investigated the relationships between such factors and business performance in Saudi industries; however, examining these effects in the Saudi construction sector may yield different results. All of these considerations have motivated the present research project, which aims to develop a model for assessing the implementation of market orientation in Saudi construction organisations.

In order to achieve this aim, a comprehensive review of the literature was undertaken. This literature review focused on factors that prompted Saudi construction companies to become market-orientated. These factors were divided into two categories; namely, internal factors (e.g., top management characteristics, interdepartmental dynamics, and organisational structure and systems) and external factors (e.g., competitiveness, market characteristics, and governmental regulations). These factors were then drawn upon to form a number of hypotheses. Accordingly, a survey, in the form of an Internet-based quantitative questionnaire, was designed in order to investigate these hypotheses. In particular, the questionnaire sought to identify factors affecting market orientation in Saudi construction companies. After administering the survey, only 220 usable questionnaires (out of 334 responses received) were analysed using factor analysis.

The findings of this study support the proposed hypotheses. In particular, the study indicated that the market orientation of Saudi construction companies is determined by 15 factors across the following four dimensions: Communication and Interaction, Risk-Taking, Competition, and Organisational Systems. On the basis of these findings, an assessment model for market orientation in Saudi construction companies was developed. Subsequently, a supplementary model was built in order to help company managers to implement the market orientation concept using the interpretive structural modelling (ISM) technique, which is an effective qualitative method for developing such models.

Fulfilling the aim of this research offers both academic and practical contributions to the study of market orientation. Researchers, for example, will be able to use this research to identify initial indicators and tools for further in-depth studies related to market orientation, while managers will gain added insight into and guidance on market orientation. This will ultimately help managers evaluate, reframe, and prioritise their managerial practices.

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Chapter 1

Introduction

The continuing interest in developing a market orientation has increased in the past few years. Top managements from all over the world are realising its usefulness in improving their business performance. Jaworski and Kohli (1993) assessed the effects of market confusion and competitive intensity on this relationship in the context of the United States. These factors may additionally imply different impacts among Saudi organisations. This research intends to improve this aspect and to contribute, specifically, to the Saudi construction industry.

This introductory chapter presents the background, aim, objectives, and motivation of the research, and describes the nature of the problems associated with the research area. Subsequently, it gives an outline of the expected research contributions, and a structure of the whole report.

1.1.   Introduction

The previous decade has seen rapid progress in internationalisation for developing markets, which has led organisations to become more efficient and effective in their increasingly competitive business environments. Furthermore, organisations nowadays have become more oriented toward meeting customers' requirements and improving their overall performance (Gheysaria *et al*., 2012). Additionally, an 'open-door policy' has helped companies from developing countries to enter and obtain a competitive advantage in international markets (Boisot and Meyer, 2008). These issues have inspired top managers to instil a more outward orientation in their organisations and adopt new marketing strategies which will help their companies to achieve international objectives, and thus survive (Van Raaij *et al*., 2008).

The 1960s and 1970s witnessed attitudes in business management shifting from "*doing the job right to doing the right job*" (Gheysaria *et al*., 2012: p.1). This developed further in the 1980s, when catchphrases such as 'optimisation' and 'cost reduction' changed to 'customer satisfaction' and 'employee contentment and loyalty', and organisations became increasingly market-driven and customer-oriented (Rogers *et al*., 1994; Shapiro, 1988). Furthermore, the current climate of increased competition has motivated businesses to concentrate more intently on clients, competition, and the market setting in general.

However, the challenges resulting from adopting this proactive approach in the market while also carrying out on-going assessment of, as well as re-establishing, organisational policies and procedures efficiently require addressing. These challenges cannot be addressed by employing the measures recommended by old economic systems, instead requiring new business approaches and suitable strategic orientations (Li *et al*., 2008; Mathews, 2006). One potential solution lies in implementing an approach that embraces market orientation (Smirnova *et al*., 2011). Unlike customer orientation, which mainly focuses on understanding and meeting the conflicting desires and needs of customers, market orientation "*represents a set of processes touching on all aspects of the company*" (Shapiro, 1988: p.120). It thus focuses on customers,

competitors and internal coordination based on market demands (Narver and Slater, 1990) and thereby provides a source of competitive advantage.

Kohli and Jaworski (1990: p.6) define market orientation as "*the organisation-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisation-wide responsiveness to it*". Moreover, Slater and Narver (1995: p.11) explain that market orientation emphasises the importance of "*continuously collecting information about target-customers' needs and competitors' capabilities and using this information to create continuously superior customer value*". In other words, market orientation can be seen as "*a means that allows managers to focus their attention on external and internal elements and activities that affect the firm's activity that enhances its performance*" (Simberova *et al.*, 2010: p.488).

In recent years, the market orientation concept, as pioneered by Kohli and Jaworski, and Narver and Slater since 1990, has been considered a critical aspect of business success. In 1990, Narver and Slater were the first researchers to identify market orientation as the basis of a firm's profitability. In 1994, they further acknowledged that it can even enhance a business's customer retention, sales growth, new product success, and, therefore, overall business performance. Later on, Jaworski and Kohli (1993) and Webster (1994) stressed market orientation's importance and proposed it as a key element of business success and survival in the modern competitive business world (Arif, 2008).

The concept has since started to attract the interest of marketing researchers globally, resulting in a significant increase in the number of academics studying market orientation. This interest can be attributed to the growing number of attempts to investigate market orientation in a huge variety of industrial and consumer sectors, including the banking industry (Wallace and de Chernatony, 2011; Hamidizadeh *et al.*, 2011), the health sector (Mutongoreni and Jagero, 2014; Buzzo and Mendonça, 2013), the higher education sector (Asaad *et al.*, 2014; Abu Bakar *et al.*, 2014), high-tech firms (Neuenburg, 2010; Liu *et al.*, 2011), the manufacturing sector

(Köhler *et al.*, 2012; Agrawal, 2012, Ellonen *et al.*, 2009), the retail industry (Pantano, 2014) and many others.

Initial research on market orientation, most of which was conducted after the revolutionary work of Kohli and Jaworski (1990), Jaworski and Kohli (1993), Kohli *et al.* (1993), and Narver and Slater (1990), focused on industries in the United States. Similar research was subsequently conducted in many other developed (industrialised) countries, including the UK (Greenley, 1995; Diamantopoulos and Hart, 1993; Harris, 2001), Japan (Deshpandé *et al.*, 1993), Germany (Fritz, 1996), Australia (Dawes, 2000; Farrell, 2000), the Netherlands (Langerak *et al.*, 2004), and Spain (Lado *et al.*, 1998) (see Table 1.1).

Table 1.1: The number and percent of empirical studies designed to assess market orientation in different countries (Goldman and Grinstein, 2010)

Country	Total contribution	Percent of total contribution
United States	440	49.5%
United Kingdom	192	21.6%
China	82	9.2%
Australia	75	8.4%
Spain	60	6.7%
Netherlands	35	3.9%
Saudi Arabia	5	0.6%
Total	889	86.0%

Researchers then progressed to exploring the relationship between market orientation and firm performance in emerging and developing nations. Several conceptual and empirical studies in developing countries examined this relationship and found strong support for its efficacy in countries such as China (Zhou *et al.*, 2008), India (Deshpandé and Farley, 1999), Taiwan (Chang and Chen, 1998; Horng and Chen, 1998), Ghana (Appiah-Adu, 1998), Korea (Kwon and Hu, 2000), Jordan (Al-Hawary *et al.*, 2013), Russia (Smirnova *et al.*, 2011), Turkey (Kirca, 2005), the United Arab Emirates (Siddique, 2014), and Uruguay (Lado *et al.*, 2013).

However, despite the growing research on market orientation in developing countries, scholars have reported gaps in the extant body of knowledge for many emerging countries, including Saudi Arabia (Bhuian, 1997; Abdul-Muhmin, 2002). In addition, the limited number of studies on market orientation in Saudi Arabia is particularly marked compared to the country's rapid economic development, so there is a clear need to examine the market orientation-firm performance relationship among different business sectors and industries in the country.

1.2.   Saudi Arabia (Economy)

The Saudi economy has experienced significant improvements in a short period of time. With strong government control over major economic activities, the country has developed from a basic agricultural society into a regional and global economic power with modern infrastructure. Saudi Arabia, which has an oil-based economy, is the largest oil producer and exporter in the world. It has around 25% of the world's proven reserves and plays a leading role in OPEC (MOP, 2008). The oil, which has been exploited since the 1950s, has brought massive wealth to the country (Saudi Commerce and Economic Review, 2005), making Saudi Arabia one of the strongest economies in the Gulf region and the Arab world (Dincer *et al.*, 2005).

Following the oil boom, it became increasingly necessary for the Saudi government to reduce its dependence on oil as a main resource, because it is likely to be depleted in the long run and is subject to the fluctuations of international energy markets (MOP, 2009). In other words, being a single-good economy will have undesirable impacts on the growth of the economy as its development will be subject to the instability of oil prices. Thus, in the early 1970s, the Saudi Ministry of Economy and Planning formulated long-term economic and social development plans aimed at creating sources of income other than oil and started to attract investment into non-oil sectors. Today, the construction sector forms 78% of the country's non-oil sector (NCB Capital, 2013) and more than 4,700 manufacturing companies in Saudi Arabia's 29 industrial

cities are in full operation producing a variety of products, from textiles, leather, woodwork, chemicals, plastics and metals to foodstuffs (Saudi Industrial Property Authority, 2012).

Consequently, the government has implemented a number of schemes to enhance infrastructure, allocating a significant budget to fund a number of major construction projects (MOP, 2009). Under the Saudi Ninth Development Plan, which was scheduled to take place between 2010 and 2014, the government aimed to invest billions of dollars in infrastructure projects including housing, healthcare, schools and colleges, airports, and road projects (GCC, 2012).

1.3. The Saudi Construction Industry

The construction industry plays an important role in the economy of Saudi Arabia (NCB Economist, 2003) and has grown rapidly over the past few years (see Figure 1.1). According to the Middle East Economic Digest (MEED, 2012), an estimated $629 billion worth of projects were planned and executed in 2012, which makes it one of the largest construction industries in the Middle East. The Saudi public sector, represented by government ministries, is responsible for infrastructure and national development projects and plays a central role in industrial activity. This is also reflected in how the government has encouraged the private construction sector to become more involved in industrial development and diversification under the Saudi free enterprise system (MCI, 2001). This involvement was a key driving factor that took the Saudi construction sector to new heights (Alsehaimi *et al.*, 2012).

These efforts have resulted in huge expenditure on construction and infrastructure projects over the past few years (see Table 1.2). With multi-billion dollar projects underway and many more in the planning stages, Saudi economic development has led to rapidly increasing growth and booming investment in the construction and infrastructure industry (Middle East Finance and Economy, 2005). As mentioned earlier, Saudi Arabia's long-term economic and social

development plans took account of the country's current situation, thereby ensuring to carry out stable and a balanced development in matters such as education, health, agriculture, energy, and transportation (MOP, 2009).

Figure 1.1: Estimated construction growth – KSA (Business Monitor International, 2012)
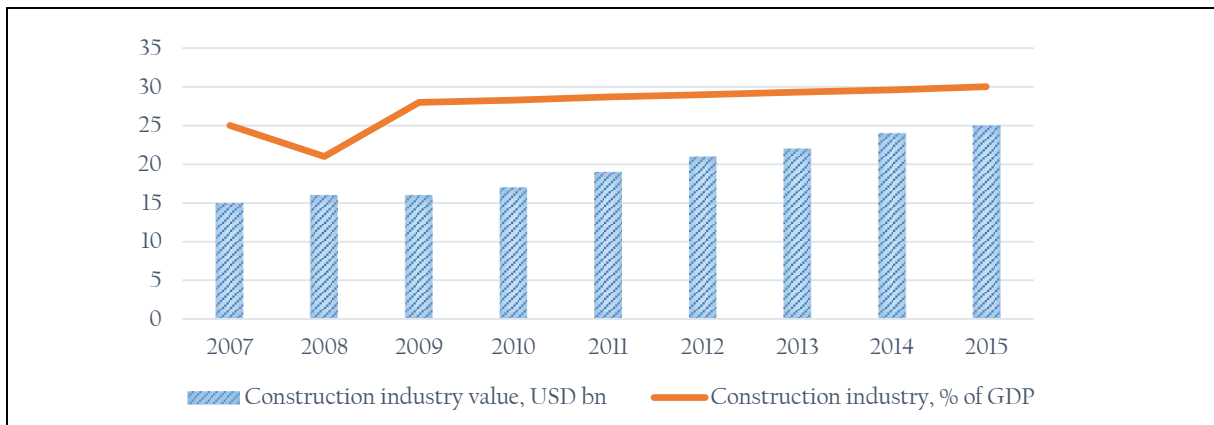
Recently, the Kingdom experienced a huge leap in education, with the number of universities jumping from 15 to 33 spread across different regions around Saudi Arabia. In 2009, the King Abdullah University for Science and Technology was established, with a budget estimated at $2.7 billion and the aim of becoming a world well-known postgraduate research institution, as well as to play a key role in contributing to scientific and technological knowledge improvement.

In the transport sector, the Saudi Landbridge Railway Project is being constructed to connect the northern and southern regions of Saudi Arabia, linking Riyadh to Dammam, Jubail, Jeddah, Makkah and Medina. In addition, the construction of a railway connecting the two holy cities has commenced and is expected to be operational by the end of 2015. Another important construction project in the country is the building of the King Abdul-Aziz International Airport in Jeddah, with an estimated value of $7.2 billion. This has been designed to support the national air transportation system and serve as the gateway to the region, as well as to provide quality facilities to its passengers, tenants and operators.

Table 1.2: Examples of major projects and their value (Business Monitor International, 2012)

Examples of major projects	Value ($ billion)
Transport	
King Abdulaziz International Airport	7.2
Port at King Abdullah Economic City	6
Saudi Landbridge Railway	7
Energy and utility	
PP10 and PP11 power plant near Riyadh	4.1
Rabigh 6, 2,400 MW power plant	3.4
Ras al Zour water and power plant	2.4
Shoaiba 3 desalination plant	2.1
Construction and social infrastructure	
Kingdom Tower project	30
Jubail refinery scheme	12
King Abdullah Sports City in Jeddah	4

Moreover, the government continues to support housing and real estate development projects in various cities and provinces of the Kingdom. Currently, 47 major housing projects are being executed to create around 517,000 commercial units, taking into account the diversity of choices of housing types, as well as considering and providing privacy, security, and compatibility in accordance with social needs. Furthermore, the energy and utilities sector is also attracting investment in new water, sewerage, and electricity projects. The Ministry of Water and Electricity's spending is expected to reach $133 billion on such projects during the next 10 years. This expenditure includes power plant projects in Riyadh, Rabigh, Ras al Zoura, and Shoaiba. The Saudi government is also planning to attract more investment in construction projects in the private and public sectors in coming years. Projects such as the Kingdom Tower project in Jeddah, the Jubail refinery scheme, the King Abdullah Sports City, and the new economic cities would generate billions of dollars for the construction industry and therefore benefit the local economy. In addition to this, under the sponsorship of His Majesty King Abdullah Bin Abdulaziz, the Saudi Arabian General Investment Authority (SAGIA) was established in April 2000 as an investment instrument to sustain the pace of economic growth in Saudi Arabia. Thus, in 2006, the government promoted the development of six new

economic cities in Rabigh, Hail, Madinah, Jazan, Tabuk and in the Eastern Province through a public-private venture, each devoted to specialised industries (SAGIA, 2006). The King Abdullah Economic City (KAEC) is the largest new economic city, located in Rabigh along the Red Sea coast with an area of about 168 square kilometres. This city, which is expected to be completed by 2016, represents an investment of $27 billion and has the potential to create a million jobs (SAGIA, 2006; SAAB, 2007). In the same year, the Prince Abdulaziz bin Mousaed Economic City (PABMEC), situated in Hail, is expected to be completed. It is slightly smaller than the KAEC, spanning an area of 156 square kilometres. The PABMEC project is headed by the Rakisa Holding Company and is estimated to be worth $8 billion, as well as promising to create 55,000 new jobs. The Knowledge Economic City (KEC) in Madinah, moreover, will cover an area of 4.8 square kilometres, is located near the holy mosque of the Prophet. It will focus on knowledge-based industries with an Islamic theme and Islamic civilisation studies, as well as hosting a park themed around the prophetic heritage. The investment in the city will amount to around $7 billion and create 20,000 new jobs. Meanwhile, Jazan Economic City (JEC) is located in the south-western region of the country on the Red Sea, covering 100 square kilometres. The city is expected to offer 500,000 new jobs and will focus on energy, agriculture, fisheries, and labour-intensive industries.

Table 1.3: New economic cities in Saudi Arabia

		Area (km²)	Value ($bn)	Job opportunities	Year of completion
Cities under development					
King Abdullah Economic City (KAEC)	Rabigh	168	27	1,000,000	2016
Prince Abdulaziz bin Mousaed Economic City (PABMEC)	Hail	156	8	55,000	2016
Knowledge Economic City (KEC)	Madinah	4.8	7	20,000	2015
Jazan Economic City (JEC)	Jazan	100	27	500,00	2014
Cities in initial planning stages					
Tabuk Economic City (TEC)	Tabuk				
Eastern Province Economic City (EPEC)	Eastern Province				

Unlike the four economic cities mentioned above, which are all under development and expected to be completed in the coming years, Tabuk Economic City (TEC) and the Eastern Province Economic City (EPEC) are still in their initial planning stages (see Table 1.3). All of these economic cities, however, will provide employment opportunities and economic development to areas of the Kingdom beyond the three major metropolitan areas of Riyadh, the Western Province, and the Eastern Province.

1.4. Research Problem

With the current booming economy in Saudi Arabia, the construction industry represents a key driving factor in its successful development. Yet, to cope with these conditions the industry must face up to a number of issues and challenges. Some of these challenges are unique to the industry, while others are inherent in any business. Issues regarding cost, quality and time taken to complete projects are the primary concerns in the construction sector at present. Indeed, many previous studies have reported that the Saudi construction industry faces continuing problems in these areas, usually in the form of frequent and lengthy delays in completing projects, low productivity, lack of knowledge management, poor quality, safety problems, waste, mistakes, and having to redo work due to initial failures (Al-Sedairy, 2001; Falqi, 2004; Assaf and Al-Hejji, 2006).

Even though cost, quality, and time are considered essential indicators of the potential success or failure of a project, Kagioglou *et al.* (2001) argue that they do not, in isolation, provide a balanced view of a company's 'true' performance, especially with today's unstable conditions. They therefore suggest focusing on other factors that are more applicable at the company level rather than at the project level, such as the customer and internal business process perspectives. In this regard, some countries have established (or supported) agencies aimed at conceiving long-term strategies for enhancing their construction industries. These countries comprise Australia (Australian Procurement and Construction Council, 1997), Hong Kong and

Singapore (Construction 21 Steering Committee), and the UK (Latham, 1994; Egan, 1998). These agencies report trends that challenge the current state of the construction industry and advocate paying further attention to the requirements of globalisation, the increasingly sophisticated economy, client demands, and technological and social changes, all of which might strongly influence survival in the industry.

Ofori (2000) and Raftery *et al.* (1998) highlight that these trends are also relevant to construction industries in developing countries, with the latter finding a strong impact of globalisation and free-markets on the development of various Asian construction industries (e.g., Japan, China, Turkey, India, Malaysia, Philippines, Sri Lanka, Vietnam, Hong Kong, and Singapore). The construction industry in Saudi Arabia is no exception to this trend, as there is now more need than ever for efficient construction management and constant improvements in performance (Al-Sedairy, 2001). Moreover, Bassioni *et al.* (2004) and El-Mashaleh *et al.* (2007) argue that economic growth and intense competition in the Saudi construction sector have put strong pressure on construction companies to improve their productivity and performance.

Most studies on organisational performance in the Saudi construction sector are still carried out at the project level, however, so studies on performance evaluation and management at the company level are still lacking (Bassioni *et al.*, 2004). However, in a recent study, Ali *et al.* (2013) investigated a list of potential performance indicators that can be implemented by construction executives in Saudi Arabia at the company level. The results of this showed that factors such as customer satisfaction, awareness of competitor activities, and business efficiency are increasingly important for enhancing the performance of Saudi construction firms. In addition, awareness of these factors will help top managers in the industry to identify optimal strategies, thereby allowing companies to improve their position in the market and, most importantly, to adapt and survive (El-Mashaleh *et al.*, 2007).

As mentioned earlier, one effective way to satisfy these managerial demands and to be proactive in the market is by implementing the market orientation concept. Bhuian has investigated the implementation of market orientation in various Saudi industries, including manufacturing (1995a, 1998), banking (1997) and non-profit firms (2012) to examine its role in enhancing business performance. However, this approach could have different effects among Saudi construction companies, given the way in which construction projects differ from the industries investigated by Bhuian. Therefore, the present research is mainly concerned with examining the development and the implementation of market orientation in Saudi construction companies.

1.5. Research Justification and Motivations

Market orientation has been identified as an "*important theoretical construct which has stimulated much conceptual, empirical and executive attention*" (Wensley, 1995: p.59). According to Kohli and Jaworski (1990: p.1), market orientation is the "*cornerstone of the marketing discipline*" and "*represents the foundation of high quality marketing practice, with the premise that market oriented organisations will improve their market performance*" (Kohli *et al.*, 1993: p.6). Since market orientation can produce value for customers and sustain a competitive advantage, organisations using this approach will typically surpass their less market-oriented competitors and improve their overall performance (Narver *et al.*, 2000). Moreover, market orientation drives organisations to expand, develop and interact with new and diverse foreign markets (Knight and Cavusgil, 2004) by accounting for client opinions and convictions, analysing information about competitors, and offering the necessary facilities and products when required (Child and Rodrigues, 2005; Luo and Tung, 2007). In addition, the influential conceptualisation and operationalisation research by Narver and Slater (1990) and Jaworski and Kohli (1993) facilitated later research to explore and define market orientation in a variety of national and industrial settings (Akrimova, 2000; Hooley *et al.*, 2000). However,

although a range of studies have discussed how firms can 'create' enhanced market orientation by means of education (e.g., Narver *et al.*, 1998), an urgent need remains for further empirical research into management techniques, especially in third world countries (Buerki *et al.*, 2014; Hussain *et al.*, 2015).

The literature on market orientation and the researcher's involvement in the Saudi construction industry have influenced and motivated the design of this research. Although market orientation is a topic that has been widely explored in the literature, there is still little research on market orientation in special service environments such as construction organisations. In addition, the researcher's involvement in the industry has given him an insight into the working practices of construction organisations and a clear sense of the seriousness of the managerial problems faced therein. Finally, it is worth mentioning that Saudi organisations' top managers are now convinced that market orientation is the path to enhanced business performance and a number of developments are increasingly moving in this direction (Bhuian, 1995b; Aldraehim et al., 2013). This movement is reflected on the increasing number of studies to evaluate the market orientation of different sectors in Saudi Arabia, for instance, the banking industry (Missaoui and Saidi, 2014) the tourism industry (Bagheri et al., 2013), and the telecommunication industry (Alanazi, 2014).

1.6.   Research Aim and Objectives

The topic of market orientation is vast and well-covered in the literature. However, although issues such as its role in improving companies' performance have been extensively studied, some service areas, like construction, have been largely overlooked. With regard to the need to expand understanding on this matter and to investigate the impact of market orientation in new fields and contexts, the construction industry in Saudi Arabia therefore becomes fertile ground for research. Moreover, conducting research in this sector will help top managers in

the industry to identify processes and procedures which can make their companies more market-oriented. Therefore, the aim of this research is:

> To develop a model for assessing the implementation of market orientation in Saudi construction organisations

In light of this, a list of objectives to help achieve the proposed aim must be developed. However, before proceeding, it is worth mentioning that formal research into market orientation is concerned with four main issues (Van Raaij *et al.*, 1998):

- The definition issue

- The measurement issue

- The model issue

- The implementation issue

The definition issue concerns the conceptualisation of market orientation, making it the first matter to tackle for research in this field. This reflects that market orientation is a very broad concept, with the literature providing extensive material on the concept of market orientation, its origins, what it constitutes, recent developments, and challenges faced by market-oriented companies. Thus, the following objective has been derived:

- To identify the historical roots and the current international position of the market orientation concept, both in general and in Saudi Arabia in particular

The measurement issue, meanwhile, focuses on the antecedents to and consequences of market orientation implementation. This includes the factors that make firms more or less market-oriented. Thus, the second objective of this research is:

- To investigate the drivers and barriers to achieving market orientation in Saudi construction organisations

The model issue, moreover, concerns the establishment of scales or instruments for assessing and operationalising market orientation. This requires the development of a model of measurement based on the drivers and barriers presented in the research context. The third objective of this study is therefore:

- To construct a model for assessing the extent of market orientation in Saudi construction organisations

This leads on to the implementation issue, which focuses on guidelines by which top managers can follow in order to make their firms more market-oriented. This gives rise to the following objective:

- To develop a model for implementing market orientation in Saudi construction organisations

Subsequently, as the need for setting a precise strategic focus for top managers becomes apparent, there is a concomitant need for recommendations as to how they can effectively apply market orientation models, including in terms of both assessment and implementation, in order to improve business performance. Therefore, the final objective of this research is:

- To provide recommendations as to how managers in Saudi construction companies can improve their business performance via enhanced market orientation.

1.7. Research Scope

The scope of the construction industry is quite broad, as it includes many participants, systems, and practices. Thus, it is unrealistic to encompass all features of the industry in one study. The following points highlight the scope of the present research.

First of all, this research will consider management-related factors that are controllable internally by construction organisations, along with external factors related to the market. Moreover, this research is limited to construction organisations' management; other aspects of

construction projects (such as cost, time, and quality of completed projects) and project lifecycle (including the planning and execution stages) will not be examined. More specifically, this research will focus on factors related to customers, competitors, and internal business processes only, as these are the key factors at which the market orientation concept is targeted.

The second important point about the scope of this study concerns the involved population, as this research is limited to Saudi private construction companies, including private consultants and contractors, as well as specialists in the fields such as designers, project managers, and engineers. However, firms fully owned by the Saudi government are excluded. This is because the majority of market orientation researchers emphasise customer needs and organisation profitability, which suggests that the market orientation approach is most applicable to private organisations. Moreover, when applying a customer-focused version of market orientation to a public organisation, citizens' needs and preferences become the focus of attention, rather than customers.

Finally, previous research on market orientation has mostly focused on large firms. Results have shown quite distinct differences between the impact of market orientation on small and medium-sized enterprises (SMEs) and on larger organisations (Acs and Audretsch, 1987; Coviello *et al.*, 2000). Larger firms are known to have advantages such as economies of scale, bargaining power with suppliers and distributors, brand name recognition, experience curve effects, and monopoly power to set prices above the competition (Fiegenbaum and Karnani, 1991). In contrast, smaller firms often face many obstacles, termed the 'liability of smallness' by Aldrich and Auster (1986). Additionally, smaller new ventures could face the added burden of the 'liability of newness', leading to higher failure rates among such organisations (Stinchcombe, 1965). In this regard, Assaf *et al.* (2014) examined the reasons behind the high number of construction SME failure in Saudi Arabia, and concluded that they relate to management incompetence, dependency on a very limited customer base and lack of effective business plans. Such differences could be significant when studying the role of market orientation in smaller firms, and which also provided the mandate for undertaking this study.

1.8. Overview of Research Design (Methodology)

A research design is a way of describing how a researcher goes about the task of conducting research. The guiding principle for designing any research is that it must fully address the research questions (Creswell, 2003). Thus, it is worth discussing the methodological approach adopted for this study. The research approach provides a blueprint for collecting data connected to the research and discussing this data in relation to the initial research questions. According to Easterby-Smith *et al.* (2002) the research approach involves defining the type of evidence sought, as well as the process of interpretation used to obtain satisfactory solutions to the objectives posed.

Research approaches are typically divided into two categories: qualitative and quantitative. However, it is common to involve both qualitative and quantitative methods, referred to as a mixed methods approach (Harwell, 2011). The use of mixed methods in social science research has been praised in the literature for providing a more holistic approach to conducting investigations (Brannen, 2005; Miles and Huberman, 1994; Punch, 2000). Furthermore, mixed methodology research has gained a lot of attention in business management studies too. Hitt *et al.* (1998), for instance, recommend that researchers engage with strategic development issues to integrate both quantitative and qualitative research techniques. Mingers (2001), meanwhile, highlights that the use of a mixed methods approach provides 'full richness' to the data obtained since real world problems are highly complex and multidimensional.

The present thesis thus consists of a combination of quantitative and qualitative approaches that will be used as following:

- The thesis will start with a literature review, which will lead to the identification of the factors effecting market orientation in Saudi Arabian construction organisations. This will lead to conducting a survey (questionnaires) to collect the quantitative data needed to conceptualise the assessment model.

- Subsequently, a qualitative approach (focus-group interviews) will be employed to develop the market orientation implementation model.

Overall, Greene (2007: p.XIII) states that adopting a mixed methods approach provides an "*opportunity to compensate for inherent method weaknesses, capitalize on inherent method strengths, and offset inevitable method biases*". In other words, this approach will lend this research the strengths of both traditions of inquiry and thus provide insights not possible when only qualitative or quantitative data are collected.

1.9. Research Outline (Overview of the Thesis Chapters)

This thesis consists of seven chapters. This chapter presents an introduction to the research by providing general background details about the research setting, the Saudi construction industry, inherent problems within the industry, and issues concerning construction management practice. It also offers an overview of the market orientation concept as a key to businesses success and identifies the motivations for this research. Following this, it states the aim and objectives for this research, along with an overview of the methodology that will be used.

The second chapter then gives more detail about the concept of market orientation, providing a review of the literature on the subject which focuses on its definition, components, development, and current local and international status. Chapter three subsequently continues this discussion of market orientation by presenting a number of factors which serve as drivers and barriers to its implementation, as well as how these might influence some of the main issues in the Saudi construction industry. This chapter also explains how these factors have helped form the research hypotheses.

Chapter four is primarily concerned with the methodology that will be used to test the hypotheses set out in the previous chapter and achieve the research aim. This covers the

philosophy, approach, design, and methods of data collection and analysis. It also describes and explains the reasons for choosing the selected methods. The collected data is then analysed and interpreted in chapter five. The process of analysis will include exploring, presenting, and describing the collected data, followed by statistical analysis. The final step of this part of the research is accepting and rejecting the hypotheses. This chapter also includes the assessment model, which is developed and explained based on the results obtained, followed by a comprehensive discussion of the research findings.

Subsequent to the development of an assessment model, chapter six covers the construction of a supplementary model that will help managers at Saudi construction companies to implement the market orientation concept. More specifically, the chapter reflects on the use of interpretive structural modelling (ISM) as an effective method for developing such models. Finally, chapter seven presents the conclusions of the research. It closes the thesis by returning to the research objectives as initially formulated, providing answers and determining whether the results meet these objectives. This includes the main conclusions of the study, contributions made to existing knowledge and practice in construction management, and general recommendations. The chapter ends with suggestions for possible future research.

1.10. Conclusion

The rapid evolution in the internationalisation of developing markets (along with increased global competition, technological innovation, and economic and political issues) has led to many organisations becoming more efficient and effective in order to survive. Dealing with such challenges effectively requires the adoption of new and suitable business strategies. One possible solution to these challenges is to implement the market orientation concept, as discussed by the likes Kohli and Jaworski, and Narver and Slater since the 1990s.

Market orientation focuses on understanding customers' conflicting desires and needs, along with concentrating on competitors' activities and optimising organisational policies and procedures. Moreover, several studies into the relationship between market orientation and firm performance have found strong support in various environments and contexts, especially in developed countries such as the United States, the United Kingdom, and Australia. Studies in developing country settings, such as Saudi Arabia, however, are still limited.

Over the past years, the Saudi economy has experienced significant improvements in many industries, including the construction industry, which has been a key driving factor in the country's successful economic development. Yet, to maintain this improvement, the industry must face up to a number of economic, cultural, global, and market challenges. Bhuian (1995a; 1997; 1998; 2012) has investigated these factors in some Saudi industries, but these same factors may have different effects in the Saudi construction. This research therefore aims to develop a model for assessing the extent of market orientation in Saudi construction organisations. This will be achieved through the following objectives:

- To identify the historical roots and the current international status of market orientation, both as a general concept and in Saudi Arabia in particular
- To investigate the drivers and barriers to achieving market orientation in Saudi construction organisations
- To construct a model for assessing the extent of market orientation in Saudi construction organisations
- To develop a model for implementing market orientation in Saudi construction organisations
- To provide recommendations as to how managers in Saudi construction companies can improve their business performance via enhanced market orientation

Achieving these objectives and satisfying the intended aim will offer both academic and practical benefits, as researchers will be able to use it as a basis for further in-depth research

and managers will gain added insight into how market orientation can help them to evaluate, reframe, and prioritise their managerial practices.

In summary, this chapter provides an overview of the study and identifies the research domain, including the aim and objectives of the study, along with providing an overview of the methodology adopted. This chapter also highlights the various research issues that have been taken into account while undertaking this research. Finally, it provides a brief outline of each of the study's chapters

Chapter 2

Market Orientation – An Overview

This chapter presents a review of over fifty years of intellectual effort on the marketing concept, and market orientation, which this whole research is based on. The core literature on market orientation builds on two important publications in the *Journal of Marketing*: Kohli and Jaworski (1990), and Narver and Slater (1990). Both publications report on studies into the market orientation construct supported by the *Marketing Science Institute* (Swartz, 1990).

In order to cover the main issues concerning the market orientation literature, this chapter starts with presenting the historical background of market orientation, which originates from the marketing concept, and then it goes through its evolution over time. This is followed by an overview of the current position of market orientation, focusing on its definitions, components, assessment tools and measurements. More importantly however, this part helps to answer questions regarding what the market orientation is, what constitutes it, and how to assess it. In addition, this chapter functions to determine the importance of being market-oriented.

2.1. Introduction

In order to cover the matters concerning the topic of this research, a special emphasis should be put on the market orientation literature. The concept of market orientation has proved an interesting area for both practitioners and academics in marketing and strategic management disciplines in past years. Most of the researches focus on the nature, changes and evolution of this research area (Goldman and Grinstein, 2010); the relationship between market orientation and business performance (Day, 1994; Chang *et al.*, 1999; Sin *et al.*, 2005; Panigyrakis and Theodoridis, 2007); the causes and effects that influence this relationship (Kohli and Jaworski, 1990; Demirbag *et al.*, 2006; Laforet, 2008); and the problems associated with it in different contexts and industry settings (Harris and Ogbonna, 2001).

This chapter reviews over 50 years of intellectual effort on the marketing concept, and market orientation, on which this whole research is based. Moreover, the chapter is divided into three major parts. The first starts by presenting the historical background of market orientation, which originates in the marketing concept. Then, it goes through its evolution over time. This is followed by an overview of the current position of market orientation in the second part, focusing on its definitions, components, and assessment tools and measurements. More importantly however, this section helps to answer questions about what the market orientation theory is, what constitutes it, and how to assess it. The third part of this chapter determines the importance of market orientation, and in addition provides a review of the key drivers and barriers for organisations in achieving it. The chapter ends with a discussion of the current position of market orientation theory in the light of issues encountered by top Saudi managements wanting to measure the extent of market orientation in their organisations.

2.2.   Development of the Market Orientation Concept

The evolution of market orientation has been strongly influenced and guided by the history, philosophy, and development of the marketing discipline. The initial period of literature into market orientation was closely associated with the principle of marketing theory, which was then perceived as a management discipline (Wilkie and Moore, 2003). Early marketing scholars (e.g. Alderson, 1955; Drucker, 1954; Converse and Heugy, 1946) presented the marketing theory as a unique contribution to business strategy that allows a thoughtful, positive impact on organisational outcomes such as innovation and performance (Hunt and Lambe, 2000). Despite the initial writings on the marketing theory, the work of McKitterick (1958), Felton (1959), and Keith (1960) was the beginning of systematic concepts of the marketing discipline in the 20th century. They contributed a number of the fundamental outlines that have been the basis of subsequent researches, including the introduction of the term marketing concept (Wilkie and Moore, 2003). It advocates an organisation to establish long-term plans aimed at satisfying customer needs in order to maximise profits (Kohli and Jaworski, 1990; Webster, 1988).

The marketing concept was then developed to set a foundation for what is known as customer orientation. Kotler *et al.* (2008) argued that customer orientation was seen as a management philosophy of attaining organisational objectives, relying on awareness of the requirements and desires of target customers, and providing them with a superior level of satisfaction (Kohli and Jaworski, 1990; Webster, 1988). In general, it consists of three elements (Cravens *et al.*, 1987; Lusch and Lusch, 1987; McCarthy and Perrault, 1990):

- Customer philosophy: focuses on recognising and fulfilling exchange partners' desires and requirements.
- Goal achievement: concentrates on the technique by which a company can attain its objectives most effectively while fulfilling clients' requirements.

- Integrated marketing organisation: combining the effort by all sections of the organisation to fulfil corporate objectives by fulfilling clients' desires and requirements.

Moreover, Deshpandé and Webster (1989) argue that customer orientation is a definite organisational culture, or a basic common set of convictions and principles constructed around the client forming the column of a company's outlook on strategy and functions, and stressed the need for marketers to assist their companies to be client-centred (Houston, 1983; Wong and Saunders, 1993; Baker *et al.*, 1994; Hunt and Morgan, 1995). In other words, a customer-oriented organisation outlines a "*distinct organisational culture...that puts the customer in the centre of the firm's thinking about strategy and operations*" (Deshpandé and Webster, 1989: p.3).

The customer orientation concept has attracted generations of managers and has been one of marketing's most influential ideas (Kotler, 2005). The concept has also influenced researchers to take it forward and to examine its significance to various organisations and industries such as non-profit firms (e.g. McNeal and Lamb, 1980) and service industries (e.g. Cooper and Jackson, 1988), as well as to various nations (e.g. Barksdale, 1978). Furthermore, the majority of marketing journals are comprised of conceptual discussions and definitions as opposed to empirical study, and few have addressed matters that could be examined and quantified analytically (Wilkie and Moore, 2003). Examples include case studies (e.g. Keith, 1960), descriptive studies (e.g. Hise, 1965) and conceptual articles (e.g. Levitt, 1969).

Moreover, the discipline's domain expanded to new areas, as marketing researchers pushed their claims that the marketing department was central to all types of organisations (Kotler, 2005).

However, in the 1980s, marketing academics examined customer orientation from an information viewpoint (Fullerton, 1988). This examination has concluded that customer orientation has been established as the optimal management philosophy when it is not necessarily so in all instances, and there are many examples of poor marketing practices that

have been adopted in the name of the concept (Houston, 1986). In response to previous criticism of the concept, as well as the intense global market changes that occurred at that period, numerous researchers have attempted to reconsider its validity (Lawton and Parasuraman, 1980; Parasuraman, 1981; Webster, 1981, 1988; Gaski, 1985; McGee and Spiro, 1988). This was supported by Webster's suggestion (1994b: p.273) to present a new concept that is suitable for market situations with a "*set of guidelines for creating a customer-focused, market-driven organisation*" rather than being a customer-driven organisation. These factors have led to the development of the market orientation concept.

2.3.   What Is Market Orientation?

Marketing literature provides many definitions and descriptions of market orientation in several ways and by different means. The first author to identify market orientation is possibly Shapiro (1988), who stated that market orientation represents "*a set of processes touching on all aspects of the company*" (p.120), and it embodies the implementation of the marketing concept as a part of these aspects. Shapiro (1988) signified that three features render a firm market driven. These are:

- information relating to corporate function
- inter-functional and interdivisional strategic and tactical decisions
- the execution of well-coordinated decisions

These features are simply the adoption of the marketing concept. Pitt *et al.* (1996) supported this argument by asserting that the extent of market orientation of an organisation is subject to the extent of execution of the marketing concept.

Even though the term market orientation has been used in lots of studies, different perspectives can be distinguished from a conceptual point of view (Becker and Homburg, 1999; Dreher,

1994). In this respect, Helfert *et al.* (2002) categorised the literature of market orientation's definitions into three major divisions (p.11): cultural, behavioural, and system-based.

The first division sees market orientation as a form of culture that is supported by the attitudes and principles of the company. The culture is client-focused and is produced as a result of the focus on clients' needs. Sathe (1983) described organisational culture as the group of significant comprehensions shared by participants in a society. According to Daft (1989), an organisational culture is described as the principles, fundamental convictions and comprehensions held in common by members of a firm. Turner and Spencer (1997) asserted that culture offers company participants a concise comprehension of thought and action. Therefore, the marketing concept may be seen as organisational culture, as it leads and channels an organisation on correct thoughts and actions.

For example, Narver and Slater (1990: p.20) define market orientation as "*the business culture, or climate, that most effectively and efficiently creates superior value for customers*". In this case, a market-oriented organisation places the highest priority on the profitable creation and maintenance of superior customer value, which involves all employees' commitment (e.g. Deshpandé *et al.*, 1993; Narver and Slater, 1990; Slater and Narver, 1995; Shapiro, 1988). In addition Narver and Slater (1998) noted that the two decision standards that comprise market orientation as an organisational culture include the extended period of concentration and profitability in addition to its three key aspects:

- Customer orientation: the constant comprehension of the requirements of the present and potential intended clients and the employment of that knowledge to form client value.
- Competitor orientation: the constant comprehension of the ability and schemes of the main present and potential optional satisfiers of the intended clients and the employment of that knowledge to form better client value.

- Interfunctional coordination: the cooperation of all activities in the business in employing client and alternative market data to form better value for clients (Narver and Slater, 1990).

These dimensions were supported by Harris (2002), who confirms that these market orientation proportions comprehend the creation of customer value.

The second type of definitions describes market orientation as a specific set of behaviours. This proposition was adopted by Kohli and Jaworski (1990: p.6), who define the market orientation concept as "*the organisation-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisation-wide responsiveness to it*". They emphasise client concentration, coordinated marketing and profitability as the main columns of the marketing theory (Rouziès *et al.*, 2005). This definition offers an operational description that outlines the functions that a market-oriented company must carry out. These activities are concentrated in three parts (Kohli and Jaworski, 1990):

- Intelligence generation: based on current customer needs and environmental factors
- Dissemination of information: the information obtained should be promulgated among organisational bodies that are alike
- Responsiveness to the information: after collecting the data, to develop and implement new strategies

Based on their synthesis study, Deshpandé and Farley (1998: p.226) confirm this definition and emphasise that "*market orientation focuses on (potential and current) customer-related activities rather than non-customer-related behaviours (e.g., collecting intelligence on competitors)*". However, Cadogan and Diamantopoulos (1995) found that the Narver and Slater conceptualisation of market orientation shares a network with that provided by Kohli and Jaworski (1990); customer orientation, competitor orientation, and inter-functional coordination tap a similar domain to intelligence generation, dissemination, and responsiveness.

Despite that, whether or not a market orientation is equivalent to organisational culture (as defined by Narver and Slater (1990)), or to a set of behaviours (as defined by Kohli and Jaworski (1990)), it is indeed a subject of intense discussion (Deshpandé and Farley, 1998a, b; Narver and Slater, 1998; Narver *et al.*, 1998). Nevertheless, Becker and Homburg (1999) detect a missing discussion about management issues related to market orientation and fill this gap by taking a systems-based perspective. Deshpandé and Farley (1998a) support this discussion and investigate the differences between Narver and Slater's, and Kohli and Jaworski's definitions. They conclude that a market orientation is rather a set of activities and processes related to continuous assessment of serving customer needs (Deshpandé and Farley, 1998a). They also claim that a market orientation "*puts the customer's interests first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise*", and emphasise that customer orientation (used synonymously with Kohli and Jaworski's (1990) market orientation) is part of an overall, but more fundamental, corporate culture (Deshpandé *et al.*, 1993: p.27).

As categorised earlier by Helfert *et al.* (2002), the third type of definitions, taps on the system-based perspective, representing market orientation in the sense of different organisational activities, and segmented into five subsidiaries: organisation, information, planning, controlling, and human resource (Narver *et al.*, 1998).

Although opinions have considerable variations in their comprehension of market orientation (Dreher, 1994), there is a substantial quantity of overlap too. Cadogan and Diamantopoulos (1995) dispute that cultural and behavioural opinions include functional and theoretical overlaps in almost all aspects. Particularly with regard to operationalisation, the prevalence is quite outstanding. Founded on their empirical results, Avlonitis and Gounaris (1997) propose that a separation of the behavioural and cultural technique must be prevented.

What makes these two theories comparable is the concentration it has on the client, where the client is the most significant aspect, and how it is important to react to client opinions.

Additionally, both theories concur that apart from the client, exterior orientation (outside organisational limits) is additionally required. Jaworski and Kohli (1996) are inclined to move towards the concepts of Narver and Slater (1990). Additionally, both perspectives entail being sensitive to the constantly changing market by conducting continuous research on clients and competitors, sharing data, and proactively coordinating operations (Martin and Grbac, 2003).

Additionally, there is an overlap between the structure-founded view and the two alternatives. For example, a market-oriented information structure has information production and distribution forming two of the three dimensions. Additionally, all structure-based aspects are operationalised with respect to clients and competitors in addition to inter-functional cooperation. As Becker and Homburg (1999: p.18) conceptualise, "*market-oriented management in terms of the degree to which management systems are designed in such a way as to promote a business organisation's orientation towards its customers and competitors*".

In summary, the previous theoretical views of market orientation include comprehending intended clients' requirements with the sustenance of customer orientation, to generate increased, maintainable values, familiarisation with the options, and attainment of long-term advantages in the competitive market, while it remains imperative to sustain the outlook of customers' present requirements and opinions as these greatly impact the market. Moreover, a firm has to recognise and inspect its competitors, their strengths, weaknesses and their present and forthcoming actions and plans (Cambra-Fierro *et al.*, 2011).

2.4. Market Orientation Terminologies

The various terminologies for basic marketing concepts include terms such as marketing-oriented, market-driven, market-focused, and customer-oriented (Day, 1994). However, after 1990, market orientation and market-oriented became the widely accepted terms, referring to

creating (Narver *et al.*, 1998) or implementing (Lichtenthal and Wilson, 1992) the marketing concept, and this was very well received (Mason and Harris, 2006). This research prefers using the latter terms for the sake of clarity, and because they were well conceived and rehearsed in a number of earlier studies (Ruekert, 1992; Harris, 1996; Slater and Narver, 1998), unless otherwise stated.

2.5. Current International Status of Market Orientation Concept

Since the revolution in the market orientation concept was so successful, researchers took it a step further by exploring the market orientation of today (Tokarczyk *et al.*, 2007). A business that is now known as a market-oriented business signifies that it is already following the marketing concept (Kohli and Jaworski, 1990), since it focuses mainly on customers, as well as competitors. In addition, the market orientation concept is nowadays associated with the ideal company culture, where satisfaction and trust are seen as the drivers of market orientation and its results (Arif, 2008).

Messikomer (1987) and Wong *et al.* (1989) assert that top management is largely supportive of market-oriented change. Moreover, new and improved market orientation suggests that the marketing department must work not alone, but alongside the top management (Abdul Kadir *et al.*, 2011). Tokarczyk *et al.* (2007) supported this argument by stating that businesses with such attitudes manage to keep ahead of the opposition. The salesperson's customer orientation, or the individual's level of market orientation, results from the conviction that their interaction with the clients has a major effect on sales (Cross *et al.*, 2007; Ruekert and Walker, 1987). There was also a focus on the selling organisation. Evaluation and reward structures were being applied, thus examining sales force market orientation (Anderson and Chambers, 1985). Focusing on these elements will subsequently make organisations meet their customers' needs and generate more profit (Webster, 1988).

Furthermore, the evolution of the market orientation literature has witnessed a substantial growth. Researchers focused their concentration on concepts founded on the idea that the successful organisation is the one that expedites organisational market orientation and perceives divergence from this as an inhibitor (Cross *et al.*, 2007; Ruekert and Walker, 1987). Finally, current researchers are attempting to gain deeper insight into market orientation through some of the following aspects:

- A more complex relationship between market orientation, company performance, and other branches, such as innovation, entrepreneurship and the learning organisation (Ozkaya *et al.*, 2015; Yannopoulos and Auh, 2012; Nasution *et al.*, 2011).

- Proactively doing business and growing with a competitive edge (O'Shaughnessy, 2014; Kumar *et al.*, 2011).

- Being responsive to the ever-changing market in different industries and contexts (Arif, 2008; Shehu, 2014; Ramaseshan and Pang, 2015).

2.6.   Market Orientation in Saudi Arabia

According to Hooley *et al.* (1990), companies in industrialised nations can be grouped into four types, namely, marketing philosophers, sales supporters, departmental marketers, and the unsures. The companies characterised as 'marketing philosophers' display the most progressive evolvement of the marketing theory. Most Saudi companies fall into this type (Bhuian, 1995). These companies view marketing as a function – with a key responsibility for recognising and satisfying client requirements – and as a directing philosophy for the whole company. The second biggest section is the 'departmental marketers'. These companies offer a halfway house in the implementation of a total market orientation. Even though they are convinced that marketing concerns recognising and satisfying client requirements, these companies limit marketing to the functions of the marketing department. The third biggest group of Saudi companies is the 'unsures'. They have no precision concerning the function of

marketing in their firms. Finally, the smallest segment of Saudi companies falls into the 'sales supporters' type. These companies' main marketing functions are sales and promotion sustenance.

Though the matter of market orientation among Saudi firms has not been tackled in many studies, several conclusions may be made regarding Saudi firms and the state of the dissemination and implementation of market orientation among them. Most are mainly production-inclined (Bhuian, 1995). Additionally, they are firms, particularly those not linked to the social leaders of the state, which face aggressive competition from both industrialised national manufacturers and local companies. A number of these companies regard promotion as the main aspect in attaining market success. Consequently, these companies concentrate on product displays, clearance sales, discounts, customer gifts etc. (Bhuian, 1995). In addition, several firms that additionally encounter aggressive competition regard clients as the main force for product evolvement and marketing endeavours. This concentration is displayed in these firms' numerous operations (e.g. hiring of marketing experts, performing client surveys, employing the services of marketing research and advertising firms, and including marketing training in their employee education schemes) (Bhuian, 1995).

