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Cultural Dissonance as a Risk Factor in the Construction of Megaprojects: The Experience of Western Consultants Working in the Gulf Cooperation Council

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Declaration

I confirm that the work presented in this thesis is original and my work.

A pilot case study on the rate of consultant churn for a Gulf Cooperation Council (GCC) megaproject (Chapter five) whose members comprise of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and Saudi Arabia which has previously been submitted for a master's in research as part of this programme, as permitted under Academic Regulations 17.6iii 19/20. Other sources of information used in the study have been well acknowledged and referenced. Aspects of this work have been previously published in presentations and proceedings (available in Salford's repository) for the following conferences and papers:

Walsh, A., & Walker, P.A. (2020, April). Looking beyond time and cost influences in megaprojects, in *COBRA at ARES Conference April 2020, 14th–18th April 2020*.

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Walsh, A., & Walker, P.A. (2020, April). National culture influences on the execution of GCC megaprojects, in *COBRA at ARES 2020, 14th –18th April 2020*.

- Fort Myers, Florida, USA.

Walsh, A., & Walker, P.A. (2019, December). Revaluating megaproject cost overruns: putting changes into perspective, in *14th International Postgraduate Research Conference 2019: Contemporary and Future Directions in the Built Environment, 16th-17th December 2019*,

- University of Salford, Salford.

Walsh, A., & Walker, P.A. (2019, September). The influence of trust and culture upon Western consultants executing GCC megaprojects, in *Trust in Major and Mega Projects – 7th IPMA Research Conference, 4th-7th September 2019*

- Project Managers Association Zagreb, Croatia.

Walker, P., & Walsh, A. (2020) The Significance of Cultural Risks for Western Consultants Executing Gulf Cooperation Council Megaprojects. *International Journal of Social and Business Sciences, 14 (08),* 315-324.

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Glossary of Terms

Acculturalisation.

Acculturation is "the dual process of cultural and psychological change that occurs as a result of contact between two or more cultural groups and their members" (Berry, 2005, p. 698). The length of time necessary to become acculturated is described as "time to proficiency", which describes the length of time an expatriate takes to become proficient in their professional dealings (Waxin, Brewster, & Ashill, 2019).

Arab project Sponsors

"Arab project Sponsors" refers to the Arab nationals nominated by the GCC states to oversee a megaproject's execution. They are usually empowered to make limited decisions on behalf of that State.[1] They are the official representative for the megaprojects. They communicate the decisions and instructions of their ultimate authority, often the Head of State and the parties engaged in delivering the megaproject, which is often Western consultants. This relationship is indicated in Figure 3.2.

Assignment failure

There are significant impacts for the individuals displaced by cultural dissonance, often considered "assignment failure" (Harzing & Christensen, 2004). In this research, "assignment failure" is considered the individual's earlier than planned departure from the GCC.

[1] These Arab project Sponsors often have authority to make decisions up to a defined commercial limit and then prepare proposals and seek endorsement for changes outside their approved jurisdiction.

Churn

Churn describes when an employee leaves their job either for personal reasons such as pursuing a higher salary or satisfying their career development or where their departure is caused by others' influence (Zhao et al., 2018). The churn rate is usually calculated as follows (Allen, 2008):

$$\text{Turnover Rate} = \frac{\text{Average number of employees}}{\text{Number of employees leaving}} \times 100$$

Cultural dissonance and cultural distance

Dissonance describes a lack of agreement or harmony between people. This study considers cultural conflict as a reflection of the disharmony, between people of different cultural beliefs. Hofstede (2002) describes the gap between cultures as “cultural distance”, suggesting that the greater the distance between the parties, the more probable that clashes and cultural dissonances will occur.

GCC megaprojects

It is frequent to see a megaproject described as a construction project costing more than a billion dollars (Flyvbjerg, 2014). GCC megaprojects differ from other megaprojects for several reasons. Some key differences are evident in their design and delivery, including project governance, greater public funds availability and reduced public consultation. These differences are explored later in this thesis. There are exceptions, but most global megaprojects require significant public consultation and frequently public approval. Global megaprojects have complex planning and appeals processes, are legally obliged to consider the environment and face considerable political and financial challenges (Eweje, Turner, & Müller, 2012; Flyvberg, 2017).

National culture

National culture describes characteristics commonly attributed to the culture of each nation. GLOBE, (2004) describes national culture as "collective group experiences, society rules and norms" and the concept is used to "distinguish the people of one country from those of another" (Hofstede, Pedersen, & Hofstede, 2002a) as discussed in detail in Chapter four.

Western consultants and Project Directors

The term "consultants" refers to specialised building consultants engaged in the delivery of megaprojects. They are experts in their respective roles to manage and deliver megaprojects, such as programme managers or construction supervisors, and they are typically architects, engineers, and cost consultants. Within their consultancy practice, the respondent's functional focus is on delivery as opposed to strategy; their place of influence and operation is the project, not the firm. The participants are senior project directors within their consultancy practices. They consult their partners or head offices on an as needs basis (see Chapter Three), but generally, they manage their consultancy scope and daily delivery requirements.

Individually project directors come from a broad mix of nationalities[2] and each met the stringent qualification criteria for their role. Mandatory requirements often include a Masters level degree, senior membership of a professional body and 15 to 20 years of relevant experience on similar megaprojects.

For this study "Western Consultancy Practices", are firms with headquarters in Europe, North America, Australia and New Zealand (Hellmann, Herborth, Schlag, & Weber, 2014). Research has found that this "Western" group of nations exhibit similar national characteristics

[2] The project directors in the pilot case study (Chapter Seven) came from America, Australia, Britain, Canada, Egypt, Croatia, Greece, Germany, India, Iraq, Ireland, Jordan, New Zealand, Pakistan, Portugal, South Africa, Spain and Syria.

(House, Javidan, Hanges, & Dorfman, 2002; Inglehart & Wayne, 2000; Minkov & Hofstede, 2012).

Typical consultancy roles considered as part of this study include:

Cost consultants	Cost consultants provide estimates and advice regarding the cost of construction works.
Architects	Architects are responsible for overseeing the architectural aspects of developing a design, producing the construction documents (plans) and specifications.
Claims specialists	Claims consultants are experts in the dispute resolution for construction disputes.
Project managers	Project managers play the lead role in planning, executing, monitoring, controlling, and closing projects.

Abstract

This research examines the hypothesis that a megaprojects' execution can be negatively impacted if a harmonious relationship and trust are not formed between its delivery partners, and specifically focuses on the relationships between the Arab project Sponsor and their specialist construction advisors during the delivery and execution of GCC megaprojects. This study finds that GCC megaproject advisors are mostly Western consultants, based in Western Europe and North America, and engages with project directors representing the consultancy practices.

Observation and experience suggest that differences in commercial, professional, and social-cultural norms can be quite profound, as clashes frequently occur, which impacts all parties, creating challenges for the megaproject's successful execution.

Constructivist Grounded Theory techniques are applied to gain insight into Western consultants' social and professional engagement to explore the risks which cultural dissonance may exert over their tenure. The research includes a pilot case study, using a live US $40 billion Qatar based megaproject, together with the perspectives of 34 project directors actively engaged in a wide range of megaprojects throughout the GCC, between 1999 and 2021.

Four interwoven exploratory themes are considered to understand cultural influences, social culture, professional culture, acculturation, and intercultural training. Overall, the findings indicate that cultural dissonance is a significant risk factor in GCC megaprojects' execution.

The more significant findings include how social differences are less of a risk for project directors, however, illuminates significant risks with professional acculturation due to a higher

degree of project politics, bureaucracy, and social conventions. These differences, combined with long working hours and a high-pressure environment, result in cultural dissonance being perceived as a frequent and to some extent an 'unavoidable' part of the execution of GCC megaprojects.

In turn, cultural dissonance leads to a high project director churn rate, contributing to losses to all parties, project knowledge leakage and delays. The project directors associate the churn rate with low levels of trust or acculturation issues, highlighting how a failure to appreciate such customs and conventions could be offset by intercultural training.

This research demonstrates the significance of cultural dissonance in GCC megaprojects' execution and frames dissonance as a megaproject risk factor. and identifies specific cultural challenges. More importantly, it proposes measures to mitigate these risks. Overall. The study finds that understanding the Arab project Sponsor's culture is fundamental to delivering megaprojects, as cultural dissonance is an underestimated risk factor in GCC megaprojects' execution.

Keywords: GCC megaprojects, national culture , risk factors in megaprojects. .

Preamble

I come relatively late in the day to doctoral-level studies, having worked in the construction industry for three decades. This cultural journey has highlighted the need to outline the researcher's positionality, motivations, and research challenges from the outset.