In summary, some Saudi enterprises have commenced implementation of the marketing concept. Others are cautiously implementing it, and yet others are considering the concept. There are several firms that are still unconvinced about it. Finally, there are firms that pay no attention to the marketing concept at all (Bhuian, 1995).

2.7. Organisational Market Orientation

The benefits of market orientation are highlighted in the literature (Gray *et al.*, 1998). However, the distinction between its main goals and how to actually implement it in an organisation

becomes essential, specifically for managers attempting to improve or to become more market-oriented.

As improvement of market orientation levels in different businesses is a complex matter, explanations concerning measuring, implementation, antecedents and consequences of market orientation are significantly useful for management decisions. These notions have received considerable research interest and inspired a number of marketing authors to offer general sets of dimensions, which resemble with different organisational advantages. In addition, because of their recognisable managerial relevance, the Marketing Science Institute (MSI) has allocated them a top priority ranking in terms of research requirements (Deshpandé and Farley, 1996).

2.8. Measuring and Conceptualising Market Orientation

In the past two decades, academics have attempted several contributions dedicated to the measurement, conceptualisation and investigation of the connection between market orientation and business performance (Jaworski and Kohli, 1993; Narver and Slater, 1990; Deshpandé and Webster, 1989; Houston, 1986; Kotler, 1977; Levitt, 1960; Shapiro, 1988; Webster, 1988). Furthermore, a review of the market orientation literature offers a great range of market orientation measuring instruments.

In the 1990s, four groups of researchers established measures of market orientation as aspects of wider studies with rather varied objectives (Narver and Slater, 1990; Kohli *et al.*, 1993; Deshpandé, Farley, and Webster, 1993; Deng and Dart, 1994). The importance of these measures is shown by the fact that numerous scholars have broadly acknowledged them, and each was employed in subsequent substantive research, which essentially broadened the research venue.

Narver and Slater (1990) developed MKTOR, which is a 15-item factor-weighted, seven-point Likert-type scale, for measuring market orientation. Although this scale is a one- dimensional

construct, beneath these 15 items are three aspects or sub-constructs: customer orientation (six items), competitor orientation (four items), and inter-functional coordination (five items). A business's market orientation score is the simple average of the scores of the three components (Narver and Slater, 1990). The scale was tested on divided samples from 371 self-conducted questionnaires from top managers of 140 SBUs from one corporation. Their outcomes, published in the Journal of Marketing (1990), established varied outcomes (positive and significant) of market orientation for product and non-product businesses.

Siguaw and Diamantopoulos examined the dimensionality of MKTOR (1994). Employing positive factor analysis, they established that the general fit for the model was unsuitable. Observing that Narver and Slater did not encompass factor analysis in their scale establishment, Siguaw and Diamantopoulos investigated the dimensionality of the main group of 15 items with investigative factor analysis. This had an outcome of five factors, the first resulting in more variance (30.8%) compared to the rest of the factors combined, and loading in factors reflecting client orientation, and a number of products reflecting competitor orientation and inter-functional coordination. Kohli *et al.* (1993) also criticised the MKTOR measure on the basis that it:

- Implements a concentrated view of markets by stressing customers and competitors as contrasted with a view that concentrates on these two stakeholders and extra aspects that force customer requirements and needs (e.g. technology, regulation)
- Does not exploit the speed with which market information is produced and distributed inside a company
- Comprises several items that do not exploit particular operations and conducts that signify a market orientation

Accordingly, Kohli *et al.* (1993) went ahead to establish a measure of market orientation, and assess its features, founded on the conceptualisation and data collected from prior studies. They established the MARKOR scale, which was published in the Journal of Marketing

Research (1993). The scale (originally with 32 items, but reduced during development to a freestanding 20-item scale) comprises three sub-constructs: intelligence generation (six items), intelligence dissemination (five items), and market responsiveness (nine items).

Kohli *et al.* (1993) claimed that MARKOR is "*moderately supportive of the validity of the market orientation construct*" (p.7). Their study was built around employing non-linear factor analysis of matched samples of senior marketing and non-marketing executives from 222 of SBU's encompassing companies, which were participants in MSI. Their technique was subsequently expanded to Scandinavia.

Although MARKOR was widely accepted by marketing practitioners and academics, Pelham (1993) argues that the measurement "*does not ensure firm-wide understanding of customers and firm-wide orientation behaviours*" (p.21), and a more suitable operationalisation of market orientation should encompass measures relating to client comprehension and how companies offer complete value to clients, instead of just measuring information collection and dissemination. On the other hand, he argues that Narver and Slater's MKTOR includes the idea of offering value to clients, by means such as client satisfaction, after-sales service, and top management communication with clients.

Moreover, Pelham (1993) conducted a pilot study of 51 presidents and sales managers, employing MKTOR as well as MARKOR. The outcomes illustrated that Narver and Slater's MKTOR attained more dependability than Jaworski and Kohli's MARKOR. MKTOR attained easy arrangement in factor analysis, while the facets of MAKOR did not attain easy arrangement for the suggested four aspects, or even two aspects. Thus, only one of the MARKOR measures attained an item association over 0.60 with an entire Cronbach's alpha score for their standard of market orientation of 0.71.

Nonetheless, comparable to this scholarly passion, particular contributions cause doubt regarding the validity of available scales and also the theory explanation. From the numerical perspective, MARKOR's reliability is reduced in comparison to MKTOR; additionally it does

not attain a single factor structure. The writers themselves acknowledge that the validity of the scales is fragile (Pelham and Wilson, 1995). When Siguaw and Diamantopoulos (1994) thoroughly examined the MKTOR model, they found that it is poorly adjusted. In addition, later researches illustrate that both scales require some adjustments, as they cannot be employed in their original state (Farrell and Oczkowski, 1997, Oczkowski and Farrell, 1998).

Using Churchill's (1979) paradigm for scale development, Gabel (1995) criticises the MARKOR scale on the following grounds:

- Domain condition of market orientation is subject to indefinite and contradictory previous conceptualisation for both itself and the marketing theory.
- Generation of scale items, data collection, and measurement purification was unable to encompass the views of clients and channel partners.
- Reliability is questionable in that MARKOR lacks both strong validity and inter-subjective certification.
- There is an absence of face and discriminate validity. For instance, Jaworski and Kohli (1993) offered no substantiation of reliability and validity of the market orientation standard, apart from recording levels of Cronbach's alpha.

In comparison, Narver and Slater did offer some proof of convergent, discriminating and concurrent validity for their MKTOR scale.

Deshpandé *et al.*, (1998) extended the market orientation studies of Jaworski and Kohli (1993) as well as Narver and Slater (1990), and developed a scale that encompassed the effect of corporate culture and organisational creativity on firm performance. Their nine-item scale was established using a list of 30 items, employing outcomes from a study on 138 Japanese executives published in the Journal of Marketing (1993). Individual interviews with two participants from pairs of client and merchant companies permitted assessment of inter-rate reliabilities at the company level. Subsequently, Deshpandé *et al.* (1997) extended their study

for global contrast. This scale was employed for England, Germany, France, China, Vietnam, Thailand, Hong Kong and the US.

In addition, efforts to distinguish and incorporate a few of the market direction scales have been made. Deshpandé and Farley (1996) synthesised MKTOR and MARKOR scales. MORTN is then produced, comprising a ten-item scale for market orientation (five-point Likert rating scale), deriving from more economical meanings of market orientation, such as: "*the set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs-assessment*" (p.46). Surprisingly, all ten items are focused on customer orientation.

With consideration to further improvement on the available market orientation scales, Deng and Dart (1994) developed a market orientation scale based on some of the conceptual foundations of Narver and Slater (1990) and Kohli and Jaworski (1990). Their scale concluded that a market orientation is comprised of four components: customer orientation, competitor orientation, inter-functional coordination, and profit orientation. Taken from journals and other publications, a 44-item collection was produced. Afterwards it was altered to 33 items in line with the results of pre-test interviews. Validity was assessed through simple correlation analysis. While performing tests on the Narver and Slater (1990) instrument on 248 senior Canadian managers, Deng and Dart (1994) found that there was a direct relationship. In concluding, Deng and Dart (1994) argue that their market orientation scale is relatively concise and it encompasses a more comprehensive variable set than previous scales. Nonetheless, the disadvantages of the Deng and Dart (1994) scale are as follows:

- The scale is taken from the MKTOR scale and adds more items. In a study with many variables, it would be time-costly to have respondents complete it, so the 33-item range is inconvenient.
- The scale includes profit-orientation items, as from the literature, an agreement was made that profit orientation is a consequence of market orientation, not a part of it.

Finally, as many authors concur with Churchill (1979) that building an acceptable scale includes refinement, iterations and modifications of the scales, the focal point of this research is to develop a measuring scale derived from Kohli *et al.* (1993) MARKOR scales and Narver and Slater (1990) MKTOR scales. While these common market orientation scales are broadly employed, the intended scale will have to be enhanced to make it more reliable to the Saudi construction industry.

2.9. Outcomes of Market Orientation

Throughout the past two decades, researchers have investigated several outcomes associated with the adoption of a market orientation (Slater and Narver, 2000; Jaworski and Kohli, 1993; Dawes, 2000; Kumar, 2002). Outcomes can be categorised as being financial, employee-associated, and customer-associated.

2.9.1. Business Financial Performance

The relationship with financial results has been a primary focus of research. Not only has financial performance regarding profitability been explored (e.g. Dawes, 2000; Kumar, 2002; Rodriguez Cana *et al.*, 2004; Kirca *et al.*, 2005) but also subsets such as sales and market share (Jaworski and Kohli, 1993; Kirca *et al.*, 2005). As has been continuously established, there is a positive relationship between an organisation's financial performance and market orientation. It is expected that, for the changing markets, this would also be the outcome given the shift in power from the supplier to the customer as a result of the reforms undertaken. If an organisation was not market oriented, then it could expect its customers to switch providers.

In addition, as market orientation assists companies to follow and react to altering customer requirements, it should be related to business performance. Literature proposes that

companies manage their association with the environment so as to increase their performance (Shoham *et al.*, 2005). Barney (1991) states that differential company reserves result in better strategy and performance. As market orientation assists companies to enhance their reserves and is a market differential, investments based on this strategy should cause enhanced performance (Menon *et al.*, 1999).

Numerous previous researches have stated support for a strong constructive association between a market orientation and organisational performance (Narver and Slater, 1990; Jaworski and Kohli, 1993). Nonetheless, not many endeavours have been made to examine the association between market orientation and organisation performance in a third-world country context. The strength of the association has to be determined in different settings, with varied samples. An inspection of the setting facing Saudi firms sustains positing an association between a market orientation and the Saudi firm performance (Bhuian, 1995).

Additionally, in spite of a considerable amount of research regarding the relationship between market orientation and business performance, results concerning this association usually vary considerably in terms of size. Consequently, the literature demonstrates mixed results of the relationship. For example, these outcomes differ from non-significant (Menon *et al.*, 1999) or negative (Bhuian, 1997) to positive (Jaworski and Kohli, 1996; Slater and Narver, 1994a, 1994b). As a likely resolution to these diverse outcomes, an analysis may offer insights into variances by recognising quantification and sample features that influence the market orientation–performance association and by assessing the generalisability of the results (Brown and Peterson, 1993).

A market orientation is often posited to enhance business performance. The argument is that organisations that are market-oriented (i.e. those that respond and react to client requirements and preferences) may better fulfil client needs and thus perform at higher levels. The study by Lusch and Laczniak (1987) offers some support for this association. A more current study, by

Narver and Slater (1990), also provides empirical validation for the association posited between market orientation and business performance.

2.9.2. Employee-Associated Outcomes

The next group of outcomes examined in the study focuses on organisational employees. Kohli and Jaworski (1990) assert that by instilling a feeling of pride among employees, market orientation improves organisational commitment and employee team spirit.

Organisational commitment is the extent to which a business unit's employees are: loyal to the firm, see their future linked to that of the company and are ready to make personal sacrifices for the business unit (Kohli and Jaworski, 1990). Shoham *et al.* (2005) stated that committed employees:

- are less likely to be absent from work or to quit their company
- are more likely to go beyond required norms to contribute to the achievement of organisational goals
- are ready to invest additional effort for the good of the organisation

Because of these features, organisational commitment should be positively associated with market orientation.

Esprit de corps (team spirit) is the extent to which a sense of belonging to a team prevails in the organisation (e.g. people in a business unit are genuinely concerned about the needs and problems of each other) (Greenberg and Baron, 1997).

Employee outcomes such as organisational commitment and team spirit have also been found to be associated with market orientation (Kohli and Jaworski, 1990; Jaworski and Kohli, 1993; Shoham *et al.*, 2005). The adoption of market orientation in an organisation has been found to unite employees of the firm around a common goal that is dedicated to the fulfilment of

customer expectations and meeting market needs. It thus adds purpose to the organisation and in so doing, enhances the team spirit of the employees as they pursue the common goal (Shoham *et al.*, 2005). With stress reduced and with a defined purpose in the organisation, employee roles would become more positive and role definition would become more certain (Siguaw *et al.*, 1994).

The research reported by Kohli and Jaworski (1990) suggests that a market orientation provides several psychological and social advantages to employees. In particular, having a market orientation is stated to result in a sense of pride in being part of an organisation in which all sections and people work towards the common goal of satisfying customers. Achievement of this goal is posited to result in employees sharing a sense of worthwhile contribution, a feeling of belongingness, and, thus, commitment to the company.

2.9.3. Customer-Associated Outcomes

The essence of market orientation is meeting customer needs. It includes more quality in products, the firm's commitment, positive word-of-mouth reactions, consumer satisfaction and loyalty (Narver and Slater, 1990). Market orientation enhances customer satisfaction and loyalty because firms are well positioned to anticipate customer needs and offer goods and services to satisfy those needs (Slater and Narver, 1994b). In that sense, the organisation is in line with market demands, providing more perceived value. Market orientation does not focus solely on customers, but they are a core aspect of the construct. Research has found a significant and positive association between market orientation and customer orientation (Jaworski and Kohli, 1993, 1996; Kirca *et al.*, 2005; Slater and Narver, 1994a, 1994b).

Positive customer responses have also been associated with the market orientation of organisations. Such responses can be categorised as customer satisfaction and customer retention (Doyle, 1995). As Doyle (1995) reasoned, when customers are satisfied with the value

being provided in a product, they are more likely to repurchase. Kohli and Jaworski (1990) also argued that market orientation is related to satisfied customers who both recommend the product to other potential customers and keep repurchasing themselves. In Saudi Arabia, this is expected to be no different. Previously, the Saudi Arabia market denied any form of serious market orientation, as it expected that customers would take the power into their own hands and continue to explore new products and services until satisfied. Once satisfied, they would not only give loyalty to the product or service but also recommend it to others. Again, those market-oriented firms are expected to benefit in contrast to those not adopting this orientation (Bhuian, 1995).

2.9.4. Learning

Learning is the acquisition, interpretation and dissemination of the organisational information inside firms' culture (Slater and Narver, 1995). Learning is a cultural procedure accumulated by the organisation and circulated within its teams. Farrell (2000) and Hurley and Hult (2004) sustained the relationship between market orientation and learning, stating that learning is a cultural aspect of the organisation that addresses marketing and client requirements.

Nonetheless, for a business to optimise its capability to learn about markets, forming a market orientation is just the beginning. A market-oriented culture may attain maximum efficiency only if supported by a sense of entrepreneurship and suitable organisational atmosphere, namely, structures, processes, and incentives for operationalising the cultural values (Deshpandé and Webster, 1989). Thus, the critical challenge for any business is to produce the combination of culture and environment that optimises organisational learning concerning how to produce better client value in dynamic and unpredictable markets, as the capability to learn quicker than the opposition could be the sole source of sustainable competitive advantage (DeGeus, 1988; Dickson, 1992).

While a market orientation offers dependable norms for knowledge gained from clients and competitors, it has to be supported by entrepreneurship and suitable organisational systems and procedures for elevated-order education (double-loop learning in Argyris, 1977; generative learning in Senge, 1990) to take place. In review, the cultural principles of a market orientation are required, but not solely adequate for the creation of knowledge.

Although several writers (e.g. Garvin, 2012; McGill *et al.*, 1992) have debated the learning organisation, there is no broadly recognised conjecture regarding what makes up the culture and environment of a learning organisation. Our aim is to suggest a concept of the learning organisation, which widens our comprehension of the advantages of market orientation, and encourages research on the learning organisation.

2.9.5. Innovation

Innovation outcomes comprise companies' creativity and the capability to form and apply new concepts, products and procedures (Hult *et al.*, 2005). Market orientation should improve an organisation's creativity and new product functionality as innovation pushes a constant and hands-on approach concerning satisfying client requirements and stresses increased employment of information (Han *et al.*, 1998). For organisations, the concepts that clients have different needs and demand different products imply the need for additional investments in R&D, and to produce more creative products.

2.10. Conclusion

Market orientation literature comprises a review of over 50 years of scholarly work, which has attracted both practitioners and academics in the marketing and strategic management disciplines. Most of the studies focus on the nature, changes and evolution of market

orientation, the relationship between it and business performance, the causes and effects that influence this relationship, and the problems associated with it in different contexts and industry settings.

The evolution of market orientation has been strongly influenced and guided by the history, development and philosophy of the marketing discipline. The early literature on market orientation was closely associated with the development of the marketing discipline as management knowledge; it was then introduced as the marketing concept, focusing on a firm's own processes and products rather than the customer. This concept was expanded in the 1980s, as marketing researchers pushed their claims that the marketing department was central to all types of organisations, and the customer orientation concept was produced. Top managements in that period played an important role in supporting these claims by implementing these thoughts within their companies, in other words, focusing on organisational culture. Evaluation and reward structures were also being applied to support that.

The 1990s has witnessed a substantial growth in the development of marketing and customer orientation concepts. This development was supported by researchers' suggestions to present a new marketing concept that is suitable for market situations. That is when the market orientation concept was born. In defining market orientation, some authors considered it equivalent to organisational culture, which creates superior value for customers (as defined by Narver and Slater, 1990), a set of behaviours that touches all aspects of the organisation (as defined by Kohli and Jaworski, 1990), or a set of activities and processes related to continuous assessment of serving customer needs (as defined by Deshpandé and Farley, 1998). Moreover, market orientation, the new and improved marketing concept, suggests that marketing departments must not work alone, but instead work alongside top management. Marketing scholars such as Kohli and Jaworski (1993), and Narver and Slater (1990) later focused their attention on studying the relationship between market orientation adoption and business performance. They developed two market orientation scales, which quickly became standards

in market orientation literature: MKTOR by Narver and Slater (1990) and MARKOR by Kohli *et al.*, (1993). These two conceptualisation and operationalisation studies extend earlier research on the marketing concept, the conceptual framework from which the concept of market orientation derives.

Since the revolution in the marketing concept was so successful, researchers took it a step further by exploring the market orientation of today (Tokarczyk *et al.*, 2007). A business that is now known as a market-oriented business signifies that it is already following the new marketing concepts (Kohli and Jaworski, 1990), since it focuses mainly on customers, as well as its competitors.

Chapter 3

Market Orientation – Determining Influencing Factors

This chapter provides a review of the key drivers and barriers for organisations to achieving market orientation. This includes a discussion of the current position of market orientation theory in light of issues that top managers in the Saudi construction industry encounter when wishing to implement the market orientation concept in their organisations.

3.1. Introduction

Following the significant progression in the concept of market orientation, authors started to focus their work on clarifying the factors predominating as the real drivers of and barriers to a market orientation, which helps academics and managers explain and identify the moderators of the relationship between market orientation and business performance. Whether or not the construct of a market orientation is equivalent to 'culture', a set of 'behaviours', or a set of 'activities', the argument that the influencing factors are market-oriented became a subject of heated debate. In this regard, a number of studies have attempted to analyse these factors (for example, Gummesson, 1991; Lear, 1963; McNamara, 1972; Messikomer, 1987; Narver and Slater, 1998; Kohli and Jaworski, 1993; Deshpande and Farley, 1998). Moreover, since the current research intends to conceptualise a market orientation assessment model for Saudi construction companies, the identification of such factors becomes essential. Furthermore, these factors will be considered in light of some of the main issues concerning the Saudi construction industry.

3.2. Issues of the Saudi Construction Industry

The literature provides many general issues concerning the success of the Saudi construction industry. They include financial, competition, procurement, licensing, cultural, structural, and labour issues.

3.2.1. Financial Issues

First, the issues associated with the drop in oil prices have caused slowing, delay, and, in some cases, even suspension of some of the enormous infrastructural projects commissioned by the Saudi government and estimated to account for two-thirds of all construction activity in the

country. Furthermore, these problems supplemented financial difficulties such as late payments, reducing profit limits and salaries, and cost-cutting or reducing work force.

3.2.2. Competition Issues

The financial changes in Saudi Arabia offered an opportunity for Saudi-owned private companies (such as the Saudi Bin Ladin Group, Saudi Ogeir, El Seif, and others), foreign expertise, and joint ventures with local companies to become more involved in the Saudi construction market. Consequently, with international companies edging into the market, Chinese contractors are inclined to acquire numerous procurement agreements when bids are made by foreign suppliers. As a result of such involvement, the industry have become highly competitive as competition in pricing, in the quality of products, or in other direct ways have ensured the survival of construction businesses.

Al-Sedairy (2001) listed a number of factors that are thought to have a strong influence on the competition between contractors in Saudi Arabia:

- A rise in the number of firms involved in construction projects.

- A dropping level of construction requirements from the public sector.

- Customers' requirements for high quality standards.

- The increasing technological and/or technical abilities of contractors, facilitating their carrying out several projects simultaneously while sustaining the quality of the provided services or their ability to complete construction projects within a considerably short period as a result of modern features.

- The financial ability of some contractors to undertake projects.

- The employment of international and/or local highly efficient consultants/technical workers and adequate skilled labour.

- Demographic position.

- Political influence.

- A wide range of available construction services that companies offer (providing nearly all types of construction services – structural, architectural, maintenance, mechanical, etc.).

Under the pressure of these factors, it is presumed that the contractors undertaking or willing to undertake construction projects in Saudi Arabia are compelled to make organisational changes or to adopt marketing strategies to sustain the necessary pace of the competitive business environment in the country.

3.2.3. Procurement Issues

The tendering process in the construction industry in Saudi Arabia is a strong influence among contractors. Construction experts are often chosen through official tender procedures. Under Article 6 of the Saudi Procurement Law, where unique construction services are required and no other professional is available to carry out the services, the government can make a direct purchase from a qualified professional after receiving three offers, irrespective of the price of the project. The 'lowest price' or 'lowest construction cost' criterion is the most common criterion for the appointment of contractors and/or subcontractors by clients.

The procurement legislation requires that all suitably licensed individuals, organisations, and firms may take part in the tender procedure. Generally, any public acquisition that surpasses SAR1 million must be put forward for public tender. Bidders usually engage Saudi procurement agents to assist in putting forward winning bids for undertakings. These agents may at times offer invaluable awareness of the Saudi market and the procurement procedure. Under the Commercial Agencies Law, Saudi agents for international companies must register their association with the Ministry of Commerce and Industry. If the agent is incapable of

registering the agency agreement, many or possibly all public organisations will reject a bid from the foreign company.

3.2.4. Licensing Issues

The Saudi Council of Engineers (SCE), which is part of the Ministry of Commerce and Industry, supervises construction companies in Saudi Arabia. The obligations of the council involve setting standards and licensing requirements for the engineering professions within Saudi Arabia, carrying out assessments for licensing, and contributing to the professional development of engineering professionals within Saudi Arabia.

Nonetheless, international bodies aiming to work on Saudi construction projects must have particular licensing specifications for foreign contractors and experts to perform local construction work. They need to have an international investment license from the Saudi Arabian General Investment Authority (SAGIA). As soon as this license has been obtained, international bodies must subsequently register with the Ministry of Commerce and Industry. Before June 2013, international bodies involved in construction projects in Saudi Arabia could register a commercial body employing a number of commercial structures, of which the most widespread comprised limited liability companies (LLCs), branch offices, and temporary commercial registrations (TCRs). Nonetheless, since June 2013, SAGIA has limited international investors' involvement in Saudi construction operations, requiring them to be organised as an LLC or a joint stock company (JSC) to acquire the necessary international investment license. JSCs and LLCs are mostly similar in that the shareholder obligation is restricted. Basically, the main benefit of a JSC over an LLC is that the former may be publicly traded and listed.

3.2.5. Cultural Issues

Other issues related to the Saudi construction involve organisational culture. Culture affects all areas of a manager's job, encompassing managerial techniques and administrative decisions. Culture additionally affects the character of negotiations. Overall, managerial conduct is affected by culture (Hill, 2009).

The roles of managers with respect to the level at which they are people-oriented are impacted by culture. For instance, if a culture stresses inequality among individuals regarding physical and intellectual abilities, then, as Hofstede (1984) argues, there is high power distance. Basically, one may anticipate a broad separation in power between managers and their subordinates within Saudi construction companies.

An additional significant dimension of the manner in which culture influences Saudi construction is the extent to which people have mutual connections with each other. The Saudi construction industry is impacted by collectivist thinking, which asserts that relationships are more important than business dealings (Barnett and Lundgren, 1998).

For multi-national companies, two cultures are involved, organisational and national. It is generally understood that national culture may comprise a key issue in enhancing general organisational performance. Making organisational enhancements usually necessitates internal cultural change.

Within the Saudi construction industry, it is a challenge for managers to change the organisational culture. The Saudis' preference towards managerial positions is encouraged by rank and prominence (within the confines of the national culture). For instance, a majority of Saudis consider it embarrassing to work as a labourer (Wood and Kardash, 2002).

3.2.6. Structural Issues

Although numerous aspects of culture influence managerial efficiency within the Saudi construction industry, the social structure may have the greatest impact. The social structure directs the amount of compliance exhibited towards managers. It is of considerable significance for subordinates to show respect to managers and not question their power. Saudi managers' leadership is authoritarian. They give clear requirements for what must be achieved and the manner in which to achieve it. This could be challenging for the construction companies, as it suppresses creative thinking and mandates that staff members wait for instructions as opposed to implementing their own resolutions. This affects managers' encounters when attempting to enhance productivity.

In Saudi construction companies, the organisational structure is arranged along strong hierarchical lines (Atiyyah, 1991). This structure stresses the Saudi perception that it is the managers' job to form resolutions and pass them along the command chain to implement them. This could be challenging for a manager who does not demand the performance of particular jobs. Within the strict Saudi organisational hierarchy, workers must follow the lead of their managers. Tasks are not carried out if workers are not instructed to carry them out. Functional departments in such companies are established to assist in avoiding miscommunication regarding responsibilities (Ali, 1986).

Finally, the social structure influences who attains positions of power inside construction companies. There is a significant power distance between subordinates and their top managers within Saudi construction companies (Atiyyah, 1991), and it is essential to respect a manager's position.

3.2.7. Labour and Manpower Issues

Saudi policy greatly encourages the employment of local staff above foreigners. Under Saudi Nitaqat scheme, which is known as Saudisation, companies are required to sustain a particular number of Saudi Arabian nationals as workers. Firms are categorised using a color-coded scale based on the number of Saudi individuals employed. The failure to sustain a satisfactory number of Saudi staff members could cause, for instance, the Ministry of Labour not to renew the residency permits for expatriate staff members and the Commerce and Industry ministry to reject renewal of the company's commercial registration certificate or to cancel it entirely.

Employing Saudi workers forces organisations to submit particular reimbursements to the General Organisation for Social Insurance (GOSI). Under GOSI laws, employers must pay 9% of Saudi workers' wages, and the workers must pay an additional 9%.

Alternatively, employing international staff members is a challenging procedure in Saudi Arabia. Primarily, the Ministry of Foreign Affairs will offer a formal invitation only to employers in Saudi Arabia that address all pertinent tax and labour stipulations (that is, Saudisation, in addition to Zakat and income).

Additionally, international employees are required to undertake considerable medical examinations and must provide a considerable amount of legal paperwork to acquire a visa. Employers are additionally required to implement an employment agreement with international staff members, the length of which must be stipulated in the agreement. International staff members are only permitted to work inside the scope of their employment agreement and are not permitted to work for anyone else within Saudi Arabia.

Subject to the Council of Ministers Resolution No. 124 (Resolution 124), international bodies involved in contracts for public works must give 30% of the work subject to the contract to Saudi natives. This could encompass, for instance, subcontracting 30% of the work to Saudi Arabian nationals or maintaining a staff made up of a minimum of 30% Saudis. Despite these

stipulations, Saudi policy states that any organisation that is at least 51% held by a Saudi Arabian natural or juristic individual is exempted from Resolution 124.

3.3. Factors of Market Orientation

The Saudi construction industry has specific issues that are inherent to it. The influence of such issues on the development of market orientation will be discussed. Identifying these factors will help in formulating appropriate testable hypotheses, which will consequently help in conceptualising the intended assessment model. In this regard, Kotler (1994: p.170) argued that the factors affecting the market orientation can be divided into two categories:

- Internal factors representing the relationship between the company and employees
- External factors representing the relationship between:
    - The company and its customers
    - The company and its competitors

3.3.1. Internal Factors

Various researchers have proposed and tested a variety of internal factors affecting the level of market orientation of a firm. They include factors such as the organisational culture (Deshpandé and Webster, 1989; Narver and Slater, 1990), top management behaviour (Jaworski and Kohli, 1993), interdepartmental relations (Jaworski and Kohli, 1993; Narver and Slater, 1990), organisational structure and design (e.g., complexity, formalisation, centralisation, and specialisation/differentiation) (Schlesinger and Heskett, 1991; Jaworski and Kohli, 1993), performance measures and reward systems (Ruekert, 1992; Jaworski and Kohli, 1993), formal marketing education (Horng and Chen, 1998; Harris, 2000), training (Ruekert, 1992; Liu and Davies, 1997), and support systems (Schlesinger and Heskett, 1991; Day, 1994a).

These different groups of factors have emerged from interviews with managers (Jaworski and Kohli, 1993), an analysis of successful service firms (Schlesinger and Heskett, 1991), an analysis of the TQM implementation approach (Day, 1994a), and a specific interest in HRM processes (Ruekert, 1992).

Jaworski and Kohli (1993) discussed propositions pertaining to the drivers and barriers of a market orientation. In their publication, they adopted a three-component conceptualisation of market orientation (intelligence generation, dissemination, and responsiveness) and considered customers and market forces (e.g., competition, technology, and regulation) as the primary focuses of a market orientation. This research, however, considers three sets of internal drivers and barriers, which are related to top management, interdepartmental factors, and organisational systems.

3.3.1.1. Top Management Characteristics

Top managers play an important role in developing a market-oriented organisation. Jaworski and Kohli (1993) examined top management emphasis and top management risk aversion as drivers of a market orientation in the United States. They found strong support for a positive influence of top management on a market orientation. Additionally, the writers discovered evidence for an inverse association between top management risk avoidance and a market orientation.

3.3.1.1.1. Top Management Emphasis

Numerous writers propose that top managers have a crucial function in forming an organisation's principles and orientation (e.g., see Felton, 1959; Hambrick and Mason, 1984; Webster, 1988). The core theme in this literature is that, unless an organisation receives concise

indications from top management regarding the significance of being sensitive to client requirements, the organisation is unlikely to be market-oriented (Levitt, 1969; Webster, 1988). A top management emphasis on market orientation focuses on the verbal reinforcement that top managers provide for market-oriented activities (e.g., top managers repeatedly tell employees that their company's survival depends on its adapting to market needs) (Selnes *et al.*, 1996). Top management reinforcement of the significance of a market orientation may encourage people in the organisation to observe changing markets, share market information with colleagues in the organisation, and be sensitive to market requirements.

The importance of top management emphasis in encouraging market-oriented behaviour amid the employees in an organisation is founded on the assumption that workers will not have an incentive to implement market-oriented activities until they observe obvious indications from the top management. Research carried out (Hooley *et al.*, 1990) in industrialised nations stated that 60% of CEOs viewed a market orientation as a directing philosophy for the entire organisation. Additionally, in some instances, a difference was noted between the opinions of the CEO and the general firm. This signifies that the CEO's view has not disseminated to the rest of the company. A study of the top management features in Saudi Arabian companies disclosed some differences from and similarities with their colleagues in industrialised nations. The Saudi culture is a mixture of Islamic and Arab conventions and acknowledges the status of a hierarchy. This is reflected in its high power distance.

The Saudi construction industry is no exception, as it has a high power distance, too. This generally means that managers make decisions autocratically (Harris, 1998a). Moreover, managers in Saudi construction companies usually tend to put less emphasis on proactiveness, assessment, and futurity (the essential elements for determining the marketing philosophy). However, those managers who were educated in developed countries and acquired work experience in global firms are regarded as having an enhanced idea of the market orientation concept. These thoughts suggested in the following hypothesis:

H1. There is a relationship between top management emphasis and the market orientation among Saudi construction companies.

3.3.1.1.2. Top Management Risk Aversion

A second factor of market orientation related to top management is risk stance. Top managers' risk aversion focuses on the attitude toward innovative actions in the face of risk and uncertainty (e.g., Top managers in a company like to 'play it safe') (Selnes *et al.*, 1996).

Awareness of changing market requirements usually requires the initiation of new products and services to meet the changing client requirements and expectations. However, new services and products usually face an increased failure risk and are inclined to be more significant than recognised products. Kohli and Jaworski (1990) asserted that, if top management shows a willingness to take risks and encounter regular failures as usual, junior managers are more inclined to suggest and initiate new ideas in reaction to alterations in customer requirements. Alternatively, if top management is risk averse and unaccepting of failures, juniors will not be as inclined to concentrate on producing or disseminating market information and reacting to changes in client requirements.

Jaworski and Kohli (1993) suggested a strong influence of top management emphasis and risk aversion on a market orientation. In Saudi Arabia, managers make decisions dictatorially because of their common high power distance culture (Muna, 1989). In addition, some of them put less emphasis on basic marketing elements such as proactiveness and future planning. In contrast, more experienced managers, especially those who work in multinational organisations, are assumed to have a better awareness of the concept of market orientation (Hofstede, 1984). Furthermore, Muna (1989) reported that Saudi managers are mostly risk avoiders, as they do not accept employees who depart from company rules, which are generally inflexible and formal (Bjerke and Al-Meer, 1993).

Hofstede (1984) stated that Saudis are great uncertainty avoiders (i.e., risk averse). Generally, Saudi construction managers are not particularly understanding with workers who depart from organisational regulations, which are mainly inflexible and formal (Bjerke and AlMeer, 1993; Muna, 1980). Nonetheless, Saudi managers with a Western education may be expected to have a constructive opinion concerning risky actions, encompassing the initiation of new products, price changes, alterations in distribution structures, and changes to promotional schemes. These actions are usually required to become market-oriented. All of these notions led to the development of the following hypothesis:

H2. There is a relationship between top management risk aversion and the market orientation among Saudi construction companies.

3.3.1.2. Interdepartmental Dynamics

Interdepartmental dynamics has been adopted in this study from Jaworski and Kohli (1993). They represent the formal and informal interactions and relationships among an organisation's departments. These critical dynamics include interdepartmental conflict and connectedness (Kohli and Jaworski, 1990).

3.3.1.2.1. Interdepartmental Conflict

Interdepartmental conflict pertains to the extent to which the goals of different departments are incompatible and tension prevails in interdepartmental interactions (e.g., Protecting one's departmental turf is considered to be a way of life in a company) (Jaworski and Kohli, 1993; Wood and Bhuian, 1993).

A primarily relevant aspect proposed to affect a market orientation is interdepartmental disagreement, which refers to the conflict between departments caused by the incompatibility of real or required reactions (Gaski, 1984; Raven and Kruglanski, 1970). Numerous authors have pointed to interdepartmental conflict as an inhibitor of a market orientation (Levitt, 1969; Lusch *et al.*, 1976; Felton, 1959). Essentially, interdepartmental conflict is likely to restrict interaction and communication across divisions (Ruekert and Walker 1987). The stress between divisions is likely to limit a determined response by the divisions to market requirements, thereby obstructing a market orientation. No implications are anticipated for information generation, as interdepartmental conflict should not influence the information-gathering procedure in a given department.

Jaworski and Kohli (1990) highlighted interdepartmental conflict as a strong barrier to market orientation. This factor could have considerable relevance to Saudi construction companies. Because the shortage of Saudi labour, Saudi construction companies hire workers from several countries, each having its own role attitude, opinions towards other nationalities, cultural inclinations, and learning history. This factor may affect the extent of interdepartmental conflict (Yavas *et al.*, 1990). Saudi managers, being Muslims and Arabs, dislike conflicts. If they observe interdepartmental trouble, they resolve it using authoritarian attitudes. These notions led to the following hypothesis:

H3. There is a relationship between interdepartmental conflict and the market orientation among Saudi construction companies.

3.3.1.2.2. Interdepartmental Connectedness

Interdepartmental connectedness is the extent to which individuals in a department are networked to various levels of the hierarchy in other departments (e.g., it is easy to talk with

virtually anyone whenever needed, regardless of his/her rank or position) (Jaworski and Kohli, 1993; Wood and Bhuian, 1993).

A market orientation was additionally stated by Jaworski and Kohli (1990) to be affected by interdepartmental connectedness, which indicates the level of official or unofficial immediate interaction among workers across departments. Numerous studies have proposed that connectedness enables interaction and the sharing of information, in addition to the actual utilisation of the data (Cronbach and Associates, 1981; Deshpandé and Zaltman, 1982; Patton, 1978). Thus, it is to be anticipated that the greater the extent to which individuals network and interact with others in different departments, the more likely they are to share market information and react to it in a concerted manner (Kohli and Jaworski, 1990). As mentioned earlier, the construction industry in Saudi Arabia is affected by collective ties across organisations. This collectivist thinking dictates that relationships are more important than business dealings (Lundgren, 1998). All of these ideas suggested the following hypothesis:

H4. There is a relationship between interdepartmental connectedness and the market orientation among Saudi construction companies.

3.3.1.3. Organisational Characteristics

Organisation-wide characteristics, known as organisational structure and systems, including formalisation, centralisation, and market-based reward systems, were proposed by Jaworski and Kohli (1993) as strong influences on a market orientation.

Ruekert (1992) analysed organisational procedure as an obstruction to market orientation and suggested that the extent to which a company can raise its market orientation is intimately related to the organisational structures, systems, and processes created to sustain them.

3.3.1.3.1. Organisational Structure

Organisational structure in the market orientation literature refers to the formalising of associations and functions that manage work and facilitate staff members to collaborate to attain organisational goals (Alhamoudi, 2010). Kohli and Jaworski (1990) investigated two structural forms of organisations, centralisation and formalisation, and argued that a market orientation is strongly related to the structural form of an organisation.

Centralisation is the extent of hierarchical power inside an organisation (Jaworski and Kohli, 1993). It refers to the opposite of the amount of delegation of decision-making throughout an organisation and the level of involvement by organisational members in in decision-making (Aiken and Hage, 1968). Jaworski and Kohli (1993) examined the effect of centralisation in the United States and found a positive relationship with market orientation. A decentralised structure encourages decision-making and increases employee satisfaction and motivation and will therefore enhance the organisation's fast responsiveness to market conditions, unlike in less centralised (bureaucratic) environments (Madhoushi and Sadati, 2010).

It is interesting to observe that the idea of bureaucracy (e.g., centralised decision-making) originated in North Africa and has been employed since the ancient Egyptians created and implemented formal regulations for managing individuals concerned with business with ancient nations such as Babylonia, China, Greece, Persia, and India (Tosi and Carroll, 1982). Consequently, this bureaucratic legacy was conveyed to the Gulf region, including Saudi Arabia, by the employees who had the most significant functions in the establishment of government and private firms. The effect of this bureaucratic legacy is obvious in Saudi Arabian construction organisations. Baker and Abou-Ismail (1993) highlighted that centralised decision-making is the general practice for conventional Saudi managers. Nonetheless, due to the increasing number of international organisations functioning in Saudi Arabia and the pressure from Western-trained managers, several organisations appear to be comparatively

fluid, flexible, decentralised and sensitive to altering market requirements (Bjerke and AlMeer, 1993). These ideas led to the formulation of the following hypothesis:

H5. There is a relationship between formalisation and the market orientation among Saudi construction companies.

The other form of organisational structure that was tested by Jaworski and Kohli (1993) is formalisation. It represents the degree to which rules define roles, authority relations, communications, norms, and procedures that are applied within an organisation (Hall, *et al.*, 1967) (e.g., the way things are done in a company is left up to the person doing the work (Jaworski and Kohli, 1993)). Previous empirical research has demonstrated that formalisation is positively associated with market-oriented behaviour (Kohli and Jaworski, 1990; Hart and Diamantopoulos, 1993; Pelham and Wilson 1996). Despite the significant relationship between market orientation and formalisation in the literature, few researchers (e.g. Pulendran *et al.*, 2000, Matsuno *et al.*, 2002) found no significant relationship.

Thus in respect to the level of formalisation, Hofstede (1984) asserted that organisations in Saudi Arabia are highly formalised and highly controlled. This can be seen as a reflection of the high uncertainty avoidance identified as a part of Arab culture, meaning that managers are not willing to be involved in situations where outcomes are not clearly determined and that involve high risks. These notions suggested the following hypothesis:

H6. There is a relationship between centralisation and the market orientation among Saudi construction companies.

3.3.1.3.2. Reward System Orientation

Reward system orientation refers to the degree to which client relations, client fulfilment, and market-oriented conduct are employed to appraise and reward people within an organisation (e.g., Customer satisfaction evaluations affect senior management's pay within a company' (Harris, 1996; Narver *et al.*, 1998)).

Literature on the subject suggests that reward systems are key in forming the manners and behaviour of staff (Anderson and Chambers 1985; Jaworski 1988). In the present context, Webster (1988: p.38) argue that "*...the key to developing a market-driven, customer-oriented business lies in how managers are evaluated and rewarded*". He observes that, if managers are primarily appraised on the basis of short-term sales and profitability, they may concentrate on these standards and ignore market aspects such as client fulfilment that ascertain the long-term health of an organisation. In line with the preceding points, it may be anticipated that people in organisations that emphasise client fulfilment and market-oriented actions as bases for offering incentives will more easily produce market information, distribute it internally, and be sensitive to market requirements. Additionally, based on this notion, Narver *et al.* (1998) theorised that market-based reward systems were constructively associated with market orientation and discovered evidence for the association in two U.S. cases.

Overall, Saudi managers, as a result of Arab and Islamic traditions, are considerably focused on collective interests and success as opposed to individuals (Baker and Abou-Ismail, 1993). Even though Islamic teaching requests advantage to effect better future outcomes, Islam additionally teaches that whatever happens to people is the will of the one God. These principles have varying impacts on the manner in which Saudi firms appraise and reward their staff members (Muna, 1980). Many Saudi organisations do not even evaluate individual staff members' performance. A number of construction organisations evaluate the general organisational results and evenly reward all staff members, while others are inclined to concentrate on market aspects (e.g., customer satisfaction, relationship construction with

suppliers and/or customers, and new account openings).These ideas resulted in the following hypothesis:

H7. There is a relationship between reliance on market-based factors for evaluating and rewarding managers and the market orientation among Saudi construction companies.

3.3.2. External Factors

The external environment includes the elements outside the organisational boundaries. In previous studies, several scholars have suggested that the environmental setting of an organisation is likely to affect its extent of market orientation (e.g., Day and Nedungadi, 1994; Jaworski and Kohli, 1993; Narver and Slater, 1990). As a result, organisations in competitive settings are expected to be more market-oriented (Lusch and Laczniak, 1987). Several scholars have drawn on this general argument to suggest that the importance of market orientation varies with the environmental context (Bennett and Cooper, 1981; Houston, 1986; Tauber, 1974). Stated differently, they have argued that the connection linking market orientation and performance is subject to the environmental features of an organisation.

Subsequent to Jaworski and Kohli's (1993) discussion, the authors proposed a set of external drivers of and barriers to a market orientation, which are related to market forces (e.g., market characteristics, competition, technology, and regulation). They also included factors such as market competitive structures (e.g., entry barriers, seller concentration, and buyer power), industry/market features (e.g., growth rate, cost, and investment structure, technological dynamism, and market turbulence). Narver and Slater (1990) examined six additional exterior control elements (market growth, company focus, entry barriers, buyer and supplier power, and technological turbulence), which are contributors to the market dynamism and competitive intensity. Thus, the external factors that are considered in this research include competitiveness, market characteristics, and government regulations.

3.3.2.1. Competitiveness

The role of competitiveness and becoming viable in the market has been emphasised in the market orientation literature. Researchers have examined factors such as market entry, buyer and supplier power, and the size and cost of an organisation in developing a market-oriented organisation and found strong support (Jaworski and Kohli, 1993). Because of the high competition in the Saudi construction industry, these factors will be discussed and investigated.

3.3.2.1.1. Entry Barriers for New Competitors

Entry barriers for new competitors into the market are defined as the unique incremental costs required of a firm to enter and become competitively viable in the market (Narver and Slater, 1990). Entry barriers are those expenses that possible entrants outside the field will penetrate and compete in the field (e.g., R&D or plant capability) (Bain, 1959; Porter, 1980; Scherer, 1980). It has been argued that entry barriers for new competitors have an influence on being market-oriented (Narver and Slater, 1990). The higher the entry barriers are, the lower the competitive pressure is on the field from present as well as possible future entrants (Narver and Slater, 1990; Boulding and Staelin, 1990). Increased entry barriers therefore usually result in increased functionality for companies in the industry.

After Saudi Arabia officially joined the World Trade Organisation (WTO) in December 2005, Saudi companies were given greater access to invest in global markets, and foreign initiatives were invited to invest in the Saudi market since the restrictions there had been lowered. This allowed foreign expertise and joint ventures between international and Saudi companies, in addition to Saudi-owned private construction companies, to become more involved in the industry, which might have made it more difficult for new construction companies to enter

and become part of the competition among these companies. These notions suggested the following hypothesis:

H8. There is a relationship between ease of entry and the market orientation among Saudi construction companies.

3.3.2.1.2. Buyer and Supplier Power

Buyer power is the degree to which a buyer can negotiate lower prices or, in general, higher value from a seller (Narver *et al.*, 1998). The traditional point of view is that buyers and sellers are opponents and that each attempts to extract from the other the maximum contribution to its own profit. Hence, adopting the traditional perspective and with other things being equal, if a company's negotiating strength over buyers is reduced, it is likely to negotiate reduced prices for facilities and products and therefore have reduced performance. A similar phenomenon is available for companies that have reduced negotiating strength over suppliers, which thus also usually have reduced performance. Therefore, supplier power is defined as the extent to which a supplier may discuss increased costs or, overall, increased value from a purchaser (Narver *et al.*, 1998).

Research has demonstrated that the association between market orientation implementation and business performance is impacted by the strength of the firm's suppliers and the power of the company's buyers (Narver and Slater, 1990). If buyers are strong enough to enforce their terms and conditions in their interactions with the producers, high growth rates of development are foreseen (Avlonitis and Gounaris, 1999). Alternatively, increased buyer power requires firms to consciously make an effort to raise their products' capability to address the purchasers' requirements and demands. Therefore, firms are encouraged to enhance the standard of the market intelligence they gather and to enhance their readiness and capability to react to this intelligence. As a result, a market orientation is prompted.

Consequently, it has been widely acknowledged that the construction industry involves collaborative work between buyers and suppliers (Vrijhoef and Koskela, 2000), as recognised in the Egan Report (DETR, 1998). This 'best practice' involves construction companies rejecting adversarial buyer relationships with suppliers in favour of a more long-term collaborative approach based on trust and partnerships/alliances. However, some Saudi construction companies have failed at this as a result of delayed payments from contractors or as a result of causes other than budget overrun. Even best and competitively priced contractors will defer deliveries and make concessions on standards to reduce expenses, especially if a penalty clause for this is not included within the contract and regularly applied. Timely payments in exchange for the observance of delivery and superiority standards acknowledged within the contract will assist in enhancing implementation. Nonetheless, a majority of project enhancement attempts will fail if the supply chain from raw materials to the final client collapses. This could result from untimely payments from contractors resulting from causes other than budget overrun.

With several issues concerning cash flows, one must hire staff members with the necessary personal abilities to establish long-term contractor/supplier relationships while functioning within the restrictions of the essential project parameters (Mitra *et al.*, 2012). All of these notions suggested the following hypotheses:

H9. There is a relationship between the power of a buyer and the market orientation among Saudi construction companies.

H10. There is a relationship between the power of a supplier and the market orientation among Saudi construction companies.

3.3.2.1.3. Sales Revenue and Operating Costs

The size of a business in relation to its largest competitor in a market implies the advantages associated with a large relative market share (Scherer, 1980). Relative size potentially captures some revenue as well as some cost effects (Greenley, 1995).

The average total operating cost of a business in relation to that of its largest competitor measures the difference in the average of all operating costs (Scherer, 1980). A construction company's comparative cost configuration concerning general operating expenses in proportion to those of competitors also clarifies variations in performance (Greenley, 1995). Saudi construction operating costs include the cost for fuel, lubricants, filters, grease, tires, repairs, maintenance, and any other variable costs (Shadeed, 1990). One should also consider the job conditions. An accurate estimate of the total hourly rate for the operating costs is essential.

Companies having cost disadvantages resulting from increased operating expenses are hypothesised to have reduced performance compared to companies with lower operating expenses (Slater and Narver, 1994). A vast majority of studies have suggested that being market-oriented is associated with superior performance in profitability, sales growth, and/or operating cost (e.g., Atuahene-Gima, 1995; Deshpande *et al.*, 1993; Han *et al.*, 1998; Jaworski and Kohli, 1993; Li and Calantone, 1998; Pelham and Wilson, 1996; Slater and Narver, 1994). These notions suggested the following hypotheses:

H11. There is a relationship between sales revenue and the market orientation among Saudi construction companies.

H12. There is a relationship between operating costs and the market orientation among Saudi construction companies.