I have held three distinct engagements with Gulf Cooperation Council (GCC) megaprojects. The first (1997-2001) arose from a wish to venture overseas, see more of the world, and work on big projects. The second (2008-2013) was tied to the lack of construction opportunities following the recession caused by the Lehman Brothers bank collapse. The importance of secure employment heightened my perceptions of a substantial turnover of project directors in GCC megaprojects' execution. The third engagement (2014 to date) was motivated by seeking more significant professional challenges after becoming involved in a substantial megaproject in Qatar.

Following a detailed analysis of churn in this megaproject (Chapter five), I realised the negative impacts of cultural dissonance, and I was motivated to understand this phenomenon further and see if potential mitigations might be possible.

This journey was challenging, and the mental challenges included getting to grips with 'culture' in enough depth to appreciate its complexity. I attended dedicated training courses to enhance my knowledge in this arena to understand better what often appeared as the competing visions of culturologists. After training, a more specialised focus was applied and the research now looks more at the influences of national culture during the execution of GCC megaprojects.

It was also challenging to decide which research methodology would work best from the many which seemed appropriate. I elected to adopt a pragmatic constructivist Grounded Theory approach and availed of tacit knowledge and reflexivity during the theory building. I also enjoyed privileged access to project directors during the investigation. They placed great

trust in me as they sought to maintain their confidentiality while ensuring their views are represented fairly and accurately.

Throughout this journey, I was acutely aware of bias, a constant companion, and strove to keep an objective and faithful account of the respondents' perspectives, as a self-conscious research instrument.

There were also more practical challenges when Qatar was subjected to a blockade from half of the GCC members (Bahrain, Saudi Arabia, and the United Arab Emirates) from June 2017 to January 2021. This challenge was addressed both by considering project directors who had previously worked in the GCC states and meeting project directors outside of the GCC.

Since the field research was completed in early 2020, there has also been a noticeable decline in GCC wealth due to global market volatility in oil and gas income, and COVID-19 has created further financial uncertainty. The number of expatriate workers and consultants appears to be declining throughout much of the GCC, as a lowering of commodity prices takes its toll through reduced revenue, leading to delayed and deferred megaprojects which are jeopardising job security for project directors. Still, the GCC remains a relative hub for megaprojects, with long-term megaprojects such as Saudi Arabia's NEOM and Qatar's LNG gas expansion megaprojects amongst those currently being undertaken.

Chapter One – Introduction

Introduction

This chapter outlines the research, demonstrates why it is needed, shares the researcher's motivation for the study and outlines the respondents' perspectives. The main and supporting research questions are provided. The study is located in the Middle East, with a particular focus on the GCC states. This group of independent nations has a combined population approaching 56 million, primarily financially supported by oil and gas reserves. The research explores how national cultural differences between the Arab project Sponsors and Western consultants may impact GCC megaprojects' execution and how such issues may be addressed. A glossary of the most frequently used terms is provided immediately before the introduction. As the thesis develops, these terms are further elaborated.

Geographical Focus

The GCC is a collection of six Arab countries situated in the Persian Gulf: the Kingdom of Saudi Arabia, the Sultanate of Oman, the United Arab Emirates, the Kingdom of Bahrain, Qatar and Kuwait (Figure *1.1*). This research explores the relationships between GCC Arab project Sponsors and the Western consultants they engage to manage their megaprojects' construction.

Figure 1.1. The GCC from a Global Perspective (www.google.com/maps)

Figure 1.2. The GCC States[3] (www.google.com/maps)

[3] There are further subdivisions within the United Arab Emirates or UAE as it is commonly known. The UAE contains seven different emirates, namely Dubai, Ajman, Fujairah, Ras Al Khaimah, Sharjah, Umm Al Quwain and Abu Dhabi.

The GCC collectively represents wealthy economies predominantly driven by oil and gas reserves with a combined gross domestic product of US $1,639 Billion[4] for 2019. The GCC was formed through a Charter in 1981. Article four of the Charter describes the councils' objectives of cooperation and integration in all fields in the pursuit of strengthening cooperation and the reinforcement of regional links (GCC, 2018). Notwithstanding this cooperation agreement, an internal GCC dispute arose in 2017 with Saudi Arabia, the UAE and Bahrain on one side and Qatar on the other side. This disagreement closed all borders between Qatar and these States.