3.3.2.2. Market Characteristics

Researchers have argued that factors associated with a market in which companies preform is one of the most important factors that influence market orientation. Market turbulence, competitive intensity, technological turbulence, and the rate of market growth are the main characteristics that represent a market.

3.3.2.2.1. Market Turbulence

Market turbulence is the level at which the preferences of a company's clients tend to alter with time (e.g., when a company witnesses demand for products and services from customers who have never bought them before) (Slater and Narver, 1994). Companies that function within a more turbulent market may have to change their services and products constantly to fulfil the changing preferences of their clients. In comparison, a company's services and products may need comparatively minor alterations in stable markets where the client requirements do not alter much. Therefore, businesses functioning in the more unstable markets may have a greater necessity to be market-oriented (i.e., to follow and react to changing client requirements) than a business in a stable market. In other words, a market orientation is likely to be more related to performance within unsteady markets than in steady markets.

An analysis of the Saudi business setting suggests that these environmental aspects may additionally entail differential impacts regarding the market orientation–performance relationship in Saudi companies. Many Saudis are greatly custom bound (Bhuian, 1995). Some of their requirements and preferences stay the same, such as clothing, food, and entertainment activities (Qutub, 1988). Subsequently, firms satisfying these unchanged requirements encounter less market turbulence. Alternatively, less conventional Saudis who are exposed to Western influences and are more accepting and progressive are likely to look for a variety of

techniques to satisfy their requirements (Saudi Commerce and Economic Review, 1995). This latter type of client causes increased market turbulence for numerous producers. Though most Saudi industries stay viable, weak sections also exist and must be dealt with. One significant aspect that renders Saudi firms less competitive in the global market is the unworried nature of businesses and their slow reaction to the changing environment. Some traders have been convinced that prosperity was over (Sajjad, 2001).

As it was acknowledged earlier that the Saudi construction industry is strongly linked to the economic situation of the country, the continuous instability of oil prices has caused major turbulence in the construction sector. These ideas suggested the following hypothesis:

H13. There is a relationship between market turbulence and the market orientation among Saudi construction companies.

3.3.2.2.2. Competitive Intensity

Competitive intensity comprises the conduct, resources, and capability of competitors to distinguish themselves (e.g., anything that one competitor can offer, others can match readily) (Kohli and Jaworski, 1990).

As noted by Houston (1986) and Kohli and Jaworski (1990), with a lack of competition, a company may perform satisfactorily, though it may not be market-oriented, as clients are stuck with the company's services and products. In comparison, in circumstances of increased competition, clients have several alternatives to meet their needs and wants. Consequently, a company that is not market-oriented may lose its clients to competitors and not perform well, so a market orientation is expected to comprise an additionally important performance signal subject to increased competitive intensity.

Comparably, competitive intensity between Saudi companies differs considerably. Several firms may be described as exclusively controlled (e.g., petrochemical and minerals) (Saudi Commerce and Economic Review, 1994). Several of these companies are additionally protected by tariff and nontariff barriers. In contrast, numerous companies are in monopolistic competitive settings (e.g., packaged foods, clothing, beverages, etc.) (Yavas *et al.*, 1990). These comprise relatively free markets with competitors around the world. However, under the pressure of Saudi-owned private construction companies, foreign expertise, and joint ventures, the construction industry became highly competitive. This forced construction companies to undertake organisational modifications or marketing strategies to stay abreast of the necessary pace of the competitive business environment. These ideas led to the following hypothesis:

H14. There is a relationship between competitive intensity and the market orientation among Saudi construction companies.

3.3.2.2.3. Technological Turbulence

Technological turbulence is the extent to which technology within a trade is in a condition of unrest (e.g., the technology in an industry changes rapidly) (Kohli and Jaworski, 1990). A market orientation basically is a technique of establishing a competitive edge, as it enables an organisation to comprehend client requirements and provide services and products that satisfy those requirements (Kohli and Jaworski, 1990). Nonetheless, there could be optional routes to gain a competitive edge. To the extent that such optional routes are available, the significance of a market orientation may be reduced. One such route is technology. Organisations that work using promising technologies that are experiencing rapid change could gain a competitive edge by means of technological innovation, thus reducing – although not extracting – the importance of market orientation. In contrast, organisations that operate with stable technology are relatively poorly positioned to influence technology to attain a competitive edge

and must rely on market orientation to a greater extent (Bennett and Cooper, 1981; Houston, 1986).

Technological turbulence is also obvious among Saudi companies. Kazim (1995) stated that there are various industries, such as leather, furniture and others, that continue to profit from the increase in domestic requirements and are experiencing expansion. These types of industries experiences less technological turbulence. Alternatively, numerous industries are compelled to modernise their facilities and alter their methods of dissemination, promotion, etc., to satisfy the changing requirements of the new Saudi generation (Azzam, 1995). These firms experience increased technological turbulence. One of the affected industries is the construction industry. For instance, moving from a computer aided design (CAD) approach to construction information modelling (BIM), which is the process of development and use of a computer-generated model to simulate the planning, design, construction, and operation of a facility (Eadie *et al.*, 2013), signifies a basic difference for individual fields and the construction industry as a whole (Arayici *et al.*, 2011). Technological difficulties at present have compelled construction leaders within Saudi Arabia to become conscious of their commercial resolutions (Al-Sedairy, 2001). These ideas suggested the following hypothesis:

H15. There is a relationship between technological turbulence and the market orientation among Saudi construction companies.

3.3.2.2.4. Rate of Market Growth

Marketing authors such as Matsuno *et al.* (2003), Deshpandé, *et al.* (2000) and Harris (2001) argued that the annual growth rate of the market size could influence the degree of organisations' level of market orientation. The overall circumstances of markets additionally affect performance (Deshpandé *et al.*, 2000; Rose and Shoham, 2002). If markets are growing, it is usually simpler for companies to find clients without much competition. Companies in

growing markets thus tend to have better performance than companies in mature markets (Harris, 2001). The predictability of imminent markets also affects company performance.

In principle, when market demand is growing, it is easier for all sellers to acquire and retain customers and earn profits. However, there are three reasons that a business may not profit from short-run demand growth (Narver and Slater, 1990):

- Some short-term demand change is unexpected and a business may be unprepared to respond.

- A considerable amount of a business's production and marketing capacity in the short term may be fixed in quantity and quality, so adjustments to demand changes are slow.

- If there is easy entry by new sellers, when market demand increases, new competitors will easily enter, capture some of the profits, and drive profitability down. If exit barriers are low as well, the new competitors depart when the market demand decreases, only to enter again upon the next increase in market demand.

The Saudi Arabian construction industry output is expected to record a forecast-period compound annual growth rate (CAGR) of 10.98% (Tiwari, 2014). A rising population, plans to overcome the housing shortage, and efforts to develop the transport network and renewable energy infrastructure will enhance industry growth. The market recorded a CAGR of 10.06% during the review period (2009-2013). Today, growth in the construction industry is supported by the Ninth Five-Year Development Plan implemented for 2010-2014. According to the Central Department of Statistics and Information, the Saudi Arabian construction industry's contribution to the GDP increased from 4.3% in 2011 to 4.8% in 2013. The industry's value added increased by 8.8%, from SAR87.3 billion ($23.3 billion) in 2012 to SAR94.9 billion ($25.3 billion) in 2013 in real terms, whereas it increased by 13.4%, from SAR118.5 billion ($31.6 billion) in 2012 to SAR134.4 billion ($35.8 billion) in 2013 in nominal terms. These ideas suggested the following hypothesis:

H16. There is a relationship between market growth and the market orientation among Saudi construction companies.

3.3.2.3. Governmental Regulations

Countries may establish different levels of rewards to become market-oriented. Nations with a great number of monopolised industries and state rules restricting marketplace exchanges may discourage operating firms from adopting a market orientation. Essentially, this outlook proposes that the political economy of a country can affect how companies react to their markets (Porter, 1990, 1998).

The role of the Saudi government and the Saudi Construction Code (SBC) is emphasised in the Saudi construction industry (Al Surf *et al.*, 2014). The central role of the government in the construction industry creates opportunities and challenges for the sector. The Ninth Five-Year Development Plan of the Ministry of Economy and Planning estimates public spending of $384 billion between 2010 and 2014. Beyond this, the government is also likely to play a crucial role in financing development. In all facets of the sector, from large-scale infrastructure projects to new hospitals and schools, the slate of work is likely to expand in the coming years. The government has laid out plans to improve the country's infrastructure in a number of documents. While a significant portion of this is going towards developing soft skills and human resources ($195 billion), there is also significant provision for spending on infrastructure in four different areas: social and health ($73 billion), economic resources ($60 billion), transportation and communications ($30 billion), and municipal and housing services ($527 billion). However, with the growing publicity of the Saudi market and the realisation of its potential, such bloated profits might not last long. The Saudi government has embarked on an ambitious spending programme that looks set to keep the local construction industry busy for years. For example, in November 2010, the governor and chairman of the Saudi Arabian General Investment Authority (SAGIA) told an entrepreneurship conference in Dubai that the

authority would spend SAR5500 billion on investments in energy, logistics, ports, and education by 2020.

There have been significant efforts to encourage private-sector participation in the development of the industry and to support the country's economic growth. In addition, the government continues to provide the impetus and loans for developers to fulfil this vision. All these notions prompted the following hypothesis:

H17. There is a relationship between governmental regulations and the market orientation among Saudi construction companies.

3.4. Conclusion

This chapter provided a review of the main issues concerning the Saudi construction industry (i.e., financial, competition, procurement, licensing, cultural, structural, and labour issues) and how they might influence some of the proposed factors for Saudi construction companies in becoming market-oriented. Furthermore, the literature on the factors influencing the market orientation is quite vast (Gummesson, 1991; Lear, 1963; McNamara, 1972; Messikomer, 1987; Narver and Slater, 1998; Kohli and Jaworski, 1993; Deshpandé and Farley, 1998). In representing these factors, they have been divided into two categories, namely internal factors (such as top management characteristics, interdepartmental dynamics, and organisational structure and systems) and external factors (such as competitiveness, market characteristics, and governmental regulations). These factors helped in forming 17 hypotheses, which will be tested in a subsequent section of this research. The next chapter will present how these hypotheses are going to be addressed. The results of testing the hypotheses will help in identifying the factors for Saudi construction companies in becoming market-oriented, which will consequently help in conceptualising the intended assessment model.

Chapter 4

Research Design and Methodology

The intention of this research project is to establish a conceptualised assessment model for measuring the extent of market orientation of Saudi Arabian private construction organisations. The previous chapters have detailed the research domain, its aim and objectives, including the research questions, and the main findings arising from the review of literature, undertaken throughout the project. The focus in this chapter is diverted to the research design strategy and the research methods used, detailing the basis on which they were chosen and their appropriateness.

As research methodology can be defined by the principles and procedures of logical thought processes, which are applied in a scientific study (Fellows and Liu, 1997), it can establish the general plan to achieve the aim and objectives of the research. This chapter details the nature of the chosen methodology, and why it was deemed necessary and adequate for this project. It also presents and justifies the research methodological design adopted to address the aim and objectives of this research. The need for a 'Modified' model integrating the Nested Model (Kagioglou *et al.*, 1998) and the Research Onion (Saunders *et al.*, 2009) is presented. This model demonstrates the choice of a philosophical stance, the use of an appropriate approach to address the research questions, followed by different research techniques employed for collecting data in addition to the process of data analysis. The chapter concludes with a discussion of the validity and reliability procedures that will be undertaken in this research.

4.1. Introduction

As mentioned earlier in the introductory chapter, this research aims mainly at conceptualising an assessment model for measuring the extent of market orientation of Saudi Arabian construction organisations supported by an implementation model. The main factors composing these models, arising from the review of literature undertaken, have been identified in the previous chapter. Although these factors have been adopted from former studies taking place in developing countries, their applicability to the setting of an emerging country such as Saudi Arabia might result in some different insights. To test their appropriateness to the research context and in order to achieve the intended aim of this research, they have to follow a set of logical principles and procedures, which is known as a methodology. A research methodology is a scientific way to systematically solve the research problem (Kothari, 2004). It can establish the general plan to attain the aim and objectives of the research (Fellows and Liu, 1997). There is no doubt that a research investigation must be based on a rigorous scientific methodology. In fact, although the concept of research might have different meanings to different individuals, there seems to be some consensus regarding some of its main principles; research is the process of inquiry and investigation and it is systematic and methodical (Denzin, 1978).

The purpose of research is to gain knowledge, learn (Denzin, 1978; Chadwick *et al.*, 1984), and to put it in colloquial terms, 'finding things out' about the world (Reed and Hughes, 1992). In this way it generates a theory (i.e., a fact-based framework or model to explain, comprehend and clarify phenomena), attaining solutions to problems or resolutions to unsolved queries. According to Kerlinger (1979), a theory comprises a group of interconnected constructs (variables), descriptions, and propositions that provides a methodical perspective of phenomena by specifying associations among variables, with the objective of clarifying characteristic phenomena (Creswell, 2003). The primary goal of theory is then to answer questions of how, when, where, and/or why (Bacharach, 1989).

According to Creswell (2003), a research methodology represents the logical development of the research process used to generate theory as it leads to establishing the technique that tackles the research question. Research methodology is best described as the methodical, formal, rigorous and particular procedure used to attain resolutions to challenges and/or to find and translate new facts and relationships (Waltz and Bausell, 1981); with its plan being comprehended to comprise "*...the architectural blueprint of a research project, linking data collection and analysis activities to the research questions and ensuring that the complete research agenda will be addressed*" (Bickman and Rog, 2009: p.11).

The focus in this chapter is diverted to the research design strategy, philosophy, and the research methods used, detailing the basis on which they were chosen and their suitability. It demonstrates the choice of a philosophical stance, the use of an appropriate approach to address the research questions, followed by different research techniques employed for collecting data, in addition to the process of data analysis. It also details the nature of the chosen methodology, in terms of why it was deemed necessary and adequate for this project. It also presents and justifies the research methodological design adopted to address the aim and objectives of this research.

4.2. Research Design

Literature on research methodology provides many diverse approaches and methods to research design. However, it is not always clear as to how to use and combine them when conducting a particular type of study, and how to evaluate the data.

The key objective of any study is to increase value to the gathered information by means of recognising, exploring, and generating resolutions to unresolved issues (Remenyi *et al.*, 1998). Frankfort-Nachmias and Nachmias (2007) assert that a research methodology is a structure of obvious regulations and processes upon which the study is based and claims for knowledge are

evaluated. Thus, the research procedure is not a specified pattern of processes, as there is no single universally accepted scientific methodology. Rather, a combination of methodological paradigms is used to form the methodology (Lee, 1989). This said, while there are a variety of research designs available to the researcher, each design is unique and applicable only to its intended purpose.

According to Churchill (1979), research design offers a general guidance for the gathering and evaluation of information for a study. The significance of research design is drawn from its function as a crucial connection linking the theory and argument that informed the study, and the empirical data gathered (Frankfort-Nachmias and Nachmias, 2007). A selection of study design "*reflects decisions about the priority being given to a range of dimensions of the research process*" (Bryman and Bell, 2007: p.40) and this will obviously have substantial effect on lower-level methodological processes like sampling and statistical packages. Thus, a design facilitates the seeking of answers to the queries being studied for any research project. In addition to a concise research structure it offers, limitations and ethical matters that will inevitably occur need to be considered (Saunders *et al.*, 2009).

Possibly unsurprisingly, there exists a difference inside and between methodologies in the manner in which research design is defined. For instance, in one study, research design can mirror the complete process, from conceptualising a research problem to reviewing the literature, techniques and conclusions, while in another study, the design might just refer to the methodology of the research (e.g., data gathering and analysis). In this study, research design follows Harwell's (2001) description as he characterises a research design as qualitative, quantitative, or as involving both qualitative and quantitative designs, in which case it is typically referred to as mixed methods.

This identification is significant as it touches on aspects concerning key elements of the research data, which may vary for qualitative, quantitative and combined techniques. Nonetheless, a general area covering study designs is that during one or more points within the

study procedure, data are gathered (numbers, signs, words) although in varying manners and for varying uses. Therefore, quantitative researches, among other things, collect and analyse quantitative data, while qualitative studies, among other things, collect and analyse qualitative data, and so on.

As mentioned earlier in the introductory chapter, this research adopts a mixed-methods approach to collect data. Since it initially expects to conceptualise an assessment model, which involves the construction of an instrument that constructs quantitative metric units and that measures abstract concepts, the use of a quantitative design becomes necessary at this particular stage of the research. On the other hand, the use of qualitative tools to develop the consequent supplementary implementation model must be clearly identified, too. In addition, this mixed methods design must follow a logical systematic process or framework. Identifying and understanding the elements constituting such process as well as providing the appropriate alignments between the method and the study area will support the task of gathering required information for developing the models.

4.3.   Research Methodology Frameworks

There are many different models and frameworks used to describe the relationship between research methodology elements to be found in the literature. These frameworks provide the conceptual background for a research undertaking. A majority of researchers took the time to deal with the conceptual aspects and elements of the task. For example, Ticehurst and Veal's (2000) Approaches and methodologies; Kolb's (1984) Experiential Learning Cycle and Karl Knox's (2004) Hierarchy of Research Needs; Sexton's (2007) PhD Research Methodology Model; and Dawood and Underwood's (2010) Research Methodology Life Cycle.

Kagioglou *et al.* (2000) have also developed a framework to research modelling, namely the Nested Approach (shown in Figure 4.1). The outer layer shows the research philosophy, which

directs the research approaches and methods highlighted in the inner layer. Research approaches refer to the techniques for theory generation and testing, like case studies, action researches, surveys, as well as experiments; research methods refers to the data collection techniques such as interviews, questionnaires, and observation. Saunders *et al.* (2009) had a similar research design approach and proposed the 'Research Onion'. The Research Onion provides an appropriate structure within which to frame this research inquiry. It has multiple layers with each layer becoming more comprehensive from the outside in.

Figure 4.1: The overlap of the research design elements in the models proposed by Kagioglou *et al.* (2000) and Saunders *et al.* (2003)

Nested model		Research Onion
Research Philosophy	e.g. Positivism / Interpretivism	Research Philosophy
		Research Approaches
Research Approach	e.g. Case studies / Experiments	Research Strategies
		Research Choices
		Time Horizons
Research Techniques	e.g. Interviews, Questionnaire Surveys	Techniques and Procedures
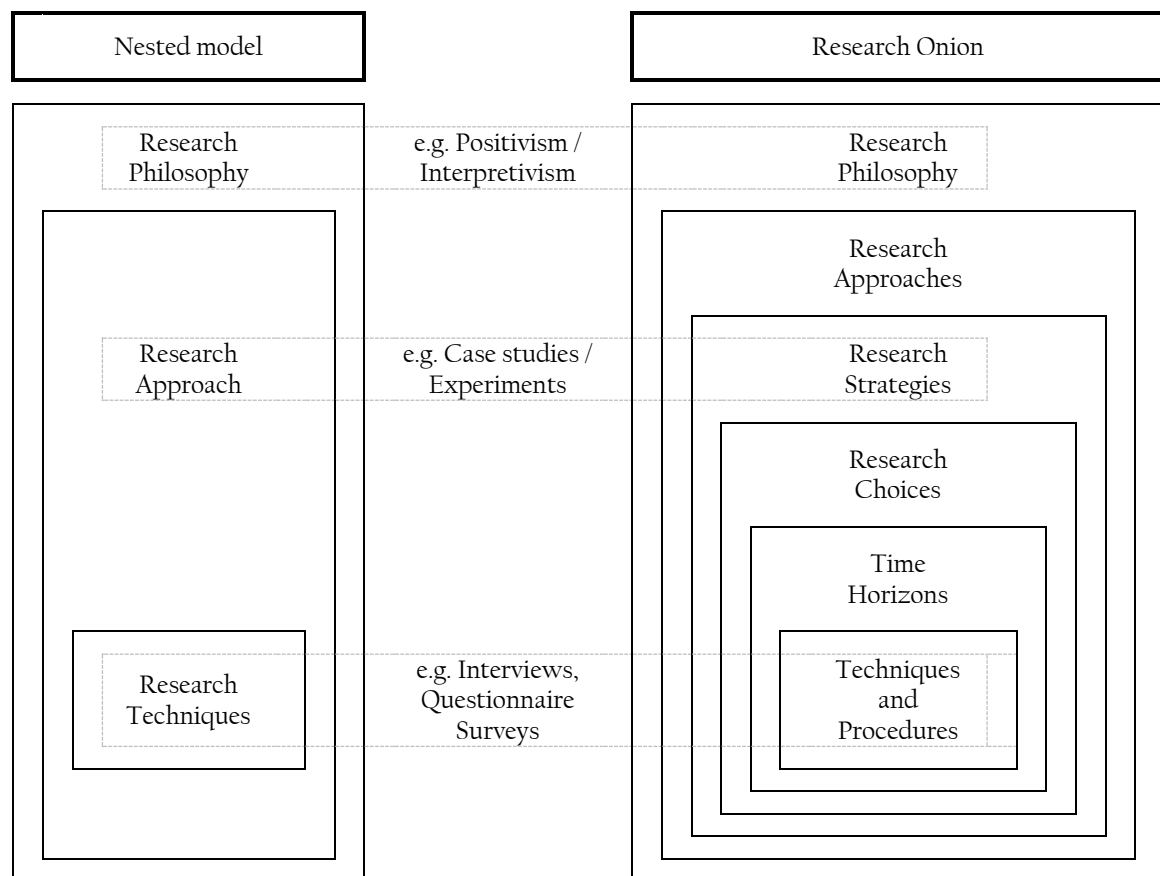
The research design model suggested by Saunders *et al.* (2009) introduced three extra levels to the nested research model. This new model was proposed as the Research Onion, with its six layers resembling the rings of an onion. It starts with philosophies at the outermost layer,

progressing through approaches, strategies, choices, time horizons, and with techniques and procedures at the centre. Even though a 'Research Approaches' level is available in the nested research model as well as in the research onion, each represents different perceptions. The research techniques within the nested model resemble the research strategies in the research onion. In addition to showing the components of each model, Figure 4.1 illustrates the manner in which the research design features overlap within the models suggested by Kagioglou *et al.* (2000) and Saunders *et al.* (2009), which also demonstrates the comprehension of the research onion.

Although the Research Onion is widely used in social science studies, Keraminiyage (2013) criticised the way it is structured as its layers give a sense of a sequence. This can give an impression that the selection of an option within a certain layer is entirely dependent on the selection of the previous layer (e.g. the selection of time horizons depend on the selection of research choices), which might not always be necessarily accurate. Accordingly, Keraminiyage (2013) proposed a modified model (shown in Figure 4.2) that attempts to avoid such issues.

Figure 4.2: Keraminiyage's Modified Research Model (2013)
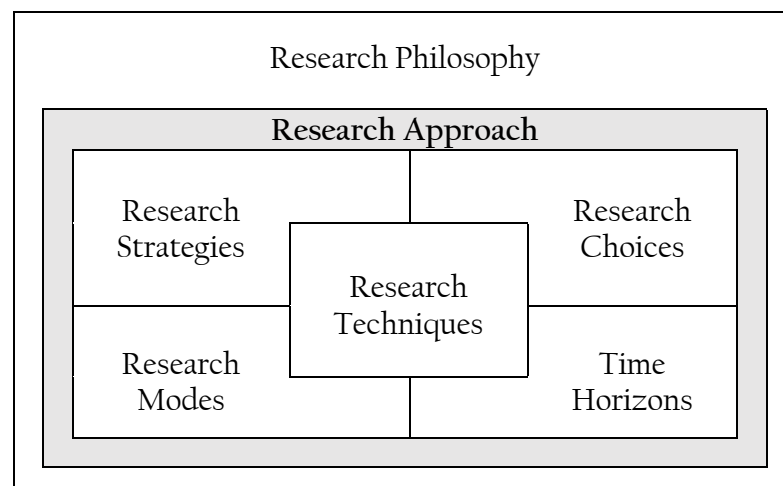
What mainly distinguishes this model from the Research Onion is that rather than studying approaches, strategies, choices, and then time horizons respectively and individually, they may

perhaps be identified all together at the same time, or at least in a different order, since identifying each one does not necessarily depend on the other. Table 4.1 presents a compression of all three models.

Table 4.1: The Modified Model compared to Nested model and Research Onion

Nested model	Research Onion	Modified model	Remarks
Research Philosophy	Research Philosophy	Research Philosophy	e.g. Positivism / Interpretivism
		Research Approach	Used as an umbrella term to include: Research Strategies, Time Horizons, Research Choices and Research modes
Research Approach	Research Strategies	Research Strategies	e.g. Case studies / Experiments
	Time Horizons	Time Horizons	e.g. Cross sectional / Longitudinal
	Research Choices	Research Choices	e.g. Quantitative / Qualitative Multi-method, Mono-method
	Research Approaches	Research modes	e.g. Inductive / Deductive
Research Techniques	Techniques and Procedures	Research Techniques	e.g. Interviews, Questionnaire Surveys

The design of this research is introduced using the latter modified model developed by Keraminiyage (2013). The six dimensions of this model will be used as an outline for the explanation of the research methodology design. The subsequent sections additionally define, in detail, the research philosophy, research approach and research techniques pertaining to this study.

4.4. Research Philosophy

While undertaking any scientific research it is important to consider different relevant branches of philosophy, as these philosophies define opinions, convictions, conclusions and the nature of reality, and they may affect the manner in which the study is carried out. Starting with design to conclusion, it is imperative to guarantee the researcher's approaches are

consistent to the nature and objectives of the specific enquiry employed, ensuring that researcher prejudices are comprehended, uncovered, and minimised. In addition, the researcher has to adopt a philosophy, which is subjective to practical considerations, and the main influence is likely to be the researcher's practical view of the association linking knowledge and the procedure by which it is established (Saunders *et al.*, 2009). Methods must also be compatible with the researcher's philosophical stance, guaranteeing that the final work is not undermined through lack of coherence (Easterby-Smith *et al.*, 2002).

Research philosophy is the core of any study, guiding and unifying the research strategy and techniques. The research approach regards the formulation and logical relation of concepts, (i.e., the approach taken towards data collection and analysis), and research techniques focus on the mean by which data is gathered and manipulated (Sexton, 2003). It refers to the institution of knowledge, as well as the nature of that knowledge (Saunders *et al.*, 2009). The two major ways of thinking of research philosophy are ontology and epistemology. Ontology seeks to identify the nature of reality; epistemology shows how we acquire and accept knowledge about the world (Sexton, 2003; Easterby-Smith *et al.*, 2002).

Ontology – "*the branch of philosophy concerned with the articulating, the nature and structure of the world*" (Wand and Weber, 1993: p.220) – discusses the claims and assumptions that can be made about the nature of reality and how they interact with each other (Guba and Lincon, 1994). According to Blaikie (2007), ontology is the science or study of 'being' and seeks to answer the "*assertions regarding what exists, what it appears to look like, what elements comprises it as well as the manner in which these elements communicate with one another*" (p.3). The most popular examples of ontological positions are objectivism and subjectivism (constructivism) (Perera and Sustrina, 2011; Grix, 2002).

- Objectivism: portrays the stance that social bodies are present in reality external to social actors related to their presence.

- Subjectivism: asserts that social phenomena are formed from the opinions and subsequent activities by those social actors related to their presence.

The simple fact of choosing one ontological philosophy over another philosophy shows precisely the way that a researcher goes about doing the research. These philosophies are related to nature, reality, and the appropriate knowledge in the area of research. In this case, that is the degree of market orientation in the Saudi construction industry. For those reasons, a number of assumptions will help locate the research within the philosophical continuum, and that should strongly influence the logic of the study, and hence affect the required collection method for obtaining data and the analysis of such data.

Epistemology, on the other side, is the alternative philosophical branch associated with ontology. It represents "*the theory or science of the method or grounds of knowledge*" (Blaikie, 2007: p.18). It stands for the conclusions made concerning the assumptions in which it is achievable to attain information about reality, presenting an opinion and validation for what may be viewed as knowledge (Easterby-Smith *et al.*, 2002). Epistemology is concerned with claims of what is assumed to exist and can be known by the "*knower or to-be-knower*" (Guba and Lincoln, 1994: p.3). It views the concept of knowledge, particularly with respect to its techniques, verification and the likely methods of attaining information in the presumed reality. Two main schools of thought have been dominating the epistemological debate on how to suitably carry out studies, defining varying and contrasting inquiry paradigms that can be positioned at two extreme ends of a continuum: positivism and interpretivism (Easterby-Smith *et al.*, 2012; Creswell, 1994).

- Positivism: the social world exists externally and its characteristics should be measured by objective techniques other than being implied subjectively by awareness, consideration or instinct.

- Interpretivism (Social Constructivism): presumes that the researcher is independent of and neither influences or is influenced by the matter of the study (Easterby-Smith *et al.*, 2008).

Epistemological grounds refer to the assumptions regarding knowledge and the manner in which it can be acquired (Sexton, 2003). Positivist research philosophies suppose that reality is objectively provided and may be defined by measurable features, which are autonomous of the observer (Sexton, 2003) and have to be quantified by means of objective techniques rather than being implied subjectively by means of feelings, opinions or reflections (Easterby-Smith *et al.*, 2002). At the opposite end of the continuum (Sustrina, 2009), interpretative research philosophies suppose that access to reality is acquired merely through social systems like language, perception and shared comprehension. Interpretive researches usually endeavour to comprehend phenomena by the meanings people allocate to them (Sexton, 2003), and emphasis is given to observation and description in generating hypotheses (Silverman, 2011). Interpretivism is the epistemological assumption that the properties of reality can be measured through subjective measures and determined by analysing people's opinions (Easterby-Smith *et al.*, 2002). Contrasting purposes of positivism and social constructionism is shown in Table 4.2.

Table 4.2: Contrasting implications of positivism and social constructionism (adopted from Easterby-Smith *et al.*, 2002)

	Positivism	Social Constructionism
The observer	Must be independent	Is part of what is being observed
Human Interest	Should be irrelevant	Are the main drivers of the science
Explanations	Must demonstrate causality	Aims to increase general understanding of the situation
Research progress through	Hypotheses and deduction	Gathering rich data from which ideas are induced
Concepts	Need to be operationalised so that they can be measured	Should incorporate stake holder perspectives
Units of analysis	Should be reduced to the simplest terms	May include the complexity of whole situation

The author further explains that ontological assumptions can differ according to whether reality is external to the individual and imposed on him with predetermined nature and structured realism, or whether reality is perceived in different ways by individuals – idealism (Burrell and Morgan, 1979 in Kulatunga, 2007).

In the present study, the researcher intends to explore and investigate the drivers and barriers of the market orientation that should be measured by objective techniques rather than being implied subjectively by awareness, consideration, or instinct. Furthermore, since this research aims to understand the reality regarding market orientation through individuals involved within the Saudi construction industry, this data takes a more objectivist stance on ontological grounds.

In these contexts, it could be said that the research takes a stance that needs to look with more propensity towards positivism. These positivistic approaches are defined primarily by individuals' views, and so an external reality exists independent from the researcher's views. As a result, the researcher detaches himself from the research environment and takes the role of an independent observer without interfering with the research environment (Kulatunga, 2007).

Alternatively stated, these perceptions observe an objectivist (realist) ontology as well as an objectivist epistemology. Positivists apply comprehensive methodologies regarding reflexivity and focus on enhancing techniques and their implementation (Johnson and Duberley, 2000). The purpose of positivist science comprises the formation of knowledge that can be generalised. In positivist science, results are evaluated through logical reasoning, quantification and the consistency attained through the consistency of control and prediction. The positivist scientist's association with the setting comprises one of neutrality and indifference.

These research philosophies are the basis for efficient study design, and incapability to observe philosophical matters can negatively affect the quality of the research. In addition, the use of

research approaches and techniques is not advised without some philosophical views, as recognised by Easterby-Smith *et al.* (2002).

In contrast, the idea of developing the implementation model will involve the identification of underlying assumptions acting as constraints and enablers to market orientation. The researcher valued ideas, opinions, and perceptions of experts based on their experience within different areas of the construction industry; the use of qualitative techniques to comprehend human experience in any one particular context is necessary. This form of enquiry employs mostly qualitative techniques to comprehend, explain and clarify a phenomenon (Sustrina, 2009; Easterby-Smith *et al.*, 2002), which is the case in this task.

In this regard, Hiatt (1986) argues that the complexities of such issues are studied more properly through qualitative study techniques that concentrate on uncovering and comprehending the perspectives, experiences and opinions about concerned participants, and interpret their views and observations to make the world visible. In other words, qualitative research is an interpretive naturalistic approach that helps the researcher to explore the purpose or reality of the world, and to investigate things in their natural settings, trying to rationalise phenomena regarding the meanings people attach to them (Denzin and Lincoln, 2005: p.3). Therefore, it could be said that the most appropriate way to study such topics is through the adoption of an interpretivistic philosophy (Lincoln and Guba, 1985), since the actions that entail developing the implementation model are related to the study of human behaviour in the Saudi construction industry. According to Miles and Huberman (1994), human activity is observed within interpretivism as 'text', (i.e., an amassment of symbols articulating levels of meanings), and research is involved with a deep understanding of these meanings.

Interpretivism (social constructionism) is the epistemological assumption that the properties of reality can be considered through subjective measures and is determined by examining people´s perceptions (Easterby-Smith *et al.*, 2002). It is also explicitly based on interpreting

beliefs where there is no knowledge beyond individuals' subjective understandings of reality (Sustrina, 2009).

The ontological position of interpretivism is subjectively understood by human beings, and it concentrates on the ways they understand the world, construct their views, and give meanings to their own realities (Easterby-Smith *et al.* 2002). Thus, instead of examining causal explanations or searching for external factors, for an interpretivist, emphasis is given to the different views that people place on their experiences, which enables the researcher to have closer interactions with the research environment unlike in positivist studies which perceives reality as 'objectively' constructed (Kulatunga, 2007).

In summary, the adoption of a positivistic philosophy through objective measures will help develop the market orientation assessment model, and in turn the adoption of an interpretivistic philosophy through subjective measures will help developing the market orientation implementation model. Understanding both philosophies will lead to choosing the most suitable approaches, strategies, and data collection methods.

4.5.   Research Approach

Following selection of the appropriate research philosophy, the next step is to identify the research approach that will influence the manner in which the study is conducted. A research approach is a way of describing how a researcher goes about the task of doing research; personalising a specific style and using varied study techniques. It is a way of gathering proof that indicates the methods employed for data collection (Weick, 1989). This section will describe the research approach applied to satisfy the research design model.

As the leading principle for establishing any study technique, it must fully tackle the study question (Creswell, 2003). The research approach should be an outline for directly collecting observations and data connected to the research, making explicit the questions the researcher

should answer, developing a data collection methodology and discussing the data in relation to the initial research questions.

The preliminary idea of this research was to determine the constitution of a market orientation in Saudi Arabia. The literature review showed that there was existing conceptualisation information elsewhere, but not in Saudi Arabia. Although this information was regarded and assimilated, the researcher still had no other information on this matter other than that provided by his colleagues in the field; architects, engineers, owners and contractors from construction companies, in addition to a few general articles related to the topic of market orientation in Saudi Arabia. This was a central issue while conducting this research. According to Easterby-Smith *et al.* (2002), the research approach includes the type of evidence, as well as the process of interpretation used to obtain satisfactory answers for the questions being posed, which cannot be answered through only observing the literature.

The research approach in Keraminiyage's (2013) modified model is used as an umbrella term to include Research Modes (deductive and inductive), Research Strategies (e.g., case study, survey, experiment), and Time Horizons (Cross-sectional, Longitudinal).

4.5.1. Research Mode

Research mode is one of the items composing the research approaches, which were proposed in Keraminiyage's (2013) modified model. There are two research modes consistent with the point at which theory is introduced: deductive and inductive research. Overall, both deductive and inductive refer to the reasoning of the study, the function of the available body of knowledge collected in the literature review stage and the way the researchers exploit the data gathering and following data evaluation. However, the main difference between deductive and inductive research resides in the use of the current body of knowledge and the distinct role of

data collection (Sustrina, 2009). The main differences between deductive and inductive studies are given in Table 4.3.

Within the deductive study, primarily the hypothesis and theory are established, and the research strategy is planned to assess these hypotheses. In the inductive study, theory will be established as a consequence of the data analysis (Saunders *et al.*, 2009). In this regard, Gill and Johnson define theory as "*a formulation regarding the cause and effect relationships between two or more variables, which may or may not have been tested*" (2002: p.16). Since the purpose of this research is to test the relationship of market orientation with all formerly proposed factors and then developing an assessment model constituting these factors, or in other words, to build a theory. This stage of research, therefore, follows a deductive reasoning.

Table 4.3: The Major Differences between Deductive and Inductive Research (Saunders *et al.*, 2003)

Deduction emphasises	Induction emphasises
- Scientific principles - Moving from theory to data - The need to explain causal relationships between variables - The application of controls to ensure validity of data - The operationalisation of concepts to ensure clarity of definition - A highly structured mode - Researcher independence of what is being researched - The necessity to select samples of sufficient size in order to generalise conclusions	- Gaining an understanding of the meanings humans attach to events - A close understanding of the research context - A more flexible structure to permit changes of research emphasis as the research progresses - A realisation that the researcher is part of the research process - Less concern with the need to generalise

Deductive reasoning functions from the more widespread to the more specific. Informally it is referred to as a 'top-down' mode. It commences with creating a theory regarding the subject of concern. Subsequently it narrows down into more specific hypotheses that can be tested. It then narrows down even further to address the hypotheses (Saunders *et al.*, 2009). This

eventually results in the capability to assess the previously created hypotheses with specific data analysis, which therefore confirms or rejects the initial theories (Robson, 2002).

Quantitative techniques are often defined as deductive in nature, as conclusions from statistically testing hypotheses which result in other conclusions regarding features of a population (Harwell, 2012; Lincoln and Guba, 1985). However, qualitative study techniques are often defined as inductive in nature, in that a researcher can create hypotheses or theories, conceptualisations and clarifications from some information provided by a participant. In addition, qualitative techniques are usually classified as presuming that there is no single 'truth' that exists, and it relies on human opinions (Lincoln and Guba, 1985).

In the inductive research, theory is developed as a result of the data analysis (Saunders *et al.*, 2009). Since the implementation model development stage will take place after testing the hypothesis and developing the assessment model, the task of developing the implementation model will follow an inductive reasoning. This inductive reasoning seeks general conclusions based on specific premises. Implanted in this technique is the view that researchers are unable to discard their experiences, views and prejudices, and therefore cannot pretend to be unbiased observers to the study (Denzin, 2006).

Inductive research works through shifting from particular observations to wider generalisations and theories. In inductive reasoning, which is sometimes called a 'bottom-up' mode, it commences with particular observations and measures to trace sequences and norms, create some hypotheses that may be explored and ultimately end up establishing some broad assumptions and theories (Robson, 2002). Finally, the adoption of the mixed-methods approach might result in "*...induction and deduction taking place simultaneously*" (Gill and Johnson, 2002: p.23), which is the case in this research.

4.5.2. Research Strategy

The second item of research approach is research strategies (Keraminiyage, 2013). The selection of research strategy will be directed by the research questions, the level of available information, the available time, and the philosophical direction. In addition, since the research philosophy comprises significant conclusions concerning the manner in which the researcher views the world (Alzu'bi, 2011), these conclusions determine the research strategy and the selected techniques as part of that strategy.

As suggested by Gill and Johnson (1991), research strategies might be placed through considering realist (nomothetic) and idealist (ideographic) ontologies. They define nomothetic as the method that utilised measured techniques for data analysis, whereas ideographic techniques concern analysis of subjective records produced through internal positions and concerning oneself with the daily stream of life (Table 4.4).

Table 4.4: A comparison of nomothetic and ideographic methods (adopted from Gill and Johnson, 2002)

Nomothetic methods emphasise	Ideographic methods emphasise
Deduction	Induction
Explanation via analysis of causal relationship	Explanation of subjective meaning systems
Generation and use of quantitative data	Generation and use of qualitative data
Testing of hypothesis	Commitment to research in everyday settings
Highly structured	Minimum structure

Nonetheless, Burrell and Morgan (1994) state that nomothetic techniques focus on the significance of founding research on methical methods, approaches utilised in the natural sciences which concentrate on the procedure of testing assumptions. Stress is thus placed on covering interpretations and assumptions, and employing measured operationalisation of theories. As clarified by Burrell and Morgan (1994), ideographic methodologies, alternatively, emphasise the evaluation of subjective accounts that are produced by entering circumstance.

The emphasis is on theory founded in such empirical observations to achieve interpretation by comprehension.

Some of the common research strategies used in business and management explained according to their relationship to the quantitative, qualitative or mixed research approaches are experiments, surveys, case studies, grounded theory, focus group, action research, phenomenological search, and narrative research (Easterby-Smith *et al.*, 2008; Collis and Hussey, 2003; Saunders *et al.*, 2009).

As stated by Gill and Johnson (1991), experiments and survey techniques are related to nomothetic class, while ethnography, focus groups, action research, and case study techniques are classified as ideography. Figure 4.4 demonstrates the characteristics of nomothetic and ideographic techniques. Even though experiments and surveys are mainly utilised for conjecture testing, action study and focus groups, as well as ethnography for concept construction, case studies are used widely for inductive as well as deductive techniques. As Eisenhardt (1989) asserts, case studies may be employed to achieve conjecture testing as well as conjecture production. As she states, case study research commences with a deductive logic technique with a problem definition, and results in an inductive logic procedure of conjecture construction. This outlines the employment of comparable study techniques inside both deductive and inductive methods.

Figure 4.3: Methodological continuum (Pathirage *et al.*, 2008)

Nomothetic	Experiments Surveys	Case study	Focus group	Action research	Ethnography	Ideographic
			Methodological Continuum			
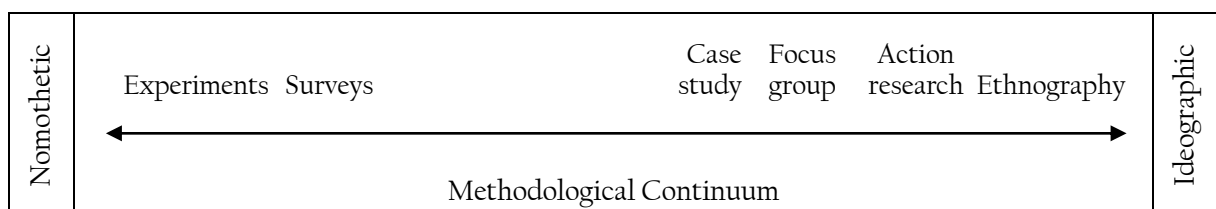
The two most commonly used quantitative research strategies are experiments and surveys (Saunders *et al.*, 2009). Experimental research is usually carried out in laboratories or fields

where there is full control on the variables and it aims to test the relationships between identified variables, ideally holding all variables constant and changing only one variable to examine the effects on the dependent variable (Fellows and Liu, 2009). The experiment is considered a trial since the answer is not known beforehand, and also an observation since the result is carefully recorded (Melville and Goddard, 1996). Experiments can also be carried out in the natural environment in which work goes on as usual, but special treatment is given to one or more groups (Sekaran, 2003). Compared to the other techniques, experiments are generally easier to replicate, less expensive and less time-consuming (Neuman, 2005; Blumberg *et al.*, 2005).

The second type of quantitative research is surveys, which form a research strategy that concerns the structured gathering of data from a considerable portion of a population. Surveys comprise one of the most important strategies in applied social research (Fellows and Liu, 2003). Even though the phrase 'survey' is usually employed to define the gathering of information employing questionnaires, it encompasses alternative methods like structured observation and structured interviews.

In this research, the strategy that will be carried out to collect quantitative data is surveying, which is practical in defining the features of a large sample, as no alternative strategy may offer such wide perspective (DeVaus, 2002). Moreover, surveys are considered a flexible way of collecting data since they may be applied in different ways such as online surveys, email surveys, social media surveys, paper surveys, mobile surveys, telephone surveys, and face-to-face interview surveys (Blumberg *et al.*, 2005). An important factor concerning data collection method is validity. The anonymity of surveys, particularly the ones that are administered online, allow respondents to answer with more sincere and valid answers which will provide an opportunity for more honest and unambiguous responses than other types of strategies, especially if it is clearly stated that survey answers will remain completely confidential (Neuman, 2005).

Although there are several types of qualitative research strategies provided in the literature, however none is universally agreed upon (Denzin and Lincoln, 2005). As the task of implementation model development follows an inductive method through subjective measures, the adoption of an ideographic method will help in choosing the most suitable strategy to perform this task. This is supported by Burrell and Morgan (1994), who claim that ideographic methodologies emphasise the evaluation of subjective interpretations that are produced by the theory founded in such empirical observations, through internal positions and concerning oneself with the daily stream of life (Gill and Johnson, 1991).

Moreover, Creswell (2003) and Saunders *et al.* (2009) list a number of the most commonly used strategies in qualitative research including grounded theory, case studies, phenomenological search, narrative research, focus group, and action research. However, Gill and Johnson (1991) stated that the qualitative strategies related to ideography include ethnographic research, focus group, action research, and case studies (Pathirage *et al.*, 2008). These strategies reflect numerous significant aspects of qualitative studies, including concentration on understanding the experiences, perspectives, views and considerations of participants by different inquiry strategies.

In order to develop the market orientation implementation model, the use of focus group as a research strategy to collect the necessary qualitative data is adopted. It will present many advantages to the study and allow in-depth investigation of this task.

This research will carry out focus-group interviews to develop the market orientation implementation model using a qualitative method known as Interpretive Structural Modelling (ISM).

ISM is a well-established technique for defining associations between particular variables, which describe an issue or a challenge of a system. ISM involves an interactive process that assists in enhancing order and location of complex relations among variables (Sage, 1977). This approach will be extensively explained in chapter 6.

4.5.3. Time Horizon

The last research approach item in the modified model is the time horizon of conducting a strategy. Depending on the research questions and objectives, the time horizon of the pursued research strategy would be either taken as a snapshot at a particular time (cross-sectional) or a diary perspective as a series of snapshots of events over a given period of time (longitudinal) (Saunders *et al.*, 2009).

This research will be cross-sectional, because of the time constraints. Furthermore, cross-sectional studies often employ survey and focus group strategies, as questionnaires and interviews are conducted over a short period of time (Easterby-Smith *et al.*, 2008; Robson, 2002).

4.6. Quantitative Data Collection Techniques

Before identifying the data collection techniques, it is worthwhile categorising the types of data involved in research. Basically, data is divided into two types: primary and secondary.

According to Malhotra and Birks (2007: p.3), secondary data is "*data already collected for purposes other than the problem at hand*". In other words, it is data already gathered by others which can be used in the research undertaken in several ways. Data can be obtained from different sources such as books, journals and company websites. Secondary data can help the researcher in terms of providing the best understanding of the research undertaken, by clarifying the problems from different points of view and opinions. It involves the background and financial statements of companies, which might be difficult to gain by primary data. According to Schmidt and Hollensen (2006: p.226), secondary data is "*relatively inexpensive, easily accessible, and quickly obtained*". In addition, it can help researchers to expand their knowledge and develop their assumptions.

On the other hand, primary data is defined as "*data originated by the researcher specifically to address the research problem*" (Malhotra and Birks, 2007: p.40). Primary data is the data which is collected by the researcher for the specific aims and objectives related to the research being undertaken. However, after obtaining the required information by researching secondary data, the real necessity occurs for primary data in any research, due to its role of providing more accuracy and being more specific to the purpose of the research data during the data collection process.

As shown previously in Figure 4.1, the modified model places the research philosophy in the outer ring and the research approach in the middle ring. The inner ring thus holds the research methods and techniques for collecting and analysing quantitative and qualitative data. In order to understand data collection methods, Saunders *et al.* (2009) consider questionnaires as the most important primary quantitative data collection method used in social sciences research.

4.7.   Questionnaires

A questionnaire is a general term to encompass all methods of data gathering in which every participant is required to answer the same set of questions in a prescribed sequence (DeVaus, 2002). Possibly not unexpectedly, the questionnaire comprises one of the most widely employed data gathering methods inside the survey strategy, as it offers an effective way of gathering answers from a substantial sample to the same set of questions (Robson, 2002). The design of a questionnaire varies subject to how it is dispensed, and specifically, the amount of interaction with the participants. It includes the following types (Figure 4.4):

- Self-administered questionnaires are generally completed by the participants.
- Interviewer-administered questionnaires are recorded by the interviewer on the basis of each participant's responses.

Figure 4.4: Questionnaire Types (Saunders *et al.*, 2009)

```
                          Questionnaires
              ┌─────────────────┴─────────────────┐
           Self-                              Interviewer-
        administrated                        administrated
     ┌──────┼──────┐                        ┌──────┴──────┐
 Internet and   Postal    Delivery and    Telephone    Structured
  intranet-  questionnaire  collection  questionnaire   interview
  mediated              questionnaire
 questionnaires
```
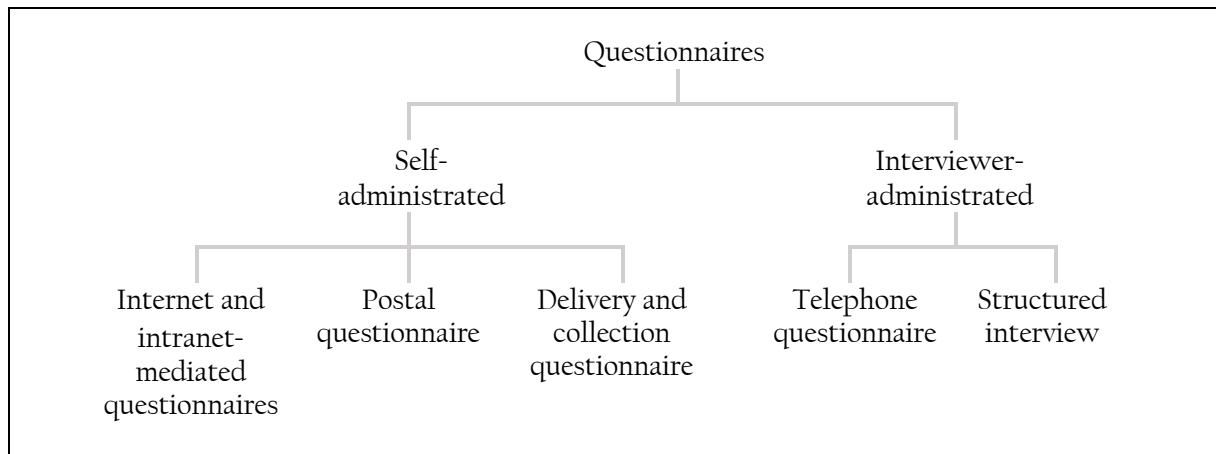
The techniques for the data collection process allow for systematic choosing of the best form of both the secondary and the primary data that will be useful in the research process in relation to the subject area of study. The process for the data collection method or techniques could be in the objects, people involved, and the phenomena as they occur in the study. To achieve this, both primary and secondary data will be collected for this research.

After the core considerations of any research regarding its philosophical stance it is important to understand how the adoption of certain methods will fit in with the research philosophy and approach.

Bearing in mind that while positioning as more interpretivist (rather than positivist), and adopting the mixed methods approach in this study, the data collection methods consist of the following:

- An ongoing literature review: The secondary data collected from the works of previous researchers in the field are used to identify some of the broader aspects considered relevant to studying the market orientation in addition to information on the economic conditions and construction industries in Saudi Arabia. In this research, a methodical literature review was carried out, covering academic articles and journals, institutional publications, reviews, and textbooks. The literature review also pointed out some of

the factors and components affecting market orientation by looking at studies related to this research.

- Internet-based quantitative questionnaires: The use of internet-mediated questionnaires, administered in conjunction with email, will assist the gathering of data. This will help when developing the assessment model. It also provides additional control as the majority of users view and reply to their individual mail at their personal computers (Witmer *et al.*, 1999).

As mentioned, questionnaires are the primary data collection technique adopted in this research. They involve the use of online survey systems distributed to the respondent, for them to choose from a multiple of answers. Questionnaires are usually less time-consuming and less expensive compared to other techniques, even though designing a questionnaire could be very stressful and difficult in terms of asking the right questions as it relates to the study. The questionnaire allows for greater anonymity. This means that the respondents have the chance to express themselves freely (Kumar, 2005). Today, most researches are widely carried out by using questionnaires. It is adopted for this research, as it is the most convenient way for data collection in a research study (Kvale and Brinkmann, 2009).

4.7.1. Questionnaire Sample

Once the primary data collection method has been chosen, the next task is to obtain a sample of respondents. Sampling is a process of selecting individuals that will represent the targeted population of interest. Sample selection plays a vital task in the research strength and dependability. It should symbolise the whole population that had been involved in negotiation projects to ensure research strength, exactness, and to be more beneficial in attaining the research goals.

Scientifically, a survey is called a probability sampling when the strategy of its choice is founded on the concept of probability. So as to have a randomly chosen sample, for instance, it has to establish a process that ascertains that the different units within the population have identical prospects of being selected. Nonetheless, sampling may additionally be carried out in the absence of concept of probability, i.e., non-probability sampling (Baohua *et al.*, 2000). The difference between probabilistic and non-probabilistic sampling is that non-probabilistic sampling does not include choices in line with a probability but probabilistic sampling does. It may not necessarily signify that non-probabilistic samples are not demonstrative of the sample. However, it does signify that non-probabilistic samples are not reliant on the logic of probability conjecture. In general, in social researches there could be instances where it is not possible, practical, or hypothetically reasonable to carry out probability sampling. In these instances, a broad variety of non-probabilistic options may function better (Trochim, 1999). There are four forms of probability sampling (Proctor *et al.*, 2005):

- Simple random sampling: All members of the population have a known identical likelihood of inclusion within a sample.

- Stratified sampling: Also called a stratified random sample. This is a sophisticated technique used when there are possible problems with ordinary random sampling, most often due to small sample size. It uses known facts about the population to systematically select sub-populations and then random sampling is used within each sub-population.

- Cluster sampling: The population is divided into groups, and drawing a sample of the group is required. In cluster sampling, the population is first separated into mutually exclusive sub-populations called clusters. Then a sample (often a random sample) of these clusters is chosen. All units in the selected clusters are selected to form the sample.

- Systematic sampling: This is when the sample is selected by a non-random procedure, such as picking every 10th product unit of the assembly line for testing, or every 50th customer of a mailing list.

On the other side, there are five forms of non-probability sampling (Arif, 2011; Baohua *et al.*, 2000):

- Modal Instance Sampling (Typical Voter): Sampling the most frequent cases, or the typical cases. It is only logical for casual sampling contexts.

- Expert Sampling: Sampling includes the gathering of a sample of individuals with recognised or demonstrable knowledge and proficiency in some area.

- Quota Sampling: The sample is selected non-randomly according to some fixed quota.
  - Proportional (proportional to the population)
  - Non-proportional (enough to do the statistical tests)

- Heterogeneity Sampling (Sampling for diversity): Used to encompass all opinions and attitudes, and is not concerned with disseminating these opinions impartially.

- Snowball Sampling: Recognising someone who fulfils the requirements for the research, and requesting him/her to suggest others who they might know as satisfying the requirements. Even though this strategy would not really result in representative samples, there are instances when it is the most suitable option. Snowball sampling is particularly practical when attempting to reach populations that are unavailable or a challenge to find, or when it involves studying relationships among mutual population members.

In this research, the non-probability Snowball sampling technique will be employed to select individuals that will represent the targeted population of interest. As this technique requires the support of other people to participate in approaching potential participants on behalf of the researcher himself, seven professional colleagues will be involved in this process. Each one

of the recruited team members (the seven professional colleagues) satisfies the following requirements:

- Works at a privately-owned Saudi construction SME: Due to the fact that the market orientation approach is most applicable to private organisations, and since this research intends to help reducing the high construction SMEs failure rates (see section 1.7 'Research Scope' for more details).

- Positioned at a middle management level: Giving their involvement into day-to-day running of a business, middle-managers play an important role in linking employees with the top management level, which makes them a strong communication channel that passes on major decisions of executives and main goals across the company. This should make it easier to distribute the questionnaire to a large sample size.

- Has at least 5 years of work experience: This implies that experienced participants would have a diversity of skills that allows them to better understand the field of construction and to communicate well with all sorts of different people involved in the industry.

The recruited team will be informed via email and all members are asked to confirm their participation in writing. Then, they will start communicating potential participants, who are subjectively assessed as meeting the study criteria, in terms of participants' type of industry they work in (i.e., private construction SME). Participant consent forms will be passed to participants and they will be asked to sign it. Then it will be collected by the recruited team and sent back, by recorded mail, to the researcher. Approximately 250 questionnaire participants will be contributing to this research in order to obtain sufficient data, which will enable practical insights into the project's success. The rationale behind this number is because it has been used in previous work (Kohli and Jaworski (1990); Narver and Slater (1990); Deshpandé *et al.* (1993); Gray *et al.* (1998)).

In this research, four factors have been taken into account when conducting the survey (Sweetman, 2005):

- The sample is large and sufficient to reflect the majority population.

- The sample is as clear as possible.

- Its defects are acknowledged.

- A logical explanation for it is produced.

The sample covered by this research involves Saudi private construction SMEs, including consultants, contractors, and specialists in the fields such as designers, project managers, and engineers. The reason for choosing this sample is that most of the construction projects in Saudi Arabia are being executed by private sector companies or semi-governmental companies, and to address the problem of the high number of construction SMEs failure in the country.

4.7.2. Questionnaire Design

The questionnaire is designed to address the research objectives and to find out the factors affecting market orientation in the Saudi construction industry (see appendix 1). All the information in the previous chapters was used to help design the questionnaire and to create knowledge of the issues related to the topic.

When constructing the questionnaire, a number of facts were considered (Churchill, 1979; DeVellis, 2011; Hinkin, 1998; Saunders *et al.*, 2009):

- The wording of each question is re-examined and ensured it is consistent with purpose of the study

- The wording of each question is easy for the population to answer

- Questions are simple, short, unambiguous, and formulated in language familiar to target respondents

- Instructions are included and easy to follow

- Questions during the start of the questionnaire are uncomplicated and straightforward

- Questions at the start of the questionnaire are apparently related to the objective of the questionnaire

- Complex questions are placed towards the middle of the questionnaire

- Questions are divided into apparent divisions which will seem sensible to the participant

The design of each question should be established by the data that is required for gathering. When designing personal questions researchers chooses one of three options (Bourque and Clark, 1994):

- adopt questions used in other questionnaires

- adapt questions used in other questionnaires

- develop their own questions

Adopting or adapting questions could be required if the researcher needs to imitate, or to contrast the outcomes with an alternative research. This can allow reliability to be assessed.

In designing this research questionnaire, the questions were adapted from a number of previous market orientation measurements, mainly from the one developed by Kohli *et al.* (1993), in addition to some subsequent measurements built on this scale (i.e., Carr and Lopez, 2007; Barker, 2008; Bhuian, 1998; Farrell, 2000; Jaskyte, 2011; Renko, 2006; Matsuno *et al.*, 2003). This combination of measurements was considered since there is no general measurement that can test all dimensions of market orientation which are relevant to the Saudi construction industry.

Moreover, the adaptation of previously established questions is more effective than establishing new questions from scratch as long as they may still gather the information required to respond to the research questions and achieve the research aim (Bourque and Clark, 1994). This was seriously considered when designing this questionnaire. In this respect,

the researcher developed a 36-items scale, shown in Table 4.5, which will help testing the proposed hypotheses.

<div align="center">Table 4.5: Questionnaire adapted items [with reference]</div>

Factor	Item	References
Top management Emphasis	1. Top managers often tell employees to be sensitive to the activities of our competitors.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
	2. Top managers keep telling people around here that they must prepare themselves now to meet customers' future needs.	McCormack (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
	3. According to top managers here, serving customers is the most important thing our business unit does.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
Top management risk Aversion	4. Top managers here occasional new product failures as being normal. *	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
	5. Top managers in this business unit like to take big financial risks.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
	6. Top managers around here like to implement plans only if they are very certain that they will work.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
Inter-departmental conflict	7. People in one department generally dislike interacting with those from other departments.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
	8. Employees from different departments feel that the goals of their respective departments are in harmony with each other.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
	9. Protecting one's departmental turf is considered to be a way of life in this business unit.	McCormack, K. (2001) Kohli and Jaworski MARKOR (1993) Bhuian (1998)
Inter-departmental Connectedness	10. In this business unit, it is easy to talk with virtually anyone you need to, regardless of rank or position.	Kohli and Jaworski MARKOR (1993)
	11. There is plenty opportunity for informal "hall talk" among individuals from different departments in the business unit.	Carr and Lopez (2007) MOCCM Scale Kohli and Jaworski MARKOR (1993)
	12. In this business unit, employees from different departments feel comfortable calling each other when the need arises.	Kohli and Jaworski MARKOR (1993)
Formalization	13. A person can make his own decisions without checking with anybody else.	Jaskyte (2011) Kohli and Jaworski MARKOR (1993) Hage and Dewar's (1973)
	14. The employees are constantly being checked on for rule violations.	Jaskyte (2011) Kohli and Jaworski MARKOR (1993) Hage and Dewar's (1973)
Centralization	15. Any decision I make has to have my boss' approval.	Jaskyte (2011) Kohli and Jaworski MARKOR (1993) Hage and Dewar's (1973)
	16. Customer satisfaction assessment influences senior managers' pay in this business unit.	Barker (2008) Kohli and Jaworski MARKOR (1993)

Reward System orientation	17. Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good market intelligence.	Kohli and Jaworski MARKOR (1993)
	18. Employees' financial compensation is almost entirely based on their sales volume.*	Barker (2008) Kohli and Jaworski MARKOR (1993)
Entry barrier	19. There are obstacles that make it difficult to enter and compete in the market.	Matsuno et al. (2003) EMO Scale
	20. Barriers to entering the market protect incumbent firms and restrict competition.	Matsuno et al. (2003) EMO Scale
Buyer power	21. It is difficult for our firm to replace a lost supplier	Matsuno et al. (2003) EMO Scale
	22. Price is important in our buyers' buying criteria	Matsuno et al. (2003) EMO Scale
	23. It is difficult for our buyers to switch suppliers	Matsuno et al. (2003) EMO Scale
Supplier power	24. Our organisation is able to negotiate lower prices from our sources of supply	Matsuno et al. (2003) EMO Scale
Relative size and cost	25. The size of our organisation's sales revenue is low compared to our largest competitors	Matsuno et al. EMO Scale (2003) Han et al. (1998)
	26. Our organisation's average total operating costs (administrative, production, rent, marketing, sales)are low in relation to our largest competitors	Matsuno et al. EMO Scale (2003) Han et al. (1998)
Market Turbulence	27. In our kind of business, customers' product preferences change quite a bit over time.	Farrell (2000) Kohli and Jaworski MARKOR (1993)
	28. We are witnessing demand for our products and services from customers who never bought them from us before.	Farrell (2000) Kohli and Jaworski MARKOR (1993)
Competitive Intensity	29. There are many "promotion wars" in our industry	Kohli and Jaworski MARKOR (1993)
	30. Anything that one competitor can offer, others can match readily.	Kohli and Jaworski MARKOR (1993)
	31. Our competitors are relatively weak.	Kohli and Jaworski MARKOR (1993)
Technological Turbulence	32. The technology in our company is changing rapidly.	Renko (2006) Kohli and Jaworski MARKOR (1993) Matsuno et al. EMO Scale (2003)
	33. A large number of new product ideas have been made possible through technological breakthroughs in our company.	Renko (2006) Kohli and Jaworski MARKOR (1993) Matsuno et al. EMO Scale (2003)
	34. Technological developments in our company are rather minor.	Renko (2006) Kohli and Jaworski MARKOR (1993) Matsuno et al. EMO Scale (2003)
Market Growth	35. The estimated annual rate of change of market size in the organisation's principal served market segment over the last three years	Matsuno et al. EMO Scale (2003)
Government regulations	36. Government regulations are seen as obstacles that make it difficult to enter and compete in the market.	Matsuno et al. EMO Scale (2003)

These items were pilot-tested for clarity and appropriateness in a self-administered pre-test with 5 managers from marketing and non-marketing departments. They were asked to complete the questionnaire and indicate any ambiguity or difficulty that they experienced in responding to the questions. Some items were eliminated and some others were modified on

the basis of their feedback. The items modification resulted in reducing the number of items to 23, as shown in Table 4.6.

Table 4.6: Administrated questionnaire

Factor	Item
Top Management Emphasis	1. Top management often tell employees to pay attention to the activities of our competitors.
	2. According to top management here, serving customers is a top priority in our organisation.
Top Management Risk Aversion	3. Top management in this organisation like to take big financial risks.
	4. Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work.
Inter-Departmental Conflict	5. In this organisation, people in one department interact normally with those from other departments.
	6. Employees from different departments feel that the goals of their respective departments are in harmony with each other.
Inter-Departmental Connectedness	7. In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position.
	8. There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation.
	9. In this organisation, employees from different departments feel comfortable calling each other when the need arises.
Reward System Orientation	10. Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation.
Formalisation	11. The employees are constantly being checked on for rule violations
Centralization	12. A person can make his own decisions without having his boss approval.
Entry Barriers	13. There are obstacles that make it difficult for our organisation to enter and to compete in the market.
Buyer Power	14. Price is not important in our customers' buying criteria.
Supplier Power	15. Our organisation is able to negotiate lowest prices from our sources of supply.
Relative Size and Cost	16. The size of our organisation's sales revenue is high compared to our largest competitors.
	17. Our organisation's average total operating costs (administrative, production, rent, marketing, sales) are high in relation to our largest competitors.
Market Turbulence	18. We are witnessing demand for our products and services from customers who never bought them from us before.
Competitive Intensity	19. There are many "promotion wars" in our industry.
	20. Anything that one competitor can offer, others can match readily.
Technological Turbulence	21. Our organisation is highly concerned in using new technologies
Government Regulations	22. Government regulations are not seen in our organisation as an obstacle to enter and compete in the market.

The final questionnaire was divided into three sections, which ensured that the questionnaire was designed in an organised manner:

- In the first part, the questions focused on the participants' firms. This includes the type of industry sector they work in (whether it is a private, a semi-private, or a public sector), its size, and its services area.

- In the second part, the questions focused on the participants' profiles. This part includes general questions about their job level, educational qualification, job function, and their years of work experience. These questions will help understand the sample and link it to the research findings.

- The third part includes a list of 15 factors (23 items in total) which may or may not be affecting the market orientation of the Saudi construction industry. Each item is graded on a 5-points Likert scale with one being strongly agree to the statements and five being strongly disagree.

The questions were closed-ended, as these have the advantage of being administered easily, which give the respondents the chance to answer freely and makes it easier for the researcher to code and analyse (Creswell, 2003). Kumar (2005) suggests that questionnaires should be interactive in ensuring that the respondents will feel free as if the questionnaire were interacting with them. Kumar (2005: p.78) also adds that "*questionnaires need to be clear and precise as there is no one to explain the meaning of every question unlike interviews*".

4.7.3. Reliability and Validity

In order to develop the intended market orientation model, two fundamental subjects need to be considered: the validity and reliability of the construct (Hair *et al.*, 2010). Satisfying these two is important as they help to ensure items generated are correlated at an acceptable level and therefore develop a better measurement scale (Rossiter, 2002; Suddaby, 2010). Minimising the likelihood of getting an answer wrong implies that attention has to be given to these two specific emphases on study design reliability and validity (Saunders *et al.*, 2009).

4.7.3.1. Reliability

Reliability refers to the level to which the data gathering methods or analysis processes will produce dependable outcomes. It reflects the "*extent that independent but comparable measures of the same trait or construct of a given object agree*" (Churchill, 1979: p.65). The most commonly used technique to assess the reliability of a construct is to measure the internal consistency between its items (or statements/questions) (Ngai and Cheng, 1997). In this regard, this research will follow the steps suggested by Easterby-Smith *et al.* (2008: p.109) to assure a high level of construct reliability:

- the measure will not provide the same outcomes on other occasions
- comparable observations will be acquired by alternative observers
- transparency is available regarding the manner in which the raw data was rationalised

In addition, Robson (2002) asserts that there may be 4 threats to reliability:

- Subject or participant error: this means that the answers will be affected by the timing of the data collection. In this respect, a neutral time was chosen to collect participants' answers, when staff can be anticipated to not be on a high, anticipating the end of the working day or week, or a low, with the working week or day ahead of them.
- Subject or participant bias: when participants might say what their bosses wanted them to say. Therefore, anonymity of respondents was ensured.
- Observer error: a high degree of structure to the questionnaire schedule is introduced in order to lessen the threats to reliability.
- Observer bias: this depends on how the replies are interpreted. This threat should not exist since the researcher is the only one to see and analyse the answers.

Although the assessment of reliability is carried out following data collection, it has to be planned during the questionnaire design phase. In this research, it will be carried out to assess the reliability of the collected answers for the third part of the questionnaire.

4.7.3.2. Validity

Validity is the approximate truth of propositions, inferences, or conclusions regarding the collected data. It is related to whether the results actually concern what they seem to concern. Validity involves two main extents: external validity and internal validity.

External validity, sometimes referred to as generalisability, is the level to which the study outcomes are generalisable: that is, whether the outcomes may be equally pertinent to alternative research circumstances, like different companies. Sampling plays an important role in improving external validity (generalisability) as the use of a random selection (if possible, rather than a non-random procedure) will increase the validity (Arif, 2011). Therefore, as mentioned earlier, a snowballing technique is adopted to collect required data for this study.

Internal validity, which is also known as construct or measurement validity means the level to which the quantification questions actually quantify the existence of those constructs which are meant to be quantified. A legitimate questionnaire will facilitate precise gathering of data, and one that is dependable will signify that these data are gathered consistently. Foddy and Foddy (1994: p.17) discuss validity regarding the queries and responses making sense, stressing that "*the question must be understood by the respondent in the way intended by the researcher and the answer given by the respondent must be understood by the researcher in the way intended by the respondent*". In this study, internal validity in association with the designed questionnaire refers to its capability to quantify what was planned to be quantified, which means that the findings should represent the reality of the market orientation in the Saudi Arabian construction industry. Therefore, in order to assess the validity of the designed questionnaire, content validity and criterion-related validity must be discussed (Blumberg *et al.*, 2008).

Content validity, or face validity (Hair *et al.*, 2010), refers to the level to which the measurement questions within the questionnaire offer sufficient coverage of the investigative

questions. It assesses the relevance of the scale items to the latent concept being investigated based on expert judgment. This is made through a careful description of the study by means of the literature reviewed. An alternative means is to employ a group of individuals to assess if each question within the questionnaire is crucial, practical but not crucial, or unnecessary (Saunders *et al.*, 2009).

Hair *et al.* (2010) also add that nomological validity has to be considered as well. Nomological validity seeks to establish the predictive power of the constructs in line with logical and theoretical expectations.

Moreover, as the aim of this research is to develop an assessment model for measuring the degree of market orientation, Arif (2011) states that scale development approaches require the measurement scale to have nomological validity:

- Predictive validity: to assess the operationalisation's capability to predict something it should be hypothetically capable of predicting.
- Concurrent validity: to assess the operationalisation's capability to differentiate groups that it should hypothetically be capable of differentiating.
- Convergent validity: to study the extent to which the operationalisation is comparable to (converges on) alternative operationalisations that it theoretically should be similar to. It seeks to ensure that measures are correlated at an acceptable level.
- Discriminant validity: to examine the level to which the operationalisation is not comparable to (differs from) alternative operationalisations that it hypothetically should not be similar to. It measures the unidimensional distinctiveness of the factors as dimensions of the measurement model being investigated.

Criterion-related validity, sometimes referred to as predictive validity, is associated with the ability of the measures (questions) to produce precise estimations. In assessing criterion-related validity, the data from the designed questionnaire will be compared using a statistical analysis known as correlation.

Exploratory factor analysis will also be used to determine factor structure and initial convergent and discriminant validity as part of a two-step process (Anderson and Gerbing, 1988). Criterion validity would seek to establish predicted relationships. With the preceding steps completed, replication and further iterative refinements can be carried out as necessary (Costello and Osborne, 2011; Gerbing and Anderson, 1988; Rossiter, 2002).

The clarity and specificity of the construct domains to be investigated, which is mainly the market orientation, helps to ensure items generated are better correlated, and content validity and reliability are satisfactory (Rossiter, 2002; Suddaby, 2010). Churchill (1979) and Hinkin (1998) advocate the importance of maximum contribution from extant literature in developing items for measurement and relevant scales. The original scales and measures developed by Narver and Slater (1990), Kohli *et al.* (1993), and Deshpandé and Farley (1998) have remained the major foundational scales in market orientation. Updates by Matsuno *et al.* (2005) and more recently by Blocker *et al.* (2011) are also useful references.

Following suggestions within the market orientation domain, the concept of orientation is more generally seen as a composition of behaviours, organisational culture and processes within a company, (Deshpandé and Webster Jr, 1989; Ferrell *et al.*, 2010; Jaworski and Kohli, 1993; Maignan and Ferrell, 2004; Maignan *et al.*, 2011; Narver and Slater, 1990).

Management perspectives of the organisational culture and processes represent the working definition adopted for the generation of scale items. The item generation process applied here integrates these elements with a managerial emphasis. Especially noteworthy is the fact that, increasingly, more recent research and conceptual papers have addressed wider item groups (Matsuno *et al.*, 2005; Ferrell *et al.*, 2010; Maignan *et al.*, 2011). In designing this research questionnaire, the questions were adapted from a number of previous validated market orientation measurements. Appendix 2 provides the comprehensive literature survey for extant market orientation related studies that helped inform this research. The studies subsequent to work by Narver and Slater (1990) and Kohli *et al.* (1993) built on the earlier

work resulting in refinement and confirmation of the original constructs for market orientation and components.

Relevant concepts were previously captured and validated by Narver and Slater (1990) and Kohli and Jaworski (1990). The scale proposed for this study must therefore capture similar validated data. Finally, the questionnaire adapted items from existing scales to simplify language in some cases, to add clarity regarding whether the item should be modelled as formative or reflective in accordance with recent suggestions (Diamantopoulos *et al.*, 2008).

4.8. Data Analysis Process

The collected data from the previously designed questionnaire, which constitutes the basis on which to construct and develop the assessment model, in its raw form – that is prior to the processing and analysis of the data – have little significance to the majority of people. In order to make these data useful they need to be analysed and interpreted. These data thus have to be processed to make them useful; that is, to convert them into information.

Quantitative data analysis involves both looking at the collected data graphically to represent the general trends in the data, and also to fit statistical models to the data. Furthermore, as the process of this research requires testing the selected hypotheses, the use of statistics and data analytical techniques will assist in this process. Additionally, the quantitative data analysis procedure may be seen as stages that lead from strategising to data gathering, to making informed resolutions founded on the consequent data. The process can be organised into the following six steps (Azzalini *et al.*, 2012):

- Understanding the nature of the problem. Effective data analysis requires an understanding of the research problem. It is important to have a clear direction before gathering data to ensure that we will be able to answer the questions of interest using the data collected.

- Deciding what to measure and how to measure it. The next step in the process is deciding what information is needed to answer the questions of interest. It is important to carefully define the variables to be studied and to develop appropriate methods for determining their values.

- Data collection. The data collection step is crucial. The researcher must primarily decide if an available data source is sufficient or if new data has to be gathered. If new data is to be gathered, a particular strategy has to be established, as the sort of evaluation that is suitable and the following conclusions that may be made are subject to how the data is gathered.

- Data summarisation and preliminary analysis. After the data are collected, the subsequent step generally concerns a primary evaluation that comprises summarising the data graphically and numerically. This primary evaluation offers insight into significant features of the data.

- Formal data analysis. The data analysis step requires the researcher to select and apply statistical methods.

- Interpretation of results. To draw conclusions from the analysed data.

While it is always preferable to start with a thoughtful and systematic exploration of any new set of data, pressures of time may tempt researchers analysing such data to launch into the 'interesting' aspects straight away. With complicated data, or even complicated data collection processes, this might lead to unpleasant consequences and may result in analyses being rerun and results being adjusted. Therefore, this research will consider such aspects in more depth. In particular, the data analysis will focus on:

- Preparing and checking the collected data
- Presenting and exploring the collected data
- Describing the collected data
- Examining the relationships in the collected data using statistics.

4.8.1. Data Preparation and Checking

Once the questionnaires are administrated, and upon the completion of the data collection stage, data must be prepared to be analysed. The task of data preparation concerns logging in or checking the data, assessing it for accuracy, entering it into the computer, and converting it into a database (Trochim, 2006). Preparing and organising the data correctly can save a lot of time, prevent mistakes from occurring, and ensure that the collected data will help achieve the research objectives.

4.8.1.1. Checking the data for errors

In the majority of social research, standard or quality of measurement is a major issue. Discovering that the data does not provide inaccuracies will assist in assuring the quality of subsequent analyses. As soon as the data is coded and recorded on the computer, it is important to assess the data for apparent errors as it is documented. However, since the questionnaire is online-based and all questions were in the form of multiple choices, there should be no room for error to occur at data entry.

4.8.1.2. Preparing the data

In order to undertake a quantitative analysis, it is recommended to prepare the data by considering the following (Saunders et al., 2009):

- Type of data (scale of measurement)
- Format which will be used for the data to be input to the analysis software
- Effect of data coding on subsequent analyses (for various kinds of data)

4.8.1.2.1. Data types

Quantitative data are often categorised in an ascending sequence of numerical accuracy (Dancey and Reidy, 2008). These varied levels of numerical quantification determine the variety of methods for the presentation, review and analysis. Quantitative data may also be divided into two different groups: numerical and categorical.

- Categorical Data: refer to data whose values may not be quantified statistically but may be either categorised in sets (categories) consistent with the features that point out or define the variable or positioned in rank sequence (Berman Brown and Saunders, 2008). They may be further sub-divided into:
  - o Descriptive (Nominal) Data: when it is impractical to describe or to rank the category numerically. Rather, these data merely calculate the number of incidents in every category of a variable. (Dichotomous Data: the variable is split into two categories, e.g., as the variable gender being divided into female or male)
  - o Ranked (Ordinal) Data: when the relative situation of every instance in the data set is known, even though the actual statistical measures like scores on which the situation is founded are not recorded, and where such data do not have similar size gaps between data values (Blumberg *et al.*, 2008): for example, rating or scale questions, such as where a participant is requested to rate how strongly she or he agrees with a statement.
- Numerical (Quantifiable) Data: refer to data whose values are measured or calculated statistically. Numerical data are more accurate compared to categorical as each data value can be allocated a rank in a numerical scale. They can be further sub-divided into:
  - o Continuous Data: are those whose values can conceptually accept any value (sometimes within a limited range) as long as it can be quantified precisely enough (Dancey and Reidy, 2008)

    o   Discrete Data: are those whose values can be quantified accurately. Every case applies one of a finite amount of values using a scale that quantifies alterations in discrete units. These data are often whole numbers (integers). Nonetheless, in several instances (e.g., UK shoe size), discrete information will encompass non-integer values.

Understanding variations between types of data is considerably significant when analysing the data quantitatively, as "*the more precise the scale of measurement, the greater the range of analytical techniques available to use*" (Saunders *et al.*, 2009: p.419).

In the questionnaire that was designed for this study:

- The types of scales in the first two parts of the questionnaires, focusing on participants' background and their firms, are considered as a descriptive (nominal) scale, since they classify people into mutually exclusive categories that indicate the group to which each subject belongs. However, these scales do not offer any quantitative information concerning the topics.

- The third part includes a list of factors effecting on the market orientation. Respondents are asked to rate how strongly they agree with statements on a 5-points Likert scale. These data are considered ranked (ordinal) data. Values on an ordinal scale signify the rank sequence of the subjects with regard to the variable being considered. The values on this ordinal scale signify a rank of levels with regard to the construct of efficiency. These rankings disclose considerably little concerning the quantitative variations between the subjects with respect to the underlying construct or components.

4.8.1.2.2. Data format and coding

Some primary data collection methods, such as the online questionnaire tool used for this research (QuestionPro*), automatically enters and saves the data on a computer file during the collection period, employing predefined codes. These data are subsequently exported in a table format, called a data matrix, to ensure they are compatible with different analysis software. In a data matrix, every column signifies a different variable for which data have been collected. Every matrix row comprises the variables for a single case, that is, a singular unit. As soon as data have been input into analysis software, it is often possible to store them in a format which may be read by alternative software.

4.8.2. Exploring and Presenting Data

Once the information has been put in and checked for errors, the analysis begins. Tukey's (1977) EDA (exploratory data analysis) technique "*is found to be useful at this initial stage*" (Saunders *et al.*, 2009: p.428). This technique stresses the employment of figures and diagrams to investigate the data, which should consequently assist in choosing the most appropriate data analysis techniques. It also guides the procedure of seeking relationships in data (Saunders *et al.*, 2009). According to Saunders *et al.* (2009), it is best to start this task by viewing each questionnaire item individually. Thus, based on the research objectives, presenting each item will guide analysis of the following aspects:

- Highest and lowest values
- Trends over time
- Proportions
- Distributions

*Accessible at http://market_orientation.questionpro.com/

When these are presented, relationships between variables can be compared (Sparrow, 1989) (Table 4.7):

- Conjunctions (the point where values for two or more variables intersect)

- Totals

- Interdependence and relationships

Table 4.7: Data presentation by data type: a summary (adopted from Saunders *et al.*, 2009: p.430)

		Categorical		Numerical	
		Descriptive	Ranked	Continuous	Discrete
Exploring and Presenting individual variables to show	one specific value	Table			
		frequency distribution			
	the highest and lowest values	pictogram		Histogram	Bar chart
				frequency polygon	pictogram
	a trend		Line graph	Line graph	Line graph bar
			bar chart	histogram	chart
	proportions of categories or values	Pie chart		Histogram	Pie chart
		bar chart		pie chart	bar chart
	the distribution of values			Frequency polygon	Frequency polygon
				histogram	bar chart
				box plot	box plot
		Categorical		Numerical	
		Descriptive	Ranked	Continuous	Discrete
Exploring and Presenting individual variables to show	one specific value	Table			
		frequency distribution			
	the highest and lowest values	pictogram		Histogram	Bar chart
				frequency polygon	pictogram
	a trend		Line graph	Line graph	Line graph bar
			bar chart	histogram	chart
	proportions of categories or values	Pie chart		Histogram	Pie chart
		bar chart		pie chart	bar chart
	the distribution of values			Frequency polygon	Frequency polygon
				histogram	bar chart
				box plot	box plot

In the questionnaire that was designed for this study, each part will be presented as the following:

- For the first and the second parts, the aim is to summarise and present the value of each variable. Since both parts are considered as a descriptive (nominal), then the easiest means of summarising data for a single variable, so that particular values may be simply read, is in tables (frequency distribution). Tables connect no visual importance to lowest or highest values, unless stressed by different colours or fonts, therefore, the use of bar charts will be more suitable for this purpose. Generally, bar charts "*provide a more accurate representation as the height or length of each bar represents the frequency of occurrence*" (Saunders *et al.*, 2009: p.431).

- For the third part, the aim is to show the proportion of occurrences of values for each variable. According to Anderson *et al.* (1999), studies have illustrated that the most frequently employed diagram to stress the fraction or percentage of occurrences is a pie chart, even though bar charts have been observed to offer equally favourable outcomes (Anderson *et al.*, 1999). Therefore, pie charts will be used to show the proportions of all ranked (ordinal) data in this part of the questionnaire by dividing each chart into proportional segments according to its value.

4.8.3. Describing the Data

After the use of diagrams and charts to understand the data, the exploratory data analysis approach emphasises the use of descriptive statistics to describe and compare variables numerically.

This task focuses on two aspects (Saunders *et al.*, 2009: p.444):

- The central tendency: When detailing data for the sample quantitatively, it is common to offer some general impression of values, which can be measured using one of the following:

  o mode: value that appears most regularly

  o median: middle value or mid-point following the ranking of the data

  o mean (average)

- The dispersion of data values around the central tendency.

In the case of this research, the data collected from the questionnaires will be described using the mode, as for descriptive data, since it is "*the only measure of central tendency that can be interpreted sensibly, and (…) it is possible to have more than one mode*" (Saunders *et al.*, 2009: p.446).

4.8.4. Examining the Data Using Statistics

After gathering all relevant data, the next stage is analysing it and applying statistical methods. Statistical analysis provides answers in regards to how variables relate to each other by testing the likelihood of the relationship occurring by chance alone, if there really was no difference in the population from which the sample was drawn (Robson, 2002). This process is known as significance or hypothesis testing, as it compares the collected data with what was theoretically expected to happen. This test can help to exclude the possibility that the results could be due to a random variation in the sample.

Despite this brief discussion of hypothesis testing, a great deal of quantitative analysis does not specify actual hypotheses. Rather, the theoretical foundations of the research and the research questions provide the context within which the probability of relationships between variables occurring by chance alone is tested. Thus, when hypothesis testing has taken place, it is often

only discussed in terms of statistical significance. The way in which this statistical significance is tested can be thought of as answering one from a series of questions, dependent on the data type (Saunders *et al.*, 2009: p.449):

- Is the association statistically significant?
- Are the differences statistically significant?
- What is the strength of the relationship, and is it statistically significant?
- Are the predicted values statistically significant?

As a result, this research will adopt the use of factor analysis to determine the structure and the variables composing of the assessment model. The Statistical Package for Social Science (SPSS) program will be used to explain, discover, and analyse the data. This, therefore, will help with either accepting or rejecting the hypotheses.

4.9. Research Design Flowchart

The research has so far detailed the research background, focus, aim and objectives, and the main findings arising from the review of literature undertaken throughout the project. The intention here is to summarise the research design strategy, the implementation, and the research methods used, detailing the basis on which they were chosen and their appropriateness. These are presented in Figure 4.5.

Figure 4.5: Research Design Flowchart

Input	Process	Output
Research theme	Problem Identification	Aim and Objectives
Articles and previous studies	Literature Review	An unbiased and a comprehensive view of previous research
Analysis of previous studies	Developed model	Survey questionnaires to understand the determining factors
Analysis of questionnaires	Refined model	Developing the assessment model
Factors from the model	Focus group interviews	Developing the implementation model
Correlation analysis	Discussion	Findings of this research
Research summary	Final write up	A foundation for future research

4.10. Ethical Considerations

Along with the data collection process, associated ethical and access issues are being considered. A cover letter was attached with the questionnaire, which explained the research

problem and the purpose of the research. The cover letter included ethical issues that concern participants to make them feel comfortable in completing the questionnaire, such as protecting their privacy.

There are ethical issues that need to be addressed when collecting data to protect the rights of participants involved in the research. Ethical issues normally concern the participant's voluntary, informed consent, confidentiality and anonymity.

In terms of voluntary disclosure, the researcher gave participants the freedom of choice to participate in the research questionnaire; they were not coerced into participating in the research.

In addition, the researcher took the participants' privacy seriously to avoid any harm or risk to participants (individuals and organisations). Therefore, the researcher kept their information confidential, in other words, not available to anyone who is not directly involved in this research. Furthermore, the research findings were shown to the respondents for approval at each stage due to any perceived risk they might have had. Moreover, the participants remained anonymous throughout the research, even to the researcher – particularly important for the participants who completed the questionnaire. The researcher pointed out in the cover letter that the participant's name should not be included in the questionnaire. Additionally, the questions in questionnaires and interviews were just related to the research subject. There were no personal questions, which could be a risk to participants or make them feel uncomfortable.

It is important to note that the researcher completed the ethical approval forms for this research before collecting the data, which includes the above ethical issues and the data collection procedures. This form was confirmed by the Research Governance and Ethics Committee at the University of Salford.

4.11. Conclusion

Research methodology defines the principals and procedures of logical thought and the processes used to generate theory, which are applied in the study. Since there are many diverse approaches and methods to design and execute research, a Modified model developed by Keraminiyage (2013) integrating the Nested model (Kaglioglou *et al.*, 1998) and the Research Onion (Saunders *et al.*, 2009) is presented in order to establish the general plan to attain the aim and objectives of the research. The Modified model demonstrates the choice of a philosophical stance, the use of an appropriate approach to address the research questions, followed by different research techniques employed for collecting data in addition to the process of data analysis.

The philosophy of this study takes a more objectivist stance on the ontological dimension, and since the research intends to explore and investigate the drivers and barriers of the market orientation, it leans more towards positivism on the epistemological dimension.

After considering philosophical stances of this research, the adopted methods for collecting the data are discussed. In this study, a mixed-methods approach was chosen. It comprised an ongoing literature review as a secondary data collection method, and internet-based quantitative questionnaires as a primary method that will help develop the market orientation assessment model. This will be followed by focus group qualitative interviews for developing the implementation model.

The survey, which is in the form of a questionnaire, was administered to the selected targeted population by employing the non-probability snowball sampling technique. Seven professional colleagues are involved in reaching participants on behalf of the researcher himself. The questionnaire is designed to address the research objectives and to find out the factors affecting market orientation in the Saudi construction industry. The questions are closed-ended and are

divided into three sections: participants' background, participants' firms, factors affecting the market orientation of the Saudi construction industry.

Analysing the data collected from the questionnaires is an important task that helps to achieve the research objectives and therefore meet the research aim. This task will include data entry and cleaning, preliminary data analysis, primary data analysis, and in some cases secondary data analysis. The types of scales that were used in the survey are considered as descriptive (nominal) which were presented by tables (frequency distribution) and will be described using the mode, while the ranked (ordinal) data will be presented by pie charts.

Finally, along with the data collection process, associated ethical issues are being considered. The researcher has completed the ethical approval forms for this research

data, and has been granted an approval by the Research Governance and

the University of Salford.

Chapter 5

Development of the Assessment Model

Data analysis process is an important task that helps achieve the research objectives and therefore meet the research aim. It includes:

- preparing, inputting into a computer and checking the data
- choosing the most appropriate tables and diagrams to explore and present the data
- choosing the most appropriate statistics to describe the data

This chapter considers these tasks and builds on the ideas outlined in the previous chapter about data collection. In addition, it describes the use of factor analysis as the main analytical technique for testing the hypotheses, and the use of correlation analysis to define the complex interconnections and relations between the factors, and which guided the discussion on these interrelations. Finally, this chapter presents the dimensions constituting the factors affecting the market orientation of Saudi construction companies, which comprise the main components of the assessment model.

5.1. Introduction

Any business and management research is likely to involve or contain some data. Such data could be useful to help achieve the research objectives and therefore meet the research aim. As mentioned earlier, this research is carried out to collect quantitative data using surveys as the main data collection strategy. The collected data from the previously designed questionnaire, which constitutes the basis on which to construct and develop the assessment model, will be analysed and interpreted in this chapter. The process of analysis will include exploring, presenting, and describing the collected data, followed by examining the relationships uncovered using statistics. After covering these aspects, the final step is the acceptance, rejection or, if necessary, the amendment of the hypotheses, depending on the empirical results obtained.

5.2. Questionnaire's Results and Findings

The online-based questionnaire was sent to the recruited participants and they were asked to approach potential participants on behalf of the researcher himself. The recruited team managed to reach over 500 individuals; however, only 334 participated in the survey (response rate 66.8%). The average time it took to fill-in the questionnaire was 10 minutes.

Moreover, the results of the questionnaires will be explored, presented, and described in the following sections. The analysis is in the same sequence as the questions were laid out in the questionnaire, which was divided into three parts.

- Part 1: Organisation Profile;
- Part 2: Personal Participants Profile;
- Part 3: Factors Influencing the Market Orientation of Saudi Construction Organisations.

5.2.1. Organisation Profile

The first part of the questionnaire represents the organisational characteristics obtained from participants. This part included some filtering (contingency) questions, which aimed at determining whether the respondents were qualified or experienced enough to answer the subsequent questions.

5.2.1.1. Type of Industry Sector

Firstly, participants were asked to identify the type of firm they were employed by. 65% worked in private companies, and that included being contractors, consultants, or designers; and 32% worked at what is known as semi-private companies (see Figure 5.1).

Figure 5.1: Participants' Type of Industry Sector
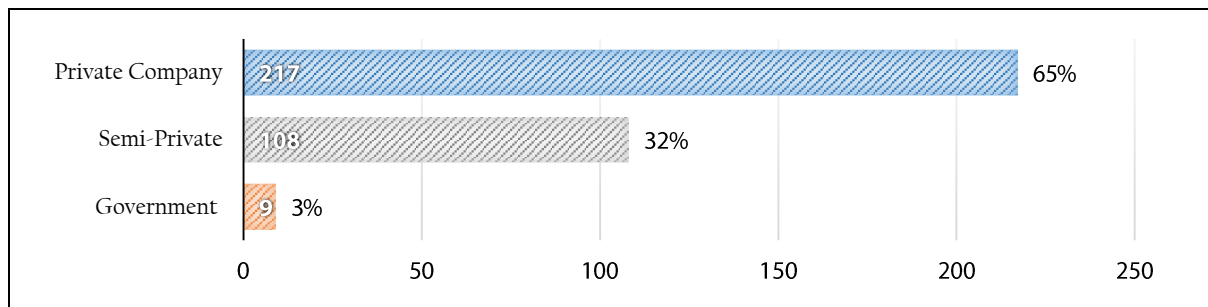
However, since this research is limited to private and semi-private construction firms, participants working at firms fully owned by the Saudi government (making as little as 3% of the whole population) will be excluded from the data, and so their results will be removed from all upcoming questions.

5.2.1.2. Number of Employees

Participants were also asked to choose within which range their companies fell, to get an indication of size. The number of employees working at a firm usually gives quite a good indication of how large it might be.

As this research focuses on the impact of market orientation on small- and medium-sized construction companies (SME's), not surprisingly, the majority of the targeted population worked at these types of firms (see Figure 5.2). Therefore, for this question, 43% of the participants worked at medium-sized companies, and almost half the remaining population (48%) worked at smaller companies (12% in micro- and 36% in small-sized firms).

Figure 5.2: Participants' Companies Sizes
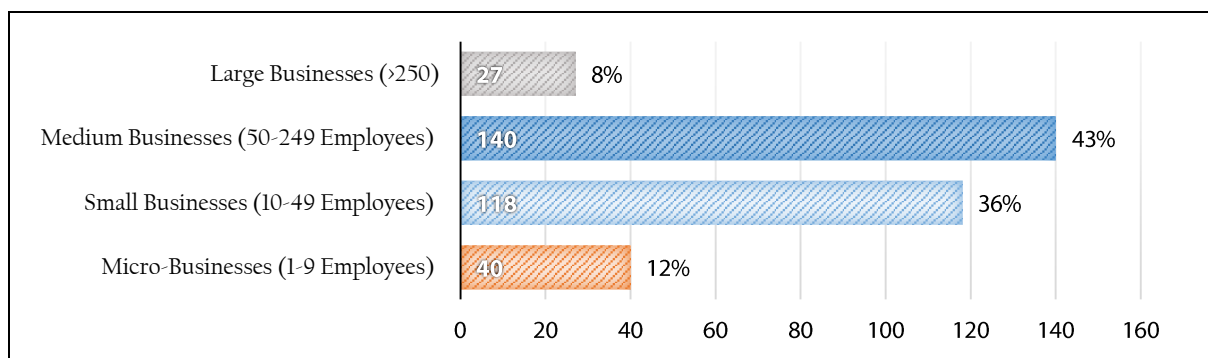
Once again, and for the reasons given earlier in the research scope, the remaining 27 participants working at large companies with more than 250 employees will be removed from the data.

5.2.1.3. Types of Industry the Firm Serves

Next, participants were asked to classify the type of industry they serve. The results show that most of the companies provide services to both private and public sectors (69%), while 18% are specialised in serving the public sector, and 13% serve private ones (see Figure 5.3).

Figure 5.3: Participants' Types of Clients
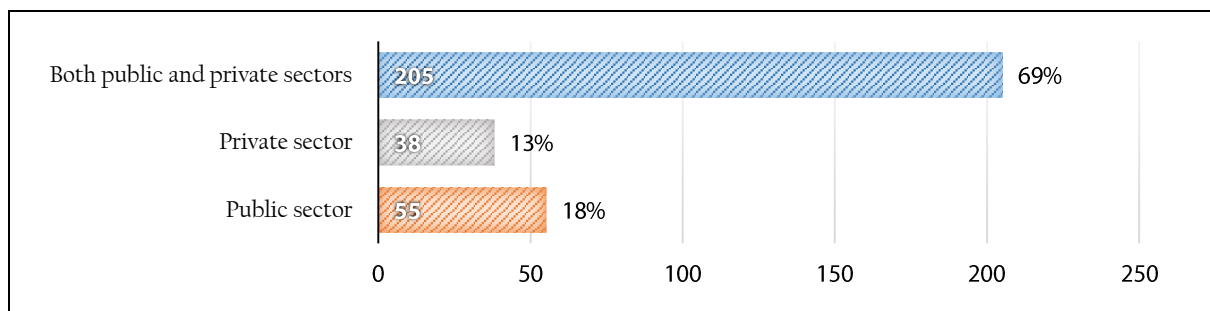
5.2.2. Personal Participants Profile

The second part of the questionnaire mainly describes the personal characteristics obtained from participants. All participants were asked to state their job level, their highest educational qualification, their years of experience, and their job function.

5.2.2.1. Job Level

Firstly, participants were asked to explain the level of their jobs: 34% were employees, and 33% were supervisors or project managers (see Figure 5.4). The remaining vary between management positions including managers, general and senior managers, vice presidents, chief executive officers, and company owners.

Figure 5.4: Participants' Job Level
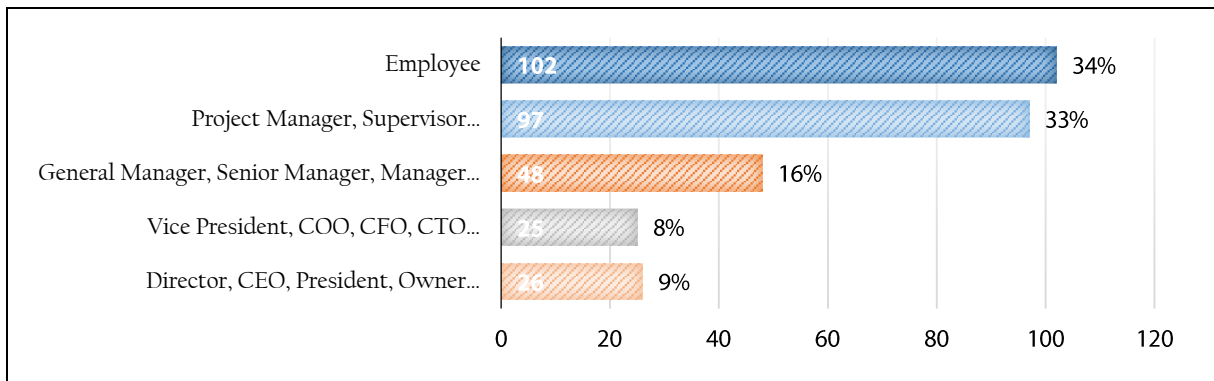
5.2.2.2. Highest Educational Qualification

In specifying their highest educational qualification, the majority, 78%, stated that they had a bachelor's degree, followed by 19% of participants who had a master's degree, and 2% who had a doctoral degree. 1% explained that they had a qualification below a bachelor's degree, including high diplomas or high school (see Figure 5.5).