The GCC is estimated to provide two trillion dollars' worth of construction opportunities, over the next decade (Deloitte GCC, 2016). Recent construction awards include Saudi Arabia's 500 billion dollars 'NEOM' Red Sea project (GSR news, 2017). These megaprojects attract considerable interest from Western Consultants.[5]

Selecting a professional doctoral approach. As distinct from a traditional Doctor of Philosophy (PhD), a professional doctorate's role is not yet "fully crystallised". Chynoweth (2014) suggests that professional doctorate students' methodological approaches mirror those of full-time PhD students and theorises that professional doctorates enhance traditional studies which look "into practice", by adding more practical research "for practice" and "through practice" (Chynoweth, 2013b). Jones, (2018, p. 823) argues that professional doctorates are "far more relevant to contemporary society compared to the more traditional PhD" due to their focus on the relevant discipline providing graduates "better adapted to industry conditions, better skilled and positioned to function quickly" (Jones, 2018, p. 821). On the other hand, Lee, Brennan and Green (2009, p. 280) suggest that professional doctorates have failed to deliver

[4] https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2019&locations=QA-SA-OM-AE-KW-BH
[5] 397 Consultancies commissions as of November 2018 as detailed in the megaproject report of Appendix one.

on their promise and need revitalisation as new relationships need to be developed in the university-government-industry-community.

For over four decades, scholars have argued for the need to “recast the relationship between research and practice” (Chynoweth, 2013b citing Schon, 1983, p. 308), particularly a perceived stand off between research and practice in construction management (Murray, 2009). Notwithstanding such ongoing debates, Harty and Leiringer (2017) suggest that research must be “relevant and academically sound to both academia and practitioners” despite such industry-practice divide. They find a growing unity between “institutional bureaucratic pressure of academic powerhouses and external reputation”.

The researcher integrates academic discipline with 30 years of practice-based professional experience in project and contract management (QAA for Higher Education, 2011). Walker, (2008, p. 318) describes some of the benefits of practical experience as enhancing the research through “mature reflection and action learning”. This practice-based study is located in the taxonomy of construction management research, which includes different professional disciplines such as architects, quantity surveyors, engineers or contracts managers. These disciplines do not necessarily share the “same ontological and epistemological perspectives regarding preferred methods of research” (Harty & Leiringer, 2017).

Chynoweth, (2013a, p.8) highlighted how quantity surveyors “insider knowledge” can help inform their research methodologies, such as knowing that protecting the informants' confidentiality is crucial to their participation. Eastman and Maguire (2016, p. 358) suggest that as the researcher is a practising professional, the core of a professional doctorate becomes a “practitioner's critiqued story” of their working life.

This study is also anchored in anthropology. Hofstede (2013) suggests that “social science researchers should familiarise themselves with the reality of their project director’s'

situation”. Fendt and Sachs (2008, p.450) argue that such an experience can be considered an asset and not a liability. The researchers' positionality is disclosed, in line with transparency principles while adopting a Grounded Theory (Bryant, Charmaz, Mruck, & Mey, 2019), by clarifying the researchers' positionality from the outset.

Research Motivation, Justification and Contribution

Research motivation. Having practised as a project and contracts manager in the built environment for over 30 years, (with slightly more than fifteen years spent working on GCC megaprojects), the researcher has first-hand knowledge of the significant and harmful impacts from cultural dissonance in the GCC. Often, the researcher's colleagues and friends have become disheartened with the GCC's social or professional aspects and either left voluntarily or were ordered to leave the project.

While exploring this phenomenon, the researcher developed an interest in cross-cultural research after reviewing anthropologists' works such as Hofstede, Trompenaars, Schwartz and Inglehart. Their understanding of cultural differences is explored and located throughout this thesis. This thesis considers the delivery of GCC megaprojects, where the financial and professional stakes can be considerable.

To attain a better understanding of national culture concepts and the significance of cultural frameworks and models, the researcher attended cross-cultural awareness coaching in Tilburg University, Amsterdam and undertook training courses and certification to practice and teach Hofstede's works, in Czechoslovakia and Finland, in 2018 and 2019.

The phenomenon of cultural dissonance forms the focal point of this research, searching for clues that may lead to a better working environment for Western consultants in the GCC.