Figure 5.5: Participants' Highest Educational Qualification
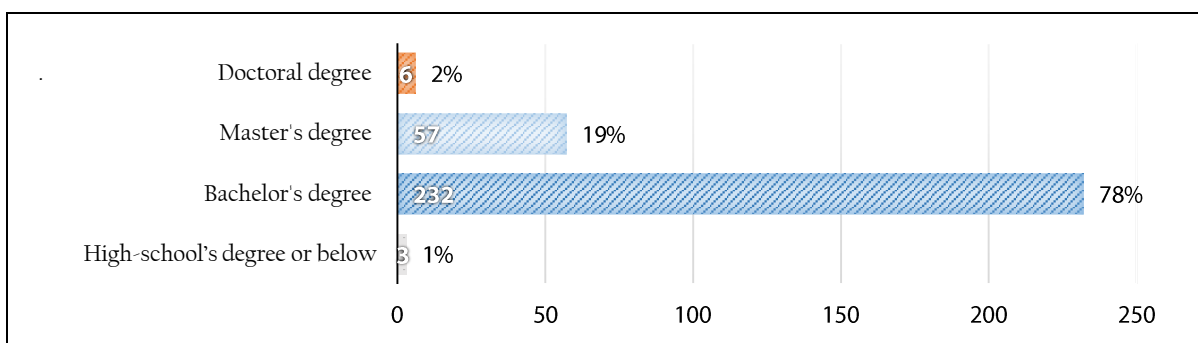
5.2.2.3. Job Function

As this questionnaire was aimed at people who work in project management and construction-related professions, they were asked to specify their exact job function in order to get a wider

image of the participants. In summary, their jobs varied between technical, R&D, business development, and general management jobs (see Figure 5.6). Not surprisingly, most of the participants were engineers and designers (42%), and project managers (including project management-related professions such as strategy and planning) (43%).

Figure 5.6: Participants' Job Function
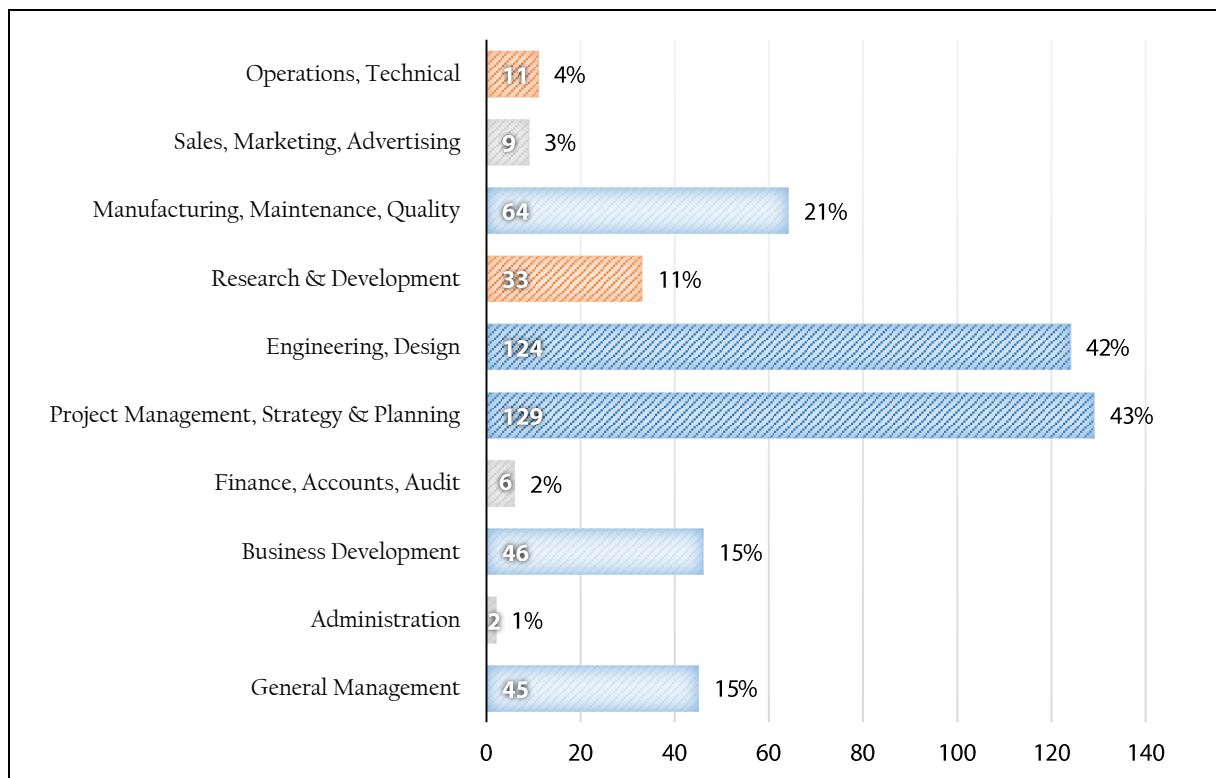
5.2.2.4. Years of Work Experience

Participants were asked to state the number of years they had worked in their firms. The majority of them had less than ten years of work experience, and 26% of the participants had worked there less than 5 years (78 participants); about 35% had been working for a period between 6 and 10 years (104 participants). 15% had worked between 11 and 15 years, while the remaining 72 participants had worked for more than 16 years (see Figure 5.7).

Figure 5.7: Participants' Years of Work Experience
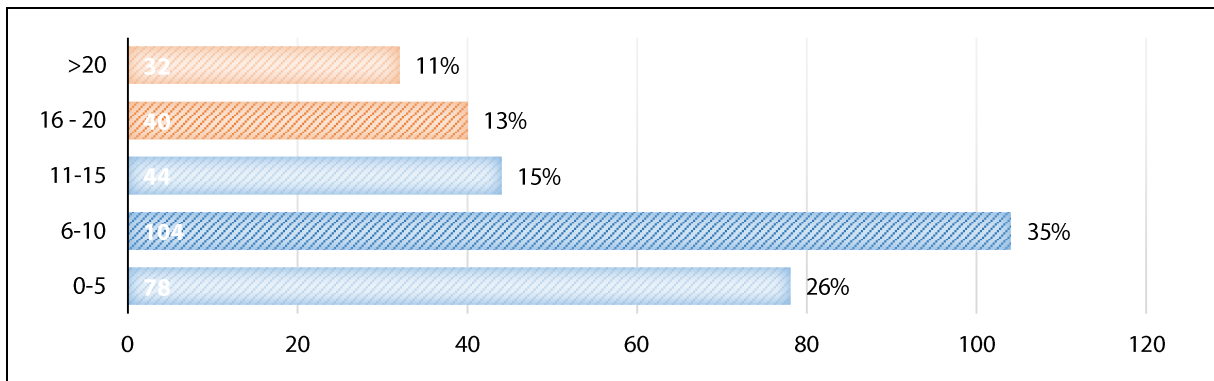
5.2.3. Reliability Assessment

Measuring the Internal consistency, or the reliability analysis, of the construct of the factors affecting market orientation is an important step before carrying out further data analysis (Hair *et al.*, 1998). Since the construct has a multi-item scale, Green *et al.* (1988) suggested the use of Cronbach's coefficient alpha analysis, which is the most widely used formula for assessing the internal consistency of measures in marketing research (Peter, 1979). It measures the degree of co-variation that exists among the construct on 0-100% scale: the higher the value the more consistent items are with each other. A low coefficient indicates that the sample items have not been able to capture the construct, while a large alpha indicates that the given item correlates well with the true scores. The alpha, therefore, provides the lower limits of a scale's reliability and, in most situations, it provides a conservative estimate of the measure's reliability (Carmines and Zeller, 1979).

Cortina (1993) and Kline (1999) have argued that an acceptable value for Cronbach's alpha could reach around and above 0.7 (0.65 to 0.84); values significantly lower than 0.7 indicate an unreliable construct. Table 5.1 shows the generally acceptable coefficient value indicators for reliability, which range from 0 to 1, where 0.5 is the lowest unacceptable value and 0.9 as the best acceptable value.

Table 5.1: acceptable values for reliability (Santos, 1999; Pallant, 2007; Tavakol, 2011; Dunn *et al.*, 2013)

Cronbach's Alpha consistence values	Internal consistence
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

In this study, Cronbach's alpha is measured for the last part of the questionnaire, which focused on the factors affecting the degree of market orientation for Saudi Arabian construction organisations. This part contains 23 items: using the SPSS software, the results reflected 63.5% (0.635) consistency between answers. This result shows a questionable, or, at best, poor, level of consistency. Therefore, and due to low reliability, the results for unexperienced participants (those who have worked for 5 years or less) will be deleted from the data, leaving 220 valid responses. Subsequently, the reliability assessment is repeated after removing the answers for all unexperienced participants. After doing so, the test shows that the consistency between answers has increased to 87.2% (0.872), and this is considered good enough to reflect the reliability of the construct.

5.2.4. Factors Affecting Market Orientation

The third part of the questionnaire deals with the factors that affect market orientation in Saudi construction companies. Participants were given a number of statements (items) and they had to identify their level of agreement with each one on a scale of agree or disagree.

5.2.4.1. Top Management Emphasis

The first factor, Top Management Emphasis, is combined of two items. Firstly, the participants were asked whether their top management tell their employees to pay attention to the activities of their competitors. Obviously, as shown in Figure 5.8, most participants agreed with that: 44% chose agree and 43% strongly agreed.

Figure 5.8: Top Management Emphasis (1)

Strongly Agree	96	43%
Agree	96	44%
Neither Agree Nor Disagree	8	4%
Disagree	16	7%
Strongly Disagree	4	2%
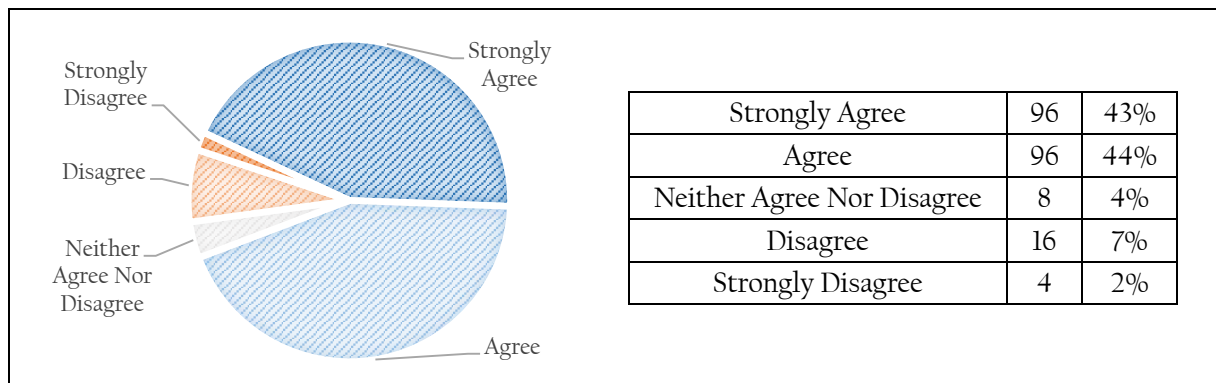
Then, they were asked whether serving customers was considered a top management top priority or not. Again, the majority of the participants (70%) agreed to that (see Figure 5.9).

Figure 5.9: Top Management Emphasis (2)

Strongly Agree	46	21%
Agree	108	49%
Neither Agree Nor Disagree	22	10%
Disagree	36	16%
Strongly Disagree	8	4%
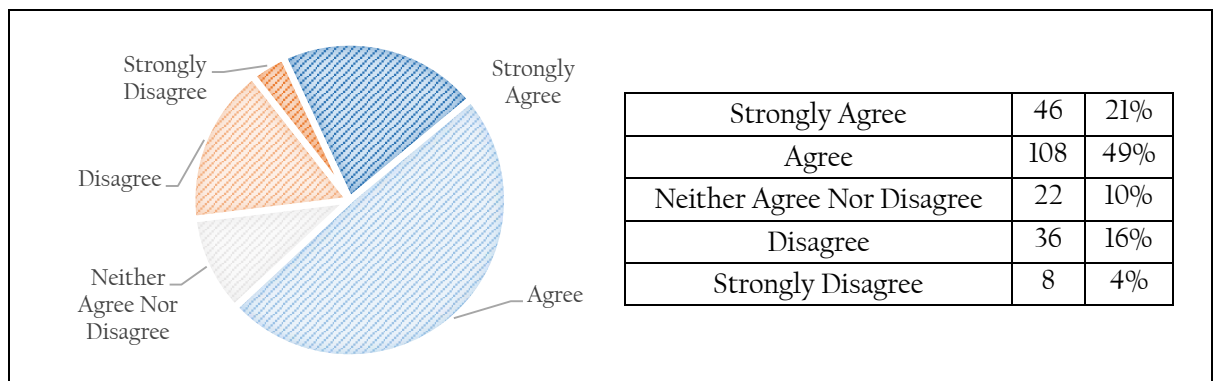
5.2.4.2. Top Management Risk Aversion

The second factor regarding top management is their level of taking or avoiding risks. This factor is divided into two items. Participants were asked about their management's likelihood of taking big financial risks. Their answers, as shown in Figure 5.10, differ between agreeing (48%) and disagreeing (27%).

Figure 5.10: Top Management Risk Aversion (1)

Strongly Agree	28	13%
Agree	76	35%
Neither Agree Nor Disagree	56	25%
Disagree	48	22%
Strongly Disagree	12	5%
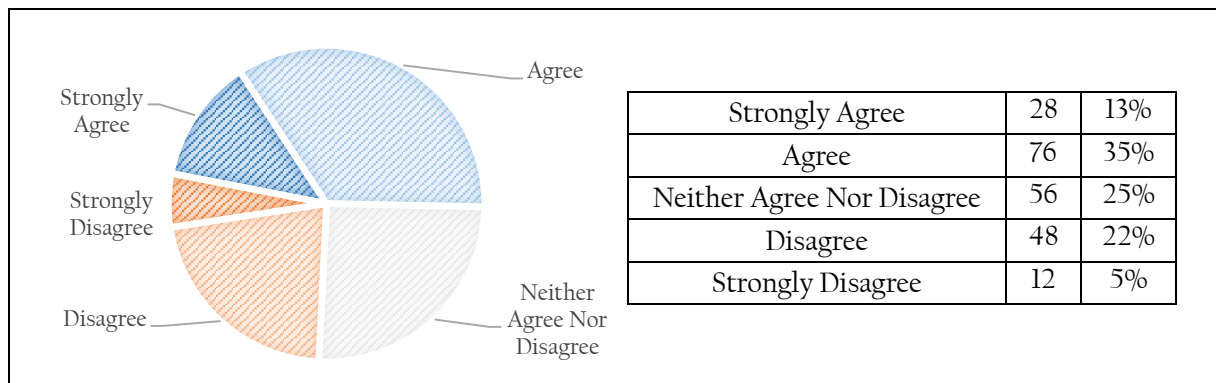
Next, they were asked to state how they feel about their confidence in their management. 55% of the participants agreed that top management do not tend to implement a strategic plan unless they are very certain that it will work, while 30% disagreed (see Figure 5.11).

Figure 5.11: Top Management Risk Aversion (2)

Strongly Agree	36	16%
Agree	86	39%
Neither Agree Nor Disagree	32	15%
Disagree	64	29%
Strongly Disagree	2	1%
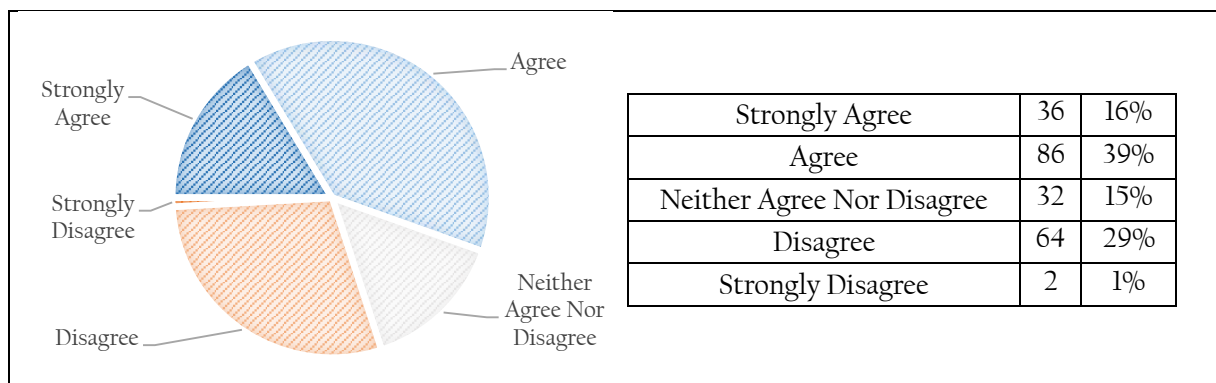
5.2.4.3. Inter-Departmental Conflict

The third and fourth factors are interested in inter-departmental relationships. First, employees' interactions in one department with others in a different department is normal according to 70% of the participants (55% agreed, and 15% strongly agreed) (see Figure 5.12).

Figure 5.12: Inter-Departmental Conflict (1)

Strongly Agree	34	15%
Agree	120	55%
Neither Agree Nor Disagree	20	9%
Disagree	30	14%
Strongly Disagree	16	7%
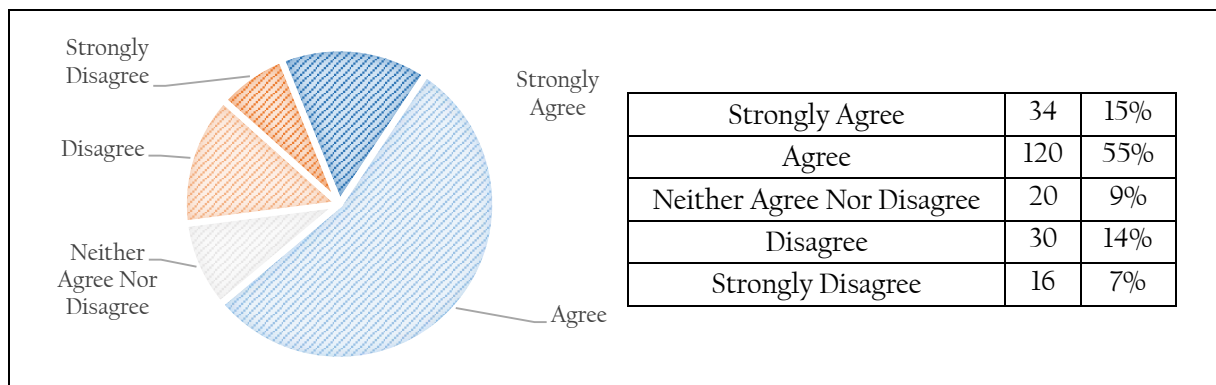
It is almost the same when it comes to different departments' goals. 45% agree that there is a harmony with each other's goals and 8% strongly agreed (see Figure 5.13).

Figure 5.13: Inter-Departmental Conflict (2)

Strongly Agree	18	8%
Agree	98	45%
Neither Agree Nor Disagree	36	16%
Disagree	48	22%
Strongly Disagree	20	9%
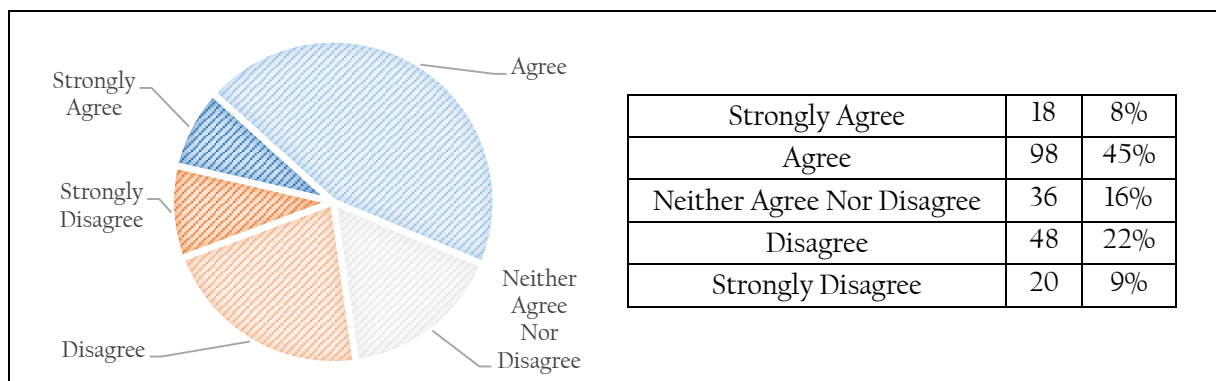
5.2.4.4. Inter-Departmental Connectedness

When it came to the hierarchal communication between individuals within an organisation, Figure 5.14 shows that the participants' answers were diverse as 55% agreed that it is easy to talk with virtually anyone regardless of his rank or position whenever needed, while 42% disagreed.

Figure 5.14: Inter-Departmental Connectedness (1)

Strongly Agree	38	18%
Agree	82	37%
Neither Agree Nor Disagree	6	3%
Disagree	78	35%
Strongly Disagree	16	7%
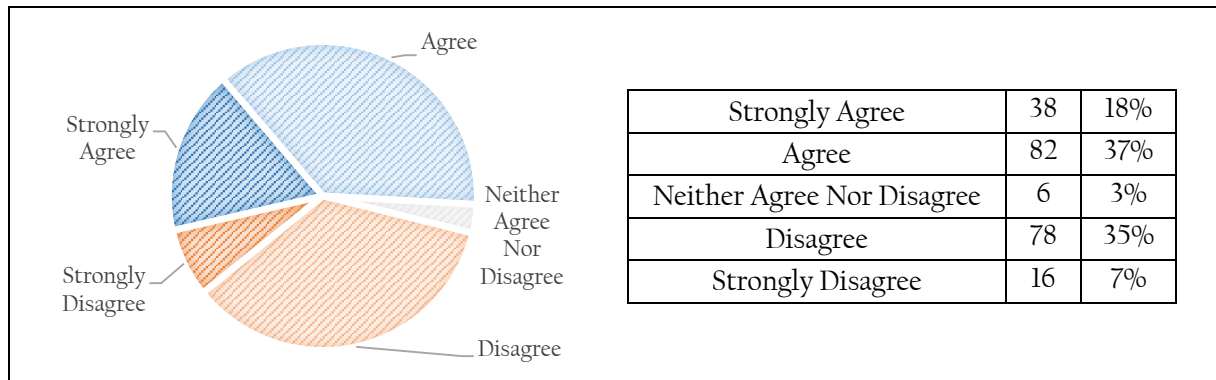
In addition, 75% agreed on the opportunity for informal 'hall talk' among individuals from different departments in their organisations (see Figure 5.15).

Figure 5.15: Inter-Departmental Connectedness (2)

Strongly Agree	52	23%
Agree	116	52%
Neither Agree Nor Disagree	22	10%
Disagree	26	13%
Strongly Disagree	4	2%
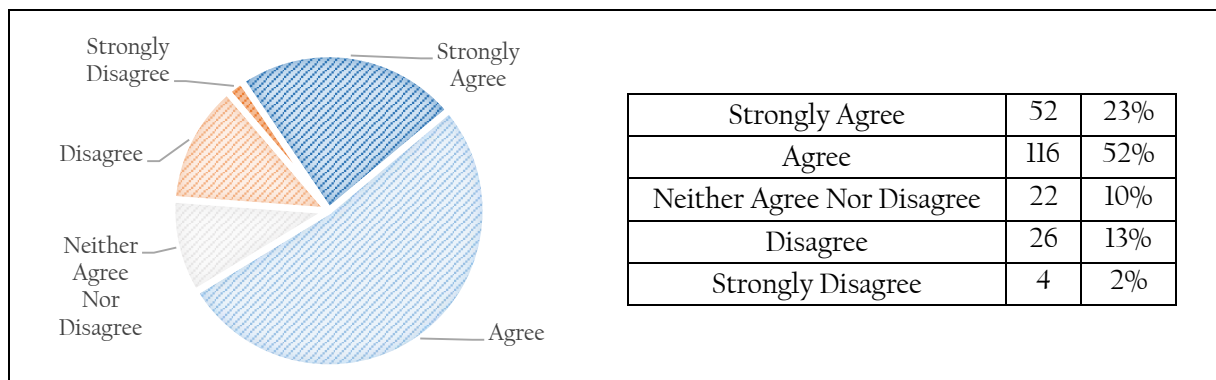
Finally, a high percentage of agreement (61% agreed and 25% strongly agreed) that when a need arises, employees from different departments feel comfortable in calling each other for help and support (see Figure 5.16).

Figure 5.16: Inter-Departmental Connectedness (3)

Strongly Agree	56	25%
Agree	134	61%
Neither Agree Nor Disagree	8	4%
Disagree	12	6%
Strongly Disagree	10	4%
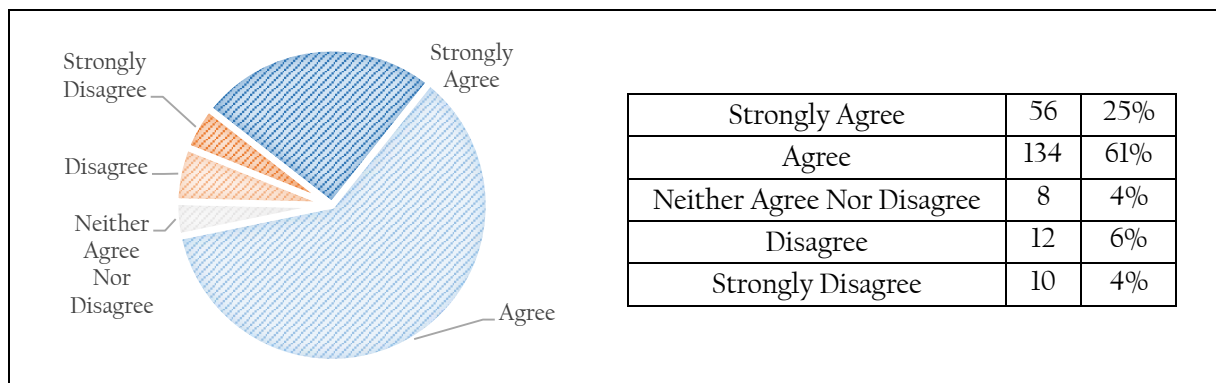
5.2.4.5. Rewards System

As formal rewards are an important factor for employees, they were asked whether a system for pay raises and promotions is actually applied to anyone who provides good work. 60% of them agreed that this is the situation in their companies, while 38% disagreed (see Figure 5.17).

Figure 5.17: Rewards System

Strongly Agree	38	18%
Agree	94	42%
Neither Agree Nor Disagree	4	2%
Disagree	48	22%
Strongly Disagree	36	16%
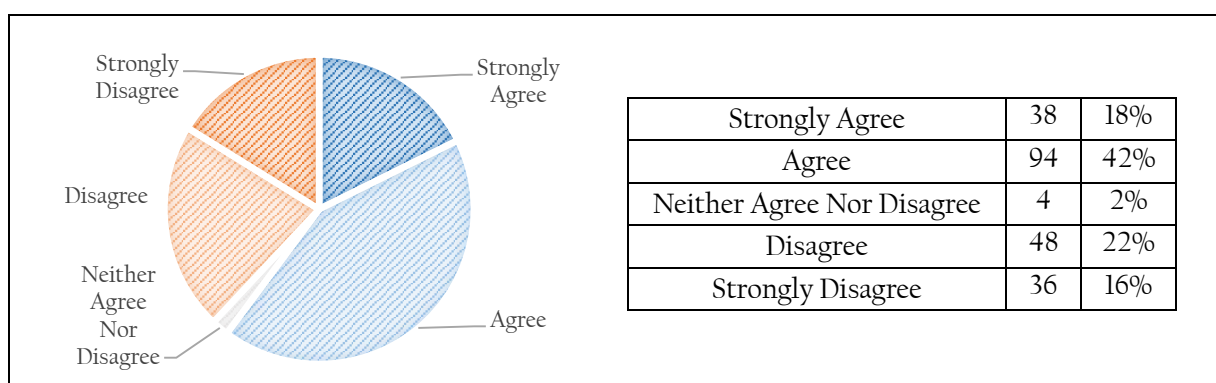
5.2.4.6. Formalisation

The environments in which participants work at are not highly formalised. The results in Figure 5.18 show that 55% said that they are not being checked for violations of rules, while 18% said that they were.

Figure 5.18: Formalisation

Strongly Agree	22	10%
Agree	98	45%
Neither Agree Nor Disagree	60	27%
Disagree	30	13%
Strongly Disagree	10	5%
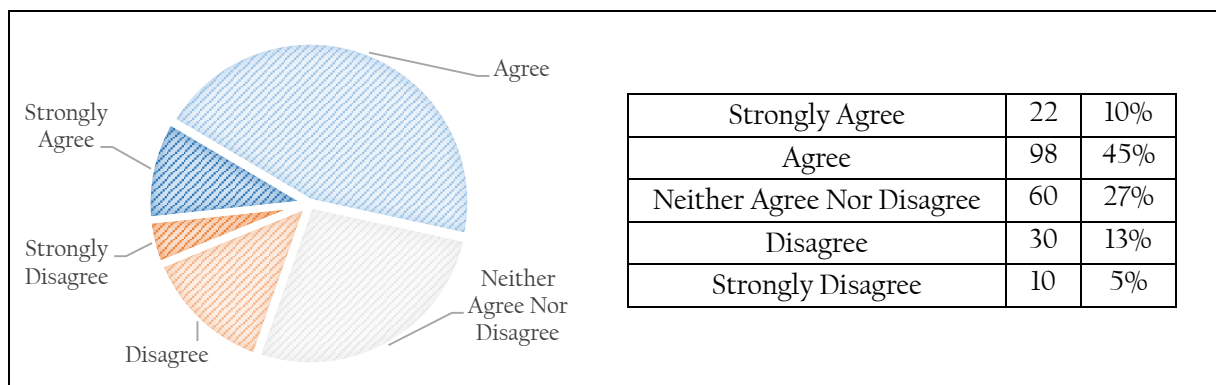
5.2.4.7. Centralisation

Centralisation is a big issue for the participants in their working environment. As shown in Figure 5.19, 41% of them strongly disagreed, and 38% disagreed, with the statement: a person can make his own decisions without having his boss's approval.

Figure 5.19: Centralisation

Strongly Agree	8	4%
Agree	18	8%
Neither Agree Nor Disagree	20	9%
Disagree	84	38%
Strongly Disagree	90	41%
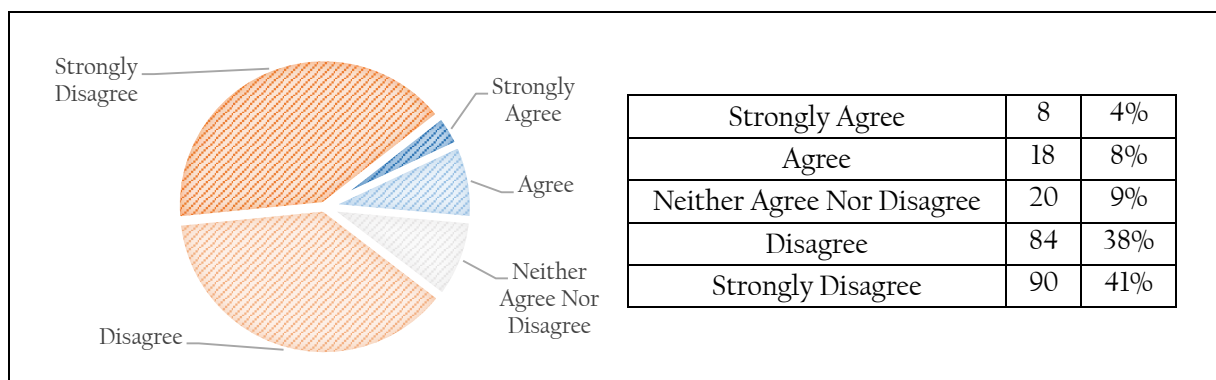
5.2.4.8. Entry Barriers

Concerning the participants' organisations entering and competing in the market, 41% stated that it's easy for their organisations to do so, while 36% claimed that it is difficult and is considered as an obstacle for them (see Figure 5.20).

Figure 5.20: Entry Barriers

Strongly Agree	14	6%
Agree	66	30%
Neither Agree Nor Disagree	50	23%
Disagree	72	33%
Strongly Disagree	18	8%
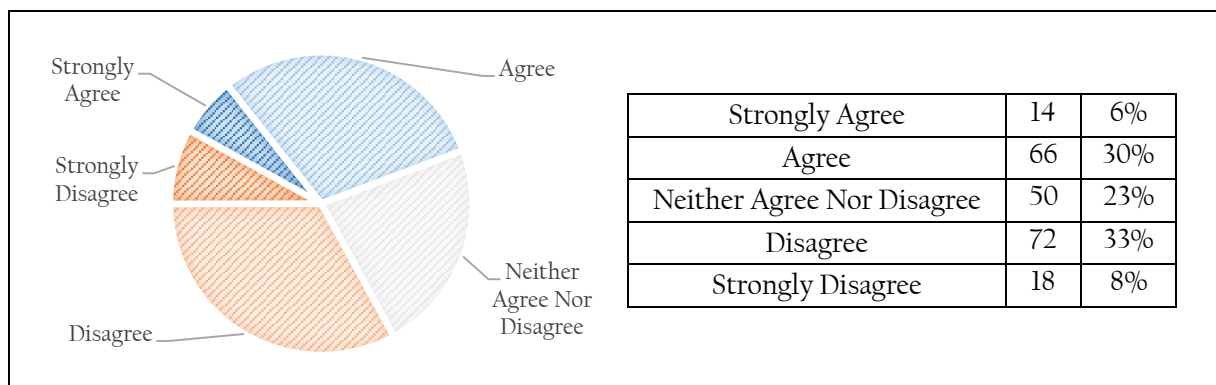
5.2.4.9. Buyer and Supplier Power

These factors identified the organisation's power as to whether price was important in their buying criteria, and whether they were able to negotiate the lowest prices from their sources of supply. For the first issue, 39% agreed that price is, in fact, not seen as important in their purchasing measures, while a similar percentage (38%) disagreed (see Figure 5.21).

Figure 5.21: Buyer Power

Strongly Agree	14	6%
Agree	72	33%
Neither Agree Nor Disagree	50	23%
Disagree	66	30%
Strongly Disagree	18	8%
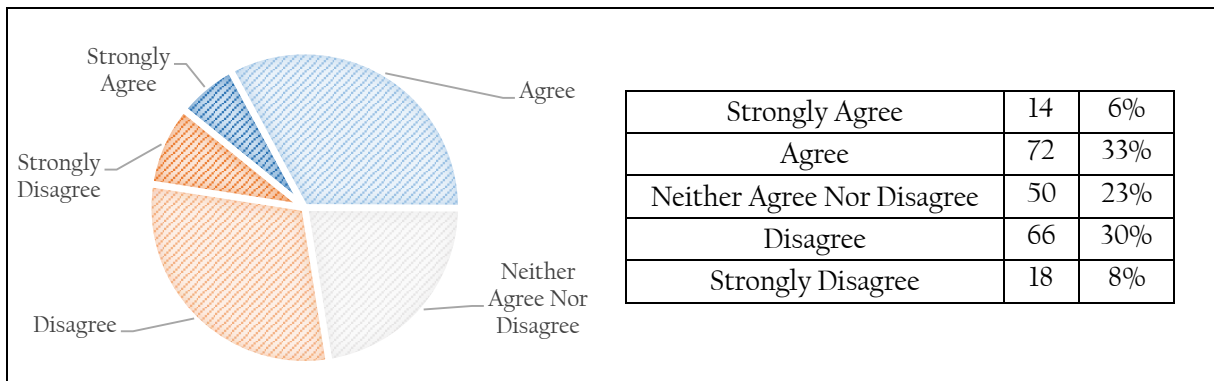
However, participants agreed on the second issue (57% agreed and 15% strongly agreed) as they claimed that their companies were able to negotiate prices (see Figure 5.22).

Figure 5.22: Supplier Power

Strongly Agree	34	15%
Agree	124	57%
Neither Agree Nor Disagree	34	15%
Disagree	28	13%
Strongly Disagree	0	0%
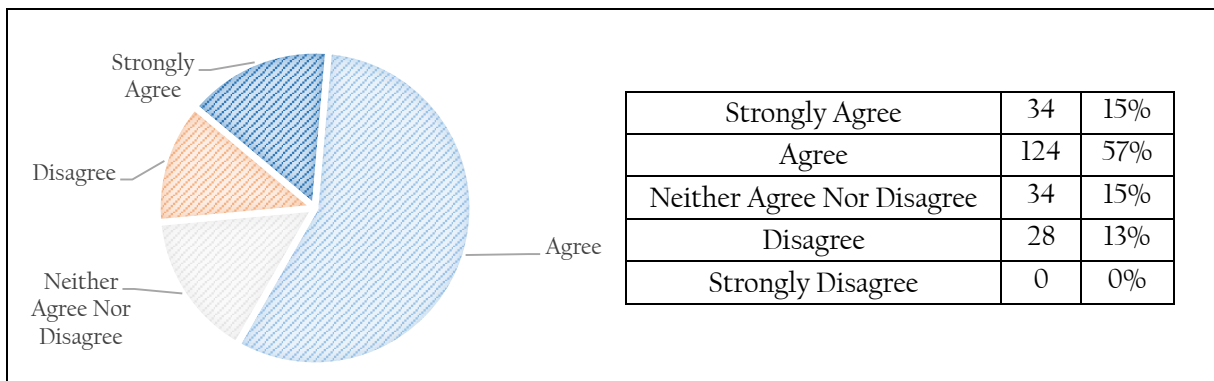
5.2.4.10. Sales Revenue and Operating Costs

An organisations' size in terms of 'sales revenues' and its 'operating costs' are important measures in today's business world. These two factors have been considered in the questionnaires. The results in Figure 5.23 show that 65% of the participants disagreed that their sales revenues are high compared to their largest competitors.

Figure 5.23: Sales Revenue

Strongly Agree	6	3%
Agree	26	12%
Neither Agree Nor Disagree	44	20%
Disagree	76	34%
Strongly Disagree	68	31%
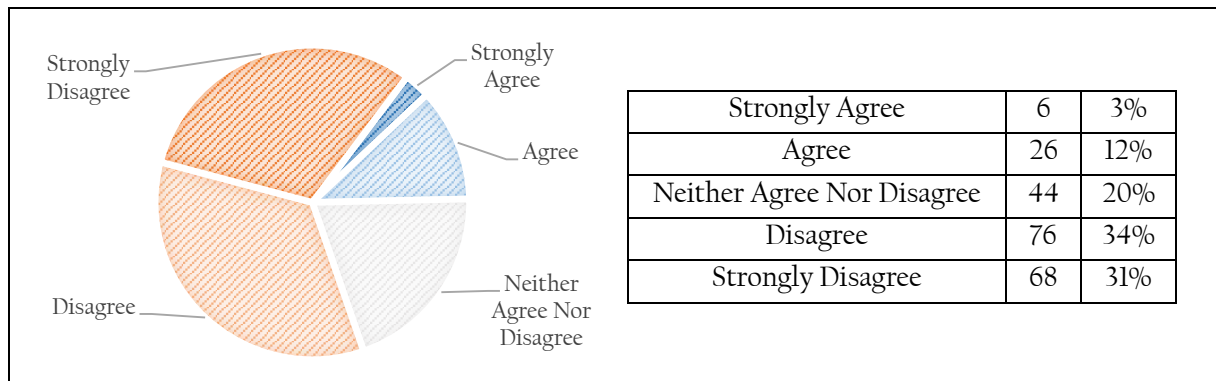
They also agreed (58%) that, compared to their competitors, their average total operating costs, which included administrative costs, production costs, rent, marketing costs, and sales, were all high (see Figure 5.24).

Figure 5.24: Operating Costs

Strongly Agree	42	19%
Agree	86	39%
Neither Agree Nor Disagree	64	29%
Disagree	28	13%
Strongly Disagree	0	0%
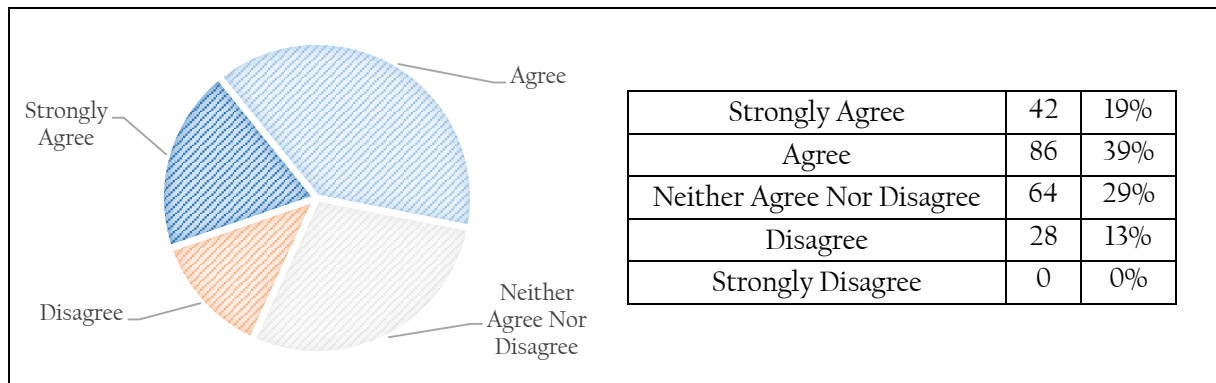
5.2.4.11. Market Turbulence

Participants were asked about changes in their customers' demands: 48% agreed, and 12% strongly agreed, that they were witnessing new and unusual requests for products and services (see Figure 5.25).

Figure 5.25: Market Turbulence

Strongly Agree	26	12%
Agree	106	48%
Neither Agree Nor Disagree	52	24%
Disagree	34	15%
Strongly Disagree	2	1%
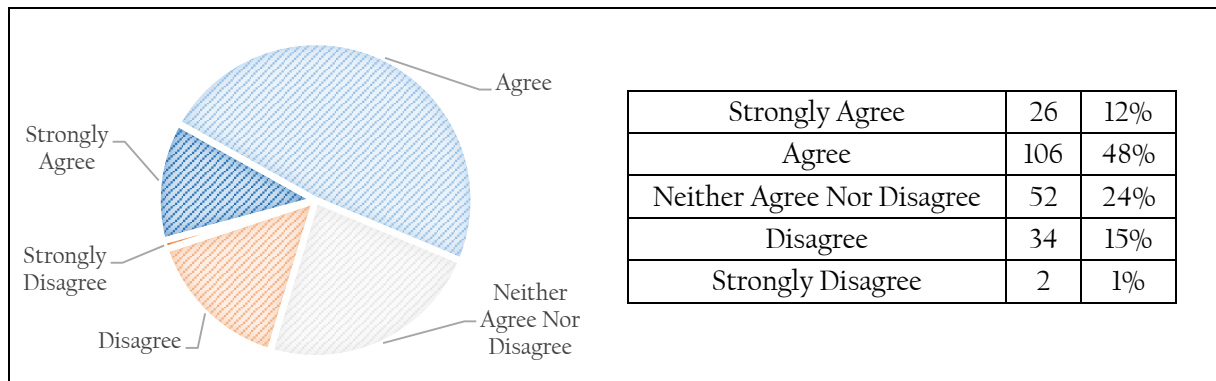
5.2.4.12. Competitive Intensity

With promotion wars, the results show (in Figure 5.26) that half the participants agreed that this kind of competition exists in the construction industry.

Figure 5.26: Competitive Intensity (1)

Strongly Agree	34	15%
Agree	76	35%
Neither Agree Nor Disagree	42	19%
Disagree	60	27%
Strongly Disagree	8	4%
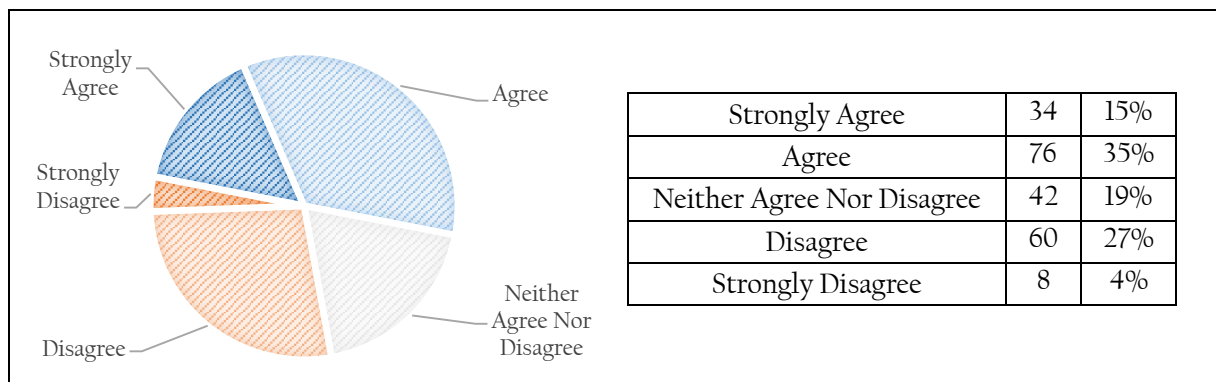
However, their answers differed when they were asked whether whatever one competitor could offer, others could match readily. 42% agreed, while almost the same percentage of people (44%) disagreed (see Figure 5.27).

Figure 5.27: Competitive Intensity (2)

Strongly Agree	10	5%
Agree	82	37%
Neither Agree Nor Disagree	32	14%
Disagree	80	37%
Strongly Disagree	16	7%
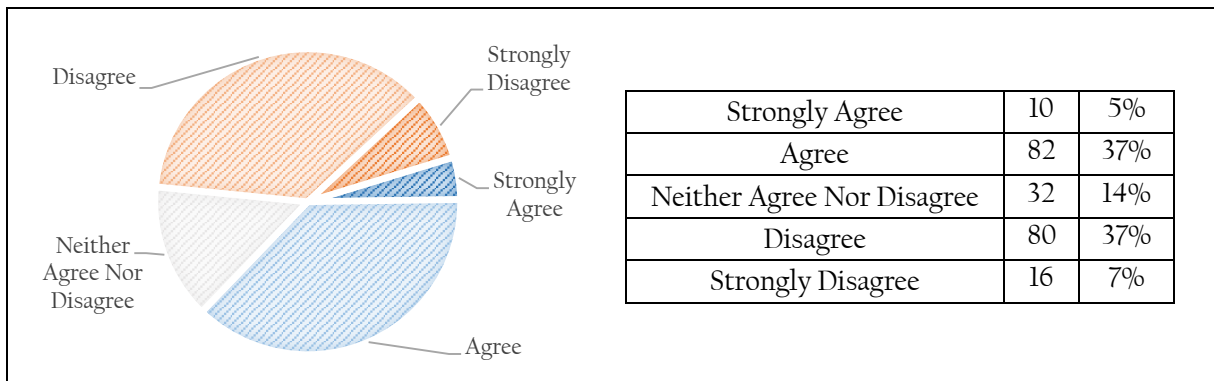
5.2.4.13. Technological Turbulence

Another element developing rapidly these days is technology. When participants were asked about the situation in their companies, 76% agreed that they were highly concerned about using new available technologies (see Figure 5.28).

Figure 5.28: Technological Turbulence

Strongly Agree	66	31%
Agree	100	45%
Neither Agree Nor Disagree	4	2%
Disagree	36	16%
Strongly Disagree	14	6%
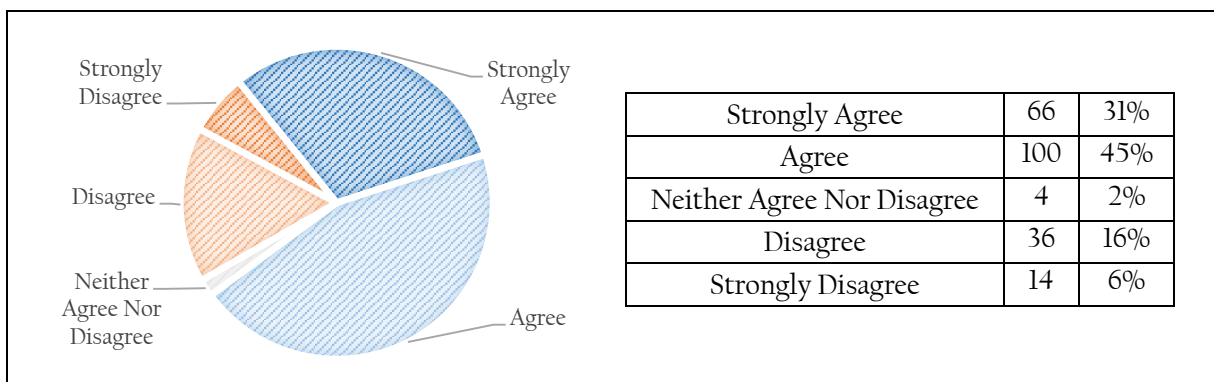
5.2.4.14. Market Growth Rates

The annual growth rates of markets is an important measure in today's business world. This factor was considered in the questionnaire. The results show that almost two-thirds of the participants (34% disagreed and 31% strongly disagreed) claimed that market growth rates

have not served their organisation's goals and objectives, while only 15% claimed the opposite (see Figure 5.29).

Figure 5.29: Market Growth Rates

Strongly Agree	6	3%
Agree	26	12%
Neither Agree Nor Disagree	44	20%
Disagree	76	34%
Strongly Disagree	68	31%
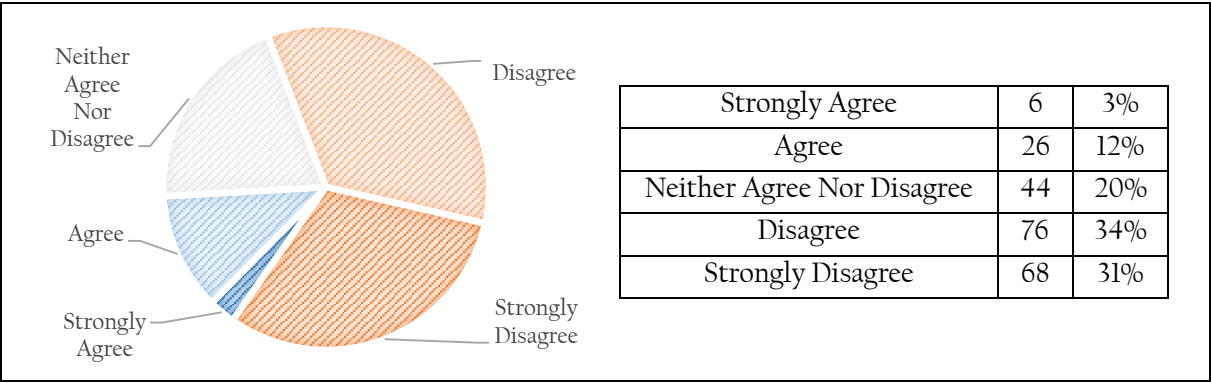
5.2.4.15. Government Regulations

The last factor regarding to the effects on market orientation is government regulations. Sometimes these regulations could be seen as an obstacle for organisations. However, the questionnaire results (in Figure 5.30) show that 47% of participants agreed that, in their organisations, this was not an issue.

Figure 5.30: Government Regulations

Strongly Agree	30	13%
Agree	74	34%
Neither Agree Nor Disagree	34	16%
Disagree	48	22%
Strongly Disagree	34	15%
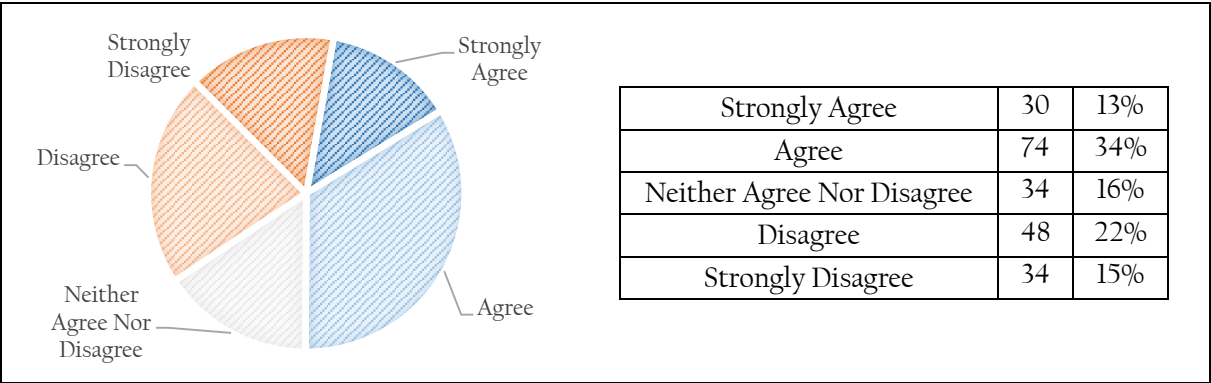
5.3. Examining Relationships Using Statistics

After collecting, presenting, and describing the relevant data, the next stage in completing the data analysis procedure will include applying statistical methods to examine the relationship between variables. Statistical analysis will provide answers regarding the hypotheses presented at earlier chapters of this research, which will guide in conceptualising the assessment model. Furthermore, this research will adopt the use of factor analysis as the main analytical technique.

5.3.1. Factor Analysis

So far, a number of variables have been proposed to describe the complex interconnections and the relations to market orientation of Saudi construction companies. Consequently, an equal number of hypotheses linking these variables have been suggested.

However, the basic propositions, which are fundamental to this research, are yet to be determined. The systematic dependencies and correlations among these variables can be measured only on presence-absence or rank order scales, which is the same for this research. Moreover, in social sciences, researchers often try to "*measure things that cannot directly be measured…by testing and exploring whether different variables are driven by the same underlying variable*" (Field, 2013: p.628). In addition, the challenges related to unknown interdependencies, series of quantitative variables, and bad data have made social scientists move in the direction of factor analysis to resolve such issues.

Factor analysis is a mathematical tool that can manage a large number of elements, create a balance for invalidity and errors, and classify complex interrelationships into their main and individual adjustments. Its technical terminology encompasses terms such as eigenvalues, rotate, simple structure, orthogonal, loadings, and communality. Its results usually decrease

many pages of data to a concise report, leaving a researcher with the task of writing a methodological introduction or an explanation of terms.

More often, factor analysis is commonly made use of by marketing academics for many reasons, such as identifying groups or clusters of variables, and reducing data. However, for this research, factor analysis will be used for the following reasons:

- Interdependency and pattern allocation: factor analysis will be employed to sort out the linear associations in their different sequences. Every sequence will emerge as a factor outlining a clear set of interrelated data.

- Data reduction: factor analysis will be practical for minimizing an accumulation of information for precise dimensions by minimizing them to their general factor sequences.

- Structure: factor analysis will be used to uncover the fundamental arrangement and structure of a domain. For example, a researcher would wish to discover the primary independent lines or dimensions of in-group features. When factors are analysed and groups are recognised, the structure will be revealed.

- Classification or description: factor analysis is a useful tool for establishing an empirical typology. It will be employed to collect interdependent factors into descriptive groups.

- Scaling: for a researcher attempting to establish a scale on which particular elements may be rated and compared, factor analysis will provide a solution by splitting the features into independent sources of factors. Every factor thus signifies a scale.

- Hypothesis testing: since the significance often related to 'dimension' comprises that of a group or cluster of highly inter-correlated features, factor analysis will be employed to assess their empirical existence. Which factors are associated with market orientation will be proposed earlier, and statistical tests for significance and later analysis will be implemented for factor analysis outcomes.

Nevertheless, to take any data forward is dependent on the questions of reliability of the data.

5.3.2. Reliability Reassessment and Scale Purification

Subsequent to providing a descriptive analysis and assessing construct reliability, this section considers the variables affecting the market orientation of Saudi construction companies by applying a factor analysis to the items of the third part of the questionnaire. In this respect, an exploratory factor analysis, using a principal component analysis, is undertaken to remove redundancy or duplication from the construct and to eliminate items with loadings lower than 0.4. The results are shown in Table 5.2.

Table 5.2: Reliability Reassessment and Scale Purification

	Item	Loading
1	Top management often tell employees to pay attention to the activities of our competitors.	.639
2	According to top management here, serving customers is a top priority in our organisation.	.557
3	Top management in this organisation like to take big financial risks.	.680
4	Top management does not appear to implement strategic and marketing plans unless they are very certain that they will work.	.526
5	In this organisation, people in one department interact normally with those from other departments.	.743
6	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	.710
7	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position.	.709
8	There are plenty of opportunities for informal 'hall-talk' among individuals from different departments in this organisation.	.597
9	In this organisation, employees from different departments feel comfortable calling each other when the need arises.	.650
10	Formal rewards (i.e., pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation.	.563
11	The employees are constantly being checked on for rule violations	.656
12	A person can make his own decisions without having his boss's approval.	.431
13	There are obstacles that make it difficult for our organisation to enter and compete in the market	.711
14	Price is not important in our customers' buying criteria.	
15	Our organisation is able to negotiate the lowest prices from our sources of supply.	.446
16	The size of our organisation's sales revenue is high compared to our largest competitors.	-.463
17	Our organisation's average total operating costs (administrative, production, rent, marketing, sales) are high in relation to our largest competitors.	
18	We are witnessing demand for our products and services from customers who never bought from us before.	
19	There are many 'promotion wars' in our industry.	.572
20	Anything that one competitor can offer, others can match readily.	.580
21	Our organisation is highly concerned with using new technologies	.572
22	The estimated annual growth rate of market size has served the organisation's goals over the past few years.	
23	Government regulations are not seen in our organisation as an obstacle to enter and compete in the market.	

The factor analysis was re-applied to the data several times in order to represent correlated items with a smaller set of 'derived' groups of factors (dimensions): as is common practice, a Varimax rotation with Kaiser Normalisation was performed to differentiate these resultant factors. According to Hair *et al.* (1998), this technique is well suited to help analyse the interrelationships among a large number of variables and explain these variables in terms of their common underlying dimensions. Following these steps, the analyses have resulted in extracting the items 14, 17, 18, 16, 22, 2, and 15 respectively, leaving 15 items with coefficients more than 0.5, and in defining four derived variables with at least three variables each. Results of the factor analyses are shown in Table 5.3 (Appendix 3 presents evidence of all factor analysis procedures undertaken).

Table 5.3: Factor Analysis

Item mo.	Statement (Item)	loading
9	In this organisation, employees from different departments feel comfortable calling each other when the need arises	.778
7	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position	.760
1	Top management often tell employees to pay attention to the activities of our competitors	.665
5	In this organisation, people in one department interact normally with those from other departments	.649
6	Employees from different departments feel that the goals of their respective departments are in harmony with each other	.593
21	Our organisation is highly concerned with using new marketing techniques	.708
4	Top management around here does not appear to implement strategic and marketing plans unless they are very certain that they will work	.667
3	Top management in this organisation like to take big financial risks compared to our competitors	.549
19	There are many 'promotion wars' in our industry	.759
20	Anything that one competitor can offer, others can match readily	.757
13	There are obstacles that make it difficult for our organisation to enter and to compete in the market	.679
8	There are plenty of opportunities for informal 'hall talk' among individuals from different departments in this organisation	.661
12	A person can make his own decisions without having his boss's approval	.591
11	The employees are constantly being checked on for rule violations	.564
10	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation	.555

5.3.3. Model Development

The four derived dimensions' result showed factors loading highly on each dimension with no cross-loading evident. By eliminating the aforementioned variable from the construct and running the reliability analysis, the alpha coefficient for each dimension is considered acceptable. Each one of these dimensions was then interpreted as relating to the variables affecting the market orientation of Saudi construction. They are as follow:

- Communication and Interaction;
- Risk-Taking
- Competition;
- Organizational Systems.

Table 5.4: Market Orientation Assessment Model

Dimension		Neutral Factor Statement	Shortened Factor Statement
Communication and Interaction	1	Comfort contacting and communicating with individuals from different departments whenever it is necessary	Ease of Organisation-wide communication
	2	Comfort contacting and communicating with virtually anyone regardless of his rank or position	Ease of Hierarchal communication
	3	Interacting and cooperating (dealing) easily with individuals from different departments	Organisation-wide collaboration
	4	Top management's encouragement towards market needs, client requirements and competitors activities	Top management emphasis
	5	Consistency and coherence of different departments' goals and objectives	Interdepartmental correspondence
Risk-Taking	6	Top management's courage towards developing and implementing innovative marketing strategies regardless of knowing if some might fail	Implementing new marketing techniques
	7	Top management's courage towards adopting new technologies	Implementing new technologies
	8	Top management's courage towards taking big financial risks	Taking big financial risks
Competition	9	Strength of competition with opponents in the industry	Competition intensity
	10	Providing competing offers compared to competitors	Competing offers
	11	Ease to enter and become competitively viable in the market	Market entry and competition ease
Organizational Systems	12	Acceptable level of rules and regulations to guide and control employees' behaviour	Deformalisation
	13	Rewards, pay raise and promotions for individuals' fulfilment of client needs and market aspects	Rewards System
	14	Employees' high allocation of decision-making authority	Decentralisation
	15	Relaxed attitude among individuals from different departments	Informality

In addition, each factor underneath these dimensions was written in a neutral form and was given a shortened form that will be used in the following parts of the research. The final dimensions' interpretation is more representative of the conceptual underpinning.

Using the assessment model, each factor is measured using a 5-point Likert rating scale-ranging from strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. The degree of agreement with a factor statement represents the extent to which this market orientation factor is being implemented within a given company (Figure 5.3). The stronger the agreement, the more the factor is optimised, and therefore the higher the level of overall market-oriented this company has reached.

Figure 5.31: The Level of Implementing Market Orientation Factors

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Chaotic, Non-existent	Initial, Aware	Neutral, Standardised	Managed, Proactive	Optimized, Significant
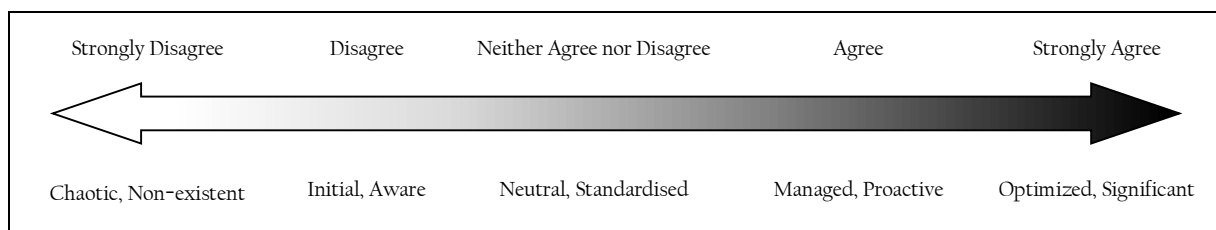
5.3.4. Hypotheses Testing

For the testing of the 17 hypotheses presented earlier, the procedure is based on an analysis of item loadings. Thus, the results of the factor analysis will be used to accept or reject the hypotheses. This will be done in order to identify the significant factors that determine the level of market orientation of Saudi construction companies. Items' rotation for exploratory factor analysis has long been used in the social sciences to test hypotheses (Schmitt and Sass, 2011), since it measures the correlation between the observed score and the latent score: generally, the higher the better.

Varimax rotation was used in this research, as it provided the lowest cross-loadings compared to other types of factor matrix rotation.

Factor loading for each of the items, in the comfortable range above 0.5 exceeding the recommended minimum reliability of 50 percent, further demonstrates the acceptance for each of the hypothesized constructs. The results of the conducted exploratory factor analyses indicated that the value of Buyer Power, Supplier Power, Sales Revenue, Operating Costs, Market Turbulence, Market Growth Rates, and Government Regulations are below 0.5. Therefore, all of hypotheses 14, 15, 16, 17, 18, 22, and 23 are rejected. Since item 2 was also below 0.5, while item 1 was above it, this results in hypothesis 1 (Top Management Emphasis) being partly accepted.

This leaves all of the remaining items including Top Management Risk Aversion, Inter-Departmental Conflict, Inter-Departmental Connectedness, Reward System Orientation, Formalisation, Centralisation, Entry Barriers, Competitive Intensity, and Technological Turbulence, as all of its item loadings were above the value of 0.5. In other words, all of hypotheses 2, 3, 4, 5, 6, 7, 8, 14, and 15 are fully accepted.

5.3.5. Correlation Analysis

Correlation analysis quantifies the strength of the linear relationship between two factors (Mann, 1995). In circumstances in which this correlation is positive and nearer to 1, it is presumed that the factor comprises a strong positive linear relationship. Thus, when it is positive but nearer to zero, then the factor has a weak positive linear relationship. Similarly, if the correlation is negative, then the factor has a negative linear relationship.

Ratner (2011) provided a guideline that interpreted the strength of the relationships between the variables. He indicated that, when the correlation coefficient (r) ranges from 0 to 0.4, the relationship is weak and negligible; when the correlation coefficient ranges from 0.4 to 0.7, the relationship is moderate; and finally, when the correlation coefficient ranges from 0.7 to 1, the

relationship is strong, high and marked. This research employed correlation analysis for two purposes:

- to recognise the availability of multicollinearity, which is a state for employing parametric techniques for data analysis;
- to explore and the investigate relationships between the factors of this research.

In this study the Spearman's rho correlation test was applied. The test was subject to a two-tailed test of statistical significance at two different levels: highly significant ($p < 0.01$) and significant ($p < 0.05$).

Table 5.5: Correlations between Market Orientation Factors

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ease of Organisation-wide communication	1	1	0.89**	0.74**	0.64**	0.66**	0.08	-0.18	0.15	0.22	0.06	0.16	-0.03	0.52**	0.46*	0.03
Ease of Hierarchal communication	2	0.89**	1	0.86**	0.65**	0.66**	0.51*	0.49*	0.25	0.24	0.14	0.25	0.05	0.76**	0.56*	0.09
Organisation-wide collaboration	3	0.74**	0.86**	1	0.55*	0.82**	0.47*	0.08	-0.20	-0.22	0.01	0.24	0.05	0.49*	0.64**	0.45*
Top management emphasis	4	0.64**	0.65**	0.55*	1	0.18	0.48*	0.25	0.71**	0.52*	0.28	-0.02	-0.04	0.47*	-0.11	0.05
Interdepartmental correspondence	5	0.66**	0.66**	0.82**	0.18	1	0.74**	0.51*	-0.27	-0.12	-0.07	0.64**	-0.14	0.77**	0.85**	0.12
Implementing new marketing techniques	6	0.08	0.51*	0.47*	0.48*	0.74**	1	0.85**	-0.22	0.18	0.02	0.31	-0.13	0.49*	0.07	-0.55*
Implementing new technologies	7	-0.18	0.49*	0.08	0.25	0.51*	0.85**	1	0.50*	0.55*	-0.12	-0.14	-0.12	0.70**	0.54*	0.03
Taking big financial risks	8	0.15	0.25	-0.20	0.71**	-0.27	-0.22	0.50*	1	0.27	0.20	0.29	-0.24	0.24	-0.24	0.23
Competition intensity	9	0.22	0.24	-0.22	0.52*	-0.12	0.18	0.55*	0.27	1	0.96**	-0.11	-0.24	0.18	-0.21	-0.23
Competing offers	10	0.06	0.14	0.01	0.28	-0.07	0.02	-0.12	0.20	0.96**	1	0.59*	-0.08	-0.16	0.05	0.04
Market entry and competition ease	11	0.16	0.25	0.24	-0.02	0.44*	0.19	-0.14	0.29	-0.11	0.59*	1	-0.06	-0.28	0.29	0.45*
Deformalisation	12	-0.03	0.05	0.05	-0.04	-0.14	-0.13	-0.12	-0.24	-0.24	-0.08	-0.06	1	-0.47*	-0.32	0.10
Rewards System	13	0.52**	0.76**	0.49*	0.47*	0.77**	0.49*	0.70**	0.24	0.18	-0.16	-0.28	-0.47*	1	0.54**	-0.26
Decentralisation	14	0.46*	0.56*	0.64**	-0.11	0.85**	0.07	0.54*	-0.24	-0.21	0.05	0.29	-0.15	0.54**	1	0.53**
Informality	15	0.03	0.09	0.45*	0.05	0.12	-0.55*	0.03	0.23	-0.23	0.04	0.45*	0.10	-0.26	0.53**	1

Table 5.5 shows results of the correlation analysis, which represents the correlation between the variables affecting the market orientation of Saudi construction organisations. These correlations are discussed in more detail in the following sections.

5.4.   Factor Identification and Discussion

The resultant variables, derived from the exploratory factor analysis, describe the factors effecting the market orientation of Saudi construction organisations. Each of the four dimensions is discussed in more detail.

5.4.1.   Communication and Interaction

The first set of factors that is proposed as affecting the level of market orientation is communication and interaction. It plays an important role in McNamara's (1972) definition of the marketing concept, which is the basis of market orientation. He argued that a business's philosophy must be based upon its "...*broad acknowledgement of the requirement for customer orientation, profit orientation, and identification of the significant role of marketing in articulating the demands of the market to all organisation's divisions*" (p.51). Mavondo (2001) supported this description as he contended that effective communication and interaction within an organisation is also necessary for the development of market orientation. Moreover, Kohli and Jaworski (1990) have emphasised the importance of the organization's ability to adapt to market needs and how effectively it communicates market intelligence between its functional areas.

Communication is also essential since it offers a collective foundation for focused actions by different divisions in an organisation (Kohli and Jaworski, 1990). Since employees need information on their customers' needs, on their organisation, and on how their contribution is vital to the organisation and its customers; as well as performing their tasks as service providers, they need to communicate their own requirements and their findings regarding this information (Gronroos, 1990).

Furthermore, based on the results of the factor analysis, each one of the five communication and interaction items is discussed in the following parts.

5.4.1.1. Top management emphasis

Jaworski and Kohli (1993) showed that the emphasis of top management greatly affects the market orientation of an organisation, as without their indications and encouragement regarding the importance of being responsive to customer needs and competitors' activities, their organisation is not likely to be market-oriented (Levitt, 1969; Webster, 1988; Pulendran *et al.*, 2000). They also asserted that it is only when the top managers articulate the importance of a commitment towards the satisfaction of consumer needs that the rest of the organisation adopts that orientation. In examining the applicability of Kohli and Jaworski's (1990; 1993) framework, Bhuian (1998) has found a positive relationship between top management emphasis and market orientation in Saudi companies. Horng and Chen (1998), who adopted the same framework as well as Narver and Slater's (1990) framework, have also found a significant relationship between the two aspects in the context of Japan. Their study concluded a general guideline for managers seeking to improve their market orientation through the communication of certain recommendations and procedures, which encourage contributions from employees.

In addition to the important role of top management in the promoting of the firm and its products or product lines to the firm's employees, the idea of market orientation must originate at the top and be communicated down to the very bottom of the firm (Parasuraman *et al.*, 1991). This two-way communication between managers and employees, known as downward vertical communication (Katz and Kahn, 1978), is initiated by superiors and received by subordinates and primarily centres on task information, organizational rules and procedures, missions and goals, and the feedback of subordinate performance (Peng and Sun, 2013). Moreover, top managers have to express their dedication to a particular market orientation to

junior managers and subsequently to staff. This necessitates that staff have to observe resource distributions that mirror that dedication.

Previous studies show that the most important determinant of a market orientation is the one emphasised by top managers. This supports the argument by Sinkula *et al.* (1997) that forming an acceptable market-oriented setting is impossible in the absence of the commitment and dedication from the top level of the organisation. This could be said on the grounds that top managers have to communicate their vision across the organisation in order to achieve competitive advantages. Webster (1988) suggested that, in order to attain market orientation, the chief executive officers (CEOs) have to provide apparent indications and signals, and institute apparent principles and convictions concerning serving the customers. In addition, Hambrick and Mason (1984) stated that CEOs and senior managers significantly affect the performance of others as organisational leaders.

Harris and Ogbonna (2001) emphasised the importance of positive behaviour of management in improving the levels of market orientation. Basically, leaders convey indications and signals across their organisations concerning the way the organisation has to function inside its market. These indications offer staff a vision of the setting in which they function and the manner in which they are expected to function within it.

5.4.1.2. Ease of Hierarchal Communication

Ease of hierarchal communication refers to the upward vertical flow of communication within and between all levels of an organisation (Katz and Kahn, 1978). This notion suggests that there should be straightforwardness in an organisation for sharing existing and anticipated information concerning customers' current and future needs, and exogenous factors from the bottom-up (Wood and Bhuian, 1993). In their study, Harris and Piercy (1999) concluded that upward vertical communication is positively related to market orientation, and suggested that

communication that is more frequent enables the dissemination of collected intelligence and facilitates timely responses to the market. According to Kohli and Jaworski (1990), this could be done by different means, including periodic newsletters, formal meetings, and informal story telling.

The ease of upward communication and information transmission from subordinates to superiors with regard to subordinates' or other employees' performance and problems, organizational practices, and policies, as well as the tasks that need to be done and how to achieve them is necessary (Gronroos, 1990). It does not only enhance management support, but also provides employees with feedback to improve their job performance (Peng and Sun, 2013).

Ease of Ease of Hierarchal communication was found to be significant and positively correlated with top management emphasis (r = 0.64, p < 0.01) in the construction companies in Saudi Arabia. This finding is supported by Gronroos (1990), and it suggests that the emphasis placed by the top management on encouraging upward communication activities will enhance the two-way information distribution between managers and employees, which will improve market orientation.

5.4.1.3. Ease of Organisation-wide Communication

Differing from the two previous modes of vertical communications, organisation-wide communication, refereeing to the horizontal communication among people at the same hierarchical level (Peng and Sun, 2013; Zeithaml et al., 1988) was proposed by Webster (1994) as a key element of the competitive business world.

Considering the importance of market orientation, organisation-wide communication has become an influential ingredient in today's market practice, specifically on how to be customer-focused, market driven, global in scope, and flexible in the ability to deliver superior

value to customers (Svensson, 2001). Ignacio *et al.* (2002) argued that communication easiness must be a faithful illustration among the organisations' members in developing a group of activities aimed at the satisfaction of the target market.

Ease of Organisation-wide communication was also found to be significant and positively correlated with top management emphasis (r = 0.54, p < 0.01), and highly positively correlated with Ease of Hierarchal communication (r = 0.89, p < 0.01) of the construction companies in Saudi Arabia.

This finding is supported by Kohli and Jaworski (1990) who suggested that for an organisation to adapt to market needs and to be market-oriented, market intelligence must be communicated, disseminated, and perhaps even sold to relevant departments and individuals in the organisation. This entails top management emphasis on encouraging the distribution of existing and anticipated information throughout the organisation and contacting with individuals from any department whenever needed. When this critical task is functioning well, horizontal communication will help improving the market orientation of the company.

5.4.1.4. Organisation-wide collaboration

Several researchers have identified a significant positive relationship between organisation-wide collaboration, which involves a smooth interaction and cooperation between different departments within an organisation, and market orientation (Jaworski and Kohli, 1993; Harris and Piercy, 1999; Pulendran *et al.*, 2000). Convenient collaboration regarding customers' needs and competitors' motivations ensures the placing of more emphasis on the gathering of information and communicating this information to the various departments in an organisation (Jaworski and Kohli, 1990).

Harris and Piercy (1999) studied the impact of having conflicting behaviour within an organisation and concluded that such behaviour will negatively influence their extent of market orientation and will inhibit the ability of an organisation to coordinate activities and focus on market dynamics. This was also supported by the findings of Pulendran *et al.* (2000) who identified interdepartmental conflict as a barrier to overall market orientation. In addition, they proposed that increased disagreement could result in obstacles between departments, which will influence communication flow and the dissemination of information.

In this regard, Shapiro (1988) emphasized that, in order to fulfil the strengths of being market-oriented, the organisation must apply well-coordinated decisions between the departments through the collective sharing of ideas and the discussion of different solutions. This should result in empowering internal connections and coordination, make communications clear, and increase employees' commitment, while poor communication and coordination can cause the misuse of resources and the incapability to acquire market opportunities. Even though these features of market orientation certainly denote a concentration on clients, Shapiro (1988) suggested that identifying competitors' strengths and weaknesses is also an aspect of being a market-oriented organization.

Conflict between departments may reduce market orientation by limiting communication flow, thereby restricting the collaboration and application of efficient company-wide reactions to collected and disseminated information. In comparison, strong inter-departmental connectedness may enable the dissemination of such information.

Organisation-wide collaboration was also found to be significant and positively correlated with top management emphasis ($r = 0.55$, $p < 0.01$), highly positively correlated with ease of hierarchal communication ($r = 0.86$, $p < 0.01$), and highly positively correlated with ease of organisation-wide communication ($r = 0.74$, $p < 0.01$) in the construction companies in Saudi Arabia. This finding suggests that the emphasis placed by the top management on encouraging communication activities, in both vertical and horizontal directions, and the smooth

interaction and cooperation between different departments will ensure that market intelligence and all other related information is disseminated among all individuals within an organisation.

5.4.1.5. Interdepartmental correspondence

Previous studies on market orientation have identified a positive relationship between market orientation and interdepartmental correspondence (Jaworski and Kohli, 1993; Caruana *et al.*, 1997). According to Jaworski and Kohli (1993), a market-oriented organisation involves having an appropriate communication system that ensures the consistency and coherence of the goals and objectives of its different departments (Blankson and Omar, 2002). They stated that greater market orientation should lead directly to one consequence, more esprit de corps (Jaworski and Kohli, 1993; Rose and Shoham, 2002; Shoham and Rose, 2001), and also to greater organizational commitment. Consequently, this builds bonds among the employees within the organisation and makes them view the organisation as a single family unit.

Interdepartmental correspondence was found to be significant and positively correlated with ease of organisation-wide communication and ease of hierarchal communication ($r = 0.66$, $p < 0.01$), and highly positively correlated with organisation-wide collaboration ($r = 0.82$, $p < 0.01$) in the construction companies in Saudi Arabia.

This finding suggests that smooth communication and a generally satisfactory interaction between different departments would support their mutual goals, increase positive influences over each other, and therefore result in an improved esprit de corps. By contrast, all negative aspects of interdepartmental behaviour, such as stereotyping and competition, may cause or be exacerbated by a lack of trust between members of the respective departments, and can generate negative communication and poor interaction (Musa *et al.*, 2012).

5.4.2. Risk-Taking

Besides the emphasis of top management in ensuring an appropriate level of communication in an organisation, risk-taking is the second factor proposed as affecting the level of market orientation in Saudi construction companies. In this regard, several researchers have argued that the top management's role in adopting a certain style of leadership further promotes this concept. Risk-taking refers to the readiness of management to dedicate considerable resources to pursuing opportunities in the face of uncertainty in situations where they have some degree of control or skill in realising a profit (Chang, 1998; Pitt *et al.*, 1997; Cunningham and Lischeron, 1991).

In addition, risk-taking was found to be significantly correlated with communication and interaction in the construction companies in Saudi Arabia. This is supported by Jaworski and Kohli (1993) who asserted that an organisations' market orientation is impacted on considerably by its managers' behaviour and their reaction toward risk. Numerous features of top management may discourage or promote the creation of a market orientation including their courage towards developing and implementing innovative marketing strategies, adopting new technologies, and taking big financial risks.

5.4.2.1. Implementing New Marketing Techniques

It is stated that top managers guide the orientation and values of the organisation (Felton, 1959; Hambrick and Mason, 1984; Webster, 1988). In this respect, previous studies on market orientation suggested that top managers have to be ready to take more risks in developing and implementing innovative marketing strategies. Bennet and O'Brien (1994) and Slater and Narver (1995) argue that in market-oriented organisations, managers motivate staff to adopt and learn about new marketing approaches, encourage the sharing of insights and innovations,

and encourage them to challenge their own expectations. Furthermore, a number of marketing strategies have been suggested by marketing authors. They include:

- Adopting successful marketing strategies from western and foreign markets, specially emerging international markets (Bhuian and Kim, 1999);

- Looking more closely at specific aspects, including how to co-ordinate media publicity and specific Internet marketing strategies;

- Undertaking comprehensive situation/market needs analysis and utilizing sophisticated planning tools, including strength, weakness, opportunity and threat (SWOT) analysis, the Experience Curve, Portfolio Planning Matrices, and profit impact on sales (PIMS), for instance (Siu, 2000);

- Setting up a long-term profitability objective, focusing on superior product design and after-sales services, followed by a market expansion strategy (Siu, 2000);

- Relying on cost-reduction as a key marketing strategy in order to "*sell to whomever would buy*" (Siu, 2000: p.108);

- Focusing more on long-term differentiation, R&D, and new product development (Tang *et al.*, 2007);

- Adopting e-marketing strategies: internal resources and capabilities such as databases (Brodie *et al.*, 2007; Tsiotsou and Vlachopoulou, 2011).

The more successful an organization is in formulating and implementing such marketing strategies, the stronger the level of overall organization market orientation (Daile and Kim, 2001).

As mentioned earlier, risk-taking was found to be significantly correlated with some aspects of communication and interaction: implementing new marketing techniques was specifically found to be correlated with ease of hierarchal communication ($r = 0.51$, $p < 0.05$), organisation-wide collaboration ($r = 0.47$, $p < 0.05$), and highly positively correlated with interdepartmental correspondence ($r = 0.74$, $p < 0.01$) in the construction companies in Saudi Arabia. In addition,

the emphasis placed by the top management was also found to be significantly correlated with the risks associated with implementing new marketing techniques ($r = 0.48$, $p < 0.05$).

These findings follow Wood and Bhuian's (1993) arguments that managers who take risks are inclined to consider information generation and dissemination as of high priority, and have satisfactory records concerning the responsiveness to activities that improve their market orientation, such as implementing new marketing ideas and techniques.

5.4.2.2. Implementing New Technologies

Increased technological innovation exerts considerable stress on top managers. Thus, their capacity to cope with its insistent requirements and advancing technology has become a fundamental factor making it necessary to adapt, survive and to become commercially conscious of business directions (Chaharbaghi and Willis, 2000). In addition, technological improvements in Saudi Arabia have required top managements' courage to generate new and innovative ideas, and change consequently becomes unavoidable (Al-Sedairy, 1999). Grewal and Tansuhaj (2001) asserted that the extent of innovations and improvements in technology cause technological uncertainty. Glazer (1991) proposed that companies are inclined to distribute resources to technology to address the uncertainty resulting from technological improvements.

In this respect, Au and Tse (1995) argued that the adoption of new technologies interacts in a complex manner that can have an enormous effect on market orientation, although it is possible to reach a balance between them. Organisations' adoption of new technologies may offer substantial functional and competitive advantages (Kohli and Jaworski, 1990; Australian Manufacturing Council, 1990; Sohal, 1995). Therefore, technological turbulence should be identified as an antecedent to measuring the extent of market orientation.

Identifying the activities, individuals, and instruments (resources and outcomes) concerned with the procedure of designing a system in the built environment is of great significance. Day (1994) highlights that the instruments and techniques of Total Quality Management (TQM), for instance, could be practical in change management and in ensuring constant enhancement aimed at satisfying customers' demands. Additionally, the progression in 'smart building technologies', 'building information modelling' (BIM) technologies, 'Computer Integrated Construction' (CIC) (Boddy *et al.*, 2007) and construction practices have to be accounted for, as they increase opportunities for collecting, exchanging, and storing all required information. A computerized era cannot translate into a 'messy era' in terms of information management. For this to be a reality, it is necessary to understand both the difficulties faced (constraints) and the existing opportunities for improvement (enablers) that might influence the development and implementation of such a system (Biscaya, 2012).

In addition, technological turbulence is noticeable in Saudi industries, but the level of that turbulence varies. For industries with less technological turbulence, companies can perform well and they are benefitting from a surge in domestic demand, even if they do not observe the effect of such technological changes on the desires and needs of their clients. Companies that encounter more technological turbulence are compelled to change their modes of distribution, promotion, etc., to upgrade their production facilities, and to maintain their observation of the influence of technological changes on the desires and preferences of clients (Kazim, 1995). With no comprehension of the nature of the influences of technological changes on the desires and preferences of clients, companies cannot provide products that can please clients. Thus, a market-oriented company is capable of following the effects of technological differences.

In this respect, the research found that implementing new technologies is highly positively correlated with implementing new marketing techniques ($r = 0.85$, $p < 0.01$) in the construction companies in Saudi Arabia, since both factors influence top management's attitudes towards taking risks, due to the increasing demands for change. Inter-departmental correspondence was also found to be significant and positively correlated with implementing new technologies

(r = 0.51, p < 0.05), as having mutual organisational goals, increased positive influence and improved esprit de corps over different departments will result in simplifying the implementation of such technologies.

5.4.2.3. Taking Big Financial Risks

A number of research papers on market orientation propose that top managers have to be willing to take additional risks in their decision-making criteria. For instance, one of these risks is their courage in taking big financial risks. In this regard, risk-taking managers are those who prefer to take financial risks so as to amplify the rate of return. Wood and Bhuian (1993) asserted that such managers are inclined to promote market orientation.

Conversely, Kohli and Jaworski (1990) argued that, risk aversive managers might face failures when they encounter such attitudes. They also claimed that market developments entail some financial risk and, if top managers are unwilling to assume these risks, the organisation is less likely to be market-oriented.

According to Zebal (2003), top managers in highly market-oriented companies tend to achieve their objectives by taking big financial risks, to an acceptable level, and implementing innovative activities. However, taking so much risk is never good for market orientation.

In this regard, top management emphasis was found to be strongly correlated with taking big financial risks (r = 0.71, p < 0.01) in the construction companies in Saudi Arabia. This finding is supported by a number of authors (i.e., Wood and Bhuian, 1993; Jaworski and Kohli, 1993; Zebal, 2003; Lancaster and Velden, 2004).

5.4.3. Competition

The issue of companies' competition and attaining a competitive advantage in today's ever-changing environment is the third factor that is proposed as affecting the level of market orientation in Saudi construction companies. This factor was extensively studied by Narver and Slater since 1990, as they argued that, by implementing such a market orientation, a company would be able to satisfy its clients' specific requests, create a strong, long-term customer relationship–better than their competitors–and therefore, achieve a competitive advantage in the market (Gheysari *et al.*, 2012; Ganesan, 1994).

Akimova (2000) proposes that the extent of a company's competitiveness within the unstable setting of a transitional economy is related to the extent of its implementation of market orientation. Appiah-Adu (1998) additionally signifies that the competitive setting impacts on the relationship between market orientation and performance. McGuinness and Morgan (2005) assert that organizations should be market-oriented so as to address new problems within their setting and to influence the success of their strategic outcomes.

Research findings have suggested that competition is affected by the strength of competition from competitors in the industry, the offers provided by a company compared to its competitors, and by its ability to enter and become competitively viable in the market. In addition, the findings suggest that it was found to be significantly correlated with some aspects of communication and interaction, and risk-taking in the construction companies in Saudi Arabia.

5.4.3.1. Competitive Intensity

Competitive intensity, referring to the extent of competition encountered by a company, includes aspects such as the frequency of price wars and the frequency of new competitive

moves. Moreover, it is an issue in which strong opposition that results from the number of competitors in the market that can challenge, or even refuse chances, for further market growth and improvement (Auh and Menguc, 2005). In opposite markets, expectedness and assurance reduces, as a company's conduct will be stochastic but not deterministic any more, as its conduct is greatly impacted upon by the actions and contingencies carried out by opponents (Asikhia and Binuyo, 2012). In marketing literature, researchers suggested that competitive intensity is one of the moderating factors that affects market orientation (Jaworski and Kohli, 1993; Gray and Hooley, 2002; Bhuian *et al.*, 2005).

In low competitive environments, Zuniga-Vicente and Vicente-Lorente (2006) propose that companies may function with their available systems to entirely capitalise on the apparent certainty of their own conduct, but when the competition gets stronger, they will have to adapt correspondingly. Managers have to be more disposed to concentrate on producing and disseminating market-based data regarding their clients and suppliers. Thus, to succeed in competitive environments, Kohli and Jaworski (1990) and Pelham and Wilson (1996) suggested that managers should focus more on:

- distinguishing products from competitors' alternatives;.
- establishing clients' desires and preferences;
- aggressively attempting to satisfy their clients' desires;
- creating superior value for the clients;
- acting faster than competitors.

Moreover, in intensive settings, firms should concentrate more on revealing the special requirements of clients, which offers them additional motivations to produce and distribute market intelligence concerning clients. Additionally, they should change their marketing strategies constantly to react faster to their competitors' moves.

Competitive intensity between Saudi firms differs considerably. Some firms may be classified as oligopolies (exclusive), e.g., minerals and petrochemicals (Saudi Commerce and Economic

Review Correspondent, 1994). Several of these firms are additionally secured by tariff and non-tariff barriers. These companies may function adequately, although they may not be greatly market-oriented as clients have no other options. While in monopolistic competitive settings (e.g., processed foods, drinks, apparel etc.) (Yavas *et al.*, 1990), companies are subject to free markets laws, and are competing with competitors from all over the world. Performing in such environments is challenging as customers have alternative product choices. As a result, a company that is not highly market-oriented is inclined to lose clients to competitors.

As a competitive market results in a broad selection of options for clients, the company should react to clients' preferences and desires sensitively, although monopolistic or oligopolistic markets could reduce the requirements to alter particular products and facilities and strategies to address different client preferences. Thus a firm under an additionally competitive setting could reduce its profitability as a result of price competition (Slate and Narver 1990).

Given the importance of competition intensity, the studies of Jaworski and Kohli (1993) and Slater and Narver (1994) examined its relationship to market orientation and performance. Their findings suggest that the strength of this relationship varies depending on the setting tested. This is said as considerable competition within a market may cause consumer selection to broaden considerably; thus, if the company does not react to client requirements and desires sensitively, it could end with low performance.

Therefore, competitive intensity within the Saudi construction industry should have positive effects on market orientation, as the concentration of competition influences the mental modes of managerial displays of competitive advantage, additionally improving the need to be market-oriented (Day and Nedungadi, 1994). Since international firms functioning within the Saudi market deal with high levels of uncertainty, domestic construction firms should be inclined to employ the standards, structures, procedures and practices of specific benchmarked institutions that are deemed valid (i.e., institutional acquisition mechanisms) in an attempt to minimize uncertainty (Grewal and Dharwadkar 2002).

As mentioned earlier, competition was found to be significantly correlated with some aspects of communication and interaction and risk-taking, and competition intensity was specifically found to be correlated with top management emphasis ($r = 0.52$, $p < 0.05$) and with implementing new technologies ($r = 0.55$, $p < 0.05$) in the construction companies in Saudi Arabia. These findings suggest that the competitive construction market leads managers to put more emphasis on and to engage in risk-taking activities in order to stay ahead of their competitors. This is confirmed by Zahra (1993: 324) who claimed that, when competition is intense, firms must innovate in terms of products as well as procedures, investigate new markets and discover new means of competing, and investigate the manner in which they will distinguish themselves from competitors.

5.4.3.2. Competing Offers

Simkin and Cheng (1997) assert that the success of an organisation is reliant on how well it comprehends its competitors and to what extent they observe and monitor their tactics and strategies. Thus, a greater focus on competitors is likely to be required, as this helps in identifying what customers want, and in anticipating changes in competitors' product strategies. Kohli and Jaworski (1990) argued that providing competing offers compared to competitors could play an important role in establishing the extent of market orientation. They suggest that greater competition results in increased options and choices for clients and therefore necessitates enhanced comprehension of clients. In competitive environments, consumers can choose from a wider pool of offers in the market. Consequently, monitoring customers' needs becomes more important to ensure that customers do not select competing alternatives (Kohli and Jaworski, 1990). Wong and Saunders (1996) suggested that a company should design its offers to satisfy targeted customers' needs and wants better than its competitors. This includes designing and providing competing offers in such a way that the customers get the best quality products while paying less money (Cross *et al.*, 2007).

Competing offers were found to be strongly correlated with competition intensity (r = 0.96, p < 0.01) in the construction companies in Saudi Arabia. Zuniga-Vicente and Vicente-Lorente (2006) proposed that, when competition is intense, companies will have to become more involved in proactive operations which necessitate education and investigation to break away from price or promotion battles.

5.4.3.3. Market Entry and Ease of Competition

The ease of entry for new competitors (new sellers) into the market is defined as "*the advantage of established sellers in an industry over potential entrant sellers, their advantages being reflected in the extent to which established sellers can persistently raise their prices above a competitive level without attracting new firms to enter the industry*" (Bain, 1956: p.3). Several marketing authors (e.g. Bain 1959; Porter 1980; Scherer 1980) argued the greater the ease of entry, the greater is the competitive pressure from both current competitors and potential entrants. Thus, the effectiveness of possible competition is reliant on the circumstances of the conditions of entry, such as economies of scale, technological benefits, and complete expense benefits.

Some authors referred to entry barriers as those expenses (e.g., a higher price than the price hypothetically attributed to long-run stability in pure competition, R&D, or plant capacity, for instance.) that possible entrants outside the market would need to expend to enter and compete in the industry (Bain, 1956). Thus, industries with high barriers to entry will comprise an additional return contrasted with industries with reduced barriers to market entry.

As in prior research (Narver and Slater, 1990; Oczkowski and Farrell, 1998), ease of entry was seen as becoming competitively viable in the market when considered as a contributor to market dynamism and competition, and it also influences a firm's performance. The higher the entry barriers, the lower the competitive pressure is on the industry from both current competitors and potential entrants. Higher entry barriers thus usually lead to higher

performance. The general conditions of markets are also found to influence performance. If markets are growing, it is generally easier for firms to acquire customers without much competition.

Market entry and ease of competition were found to be significantly correlated with competing offers ($r = 0.59$, $p < 0.05$) and with the interdepartmental correspondence ($r = 0.64$, $p < 0.01$) of the construction companies in Saudi Arabia. These findings suggest that a firm should have mutual organisational goals and an increased esprit de corps between its departments, in addition to providing competing offers in order to enter and compete easily in the Saudi construction market.

5.4.4. Organisational Systems

The success of the company's strategy application is greatly impacted on by how suitably the organisation is structured (Vorhies *et al.*, 2003; Olson, 2005). The organisation's structure is required to direct its organisational works, which is split into minor portions to attain a targeted strategy. It comprises the management of works resulting in the appearance of a range of options for the organisational structure and, therefore, can form the basis of the company.

The fourth, and final, group of factors that is proposed as affecting the level of market orientation in Saudi construction companies is organisational systems, which refer to the organisation-wide characteristics and procedures that are commonly employed. Organisational systems are an important issue that is tightly connected with general services marketing management, and which emphasises the important role of employees and social elements. Staff are viewed as a main productivity and superiority force (Zeithamel, Bitner, 1996), important to the organisation, and to clients.

Taguiri and Litwin (1968) stated that organisational systems that emphasise the important role of employees positively influences behaviours and sustain qualities of the internal

environment of the firm. This could result in desirable marketing outcomes. Such systems include deformalisation, rewards systems, decentralisation, and informality. In this respect, several researchers have studied the impact of these systems on market orientation and found strong relationships. According to Ruekert *et al.* (1985), interventions for raised market orientation should be available within organisational systems. The results of the research imply that alterations in an institution's conduct within the market place have to be sustained by organisational structures and procedures, which function to direct the operations of the organisation. Although a temporary difference in conduct may be attained in the absence of the corresponding alterations in organisational systems, an extended term of change in the direction of market orientation possibly necessitates an additionally permanent change in organisational procedures too. These systems, from Ruekert's perspective, are primarily human resource structures of recruitment and selection, training, and reward and payment. Regarding evaluating the change procedure, Ruekert observes that the research displayed a positive relationship between the extent of market orientation and the organisational systems employed.

Each one of the organisational systems (deformalisation, rewards system, decentralisation, and informality) is described in the following. Research findings have suggested that these organisational systems were found to be significantly correlated with some aspects of communication and interaction and the risk-taking of the construction companies in Saudi Arabia.

5.4.4.1. Deformalisation

Formalisation signifies the level to which regulations define functions, power, interactions, and processes (Hall *et al.*, 1967). Formalisation refers to the extent of the formality of regulations and procedures employed to dictate the works within a firm encompassing decisions and working associations (Olson *et al.*, 2005). The regulations and processes may

clarify the expected appropriate behaviour in working relationships and deal with the routine elements of work. Consequently, individuals and the organisation itself may attain the advantage of employing such regulations and processes. In this respect, the employment of the regulations and processes may result in a rise in effectiveness and a reduction in administrative expense, particularly in the regular environment featured by easy and recurrent jobs (Ruekert *et al.*, 1985; Walker *et al.*, 1987; Olson *et al.*, 2005).

Although formalisation appears to affect market orientation, it would seem that the content of formal rules, rather than their mere presence, is a more important determinant of market orientation. Comparably, how the different departments communicate seems to comprise an additionally significant determinant of market orientation rather than the total number of departments in a business.

In the case of non-issues, typical bureaucratic structures, referred to in their formalisation aspect, work well. Information may be directed to the relevant specialist who may apply resolutions using the foundation of standard company regulations and policies (Thompson and Tuden, 2000). Information is not distributed broadly, but immediately to an individual. For instance, regulations in the form of ethical codes may function effectively to sort out issues to the satisfaction of stakeholders where they and the company have comparable values and understandings of what occurred.

Often, companies will have specific departments to handle routine processes such as environmental assessments, corporate philanthropy, and public relations. These structures usually form the heart of a firm's ethical program (Centre for Business Ethics, 1986). Research indicates that the availability of these routinised structures could have a positive effect on market orientation (Reed *et al.*, 2000).

Hall *et al.* (1967) explained formalisation as the degree to which rules define roles, authority relations, communications, norms and sanctions and procedures. This explanation by Hall *et al.* (1967) is reflected by those put forward by Zeffane (1989) and Smith *et al.* (1989). Past

research had shown that formalisation is related to market orientation (Zaltman *et al.*, 1973; Jaworski and Kohli, 1993). In addition, a formalised system was specifically criticised in the literature, as this system may facilitate instrumental utilisation processes, and reduce information generation, information dissemination and the utilisation of such information by weakening myopic interpretations (Imai *et al.*, 1985; Day, 1991; Menon and Varadarajan, 1992; Moorman, 1995).

Formalisation was removed from all the regression equations during the analysis of the quantitative results by the stepwise regression procedure. This means that formalisation was not found to be significant in determining market orientation and its components. This was further supported by the qualitative research findings, as the participating companies were found to be balanced between formal and informal organisational structures. This balance between two organisational structures by the participating companies was probably responsible for the lack of a significant relationship between formalisation and market orientation in the quantitative findings. This finding is inconsistent with the findings of Pelham and Wilson (1996), Avlonitis and Gounaris (1999), and Harris (2000), as, in these studies, formalisation was found to be negatively related to market orientation and its components. However, it is consistent with the findings of Jaworski and Kohli (1993), Pulendran *et al.* (2000), and Matsuno *et al.* (2002), as they identified no significant relationship between formalisation and market orientation.

5.4.4.2. Informality

An important issue that is related to organisational systems and market orientation is the level of informality between employees that denotes a relaxed attitude among individuals from different departments. The majority of authors from the service-marketing field (i.e., Jaworski and Kohli, 1993; Grönroos, 2000) emphasise the critical role of informality between employees within an organisation for it to become market-oriented. This infers that the conceptualisation

of market orientation has to surpass the conventional idea of just coordinating various divisions as one of its key aspects.

Grönroos (2000) states that informality is concerned with ensuring the understanding and motivation of client awareness, the comprehensive management of staff attitudes, establishing a service culture, training, and internal communications (Grönroos, 2000). Moreover, the idea of informality could involve the allocation of informal channels for information distribution, such as empowering the role of 'hall-talks' among secretaries, engineers, and production personnel from different departments to get to know more about their customers and competitors. Kohli *et al.* (1993) suggested that 'hall-talk' is a very strong method for keeping staff in touch with clients and their requirements and can support the flow of information that occurs both within and between departments (Daft and Steers, 1985). It also serves to coordinate people and departments to facilitate the attainment of overall organisational goals.

Informality was found to be significantly correlated with organisation-wide collaboration ($r = 0.45$, $p < 0.05$), and with market entry and ease of competition ($r = 0.45$, $p < 0.05$) in the construction companies in Saudi Arabia. These findings suggest that the smooth interaction, cooperation, and relaxed attitude between individuals from different departments would help firms to enter and compete easily in the Saudi construction market.

5.4.4.3. Decentralisation

Decentralisation refers to the high level of involvement and the large amount of the allocation of decision-making power throughout an organisation by its members (Zeffane, 1989; Martin and Glisson, 1989). Previous research indicated a significant relationship between market orientation and the decentralisation of an organisation (Pelham and Wilson, 1996; Harris, 2000; Jaworski and Kohli, 1993). Wolf (1997: p.354) argued that it is necessary for companies to base their structure on "*a post bureaucratic paradigm of decentralized structure and*

entrepreneurial operation" in order to obtain goals related to market orientation. Similarly, Matsuno *et al.* (2002) suggested that organisations with a high level of entrepreneurial proclivity generally avoid high levels of organisational centralisation. The negative relationship between centralisation and market orientation implies that it could be practical to 'empower' staff to apply resolutions in the lower levels of organisations as opposed to focusing on resolution formation in the upper levels. This calls on companies to transform their internal bureaucratic structures to more flexible systems which resemble flattened hierarchies that reduce the number of management layers, and aim for a decentralised decision-making process that empowers employees with more discretion and opportunities for workplace participation.

Shapiro (1988) conceptualises market orientation as comprising an organisational decision-making process. At the core of this procedure is a powerful dedication and commitment by management to disseminate information inter-departmentally and practice open decision-making processes between functional and divisional staff. Shapiro (1988) stipulates three features that make a company market-oriented:

- Information on all important buying influences permeates every corporate function (p.120);
- Strategic and tactical decisions are made inter-functionally and inter-divisionally (p.121);
- Divisions and functions make well-coordinated decisions and execute them with a sense of commitment (p.122).

Decentralisation was found to be significantly correlated with a number of communication factors in the construction companies in Saudi Arabia. These include organisation-wide ease of communication ($r = 0.46$, $p < 0.05$), ease of hierarchal communication ($r = 0.56$, $p < 0.01$), organisation-wide collaboration ($r = 0.64$, $p < 0.01$), and interdepartmental correspondence ($r = 0.85$, $p < 0.01$). These findings suggest that the decentralised decision-making system allows

communication across organisations (Weber, 1946). In addition, decentralisation was found to be significantly correlated with implementing new technologies ($r = 0.54$, $p < 0.05$). This suggests that, in unstable and complex environments, the use of decentralised organisational structures is needed. In such organisations, a range of perspectives and creative concepts and technologies may appear from different levels of the organisation.

5.4.4.4. Market-Based Reward System

Several researchers have proposed that the role of market-based reward systems in fostering a market direction seems to be strong (Anderson and Chambers, 1985; Jaworski, 1988; Siguaw *et al.*, 1994). It refers to the employment of evaluation criteria, which are based upon fulfilling market aspects (i.e., consumers and competitors). Since this system has traditionally been viewed as having a strong impact on the attitudes and behaviours of employees (Hopwood, 1974; Lawler and Rhode, 1976), it would consequently motivate the roles and contributions of employees in perceiving and reacting to market requirements. Such rewards could also be in the form of compensations, pay raises, and promotions.

Moreover, in developing a market orientation, this organisational process can serve to reinforce the importance of satisfying customer needs and direct individual behaviours toward this goal. For example, compensation systems for production employees based on cost control is relatively less customer-oriented than a compensation system designed to reward zero product defects. This relationship is also proposed by Kohli and Jaworski (1990). In addition, the employment of client satisfaction or relationship criteria within a performance assessment system would be regarded as a market-based reward.

Webster (1988) asserted that the key to establishing a market-driven, customer-oriented enterprise is entrenched in the manner in which managers are evaluated and rewarded, e.g., the fundamental stipulation for the establishment of a market-oriented company comprises the

formation of market-based performance measures. In this connection, Pulendran *et al.* (2000) stated that the form of measurement and reward systems applied by the organisation will establish the level to which market orientation is applied. They additionally verified this assertion by recognising an important association between market orientation and the reward system. In addition, Jaworski and Kohli (1993) established a strong significant relationship between market-based reward systems and market orientation and proposed that organisations that reward staff on the basis of aspects such as client satisfaction as well as building associations with customers are inclined to be more market-oriented. Hence, Wood and Bhuian (1993: p.23) added that, "*organisations employing this philosophy tend to reward employees based on positive consumer responses to their marketing efforts as opposed to basing rewards strictly on short-term profitability*". In addition, Pulendran *et al.* (2000) postulated that this kind of reward system minimizes considerably functional conflict and job uncertainty.

Rewards system was also found to be significantly correlated with a number of communication and risk-taking factors in the construction companies in Saudi Arabia. These include top management emphasis ($r = 0.47$, $p < 0.01$), ease of organisation-wide communication ($r = 0.52$, $p < 0.01$), ease of hierarchal communication ($r = 0.76$, $p < 0.01$), organisation-wide collaboration ($r = 0.39$, $p < 0.05$), and interdepartmental correspondence ($r = 0.77$, $p < 0.01$). Moreover, it was found to be significantly correlated with implementing new technologies ($r = 0.70$, $p < 0.01$) and techniques ($r = 0.49$, $p < 0.05$). These findings suggest that having such reward systems will help to improve communication and the interaction between employees and managers from the same and from different departments in the whole organisation. It also helps top managers implement new marketing technologies.

5.5. Conclusion

The process of data analysis is an important task that helps to achieve the research objectives and therefore meet the research aim, which was to construct and develop a market orientation assessment model. This process may be seen as a series of stages that lead from organising to data gathering and, consequently, drawing conclusions from analysing this data. At this stage, the main focus was to cover the data analysis of the questionnaires which were designed for this study. This included preparing, exploring, presenting, and describing the collected data.

Initially, 334 individuals participated in the survey (a response rate of 66.8%). The average time it took to fill-in the questionnaire was 10 minutes. The types of scales that were used in the survey are considered as descriptive (nominal) which were presented by tables (frequency distribution) and were described using the mode, while the ranked (ordinal) data were presented by pie charts. After covering these aspects, a reliability test was undertaken in order to measure the consistency between answers. Using Cronbach's alpha approach, the percentage of 87% was considered good enough to reflect the reliability of the questionnaires.

The next stage in completing the data analysis procedure included applying statistical methods to examine the relationship between the variables. In doing so, the use of factor analysis as the main analytical technique was helpful in describing the complex interconnections and relations between the proposed factors, and in testing the hypotheses. In addition, it resulted in deriving the four dimensions constituting the factors affecting the market orientation of Saudi construction, which comprised the main components of the intended assessment model. They are as follow:

- Communication and Interaction Dimension: this includes factors such as ease of organisation-wide communication, ease of hierarchal communication, organisation-wide collaboration, top management emphasis, and interdepartmental correspondence;

- Risk-Taking Dimension: this includes factors such as implementing new marketing techniques, implementing new technologies, and taking big financial risks;

- Competition Dimension: this includes factors such as competition intensity, competing offers, and market entry and ease of competition;

- Organizational Systems Dimension: this includes factors such as deformalisation, rewards systems, decentralisation, and informality.

The factor analysis also provided answers regarding the 17 hypotheses presented earlier in this research. This was based on the analysis of items loadings, as factors exceeding the value of 0.5 demonstrated the acceptance for those hypothesized constructs. In summary, hypotheses regarding Top Management Risk Aversion, Inter-Departmental Conflict, Inter-Departmental Connectedness, Reward System Orientation, Formalisation, Centralisation, Entry Barriers, Competitive Intensity, and Technological Turbulence were accepted; Top Management Emphasis was partly accepted, while Buyer Power, Supplier Power, Sales Revenue, Operating Costs, Market Turbulence, Market Growth Rates, and Government Regulations were rejected. Finally, Spearman's rho correlation test was applied to measure the strength of the linear association between the variables, which guided the discussion on these interrelations.

Chapter 6

Development of the Implementation Model

In order to achieve the research aim, developing a model that helps managers within Saudi construction companies implement the market orientation concept was needed. This chapter outlines the use of the Interpretive Structural Modelling technique (ISM) as a valuable tool in preparing the hierarchical structure of factors encountered during the implementation phase. Subsequently, the MICMAC analysis have identified the nature and degree of the interrelationship between the 15 factors of market orientation, and categorised them into dependents, independent, and autonomous factors based on their driving and dependency power. Finally, this chapter provides practical guidelines on using the developed models for managers in Saudi construction companies.

6.1. Introduction

During recent years, marketing authors and professionals have addressed questions regarding how an organisation could become more market-oriented. The implementation issue of market orientation has been enriched by both qualitative as well as quantitative empirical studies. A number of case studies to define alternative procedures for implementing this and becoming more market-orientated have been published. Such empirical research varies from comparisons between overall change outlines (Day, 1999a), explanations of organizational re-orientations (Ballantyne, 1997; Hennestad, 1999), to reactions of people to cultural change systems (Harris and Ogbonna, 2000). In this respect, and subsequent to developing a model that aims at assessing the degree of market orientation within Saudi construction companies, this chapter considers building a supplementary model that will help managers in those Saudi construction companies implement the concept of market orientation. More specifically, this chapter reflects on the use of the Interpretive Structural Modelling technique (ISM) as an effective method for developing such a model.

6.2. An Overview of Interpretive Structural Modelling (ISM) Technique

The Interpretive structural modelling (ISM) is a well-established qualitative technique for recognising and sorting relationships among particular factors that could describe an implementation process for a matter or a decision-making criterion to solve a problem (Sage, 1977). It provides solutions for complex challenges based on the structural mapping of the interconnections of factors (Malone, 1975; Watson, 1978). The resultant structure of the factors in the setting of the ISM is subject to a specific form of relation that defines the links of the factors to one another (Warfield, 1994). The technique sustains the identification and sequence of the complex associations among the elements so that their influence could be evaluated. The ISM has been increasingly used by various researchers to represent the

interrelations between various elements related to different problems and challenges in a particular system. Moreover, it comprises a strong instrument, which has been implemented in different fields:

- Saxena *et al.* (1990) have recognised the main variables employing direct as well as indirect associations among the variables, and provided the outcomes of the implementation of ISM methodology to the instance of energy saving in the Indian cement industry.

- Mandal and Deshmukh (1994) employed the ISM technique to evaluate several significant vendor choice standards and have displayed the associations of standards and their levels.

- Singh *et al.* (2003) have employed this method for the application for knowledge management within the engineering industry.

- Qureshi *et al.* (2007) established a model for the logistics of outsourcing association elements to improve the shipper's output and competitiveness within the logistical supply chain employing ISM techniques.

- Faisal *et al.* (2006) discovered ISM implementation in supply chains in the Indian manufacturing industry.

- Hasan *et al.* (2007) investigated different elements in applying agile manufacturing and instituted an association among these elements by means of the ISM technique.

- Raj *et al.* (2008) carried out a case a study and implemented ISM techniques for modelling the enablers in the manufacturing industry.

- Sahney *et al.* (2010) suggested a quality structure for the Indian higher education system, especially for administrative staff. The system was established by the implementation of ISM.

6.3. ISM Methodology

The ISM is defined as an interpretive qualitative methodology: a group discussion decides the factors in which the aspects are associated and how. In ISM methodology, a number of directly and indirectly related factors influence how the system under consideration is arranged into an inclusive general model by the means of the discussions. Moreover, dependencies between the factors of the issue discussed or the targeted system are examined and interpreted as an object (complex) system, a poorly structured system, or one not structured at all (Szyperski and Eul-Bischoff, 1983). Consequently, it is transformed into a well-defined and representative structure comprised of directed digraph (graphs). The interpretation of the system with regard to its contents is then completed with information. The model thus created illustrates the structure of a carefully planned and designed sequence using graphics (Singh *et al.*, 2003; Ravi and Shankar, 2005; Faisal *et al.*, 2006). The mapped system (digraphs) becomes the 'basic structural model'. The extension with content (information/words) eventually results in an 'interpretive structural model'.

In summary, ISM methodology is suitable for employment by professionals who are conversant with the context of the challenge (Agarwal *et al.*, 2007). The structured digraph should provide the foundation of the associations an inclusive arrangement of all its complex aspects by contemplating all likely pairwise communications of the elements.

6.4. Development of the Implementation Model Using ISM

Developing the implementation model of market orientation for Saudi construction organizations using the ISM technique requires following a systematic process. Briefly, it starts with an identification of variables, which are relevant to the problem or issue, or that could be related to each other in a system. Direct and indirect relationships are identified between these variables, which are then converted into a matrix that is finally structured into a digraph model

through a hierarchical configuration. The actual steps involved in ISM technique are detailed below.

6.4.1. Identification of Elements

The starting point for developing an ISM model is the selection and the identification of the elements relevant to the problem. These elements consist of the 15 identified factors (or variables) of market orientation for Saudi construction organizations, which have already been discussed in previous chapters. They include Organisation-wide ease of communication, ease of Hierarchal communication, Organisation-wide collaboration, Top management emphasis, Interdepartmental correspondence, Implementing new marketing techniques, Implementing new technologies, Taking big financial risks, Competition intensity, Competing offers, Market entry and competition ease, Deformalisation, Rewards System, Decentralisation, and Informality.

6.4.2. Structural Self-Interaction Matrix (SSIM)

Following identifying and enlisting the 15 factors, a contextual relationship among them is presented. Relationships may comprise relative, influential, impartial, comparative, or sequential relations (Austin and Burns, 1985; Warfield, 1994). This stage, the preparation of Structural Self-Interaction Matrix (SSIM), comprises the most important and most challenging task of ISM. As such structural analysis tasks are used to filter the groupthink from a relatively small number of 'Expert' respondents, or from people with knowledge of the subject being analysed into a 'single set' of data. Further, Warfield (1974) suggests that an ideal group number would be between 5 and 10 respondents.

6.4.3. Focus Group

In recent years, focus-group interviews, as a method of qualitative data gathering, have attained popularity amongst academics within the social science field. Thomas *et al.* (1995: p.21) state that a focus group is "*a method concerning the employment of in-depth group interviews within which participants are chosen as they are a purposive, even though not actually representative, sampling of a particular population, this faction being 'concentrated on a provided subject*". An obvious characteristic of focus-group interviews involves its group dynamics; thus the type of data produced by the social communication of the group is usually richer and deeper than those acquired from one-to-one interviews (Richardson and Rabiee, 2001).

Focus groups could provide information about a range of ideas and feelings that individuals have about certain issues, as well as illuminating the differences in perspective between groups of individuals (Krueger, 1994). The narratives generated from professionals working in this area, although very different, complement the range of issues raised by the public (Rabiee, 2004). Focus groups can generate large amounts of data in a relatively short time span, and the findings may be used to precede quantitative procedures (Green *et al.*, 2003). Like one-to-one interviews, the results of focus-group interviews can be presented in uncomplicated ways using lay terminology supported by quotations from the participants.

Since the principal of ISM is placed on the perceptions of the involved participants, a group of seven experts with vast experience in the fields of construction and service marketing (at appropriate levels of capability) were brought together as an 'Expert's Panel' in order to investigate and to gain an understanding of the complex relationships between the identified factors. Each one of the expert's panel (the seven professional colleagues) satisfies the following requirements:

- Works at a privately-owned Saudi construction SME.

- Positioned at a top management level: they consist of the board of directors (including non-executive directors and executive directors), presidents, vice-presidents and CEOs. Giving their involvement in controlling and overseeing the entire organization and in setting up strategic development plans. This should make it a good solution to gain from their experience about the issues related to the construction industry.

- Has at least 10 years of work experience: This implies that experienced participants would have a better understanding of the field of construction.

More specifically, the experts involved in the group discussion had to decide upon the pairwise relationship (in a 'leads to' type of relation) between the factors. This signifies that one factor results in another factor. Based on this, the existence of an association between any two factors, as well as the direction of the relation, if available, is queried, and the SSIM is consequently constructed.

During this phase, the participants were consulted with a view to developing the contextual relationship among the 15 factors, which were arranged in the SSIM matrix. Participants were asked to decide upon the pairwise relationship between the rows (i) and columns (j) by denoting the direction of the relationship using one of the following symbols:

- V: if a direct relation exists but only in the direction from i to j

- A: if a direct relation exists but only in the direction from j to i

- X: if a direct relation exists between i and j in both directions

- O: if no direct relation exists between i and j

On the basis of the pair-wise relationship between the factors in the system, a structural self-interaction matrix (SSIM) is developed for the factors. The SSIM is discussed with the experts. Based on their responses, SSIM has been finalized (Table 6.1).

Table 6.1: Structural Self-Interaction Matrix (SSIM)

		Ease of Organisation-wide communication	Ease of Hierarchal communication	Organisation-wide collaboration	Top management emphasis	Interdepartmental correspondence	Implementing new marketing techniques	Implementing new technologies	Taking big financial risks	Competition intensity	Competing offers	Market entry and competition ease	Deformalisation	Rewards system	Decentralisation	Informality
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ease of Organisation-wide communication	1	X	A	X	X	X	V	V	O	V	O	V	O	O	A	A
Ease of Hierarchal communication	2		X	V	X	X	V	V	O	V	O	V	O	O	X	A
Organisation-wide collaboration	3			X	X	X	V	V	O	V	O	V	O	O	X	A
Top management emphasis	4				X	X	V	V	V	V	V	V	V	O	V	X
Interdepartmental correspondence	5					X	V	V	O	V	O	V	O	A	O	A
Implementing new marketing techniques	6						X	X	X	V	V	V	O	A	V	O
Implementing new technologies	7							X	X	V	V	V	O	O	X	O
Taking big financial risks	8								X	V	V	V	O	O	O	O
Competition intensity	9									X	X	V	O	O	A	O
Competing offers	10										X	V	O	O	O	O
Market entry and competition ease	11											X	A	A	A	A
Deformalisation	12												X	O	O	O
Rewards System	13													X	X	O
Decentralisation	14														X	O
Informality	15															X

6.4.4. Initial Reachability Matrix

After completing the Structural Self-Interaction Matrix (SSIM), it is converted into a Reachability Matrix (RM). To establish the reachability matrix from SSIM, two sub-steps are followed. Firstly, the SSIM table is transformed into the initial reachability matrix by changing the information of every cell of SSIM into binary digits according to the following rules:

- If the cell (i,j) is assigned with "V", then this cell (i,j) entry becomes "1" and the cell (j,i) entry becomes "0".

- If the cell (i,j) is assigned with "A", then, this cell (i,j) entry becomes "0" and the cell (j,i) entry becomes "1".

- If the cell (i,j) is assigned with "X", then, this cell (i,j) entry becomes "1" and the cell (j,i) entry also becomes "1".

- If the cell (i,j) is assigned with "O", then, this cell (i,j) entry becomes "0" and the cell (j,i) entry also becomes "0".

When all cells entry of the SSIM binary numbers "1" and "0" are obtained, an initial reachability matrix is thus constructed (Table 6.2).

Table 6.2: Initial Reachability Matrix

		Ease of Organisation-wide communication	Ease of Hierarchal communication	Organisation-wide collaboration	Top management emphasis	Interdepartmental correspondence	Implementing new marketing techniques	Implementing new technologies	Taking big financial risks	Competition intensity	Competing offers	Market entry and competition ease	Deformalisation	Rewards system	Decentralisation	Informality
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ease of Organisation-wide communication	1	1	0	1	1	1	1	1	0	1	0	1	0	0	0	0
Ease of Hierarchal communication	2	1	1	1	1	1	1	1	0	1	0	1	0	0	1	0
Organisation-wide collaboration	3	1	0	1	1	1	1	1	0	1	0	1	0	0	1	0
Top management emphasis	4	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Interdepartmental correspondence	5	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0
Implementing new marketing techniques	6	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0
Implementing new technologies	7	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0
Taking big financial risks	8	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
Competition intensity	9	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
Competing offers	10	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
Market entry and competition ease	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Deformalisation	12	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Rewards System	13	0	0	0	0	1	1	0	0	0	0	1	0	1	1	0
Decentralisation	14	1	1	1	0	0	0	1	0	1	0	1	0	1	1	0
Informality	15	1	1	1	1	1	0	0	0	0	0	1	0	0	0	1

6.4.5. Final Reachability Matrix

After obtaining the initial reachability matrix, it is checked for transitivity, and modifications (if any) are made. Transitivity is a fundamental assumption that results in the final reachability matrix in ISM. It asserts that if a factor "i" is related with "j" and "j" is related to another factor "k", then "i" is necessarily related to "k". The final reachability matrix will subsequently comprise some entries from the pair-wise comparison and some implied entries. After incorporating the transitivity concept as described earlier, the final reachability matrix is obtained (Table 6.3) and transitivity is marked as 1*.

Table 6.3: Final Reachability Matrix

		Ease of Organisation-wide communication	Ease of Hierarchal communication	Organisation-wide collaboration	Top management emphasis	Interdepartmental correspondence	Implementing new marketing techniques	Implementing new technologies	Taking big financial risks	Competition intensity	Competing offers	Market entry and competition ease	Deformalisation	Rewards system	Decentralisation	Informality
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ease of Organisation-wide communication	1	1	0	1	1	1	1	1	0	1	0	1	0	1*	0	1*
Ease of Hierarchal communication	2	1	1	1	1	1	1	1	0	1	0	1	0	0	1	1*
Organisation-wide collaboration	3	1	0	1	1	1	1	1	0	1	0	1	0	1*	1	1*
Top management emphasis	4	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Interdepartmental correspondence	5	1	1	1	1	1	1	1	1*	1	0	1	0	0	0	0
Implementing new marketing techniques	6	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0
Implementing new technologies	7	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0
Taking big financial risks	8	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0
Competition intensity	9	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
Competing offers	10	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
Market entry and competition ease	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Deformalisation	12	0	0	0	0	0	0	0	0	0	0	1	1	0	1*	0
Rewards System	13	0	0	0	0	1	1	0	0	0	0	1	0	1	1	
Decentralisation	14	1	1	1	0	0	0	1	0	1	0	1	1*	1	1	0
Informality	15	1	1	1	1	1	0	0	0	0	0	1	0	0	1*	1

6.4.6. Level Partitions

The next step in developing the ISM model concerns the removal of a sequential ordering from the reachability matrix by level partitioning (Warfield, 1977). The objective of this stage is to enable the building of the digraph from the final reachability matrix. The level partition uses groups related to every element s_j in s. Founded on the proposals of Warfield (1977), and Farris and Sage (1975), the final reachability matrix results in reachability and the antecedent set for each factor.

The reachability set $R(s_i)$ for a specific factor s_i is the group of elements described within the columns which comprise 1 in row s_i and it is comprised of the factor itself as well as the rest of the factors which are reachable from s_i. Similarly, the antecedent $A(s_i)$ of the element s_i comprises the set of factors described within the rows which comprise 1 in the column s_i and it is comprised of the factor itself as well as the other factors which may reach the element s_i comprising the antecedent set $A(s_i)$. After discovering the reachability set and antecedent set for all factors, the intersection for these sets (the common elements in both sets $R(s_i) \cap A(s_i)$) is derived for all the factors. The factor for which $R(s_i) = R(s_i) \cap A(s_i)$ comprises the top-level factor within the ISM hierarchy.

After the first iteration, factor 11 (Market entry and competition ease) was found to be the top-level factor, and it has no association with any other factors over its own level (see Table 6.4). As soon as the top-level factor is recognised, it is removed from the other remaining factors. Then, the same iterative process continues until the level of all elements is achieved (until the levels of each factor are determined).

Table 6.4: Iteration 1

		Reachability Set	Antecedents Set	Intersection Set	T	Level
Ease of Organisation-wide communication	1	1 3 4 5 6 7 9 11 13 15	1 2 3 4 5 14 15	1 3 4 5 15	5	
Ease of Hierarchal communication	2	1 2 3 4 5 6 7 9 11 14 15	2 4 5 6 14 15	2 4 5 6 14 15	6	
Organisation-wide collaboration	3	1 3 4 5 6 7 9 11 13 14 15	1 2 3 4 5 14 15	1 3 4 5 14 15	6	
Top management emphasis	4	1 2 3 4 5 6 7 8 9 10 11 12 14 15	1 2 3 4 5 15	1 2 3 4 5 15	6	
Interdepartmental correspondence	5	1 2 3 4 5 6 7 8 9 11	1 2 3 4 5 13 15	1 2 3 4 5	5	
Implementing new marketing techniques	6	6 7 8 9 10 11 14	1 2 3 4 5 6 7 8 13	6 7 8	3	
Implementing new technologies	7	6 7 8 9 10 11 14	1 2 3 4 5 6 7 8 14	6 7 8	3	
Taking big financial risks	8	6 7 8 9 10 11	4 5 6 7 8	6 7 8	3	
Competition intensity	9	9 10 11	1 2 3 4 5 6 7 8 9 10 14	9 10	2	
Competing offers	10	9 10 11	4 6 7 8 9 10	9 10	2	
Market entry and competition ease	11	11	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	11	1	1
Deformalisation	12	11 12 14	4 12 14	12 14	2	
Rewards System	13	5 6 11 13 14	1 3 13 14	13 14	2	
Decentralisation	14	1 2 3 7 9 11 12 13 14	2 3 4 6 7 12 13 14 15	2 3 7 12 13 14	6	
Informality	15	1 2 3 4 5 11 14 15	1 2 3 4 15	1 2 3 4 15	5	

The second iteration (Table 6.5), led to factors 9 (Competition intensity), 10 (Competing offers), and 12 (Deformalisation) being removed and placed at Level 2. For the third iteration (Table 6.6), the factor 13 (Rewards System) was removed and placed at Level 3. In the fourth iteration (Table 6.7), factors 6 (Implementing new marketing techniques), 7 (Implementing new technologies), and 8 (Taking big financial risks) were removed and placed at Level 4. For the fifth iteration (Table 6.8), factor 14 (Decentralisation) was removed and placed at Level 5. For the sixth iteration (Table 6.9), factor 2 (Ease of Hierarchal communication) was removed and placed at Level 6. In the seventh iteration (Table 6.10), factor 5 (Interdepartmental correspondence) and factor 15 (Informality) were removed and placed at Level 7. In the eighth and final iteration (Table 6.11), the last three remaining factors, factor 1 (Ease of Organisation-wide communication), factor 3 (Organisation-wide collaboration), and factor 4 (Top management emphasis) had the same reachability and the intersection sets; accordingly, they were assigned to Level 8. The levels so determined helped in building the digraph and the final model of ISM.

Table 6.5: Iteration 2

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Ease of Organisation-wide communication	1	1 3 4 5 6 7 9 13 15	1 2 3 4 5 14 15	1 3 4 5 15	5	
Ease of Hierarchal communication	2	1 2 3 4 5 6 7 9 14 15	2 4 5 6 14 15	2 4 5 6 14 15	6	
Organisation-wide collaboration	3	1 3 4 5 6 7 9 13 14 15	1 2 3 4 5 14 15	1 3 4 5 14 15	6	
Top management emphasis	4	1 2 3 4 5 6 7 8 9 10 12 14 15	1 2 3 4 5 15	1 2 3 4 5 15	6	
Interdepartmental correspondence	5	1 2 3 4 5 6 7 8 9	1 2 3 4 5 13 15	1 2 3 4 5	5	
Implementing new marketing techniques	6	6 7 8 9 10 14	1 2 3 4 5 6 7 8 13	6 7 8	3	
Implementing new technologies	7	6 7 8 9 10 14	1 2 3 4 5 6 7 8 14	6 7 8	3	
Taking big financial risks	8	6 7 8 9 10	4 5 6 7 8	6 7 8	3	
Competition intensity	9	9 10	1 2 3 4 5 6 7 8 9 10 14	9 10	2	2
Competing offers	10	9 10	4 6 7 8 9 10	9 10	2	2
Deformalisation	12	12 14	4 12 14	12 14	2	2
Rewards System	13	5 6 13 14	1 3 13 14	13 14	2	
Decentralisation	14	1 2 3 7 9 12 13 14	2 3 4 6 7 12 13 14 15	2 3 7 12 13 14	6	
Informality	15	1 2 3 4 5 14 15	1 2 3 4 15	1 2 3 4 15	5	

Table 6.6: Iteration 3

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Ease of Organisation-wide communication	1	1 3 4 5 6 7 13 15	1 2 3 4 5 14 15	1 3 4 5 15	5	
Ease of Hierarchal communication	2	1 2 3 4 5 6 7 14 15	2 4 5 6 14 15	2 4 5 6 14 15	6	
Organisation-wide collaboration	3	1 3 4 5 6 7 13 14 15	1 2 3 4 5 14 15	1 3 4 5 14 15	6	
Top management emphasis	4	1 2 3 4 5 6 7 8 14 15	1 2 3 4 5 15	1 2 3 4 5 15	6	
Interdepartmental correspondence	5	1 2 3 4 5 6 7 8	1 2 3 4 5 13 15	1 2 3 4 5	5	
Implementing new marketing techniques	6	6 7 8 14	1 2 3 4 5 6 7 8 13	6 7 8	3	
Implementing new technologies	7	6 7 8 14	1 2 3 4 5 6 7 8 14	6 7 8	3	
Taking big financial risks	8	6 7 8	4 5 6 7 8	6 7 8	3	
Rewards System	13	5 6 13 14	1 3 13 14	13 14	2	3
Decentralisation	14	1 2 3 7 13 14	2 3 4 6 7 13 14 15	2 3 7 13 14	5	
Informality	15	1 2 3 4 5 14 15	1 2 3 4 15	1 2 3 4 15	5	

Table 6.7: Iteration 4

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Ease of Organisation-wide communication	1	1 3 4 5 6 7 15	1 2 3 4 5 14 15	1 3 4 5 15	5	
Ease of Hierarchal communication	2	1 2 3 4 5 6 7 14 15	2 4 5 6 14 15	2 4 5 6 14 15	6	

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Organisation-wide collaboration	3	1 3 4 5 6 7 14 15	1 2 3 4 5 14 15	1 3 4 5 14 15	6	
Top management emphasis	4	1 2 3 4 5 6 7 8 14 15	1 2 3 4 5 15	1 2 3 4 5 15	6	
Interdepartmental correspondence	5	1 2 3 4 5 6 7 8	1 2 3 4 5 15	1 2 3 4 5	5	
Implementing new marketing techniques	6	6 7 8 14	1 2 3 4 5 6 7 8	6 7 8	3	4
Implementing new technologies	7	6 7 8 14	1 2 3 4 5 6 7 8 14	6 7 8	3	4
Taking big financial risks	8	6 7 8	4 5 6 7 8	6 7 8	3	4
Decentralisation	14	1 2 3 7 14	2 3 4 6 7 14 15	2 3 7 14	4	
Informality	15	1 2 3 4 5 14 15	1 2 3 4 15	1 2 3 4 15	5	

Table 6.8: Iteration 5

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Organisation-wide communication	1	1 3 4 5 15	1 2 3 4 5 14 15	1 3 4 5 15	5	
Ease of Hierarchal communication	2	1 2 3 4 5 14 15	2 4 5 14 15	2 4 5 14 15	5	
Organisation-wide collaboration	3	1 3 4 5 14 15	1 2 3 4 5 14 15	1 3 4 5 14 15	6	
Top management emphasis	4	1 2 3 4 5 14 15	1 2 3 4 5 15	1 2 3 4 5 15	6	
Interdepartmental correspondence	5	1 2 3 4 5	1 2 3 4 5 15	1 2 3 4 5	5	
Decentralisation	14	1 2 3 14	2 3 4 14 15	2 3 14	3	5
Informality	15	1 2 3 4 5 14 15	1 2 3 4 15	1 2 3 4 15	5	

Table 6.9: Iteration 6

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Organisation-wide communication	1	1 3 4 5 15	1 2 3 4 5 15	1 3 4 5 15	5	
Ease of Hierarchal communication	2	1 2 3 4 5 15	2 4 5 15	2 4 5 15	4	6
Organisation-wide collaboration	3	1 3 4 5 15	1 2 3 4 5 15	1 3 4 5 15	5	
Top management emphasis	4	1 2 3 4 5 15	1 2 3 4 5 15	1 2 3 4 5 15	6	
Interdepartmental correspondence	5	1 2 3 4 5	1 2 3 4 5 15	1 2 3 4 5	5	
Informality	15	1 2 3 4 5 15	1 2 3 4 15	1 2 3 4 15	5	

Table 6.10: Iteration 7

Element	#	Reachability Set	Antecedents Set	Intersection Set	T	Level
Organisation-wide communication	1	1 3 4 5 15	1 3 4 5 15	1 3 4 5 15	5	
Organisation-wide collaboration	3	1 3 4 5 15	1 3 4 5 15	1 3 4 5 15	5	
Top management emphasis	4	1 3 4 5 15	1 3 4 5 15	1 3 4 5 15	5	
Interdepartmental correspondence	5	1 3 4 5	1 3 4 5 15	1 3 4 5	4	7
Informality	15	1 3 4 5 15	1 3 4 15	1 3 4 15	4	7

Table 6.11: Iteration 8

		Reachability Set			Antecedents Set			Intersection Set			T	Level
Ease of Organisation-wide communication	1	1	3	4	1	3	4	1	3	4	3	8
Organisation-wide collaboration	3	1	3	4	1	3	4	1	3	4	3	8
Top management emphasis	4	1	3	4	1	3	4	1	3	4	3	8

The level identification process of these factors was completed in eight iterations (Tables 6.4 – 6.11). The identified levels for each factor (summarised in Table 6.12) help in building the digraph and final ISM model.

Table 6.12: Summary of Factors Levels

Level	Item	
1	Market entry and competition ease	11
2	Deformalisation	12
	Competing offers	10
	Competition intensity	9
3	Rewards System	13
4	Implementing new marketing techniques	6
	Implementing new technologies	7
	Taking big financial risks	8
5	Decentralisation	14
6	Ease of Hierarchal communication	2
7	Interdepartmental correspondence	5
	Informality	15
8	Ease of Organisation-wide communication	1
	Organisation-wide collaboration	3
	Top management emphasis	4

6.4.7. Developing Conical Matrix

The levels of factors brought out from the intersection of the reachability and antecedent sets can be converted into a lower triangular matrix or conical matrix. A Conical Form of Matrix is achieved from a partitioned reachability matrix by rearranging the factors according to their level, which means that all the factors with the same levels are clubbed together. This provides a clear indication of the hierarchy of influence of each element. After rearranging, the conical matrix is obtained, which is depicted in Table 6.13.

Table 6.13: Conical (Lower Triangular) Matrix

| Factor	#	Market entry and competition ease (11)	Deformalisation (12)	Competing offers (10)	Competition intensity (9)	Rewards system (13)	Implementing new marketing techniques (6)	Implementing new technologies (7)	Taking big financial risks (8)	Decentralisation (14)	Ease of Hierarchal communication (2)	Interdepartmental correspondence (5)	Informality (15)	Ease of Organisation-wide communication (1)	Organisation-wide collaboration (3)	Top management emphasis (4)
Market entry and competition ease	11															
Deformalisation	12	1														
Competing offers	10	1	0													
Competition intensity	9	1	1	0												
Rewards System	13	1	0	0	0											
Implementing new marketing techniques	6	1	0	1	1	0										
Implementing new technologies	7	1	0	1	1	0	1									
Taking big financial risks	8	1	0	1	1	0	1	1								
Decentralisation	14	1	1*	0	1	1	0	1	0							
Ease of Hierarchal communication	2	1	0	0	1	0	1	1	0	1						
Interdepartmental correspondence	5	1	0	0	1	0	1	1	1*	0	1					
Informality	15	1	0	0	0	0	0	0	0	1*	1	1				
Ease of Organisation-wide communication	1	1	0	0	1	1*	1	1	0	0	0	0	1	1*		
Organisation-wide collaboration	3	1	0	0	1	1*	1	1	0	1	0	1	1*	1		
Top management emphasis	4	1	1	1	1	0	1	1	1	1	1	1	1	1	1	

The conical matrix helps in the generation of the digraph and, later on, a structural model.

6.4.8. Building the ISM-Based Model

Based on the conical matrix, a preliminary digraph encompassing transitivity connections is acquired. This is produced by nodes and lines of edges. After extracting the indirect connections, a final digraph is established and is transformed into the ISM model by substituting the nodes of the factors with statements (as displayed in Figure 6.1) to get a complete representation of the inter-relationship among the elements.

Figure 6.1: Final ISM Model (Showing Levels and Relationships between Elements)
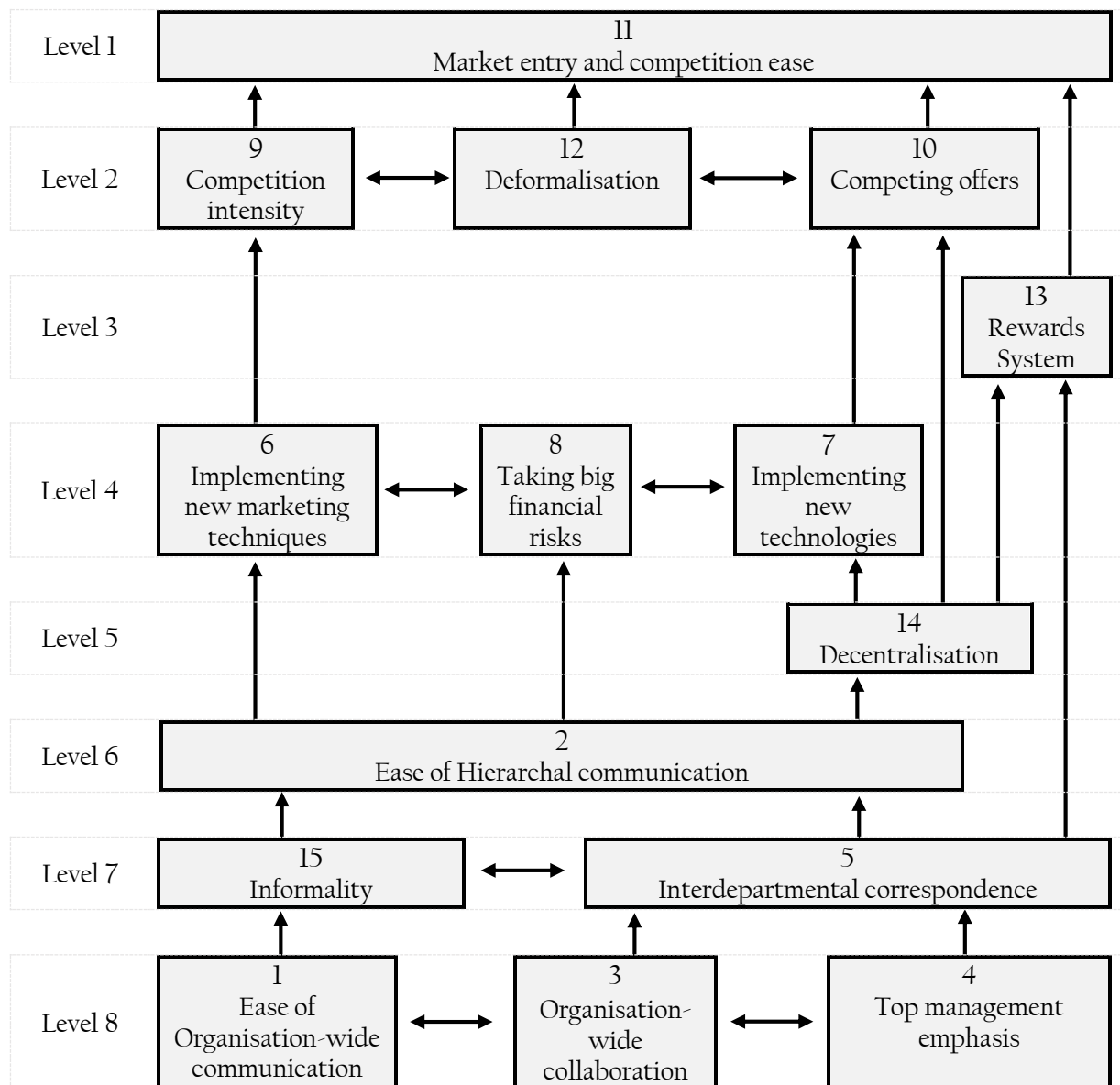
In the ISM model, the interrelationship between the various elements are identified and denoted as directional arrows representing the direction of the relationship. The top-level factor is placed at the top of the digraph and second level factors are positioned at the second level and so forth, until the bottom level is positioned at the last level of the digraph (Figure 6.1).

6.4.9. ISM Model Description

The digraph obtained from ISM presents a hierarchy of factors that exist to implement the market orientation concept. It should help managers and practitioners of market orientation to understand the relationship between the factors as it provides the decision makers and practitioners with a more realistic representation of the problem in the course of implementing market orientation in their organisations.

A major contribution of this model is found in the establishment of the contextual associations among different identified factors of market orientation, which are concluded in a single systemic structure. The usefulness of the suggested ISM technique is found in the imposed order and direction regarding the complexity of relationships among these factors, which would help the decision-makers and practitioners to utilise better their available resources for maximising the factors in their organisations. These factors are also modelled in respect of their driving and dependence powers. The factors with a higher driving power, located at the bottom of the ISM model, have to be addressed carefully via a priority foundation as they influence becoming more market-oriented, and are responsible for a company achieving factor number 11 (Market entry and competition ease) that came at the top of the hierarchy.

The links shown in the ISM Model, as shown in Figure 6.1, are interpreted as follow:

- At the bottom level (level 8), Top management emphasis, organisation-wide collaboration, and ease of organisation-wide communication directly influence each other in a two-way relationship. Direct links exist between these factors and both factors are located at level 7.

- At level 7, there is a direct two-way relationship between the two factors of Informality and Interdepartmental correspondence, and direct links exist between them and the factor at level 6. In addition, there is a direct link between factor 5 (Interdepartmental correspondence) and factor 13 (Reward Systems), which is found at level 3.

- At level 6, a direct link exists between the sole factor at this level, Ease of hierarchal communication, and the factor Decentralisation. Direct links also exist between the former factor and 2 of the factors in level 4, which are Implementing new marketing techniques and Taking big financial risks.

- At level 5, the factor Decentralisation has direct links with factors from 3 different levels, as a link exists leading towards factor 7 (Implementing new technologies), a link towards the factor reward system (located in level 3), and a link towards Competing offers (placed at level 2).

- At level 4, two-way direct relationships exist between Implementing new marketing techniques, Taking big financial risks, and Implementing new technologies. No direct link between this level and level 3 exist. However, Implementing new technologies is linked directly to Competing offers (placed at level 2), and Implementing new marketing techniques is linked directly to Competition intensity (also placed at level 2).

- At level 3, Reward System has direct links with Market entry and competition ease, which are located at level 1, at the very top of the model. No direct links exist to factors in level 2.

- At level 2, Competition intensity, Competing offers, and Deformalisation have two-way direct relationships between each other. In addition, all of these 3 factors are directly related to factor 11 (Market entry and competition ease), which is placed at level 1.

A key finding of this model is that Top management emphasis, and the ease of organisation-wide communication and collaboration are the most important factors. From the ISM model, it is observed that these three are at the very bottom level of the hierarchy, implying the highest driving powers. Moreover, the two-way interrelationships between these elements represent that point that they directly influence each other.

The directional arrows from level 8 towards level 7, which consequently lead towards level 6, denote strong links between them, and suggest the significant impact of these factors (1, 2, 3, 4, 5, and 15) on the market orientation of Saudi construction companies. Therefore, top management should focus on market needs, client requirements and competitors' activities as well as assuring ease in contacting and communicating and cooperating with individuals from different departments within the company, in order to improve their level of market orientation.

Furthermore, a healthy relationship between departments (factors 1 and 3), a relaxed attitude between employees (factors 5 and 15), and the rule of top management especially in assuring the ease of hierarchal communication among everyone within the company regardless of their positions (factors 2 and 4) should be maintained. This is claimed, as these factors influence the dimension of 'Risk-Taking', which is represented in factors 6, 7 and 8 (level 4 in the ISM model) and consequently determine the extent of the implementation of market orientation.

Finally, when a company has decent and effective communication channels assuring the flow of communication, sensible risk-taking, and effective organizational systems with the aim of empowering its employees (such as an operative Rewards System (factor 13) and a decentralised working environment (factor 14)), these points would lead to the optimum outcome in market orientation: 'Competition'. This final dimension implies that achieving all

the mentioned factors will help strengthen the competition against opponents in the industry (factor 9), constantly providing customers with competing offers (factor 10), and finally entering and becoming competitively viable in the market (factor 11).

6.5.   Classification of Factors Using MICMAC Analysis

After the development of the ISM model and identifying the relationships between its elements, it is necessary to ascertain the degree of the relationships between those various elements. The use of the MICMAC principle (Matrice d'Impacts Croises-Multiplication Appliqúe An Classment), which is called a Cross-Impact Matrix Multiplication Applied To Classification, will be helpful in doing so (Sharma *et al.*, 1995).

The objective of MICMAC comprises analysing the driver (influencer) power and dependence (reliance) power of the factors (Mandal and Deshmukh, 1994). The driving power is the summation of binary digit "1" in the corresponding row for each factor in the final reachability matrix, while the dependence power of each element is obtained by the summation of 1's in the corresponding factor column (Table 6.14).

Table 6.14: Reachability Matrix (with Driving Power and Dependence Power)

		Ease of Organisation-wide communication	Ease of Hierarchal communication	Organisation-wide collaboration	Top management emphasis	Interdepartmental correspondence	Implementing new marketing techniques	Implementing new technologies	Taking big financial risks	Competition intensity	Competing offers	Market entry and competition ease	Deformalisation	Rewards system	Decentralisation	Informality	Driving power
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Ease of Organisation-wide communication	1	1	0	1	1	1	1	1	0	1	0	1	0	0	0	0	8
Ease of Hierarchal communication	2	1	1	1	1	1	1	1	0	1	0	1	0	0	1	0	10
Organisation-wide collaboration	3	1	0	1	1	1	1	1	0	1	0	1	0	0	1	0	9
Top management emphasis	4	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	14
Interdepartmental correspondence	5	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	9
Implementing new marketing techniques	6	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	7
Implementing new technologies	7	0	0	0	0	0	1	1	1	1	1	1	0	0	1	0	7
Taking big financial risks	8	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	6
Competition intensity	9	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3
Competing offers	10	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3
Market entry and competition ease	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Deformalisation	12	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Rewards System	13	0	0	0	0	1	1	0	0	0	0	1	0	1	1	0	5
Decentralisation	14	1	1	1	0	0	0	1	0	1	0	1	0	1	1	0	8
Informality	15	1	1	1	1	1	0	0	0	0	0	1	0	0	0	1	7
Dependence power		7	5	7	6	7	9	9	4	11	6	15	2	2	7	2	

In addition, the MICMAC analysis complements and extends impressions that experienced users draw from the visual analysis of influence structures. Specifically, it explores the influence and dependence between issues and classifies them into independent, relay/linkage, dependent, and autonomous clusters. Based on the driving and dependence powers, a graph is plotted, classifying the factors into four clusters:

- First cluster: contains 'autonomous factors' that have weak driver power and weak dependence. These factors are relatively disconnected from the system, with which they have only few links, which may be strong.

- Second cluster: contains 'dependent factors' that have weak driver power but strong dependence.

- Third cluster: has the linkage factors that have strong driving power and also strong dependence. These factors are unstable from the fact that any action on these factors will have an effect on others and also a feedback on themselves.

- Fourth cluster: includes the independent factors having strong driving power but weak dependence.

After obtaining the driver power and dependence power of each element, they are presented in the form of a driver power-dependence matrix (Table 6.15).

Table 6.15: Driving Power and Dependence Power for the Elements

Item		Driving Power	Dependence Power
Ease of Organisation-wide communication	1	8	7
Ease of Hierarchal communication	2	10	5
Organisation-wide collaboration	3	9	7
Top management emphasis	4	14	6
Interdepartmental correspondence	5	9	7
Implementing new marketing techniques	6	7	9
Implementing new technologies	7	7	9
Taking big financial risks	8	6	4
Competition intensity	9	3	11
Competing offers	10	3	6
Market entry and competition ease	11	1	15
Deformalisation	12	2	2
Rewards System	13	5	2
Decentralisation	14	8	7
Informality	15	7	2

Subsequently, each element is plotted as a point using the conventional x-y coordinate system. For example, as factor 1 has a driver power of "8" and a dependence power of "7", it is, therefore positioned at the fourth cluster, namely, Independent Factors, and so on. In the present study, the market orientation factors are classified into their respective clusters (Figure 6.2). They are as follows:

- Autonomous Factors (weak driving power and weak dependence power):
    - Taking big financial risks (Factor 8)
    - Competing offers (Factor 10)
    - Deformalisation (Factor 12)
    - Rewards System (Factor 13)
    - Informality (Factor 15)

These Autonomous or Excluded factors have little influence and are only a little dependent. They appear quite out of line and rather excluded from the global dynamics of the system, since they allow neither the stopping of any major evolution, nor the taking advantage of it. They also can act as a secondary variable or as an application point for possible accompanying measures.

- Dependent Factors (weak driving power, but strong dependence power):
    - Implementing new marketing techniques (Factor 6)
    - Implementing new technologies (Factor 7)
    - Competition intensity (Factor 9)
    - Market entry and ease of competition (Factor 11)

These Dependent or Resultant Factors are of little influence and very dependent. In this, they are especially sensitive to the evolution of independent factors. They are exit variables from the system.

- Independent Factors (strong driving power but weak dependence power):
    - Ease of organisation-wide communication (Factor 1)

    o   Ease of hierarchal communication (Factor 2)

    o   Organisation-wide collaboration (Factor 3)

    o   Top management emphasis (Factor 4)

    o   Interdepartmental correspondence (Factor 5)

    o   Decentralisation (Factor 14)

These Independent factors are very influential, and little dependent. Most of the system thus depends on these factors. They are crucial since they act on the system, depending on how much they can control them. They are also considered as entry elements into the system. In general, the system itself has no control over these factors. Therefore, collectively, they act as factors of inertia.

Figure 6.2: Classification of Factors (MICMAC Analysis)
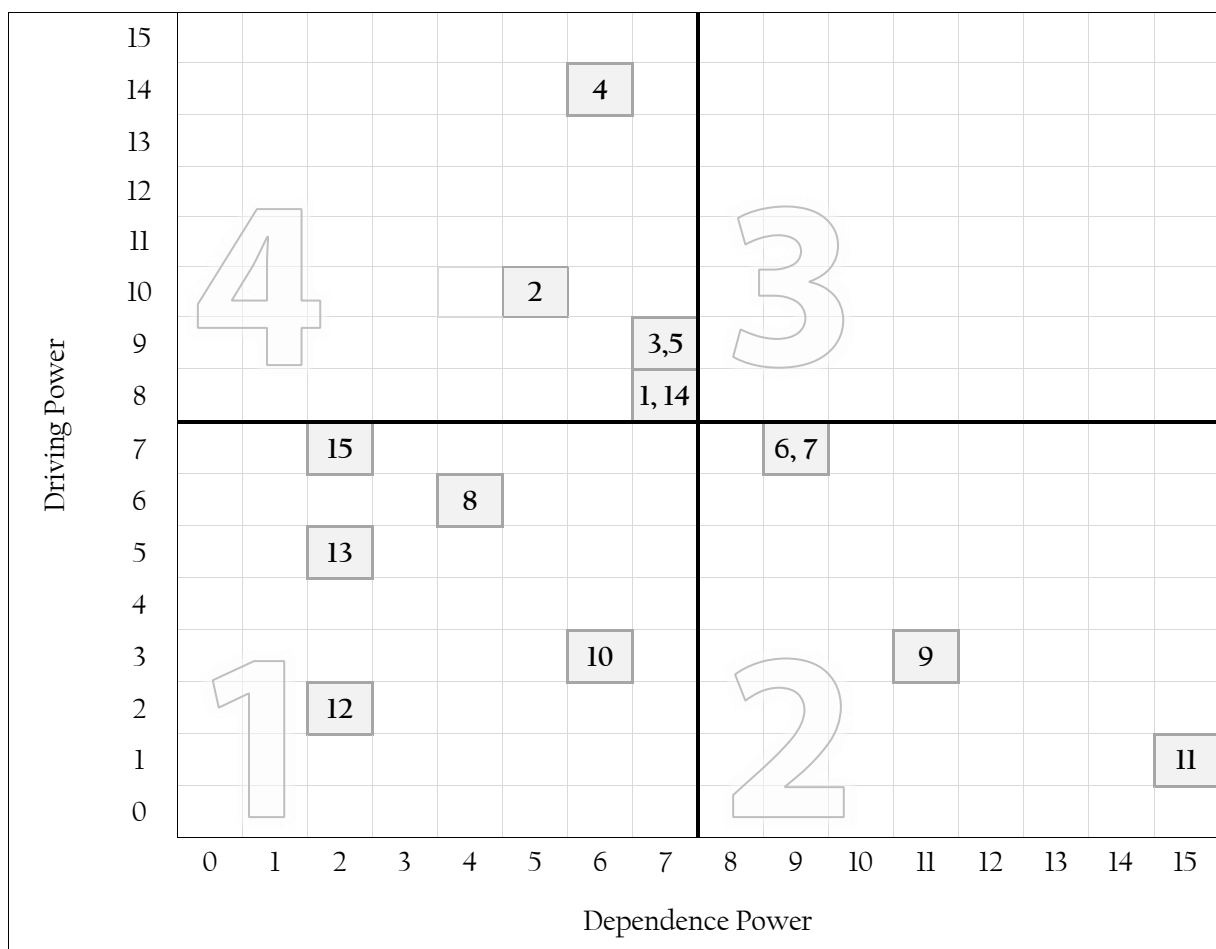
An observation from the MICMAC Analysis indicates that independent factors such as Ease of organisation-wide communication, Ease of hierarchal communication, Organisation-wide collaboration, Top management emphasis, Interdepartmental correspondence, and Decentralisation (which are at the bottom of ISM hierarchy), having strong driving power and weak dependence. Thus, management should place a high priority on tackling these factors, which have the capability of influencing other factors. They may be treated as the 'major factors' in market orientation implementation. Moreover, autonomous factors that have weak driver power and weak dependence include Taking big financial risks, Competing offers, Deformalisation, Rewards System, and Informality. These factors are relatively disconnected from the system, with which they have only few links, which may be strong.

In addition, factors such as implementing new marketing techniques, implementing new technologies, Competition intensity, and Market entry and ease of competition possess weak driving powers but strong dependency on other factors. They are seen at the top of the ISM hierarchy (Figure 6.2). These factors represent the outcome to managers and practitioners of market orientation in Saudi construction companies. Hence, managers should take special care to handle these factors.

Finally, it is noticed that no factors were seen as linkage factors with a strong driving power and strong dependence. Thus, it can be deduced that all factors of market orientation identified earlier are stable.

6.6.   Practical Guidelines for Managers

The implementation model (figure 6.1) is developed to guide managers in Saudi construction companies in implementing the market orientation concept. It provides a hierarchical structure of factors encountered during the implementation phase in those companies. More specifically, this model should help managers answer the following questions:

- What parts of the organisation should be improved?

- How to prioritise implementation tasks in a list of improvement areas?

Inherent in the developed models are answers to these two questions. The implementation process should start with a diagnosis of the current situation, using the market orientation assessment model (Table 5.4). This will help managers build a case for the need to improve, and to identify areas for improvement. Such improvements should reflect on organisational aspects that necessitate redesigning, reconsidering, or – in some cases – complete rebuilding in order to stimulate market-oriented manners. The results from the assessment model should be taken forward to the implementation model. Even though the implementation model describes the activities, the 'causal' relationships, and the implementation process with little detail, the model users will have to translate it so it suits the character of their own organisation. Therefore, data from the measurement (assessment model) on satisfaction or dissatisfaction of achieving any market orientation factors (measures) must be converted into improvement plans and should then be linked to the change process, which is detailed in the implementation model.

Further, from the implementation model, it could be said that areas with top management impact should always receive higher priority for improvement. This is reflected in their responsibility to develop a strategic vision of what the market-oriented organisation is, what should be accomplished, and what its activities should be (Day, 1999). In addition, they must manage high levels of communication and collaboration with ease, high interdepartmental correspondence, and high levels of informality among all individuals in the organisation in order to be able to disseminate this vision to all departments. The consequent steps are also concerned with top managers' impact, specifically on their courage in taking risks on issues regarding implementing new marketing techniques and technologies, and in taking big financial risks. Additional issues concerning organisational systems such as decentralisation, deformalisation, and rewards system must be enhanced and optimised so as to accomplish competition aspects and therefore to compete easily and become viable in the market. These

previous steps serve to identify areas for improvement in order to increase the degree of market orientation of the organisation.

Although the development of a vision is an assignment for top managers (Lovas and Ghoshal, 2000) and the identification of areas for improvement is an assignment for a research and development team (Van Raaij *et al.*, 1998), translating these improvement areas into plans should signify the commitment and involvement of individuals from all of the different departments. This task can be encouraged by involving those who will have to implement the strategies in the decision-making process of satisfying market needs (Noble and Mokwa, 1999).

After developing a strategic vision and identifying areas for improvement, a directing team is responsible for managing the improvement plans. In addition to monitoring the execution of the proposed plans, the directing team is also responsible for constantly reassessing the suitability of the proposed plans, and suggesting any new areas for improvement, after undertaking the reassessment task.

6.7. Conclusion

Subsequent to developing a market orientation assessment model, a need was identified to build a model that helps managers within Saudi construction companies implement a market orientation concept. Therefore, the Interpretive Structural Modelling technique (ISM) was used as a tool in preparing the hierarchical structure of factors encountered during the implementation phase in those companies. The developed ISM model and the subsequent MICMAC analysis have identified the nature and degree of the interrelationship between the 15 factors of market orientation.

MICMAC analysis suggests that 5 factors are identified as autonomous factors and appear as weak drivers and weak dependents and they do not have much mutual influence on others. However, implementing new marketing techniques, implementing new technologies,

Competition intensity, and Market entry and ease of competition appeared to have strong dependency on these autonomous factors. While independent factors such as Ease of organisation-wide communication, Ease of hierarchal communication, Organisation-wide collaboration, Top management emphasis, Interdepartmental correspondence, and Decentralisation have been found to have the highest independency (driving power), they are quite strong to affect all other market orientation factors.

Chapter 7

Research Conclusions

As this research aimed at developing a model for assessing the implementation of market orientation in Saudi construction organisations, this concluding chapter discusses how this aim was achieved, how the objectives were fulfilled, and what limitations were faced during the course of this research. In addition, it outlines the contributions to knowledge it offered, and suggests directions for future research.

7.1. Introduction

During the 1990's, the concept of market orientation became one of the most interesting fields of research, and ever since it has continued to attract the attention of marketing researchers, especially in countries such as the United States, United Kingdom, China and Australia. Most of this research trend has focused on defining and measuring the concept, studying its relationship with a firms' performance, and examining the moderating effects on that relationship.

While most of these conceptual and empirical studies took place in the context of developed countries, researchers claimed that studies in the setting of developing countries are still limited. Therefore, this research was conducted as an effort to respond to the call for expanding the knowledge in this area and to explore its impact on firms' performance, and to examine the influence of different factors on being market-oriented in those developing countries. More specifically, this research was intended to focus on these matters in the setting of Saudi Arabia, given its significant economic improvements during the past years.

The Saudi construction industry, which is a key driving factor for the country's successful economic development, was central in this research. With its multi-billion dollar projects planned and executed in the past few years, and many more in the planning stages or underway, this made it one of the largest construction industries in the Middle East.

Yet, to cope with rapidly growing conditions, the Saudi construction industry has to face various issues and challenges. Economic growth and an intense competition in Saudi construction have put a fierce pressure on construction companies to improve their productivity and performance, and to become more proactive and viable in the market. As a solution to deal with such issues, researchers have suggested focusing on factors that look more at customers, competitors, and internal business process perspectives, all of which can be achieved by implementing the market orientation concept.

In addition, since scales for market orientation have either not been available for developing contexts or not been updated since early 2000, this study filled a gap in the literature and provided an impetus for future research. In particular, this research aimed at developing a model for assessing the implementation of market orientation in Saudi construction organisations.

This chapter discusses how this aim was achieved, and what limitations were faced during the course of this research. In addition, it provides managerial implications and suggests directions for future research.

7.2. Research Objectives Revisited

The outcome of this research is a set of models that specify guidelines for the assessment and implementation of a market orientation among Saudi construction companies. The successful completion of this outcome was achieved through the following objectives:

- To identify the historical roots and the current international position of market orientation concepts in general, and in Saudi Arabia in particular. (chapter 2)
- To investigate the drivers and barriers to achieving market orientation in Saudi construction organisations. (chapter 3,4)
- To conceptualise a model for assessing the extent of market orientation in Saudi construction organisations. (chapter 5)
- To develop a model for implementing market orientation in Saudi construction organisations. (chapter 6)
- To provide recommendations as to how managers in Saudi construction companies can improve their business performance via enhanced market orientation. (chapter 5,6)

The following subsections examine in turn how each objective has been met.

7.2.1. The Concept of Market Orientation

In order to fulfil the first objective that is concerned with identifying the historical roots and the current position of the concept of market orientation, the researcher conducted a comprehensive review of literature on research into the origin of the concept, how it has evolved over the time, what it constitutes, and how is it being handled now. A full discussion on these aspects is presented in chapter 2.

Market orientation literature comprises a review of over 50 years of scholarly work, which has attracted both practitioners and academics in the marketing and strategic management disciplines. Most of the studies focus on market orientation's nature, changes and the evolution of this research area, the relationship between market orientation and business performance, the causes and effects that influence this relationship, and the problems associated with it in different contexts and industry settings.

The evolution of market orientation has been strongly influenced and guided by the history, development and philosophy of the marketing discipline. It was then introduced as a marketing concept, focusing on a firm's own processes and products rather than the customer. This concept was expanded in the 1980's, as marketing researchers pushed their claims that the marketing department was central to all types of organisations, and so the customer orientation concept was produced. The 1990's witnessed a substantial growth in the development of marketing and customer orientation concepts. This development was supported by researchers' suggestions presenting a new marketing concept that is suitable for market situations. That is when the market orientation concept was born.

In defining market orientation, marketing scholars who wrote about it appear to have a common understanding of the concept, but there was still no shared definition of the concept. This issue was subjected to intense discussions between authors and it has led to unjustified usage of the term, which resulted in market orientation being viewed from different

perspectives. Most of these perspectives were categorised under one of the following major divisions:

- Market orientation is a form of culture.

- Market orientation is a set of behaviours.

- Market orientation is a set of activities and processes.

Although the opinions have considerable variations in their comprehension of market orientation (Dreher, 1994), there is a substantial quantity of overlap too. As the previous theoretical views include comprehending intended clients' requirements with the maintenance of customer orientation to generate increased, maintainable values, to become familiar with options, and attain long-term advantages in the competitive market, it remains imperative to sustain the outlook of customers' present requirements and opinions as these greatly impact on the market.

As part of accomplishing the first research objective, and since this research is concerned with examining the concept in the setting of Saudi Arabia, there was a need to identify the status of market orientation among Saudi firms. Although the subject has only been tackled in very few studies, the researcher has looked into them, and concluded the following:

- Based on the categorisation of Hooley *et al.* (1990), and the study carried out by Bhuian (1995), Saudi companies fall into the following types:
  - Companies that view marketing as a function, with key responsibility for recognising and satisfying the client.
  - Companies that consider satisfying the client but limit marketing to the functions of the marketing department.
  - Companies that have no precision concerning the function of marketing in their firms.

- Companies such that their marketing functions mainly deals with sales and promotions, concentrating on product displays, clearance sales, discounts, customer gifts etc.

- The degree of companies' competition in Saudi Arabia varies between one sector and another. Some industries meet aggressive competition from both industrialised nations and local companies, while others do not.

- Regarding the implementation level of market orientation among Saudi firms, they can be categorised as:

    - Firms that are implementing the market orientation concept.

    - Firms that are considering the concept of market orientation.

    - Firms that are still unconvinced by implementing the concept.

    - Firms that are not anticipating the use of the concept at all.

7.2.2. Drivers and Barriers to Achieving Market Orientation

The second research objective was concerned with investigating the drivers and barriers to achieving market orientation in Saudi construction organisations. In order to fulfil this objective, the researcher firstly provided a comprehensive review of literature on some of the characteristic aspects of the Saudi construction industry (i.e., the financial, competition, procurement, licensing, cultural, structural, and labours issues). Then a discussion was presented on how such aspects might influence some of the proposed factors for Saudi construction companies becoming market-orientated. Furthermore, in representing these factors, they have been divided into two categories, namely internal factors (such as top management characteristics, interdepartmental dynamics, and organisational structure and systems), and external factors (such as competitiveness, market characteristics, and governmental regulations).

These factors helped form a number of hypotheses, which were proposed to test the relationship between them and market orientation among Saudi construction companies. To do so, a survey, in the form of internet-based quantitative questionnaires, was used to address this objective and to accept or reject each hypothesis. Detailed descriptions on the adoption of the research methodology, defining the principals and procedures of the logical processes, which were applied in the study, are presented in chapter 4. In addition, chapter 4 established the general plan that was used to attain the aims and objectives of the research.

7.2.3. Market Orientation Assessment Model

The third research objective was concerned with conceptualising a model for assessing the extent of market orientation of Saudi construction organisations. In this respect, the most frequently used scales MARKOR by Kohli *et al.* (1993) and MKTOR by Narver and Slater (1990) were the bases for developing a customised assessment tool for market orientation. Detailed discussion on this matter is presented in chapter 5. Thus, fulfilling this objective has made a valuable contribution to achieving one of the major tasks of this research. Moreover, the successful accomplishment of this objective was based on a series of steps and procedures. They include:

- Items generation. This was based on a strong theoretical foundation, by the means of a comprehensive literature review, in order to capture the domain in a clear, specific, and adequate way.

- Construct development. This assured the simplicity and lack of ambiguity in the items' wording in order to avoid confusion, and question directness to avoid biased answers.

- Construct pre-test. A content validity test was applied to identify relevance, and an initial pre-test (pilot test) was carried out to refine unclear items.

- Survey design. The use of a Likert rating scale, the division of the survey into sections, assuring it is user-friendly, well-structured, visually appealing, clear, and uncluttered, worked to provide ease of response and to minimise response bias.

- Survey administration. Experts in the field were consulted to participate in the survey.

- Factor analysis. This was employed to determine the model structure and dimensionality.

- Scale purification. Reliability of scale and items were assessed, inter-item correlations were checked, and cross-loads and weak loads (< 0.5) were eliminated.

The finalised assessment model, shown in chapter 5 (Table 5.4), represents the factors affecting the market orientation of Saudi construction and their respective dimensions, which include:

- Communication and Interaction dimension, which includes the following factors: Ease of Organisation-wide communication, Ease of Hierarchal communication, Organisation-wide collaboration, Top management emphasis, and Interdepartmental correspondence

- Risk-Taking dimension, which includes the following factors: Implementing new marketing techniques, Implementing new technologies, and Taking big financial risks

- Competition dimension, which includes the following factors: Competition intensity, Competing offers, and Market entry and competition ease

- Organizational Systems dimension, which includes the following factors: Deformalisation, Rewards System, Decentralisation, and Informality

Each factor underneath these dimensions is measured using a 5-point agree-disagree Likert rating scale. The degree of agreement on a factor statement represents the extent to which this market orientation factor is being implemented within a given company. The stronger the agreement, the more the factor is optimised, and therefore a higher level of overall market orientation this company has.

7.2.4. Market Orientation Implementation model

Subsequent to developing a market orientation assessment model, a need was felt to build a model that helps managers within Saudi construction companies implement the market orientation concept. Therefore, the Interpretive Structural Modelling technique (ISM) was used as a tool in preparing the hierarchical structure of factors encountered during the implementation phase in those companies. This has helped in achieving the fourth research objective, which is concerned with developing a model for implementing market orientation in Saudi construction organisations.

The developed ISM model, shown in Chapter 6 (Figure 6.1), and the subsequent MICMAC analysis have identified the nature and degree of interrelationship between the 15 factors of market orientation. The MICMAC analysis suggests that 5 factors are identified as autonomous factors and appear as weak drivers and weak dependents and they mutually do not have much influence on others. However, implementing new marketing techniques, implementing new technologies, Competition intensity, and Ease of market entry and competition appeared to have strong dependency on these autonomous factors. While independent factors such as Ease of organisation-wide communication, Ease of hierarchal communication, Organisation-wide collaboration, Top management emphasis, Interdepartmental correspondence, and Decentralisation have been found to have the highest independency (driving power), they are quite strong to affect all other market orientation factors.

7.2.5. Practical Suggestions (Recommendations) for Managers

In order to meet the last research objective, which is providing recommendations to managers in Saudi construction companies, chapters 5 and 6 have proposed answers on how they can

improve their business performance via enhanced market orientation. However, a fair answer to the question is by simply specifying two things:

- The area of change: in other words, what should be changed, e.g., beliefs, behaviours, systems.
- The strategy for change, in other words, how it should be changed, e.g., to employ a bottom-up strategy.

With respect to the area of change, professionals who want to improve the degree of market orientation of an organization are advised to diagnose the current organisation's status and to formulate, choose, and implement improvements. Besides, they should define a vision of what the market-oriented organisation should look like. Then, the change team should develop and manage a strategy of both planned projects and where in the organisation to look for possible improvements. The strategy for change is detailed in the implementation model.

7.3. Research Contributions

The pressures of globalisation have intensified competition in product and labour markets, which emphasise the need for greater efficiency and productivity. Globalisation has also led to a reduction in trade barriers between countries, the deregulation of markets, increased privatisation, and the ending of many state monopolies (Holman *et al.*, 2003). Although there is evidence of a lot of research taking place since the 1990's, which contended that, "*market orientation is important to firms because of its positive association with performance and in solving such related issues*", (Appiah-adu, 1998: p.29), there are only few researchers who have studied the phenomenon of market orientation in transitional economic countries.

Due to these factors, this research intended to address a gap in the literature relating to studies of market orientation in a developing country such as Saudi Arabia (Kohli *et al.*, 1993; Ward

and Lewandowska, 2005). In addition, this research has responded to researchers such as Kohli *et al.* (1993) and Ward and Lewandowska (2005) who have called for an investigation of market orientation in different industries. In this regard, the four identified dimensions of Communication and Interaction, Risk-Taking, Competition and Organizational Systems make a significant contribution to the theoretical literature, particularly, in the market context of the developing country by classifying of the most important aspects for determining the market orientation of a Saudi construction company. Moreover, these dimensions and their respective factors, which are at the centre of the market orientation assessment and implementation models, also make a significant contribution to knowledge by establishing the tools for diagnosing and prioritising the improvement tasks.

Furthermore, this research offered both academics and practitioners the following contributions:

- Managers will gain added insights and guidelines on market orientation that will help them evaluate, reframe, and prioritise their managerial practices.

- Researchers will have initial indicators and tools for further in-depth research related to market orientation.

- The assessment model will benefit Saudi businesses, particularly construction firms, in assessing their degree of market orientation, and will provide an indication of what part of the business requires intervention.

- The utilisation of the issue of market orientation and the setting of Saudi Arabia contributes to the generalisability of the existing body of research, which is mostly from industrialised countries.

- The research extends the comparative marketing and management study field.

- The research may provide insights that are important for Saudi Arabian companies as well as companies functioning in the transitional markets in Eastern/Central Europe and in C.I.S. nations.

- Understanding of the construct of market orientation can be useful for firms doing or planning to do businesses in countries that are moving towards free-market economies.

7.4. Limitations and Further Research Directions

Although the scope of this research had specified the parameters under which this study was conducted, it also limited the generalisability of the findings. For instance, the developed models for assessing and implementing market orientation were limited to small and medium-sized construction companies (SMEs) in Saudi Arabia. This was in an attempt to provide a solution to reduce the high numbers of failure rates in these organisations. Such limitation could influence future market orientation studies to incorporate large-sized Saudi construction companies, and compare the results with what was provided in this study.

In addition, as this study was limited to one developing country, it was not possible to carry out a comparative analysis with market orientation in another country. It is therefore suggested that cross-cultural studies, examining the applicability of the proposed models, should be carried out in the future in different developing countries and in different industries for comparison purposes.

Furthermore, as market orientation emphasizes customers' needs and organisations' profitability, this aligns better with the purposes served by private organizations. For this reason, this research was limited to Saudi private and semi-government construction companies. However, further studies could focus on firms fully owned by the Saudi government or on non-profit firms. Thus, when applying a customer focus in market orientation in those types of firm, attention is focused on citizens' needs and preferences, rather than customers.

In addition, this study is a 'correlation study' in nature as exploratory factor analysis and correlation analysis were used for data analysis. These two data analysis techniques have been

widely used by researchers in previous market orientation studies as reported in the literature, and so, in order to confirm the consistency of the findings of this study with previous market orientation studies, it would have been inappropriate to use other data analysis techniques in this study. It is suggested that, in order to confirm the findings of this study, additional studies should use different data analysis techniques to this study, such as Confirmatory factor analysis, to validate and confirm the theorized factor structure with empirical data distinct from the data used in the exploratory analysis, stepwise regression analysis, or multivariate analysis of variance (MANOVA). Finally, given the time and cost involved in this study, it is highly advisable to carry out a case study to validate its developed models in future studies. These studies could focus on measuring business performance (economic performance) considering metrics such as sales growth, new product success rate, return on investment, market share, and profitability.

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Appendices

- Appendix 1: Questionnaire

- Appendix 2: Questionnaire with references

- Appendix 3: Factor Analysis

Appendix 1: Questionnaire

Section 1: Organisation Profile

1.1. Please select the type of industry sector you work in:
1. ☐ Government
2. ☐ Semi- Government
3. ☐ Private Company (including Contractor, Consultant, Designers…)

1.2. Number of Employees in your Company is (including sub-contracting Employees):
1. ☐ 1-9
2. ☐ 10-49
3. ☐ 50-249
4. ☐ >250

1.3. Please select the type of industry your firm provides services to:
1. ☐ Public sector
2. ☐ Private sector
3. ☐ Both public and private sectors

Section 2: Personal Profile

2.1. Please choose your appropriate job level:
1. ☐ Director, CEO, President, Owner…
2. ☐ Vice President, COO, CFO, CTO…
3. ☐ General Manager, Senior Manager, Manager…
4. ☐ Project Manager, Supervisor…
5. ☐ Employee

2.2. Please choose the highest educational qualification you hold:
1. ☐ High-school's degree or below
2. ☐ Bachelor's degree
3. ☐ Master's degree
4. ☐ Doctoral degree

2.3. Please select the function which most appropriately describes your current position:
1. ☐ General Management
2. ☐ Administration
3. ☐ Business Development
4. ☐ Finance, Accounts, Audit
5. ☐ Project Management, Strategy & Planning
6. ☐ Engineering, Design
7. ☐ Research & Development
8. ☐ Manufacturing, Maintenance, Quality
9. ☐ Sales, Marketing, Advertising
10. ☐ Operations, Technical

2.4. Please choose your total years of work experience:
1. ☐ 0-5
2. ☐ 6-10
3. ☐ 11-15
4. ☐ 16 - 20
5. ☐ >20

Section 3: Market Orientation Factors

▪ Please indicate the extent to which you agree or disagree with the following statements

			1 Strongly Agree	2 Agree	3 Neither Agree Nor Disagree	4 Disagree	5 Strongly Disagree
Top Management Emphasis	3.1	Top management often tell employees to pay attention to the activities of our competitors.	☐	☐	☐	☐	☐
	3.2	According to top management here, serving customers is a top priority in our organisation.	☐	☐	☐	☐	☐
Top Management Risk Aversion	3.3	Top management in this organisation like to take big financial risks.	☐	☐	☐	☐	☐
	3.4	Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work.	☐	☐	☐	☐	☐
Inter-Departmental Conflict	3.5	In this organisation, people in one department interact normally with those from other departments.	☐	☐	☐	☐	☐
	3.6	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	☐	☐	☐	☐	☐
Inter-Departmental Connectedness	3.7	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position.	☐	☐	☐	☐	☐
	3.8	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation.	☐	☐	☐	☐	☐
	3.9	In this organisation, employees from different departments feel comfortable calling each other when the need arises.	☐	☐	☐	☐	☐
Reward System Orientation	3.10	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation.	☐	☐	☐	☐	☐
Formalisation	3.11	The employees are constantly being checked on for rule violations.	☐	☐	☐	☐	☐
Centralisation	3.12	A person can make his own decisions without having his boss approval.	☐	☐	☐	☐	☐
Entry Barriers	3.13	There are obstacles that make it difficult for our organisation to enter and to compete in the market.	☐	☐	☐	☐	☐
Buyer Power	3.14	Price is not important in our customers' buying criteria.	☐	☐	☐	☐	☐
Supplier Power	3.15	Our organisation is able to negotiate lowest prices from our sources of supply.	☐	☐	☐	☐	☐
Sales Revenue	3.16	The size of our organisation's sales revenue is high compared to our largest competitors.	☐	☐	☐	☐	☐
Operating Costs	3.17	Our organisation's average total operating costs (administrative, production, rent, marketing, sales) are high compared to our largest competitors.	☐	☐	☐	☐	☐
Market Turbulence	3.18	We are witnessing demand for our products and services from customers who never bought them from us before.	☐	☐	☐	☐	☐
Competitive Intensity	3.19	There are many "promotion wars" in our industry.	☐	☐	☐	☐	☐
	3.20	Anything that one competitor can offer, others can match readily.	☐	☐	☐	☐	☐
Technological Turbulence	3.21	Our organisation is highly concerned in using new technologies	☐	☐	☐	☐	☐
Market Growth Rate	3.22	The estimated annual growth rate of market size has served the organisation's goals over the past few years.	☐	☐	☐	☐	☐
Government Regulations	3.23	Government regulations are not seen in our organisation as an obstacle to enter and compete in the market.	☐	☐	☐	☐	☐

Appendix 2: Questionnaire with references

From literature: developed a 36-items-questionnaire, under 16 factors. This questionnaire was then evaluated in a pilot test.

Factor	Item	References
Top management Emphasis	1. Top managers often tell employees to be sensitive to the activities of our competitors.	Qu, R., Ennew, C., & Thea Sinclair, M. (2005) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
	2. Top managers keep telling people around here that they must prepare themselves now to meet customers' future needs.	Qu, R., Ennew, C., & Thea Sinclair, M. (2005) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
	3. According to top managers here, serving customers is the most important thing our business unit does.	Qu, R., Ennew, C., & Thea Sinclair, M. (2005) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
Top management risk Aversion	4. Top managers here occasional new product failures as being normal. *	Qu, R., Ennew, C., & Thea Sinclair, M. (2005) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
	5. Top managers in this business unit like to take big financial risks.	Qu, R., Ennew, C., & Thea Sinclair, M. (2005) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
	6. Top managers around here like to implement plans only if they are very certain that they will work.	Qu, R., Ennew, C., & Thea Sinclair, M. (2005) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
Inter-departmental conflict	7. People in one department generally dislike interacting with those from other departments.	McCormack, K. (2001) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
	8. Employees from different departments feel that the goals of their respective departments are in harmony with each other.	McCormack, K. (2001) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
	9. Protecting one's departmental turf is considered to be a way of life in this business unit.	McCormack, K. (2001) Kohli and Jaworski (1993) MARKOR Scale Bhuian, S. N. (1998)
Inter-departmental Connectedness	10. In this business unit, it is easy to talk with virtually anyone you need to, regardless of rank or position.	Kohli and Jaworski (1993) MARKOR Scale
	11. There is plenty opportunity for informal "hall talk" among individuals from different departments in the business unit.	Carr and Lopez (2007) MOCCM Scale Kohli and Jaworski (1993) MARKOR Scale
	12. In this business unit, employees from different departments feel comfortable calling each other when the need arises.	Kohli and Jaworski (1993) MARKOR Scale
Formalization	13. A person can make his own decisions without checking with anybody else.	Jaskyte, K. (2011) Kohli and Jaworski (1993) MARKOR Scale Hage and Dewar's (1973)
	14. The employees are constantly being checked on for rule violations.	Jaskyte, K. (2011) Kohli and Jaworski (1993) MARKOR Scale Hage and Dewar's (1973)

Centralization	15. Any decision I make has to have my boss' approval.	Jaskyte, K. (2011) Kohli and Jaworski (1993) MARKOR Scale Hage and Dewar's (1973)
Reward System orientation	16. Customer satisfaction assessment influences senior managers' pay in this business unit.	Barker, T. A. (2008) Kohli and Jaworski (1993) MARKOR Scale
	17. Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good market intelligence.	Barker, T. A. (2008) Kohli and Jaworski (1993) MARKOR Scale
	18. Employees' financial compensation is almost entirely based on their sales volume.*	Barker, T. A. (2008) Kohli and Jaworski (1993) MARKOR Scale
Entry barrier	19. There are obstacles that make it difficult to enter and compete in the market.	Matsuno et al. (2003) EMO Scale
	20. Barriers to entering the market protect incumbent firms and restrict competition.	Matsuno et al. (2003) EMO Scale
Buyer power	21. It is difficult for our firm to replace a lost supplier	Matsuno et al. (2003) EMO Scale
	22. Price is important in our buyers' buying criteria	Matsuno et al. (2003) EMO Scale
	23. It is difficult for our buyers to switch suppliers	Matsuno et al. (2003) EMO Scale
Supplier power	24. Our organisation is able to negotiate lower prices from our sources of supply	Matsuno et al. (2003) EMO Scale
Relative size and cost	25. The size of our organisation's sales revenue is low compared to our largest competitors	Matsuno et al. (2003) EMO Scale Han, J. K., Kim, N., & Srivastava, R. K. (1998).
	26. Our organisation's average total operating costs (administrative, production, rent, marketing, sales)are low in relation to our largest competitors	Matsuno et al. (2003) EMO Scale Han, J. K., Kim, N., & Srivastava, R. K. (1998)
Market Turbulence	27. In our kind of business, customers' product preferences change quite a bit over time.	Farrell, M. A. (2000) Kohli and Jaworski (1993) MARKOR Scale
	28. We are witnessing demand for our products and services from customers who never bought them from us before.	Farrell, M. A. (2000) Kohli and Jaworski (1993) MARKOR Scale
Competitive Intensity	29. There are many "promotion wars" in our industry	Kohli and Jaworski (1993) MARKOR Scale
	30. Anything that one competitor can offer, others can match readily.	Kohli and Jaworski (1993) MARKOR Scale
	31. Our competitors are relatively weak.	Kohli and Jaworski (1993) MARKOR Scale
Technological Turbulence	32. The technology in our company is changing rapidly.	Renko, M. (2006) Kohli and Jaworski (1993) MARKOR Scale Matsuno et al. (2003) EMO Scale
	33. A large number of new product ideas have been made possible through technological breakthroughs in our company.	Renko, M. (2006) Kohli and Jaworski (1993) MARKOR Scale Matsuno et al. (2003) EMO Scale
	34. Technological developments in our company are rather minor.	Renko, M. (2006) Kohli and Jaworski (1993) MARKOR Scale Matsuno et al. (2003) EMO Scale
Market Growth	35. The estimated annual rate of change of market size in the organisation's principal served market segment over the last three years	Matsuno et al. (2003) EMO Scale
Government regulations	36. Government regulations are seen as obstacles that make it difficult to enter and compete in the market.	Matsuno et al. (2003) EMO Scale

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Pilot-testing: The previous questionnaire was evaluated in a pilot test by an expert. The number of items was reduced to 23, under 15 factors. The following questionnaire was distributed to participants for data collection.

	▪ Please indicate the extent to which you agree or disagree with the following statements	1 Strongly Agree	2 Agree	3 Neither Agree Nor Disagree	4 Disagree	5 Strongly Disagree
Top Management Emphasis	1. Top management often tell employees to pay attention to the activities of our competitors.	☐	☐	☐	☐	☐
	2. According to top management here, serving customers is a top priority in our organisation.	☐	☐	☐	☐	☐
Top Management Risk Aversion	3. Top management in this organisation like to take big financial risks.	☐	☐	☐	☐	☐
	4. Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work.	☐	☐	☐	☐	☐
Inter-Departmental Conflict	5. In this organisation, people in one department interact normally with those from other departments.	☐	☐	☐	☐	☐
	6. Employees from different departments feel that the goals of their respective departments are in harmony with each other.	☐	☐	☐	☐	☐
Inter-Departmental Connectedness	7. In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position.	☐	☐	☐	☐	☐
	8. There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation.	☐	☐	☐	☐	☐
	9. In this organisation, employees from different departments feel comfortable calling each other when the need arises.	☐	☐	☐	☐	☐
Reward System Orientation	10. Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation.	☐	☐	☐	☐	☐
Formalisation	11. The employees are constantly being checked on for rule violations	☐	☐	☐	☐	☐
Centralization	12. A person can make his own decisions without having his boss approval.	☐	☐	☐	☐	☐
Entry Barriers	13. There are obstacles that make it difficult for our organisation to enter and to compete in the market.	☐	☐	☐	☐	☐
Buyer Power	14. Price is not important in our customers' buying criteria.	☐	☐	☐	☐	☐
Supplier Power	15. Our organisation is able to negotiate lowest prices from our sources of supply.	☐	☐	☐	☐	☐
Relative Size and Cost	16. The size of our organisation's sales revenue is high compared to our largest competitors.	☐	☐	☐	☐	☐
	17. Our organisation's average total operating costs (administrative, production, rent, marketing, sales) are high in relation to our largest competitors.	☐	☐	☐	☐	☐
Market Turbulence	18. We are witnessing demand for our products and services from customers who never bought them from us before.	☐	☐	☐	☐	☐
Competitive Intensity	19. There are many "promotion wars" in our industry.	☐	☐	☐	☐	☐
	20. Anything that one competitor can offer, others can match readily.	☐	☐	☐	☐	☐
Technological Turbulence	21. Our organisation is highly concerned in using new technologies	☐	☐	☐	☐	☐
Market Growth Rate	22. The estimated annual growth rate of market size has served the organisation's goals over the past few years.	☐	☐	☐	☐	☐
Government Regulations	23. Government regulations are not seen in our organisation as an obstacle to enter and compete in the market.	☐	☐	☐	☐	☐

Factor analysis: after distributing and collecting the questionnaires, a factor analysis was applied to the results to remove redundancy or duplication from a set of correlated items and to represent correlated items with a smaller set of "derived" items (factors).

Item no.	Item	Component 1	2	3	4	5	6	7	8
	Rotated Component Matrix[a]								
21	Our organisation is highly concerned in using new technologies	.780							
10	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation.	.658							
4	Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work.	.565							
22	Government regulations are not seen in our organisation as an obstacle to enter and compete in the market.	.488							
9	In this organisation, employees from different departments feel comfortable calling each other when the need arises.		.809						
7	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position.		.635						
5	In this organisation, people in one department interact normally with those from other departments.		.604						
8	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation.			.711					
13	There are obstacles that make it difficult for our organisation to enter and to compete in the market.			.695					
12	A person can make his own decisions without having his boss approval.			.619					
18	We are witnessing demand for our products and services from customers who never bought them from us before.				.781				
15	Our organisation is able to negotiate lowest prices from our sources of supply.				.519	.461			
2	According to top management here, serving customers is a top priority in our organisation.	.446			.510				
6	Employees from different departments feel that the goals of their respective departments are in harmony with each other.				.446				
20	Anything that one competitor can offer, others can match readily.					.776			
19	There are many "promotion wars" in our industry.					.736			
1	Top management often tell employees to pay attention to the activities of our competitors.								
23	The estimated annual growth rate of market size has served the organisation's goals over the past few years								
17	Our organisation's average total operating costs (administrative, production, rent, marketing, sales) are high in relation to our largest competitors.						.817		
16	The size of our organisation's sales revenue is high compared to our largest competitors.						.653		
3	Top management in this organisation like to take big financial risks.							.885	
14	Price is not important in our customers' buying criteria.								.858
11	The employees are constantly being checked on for rule violations								

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 11 iterations.

Re-factor analysis: the test was re-applied to the data several times in order to represent correlated items under derived factors. These tests resulted in extracting non-experienced participants results from the data in addition to extracting items 14, 17, 18, 22, 16, and 2 respectively, after forcing the items into 4 factors for better representation.

Item mo.	Statement (Item)	Component			
		1	2	3	4
9	In this organisation, employees from different departments feel comfortable calling each other when the need arises	.781			
7	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position	.712			
5	In this organisation, people in one department interact normally with those from other departments	.685			
1	Top management often tell employees to pay attention to the activities of our competitors	.531			
6	Employees from different departments feel that the goals of their respective departments are in harmony with each other	.524			
4	Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work		.808		
21	Our organisation is highly concerned in using new marketing techniques		.783		
19	There are many "promotion wars" in our industry			.710	
20	Anything that one competitor can offer, others can match readily			.709	
13	There are obstacles that make it difficult for our organisation to enter and to compete in the market			.692	
3	Top management in this organisation like to take big financial risks compared to our competitors			.577	
11	The employees are constantly being checked on for rule violations				.721
10	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation				.683
12	A person can make his own decisions without having his boss approval				.635
8	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation				.612

Factors and items evaluation: the resulting factor analysis was evaluated and modified by 3 experts in order to put more sense and logic to the results of the test. The following table represents the modified factors and their sets of items.

Factor		Item
1	1	We feel comfortable calling employees from different departments when the need arises
	2	We feel comfortable talking with virtually anyone we need to, regardless of his rank or position
	3	We interact normally with people from all other departments
	4	Our top management often tells us to pay attention to the activities of our competitors
	5	We feel that the goals of our department are in harmony with all other departments' goals
2	6	Our top management appears to implement strategic and marketing plans even when they are not very certain that they will work
	7	Our organisation is highly concerned in using new marketing techniques
	8	Our top management likes to take big financial risks compared to our competitors
3	9	We are witnessing so many "promotion wars" in our industry
	10	The offers we make are difficult for our competitors to match
	11	We don't have obstacles to enter and compete in the market
4	12	We don't have restricted procedures to follow in dealing with unusual situations whenever they arise
	13	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation
	14	We can make our own decisions without having our boss approval
	15	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation

Each factor (set of items) was given a representative name that describes its own individual character, and each item was also written in a neutral form and was given a shortened form that will be used in the following parts of the thesis.

Factor		Statement	Item
Communication and Interaction	1	We feel comfortable calling employees from different departments when the need arises	Communication Ease
	2	We feel comfortable talking with virtually anyone we need to, regardless of his rank or position	Hierarchy Communication Ease
	3	We interact normally with people from all other departments	Interaction Ease
	4	Our top management often tells us to pay attention to the activities of our competitors	Top Management Announcements
	5	We feel that the goals of our department are in harmony with all other departments' goals	Departments Interaction
Risk-Taking (Riskiness)	6	Our top management appears to implement strategic and marketing plans even when they are not very certain that they will work	Plans Implementation Certainty
	7	Our organisation is highly concerned in using new marketing techniques	Implementing New Techniques
	8	Our top management likes to take big financial risks compared to our competitors	Taking Big Financial Risks
Competition	9	We are witnessing so many "promotion wars" in our industry	Marketing Campaigns
	10	The offers we make are difficult for our competitors to match	Competing Offers
	11	We don't have obstacles to enter and compete in the market	Market Entry and Competition Ease
Empowerment (Organizational Systems/controls)	12	We don't have restricted procedures to follow in dealing with unusual situations whenever they arise	Deformalisation
	13	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation	Rewards System
	14	We can make our own decisions without having our boss approval	Decentralisation
	15	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation	Informality

Semi-final: 4 factors and 15 items

Factor	No.	Original Statement (question)	Old Statement (question)	New Statement (neutral form)	Old Item (Shortened Statement)	New Item (Shortened Statement)
Communication and Interaction	1	In this organisation, employees from different departments feel comfortable calling each other when the need arises.	We feel comfortable calling employees from different departments when the need arises	Comfort contacting and communicating with individuals from different departments whenever it is necessary	Communication ease	Organisation-wide communication ease
	2	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position.	We feel comfortable talking with virtually anyone we need to, regardless of his rank or position	Comfort contacting and communicating with virtually anyone regardless of his rank or position	Hierarchy communication ease	Hierarchal communication ease
	3	In this organisation, people in one department interact normally with those from other departments.	We interact normally with people from all other departments	Interacting and cooperating (dealing) easily with individuals from different departments	Interaction ease	Organisation-wide collaboration
	4	Top management often tell employees to pay attention to the activities of our competitors.	Our top management often tells us to pay attention to the activities of our competitors	Top management's encouragement towards market needs, client requirements and competitors activities	Top management announcements	Top management emphasis
	5	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	We feel that the goals of our department are in harmony with all other departments' goals	Consistency and coherence of different departments' goals and objectives	Departments interaction	Interdepartmental correspondence
Risk-Taking (Riskiness/Risky-Actions)	6	Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work.	Our top management appears to implement strategic and marketing plans even when they are not very certain that they will work	Top management's courage towards developing and implementing innovative marketing strategies regardless of knowing if some might fail	Plans implementation certainty	Implementing new marketing techniques
	7	Our organisation is highly concerned in using new technologies	Our organisation is highly concerned in using new marketing techniques	Top management's courage towards adopting new technologies	Implementing new techniques	Implementing new technologies
	8	Top management in this organisation like to take big financial risks.	Our top management likes to take big financial risks compared to our competitors	Top management's courage towards taking big financial risks	Taking big financial risks	Taking big financial risks
Competition	9	There are many "promotion wars" in our industry	We are witnessing so many "promotion wars" in our industry	Strength of competition with opponents in the industry	Marketing campaigns	Competition intensity
	10	Anything that one competitor can offer, others can match readily.	The offers we make are difficult for our competitors to match	Providing competing offers compared to competitors	Competition intensity	Competing offers
	11	There are obstacles that make it difficult for our organisation to enter and to compete in the market.	We don't have obstacles to enter and compete in the market	Ease to enter and become competitively viable in the market	Market entry and competition ease	Market entry and competition ease
Empowerment (Organizational Systems/controls)	12	The employees are constantly being checked on for rule violations (move to next tab➔)	We don't have restricted procedures to follow in dealing with unusual situations whenever they arise	Acceptable level of rules and regulations to guide and control employees' behaviour	Deformalisation	Deformalisation
	13	Formal rewards (i.e. Pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation.	Formal rewards (i.e. Pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation	Rewards, pay raise and promotions for individuals' fulfilment of client needs and market aspects	Rewards system	Rewards system
	14	A person can make his own decisions without having his boss approval.	We can make our own decisions without having our boss approval	Employees' high amount of allocation of decision-making authority	Decentralisation	Decentralisation
	15	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation.	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation	Relaxed attitude among individuals from different departments	Informality	Informality

Final: 4 factors and 15 items

Factor	No.	New Statement (neutral form)	New Item (Shortened Statement)
Communication and Interaction	1	Comfort contacting and communicating with individuals from different departments whenever it is necessary	Organisation-wide communication ease
	2	Comfort contacting and communicating with virtually anyone regardless of his rank or position	Hierarchal communication ease
	3	Interacting and cooperating (dealing) easily with individuals from different departments	Organisation-wide collaboration
	4	Top management's encouragement towards market needs, client requirements and competitors activities	Top management emphasis
	5	Consistency and coherence of different departments' goals and objectives	Interdepartmental correspondence
Risk-Taking (Riskiness/Risky-Actions)	6	Top management's courage towards developing and implementing innovative marketing strategies regardless of knowing if some might fail	Implementing new marketing techniques
	7	Top management's courage towards adopting new technologies	Implementing new technologies
	8	Top management's courage towards taking big financial risks	Taking big financial risks
Competition	9	Strength of competition with opponents in the industry	Competition intensity
	10	Providing competing offers compared to competitors	Competing offers
	11	Ease to enter and become competitively viable in the market	Market entry and competition ease
Empowerment (Organizational Systems/controls)	12	Acceptable level of rules and regulations to guide and control employees' behaviour	Deformalisation
	13	Rewards, pay raise and promotions for individuals' fulfilment of client needs and market aspects	Rewards system
	14	Employees' high amount of allocation of decision-making authority	Decentralisation
	15	Relaxed attitude among individuals from different departments	Informality

Factor		Neutral Item Statement	Shortened Item Statement
Communication and Interaction	1	Comfort contacting and communicating with individuals from different departments whenever it is necessary	Organisation-wide communication ease
	2	Comfort contacting and communicating with virtually anyone regardless of his rank or position	Hierarchal communication ease
	3	Interacting and cooperating (dealing) easily with individuals from different departments	Organisation-wide collaboration
	4	Top management's encouragement towards market needs, client requirements and competitors activities	Top management emphasis
	5	Consistency and coherence of different departments' goals and objectives	Interdepartmental correspondence
Risk-Taking (Riskiness / Risky-Actions)	6	Top management's courage towards developing and implementing innovative marketing strategies regardless of knowing if some might fail	Implementing new marketing techniques
	7	Top management's courage towards adopting new technologies	Implementing new technologies
	8	Top management's courage towards taking big financial risks	Taking big financial risks
Competition	9	Strength of competition with opponents in the industry	Competition intensity
	10	Providing competing offers compared to competitors	Competing offers
	11	Ease to enter and become competitively viable in the market	Market entry and competition ease
Empowerment (Organizational Systems/controls)	12	Acceptable level of rules and regulations to guide and control employees' behaviour	Deformalisation
	13	Rewards, pay raise and promotions for individuals' fulfilment of client needs and market aspects	Rewards System
	14	Employees' high amount of allocation of decision-making authority	Decentralisation
	15	Relaxed attitude among individuals from different departments	Informality

Appendix 3: Factor Analysis

	1			2			3	

Item no.	loading
1	.639
2	.557
3	.680
4	.526
5	.743
6	.710
7	.709
8	.597
9	.650
10	.563
11	.656
12	.431
13	.711
14	
15	.446
16	-.463
17	
18	
19	.572
20	.580
21	.572
22	
23	

All factors
Highlighted 14, 17, 18, 22, 23 will be extracted next

Item no.	loading
7	.747
5	.695
9	.694
13	.691
1	.690
20	.679
19	.661
11	.647
3	.626
6	.611
8	.607
10	.597
21	.586
12	.583
4	.540
15	.457
2	.455
16	-.449

All factors
After extracting 14, 17, 18, 22
Highlighted 16 will be extracted next

Item no.	loading
7	.735
9	.711
13	.691
20	.690
19	.682
5	.677
1	.672
21	.624
11	.623
10	.608
3	.604
8	.604
4	.602
6	.597
12	.583
15	.495
2	.452

All factors
After extracting 14, 17, 18, 22
After extracting 16
Highlighted 2 will be extracted next

Item no.	loading
20	.753
7	.752
19	.746
9	.721
1	.682
13	.679
8	.666
5	.665
21	.639
6	.634
11	.616
10	.614
4	.599
12	.569
3	.567
15	.485

All factors
After extracting 14, 17, 18, 22
After extracting 16
After extracting 2
Highlighted 15 will be extracted next

Item no.	loading
9	.778
7	.760
19	.759
20	.757
21	.708
13	.679
4	.667
1	.665
8	.661
5	.649
6	.593
12	.591
11	.564
10	.555
3	.549

All factors
After extracting 14, 17, 18, 22
After extracting 16
After extracting 2
After extracting 15

Item mo.	Statement (Item)	loading
9	In this organisation, employees from different departments feel comfortable calling each other when the need arises	.778
7	In this organisation, it is easy to talk with virtually anyone you need to, regardless of his rank or position	.760
1	Top management often tell employees to pay attention to the activities of our competitors	.665
5	In this organisation, people in one department interact normally with those from other departments	.649
6	Employees from different departments feel that the goals of their respective departments are in harmony with each other	.593
21	Our organisation is highly concerned in using new marketing techniques	.708
3	Top management in this organisation like to take big financial risks compared to our competitors	.549
4	Top management around here doesn't appear to implement strategic and marketing plans unless they are very certain that they will work	.667
19	There are many "promotion wars" in our industry	.759
20	Anything that one competitor can offer, others can match readily	.757
13	There are obstacles that make it difficult for our organisation to enter and to compete in the market	.679
8	There is plenty opportunity for informal "hall talk" among individuals from different departments in this organisation	.661
12	A person can make his own decisions without having his boss approval	.591
11	The employees are constantly being checked on for rule violations	.564
10	Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who consistently provides good work in this organisation	.555