Research justification. Megaprojects are prone to multiple influences, such as risk, time and cost restraints or black swan effects (Flyvbjerg, 2017). Limited studies[6] have discussed the importance of culture on a megaproject's execution, and such studies have generally bypassed the GCC. The researcher and colleagues' experience suggests that GCC megaproject cultural issues can significantly impact a megaproject's success. This thesis analyses the sources of tension giving rise to such dissonances, consequences, and proposals for mitigating such risks for the Western consultant.

The GCC workforce is culturally diverse and has been described as a cultural soup of nations (Zein, 2018). In 2018, 397 Western Consultancy Agreements supported GCC megaprojects' execution, and construction costs were estimated at US $1,750 billion.[7] These construction costs are dispersed amongst the GCC states, including significant individual megaproject expenditures, such as Qatar's 'Lusail City' development of US $45 billion or Saudi Arabia's 'Neom' project valued US $500 billion. These enormous capital costs can exceed the GDP of many small nations.

Megaprojects are mostly unique and complex projects; they have attracted researchers' interest, some of whom have proposed novel means to manage these ventures more effectively and efficiently. Although of lengthy duration they are carried out by temporary project coalitions and due to their sheer size, speciality and duration, require many specialist multinational parties to converge to execute their construction (Brookes, Sage, Dainty, Locatelli, & Whyte, 2017; Dwivedula, Bredillet, & Müller, 2018; Turner, 2018). The size and scale of these ventures tend to attract experts from all over the world. The GCC states do not have a large enough indigenous professional sector to manage these megaprojects and are mostly reliant on external countries to supply the professional, technical, and labour resources.

[6] Such as the works of Marrewijk, Smits, van Marrewijk & Smits, (2016); Merron, (1988); Smits & Brownlow, (2017)
[7] GCC Megaproject Report – Report -Appendix One.

The GCC appoints one of its subjects, as the ‘project Sponsor’, managing the state's interests in the fulfilment and delivery of megaprojects.

In a paper, Brockmann, Brezinski, Ibn and Agadir (2013, p.8) suggest that eight project directors associated with a US $45 billion GCC rail megaproject were replaced, due to ‘cultural dissonance’. These findings and the researchers own experiences, motivated this research, to explore the role that cultural dissonance may exert over GCC megaprojects' execution and consider the wide range of impacts from such churn to the Western consultants (both as a practice and for the individuals concerned).

Table 1 provides a contextual background for the scale and nature of GCC megaprojects.

Key GCC Statistics[8]

	GCC State	Total Population	Expatriate Population	Expatriates Residents	% Expats in Construction	GDP USD Billion 2019	Value of Constructio n USD Billion
1	Qatar	2,639,211	2,111,369	80%	50%	175,873	46.40
2	KSA	32,938,213	10,500,000	32%	36%	792,966	109.00
3	UAE	9,400,145	7,800,000	83%	30%	421,142	87.70
4	Kuwait	4,136,528	2,895,570	70%	17%	134,628	12.60
5	Oman	4,636,262	2,086,318	45%	31%	76,331	15.20
6	Bahrain	1,492,584	666,000	45%	22%	38,574	7.70
7	Totals	55,242,943	26,059,256	47%	31%	1,639,481	279.00

(Author, 2019)

The GCC relies on recruiting millions of expatriates to help build and support its infrastructure and economy. The recruited personnel volume can range from 32% in Saudi Arabia to 80% in Qatar (2018). The GCC engages nine million personnel in its construction sector, almost twice the 4.8 million construction personnel participated throughout the European Union (Statista, 2019).

GCC investment in the construction industry sets it aside from the rest of the world. In monetary terms, construction-related activities account for 19% of GDP, twice the estimated

[8] (AECOM, 2019; Central Intelligence Agency, 2019; World bank data, 2019) Expatriate Statistics Qatar www.mdps.gov.qa; Oman www.ncsi.gov.om; Bahrain www.blmi.lmra.bh; UAE www.grc.net; Saudi Arabia ; Kuwait ww.ceicdata.com/en/Kuwait

construction-related GDP 9% for Europe (EBC, 2019) or three times that of the UK 6% (CIoB, 2020). While the GCC's sovereign wealth was estimated in 2017 as US $2 trillion (Deloitte, 2016), locally-based cost consults RLB, and T&T have confirmed that several megaprojects were placed on hold, slowed down or suspended between 2015 and 2019 (RLB, 2019). This decline has been accompanied by a significant reduction in Western expatriates engaged in GCC megaprojects, due to ‘resource optimization’, throughout the GCC.

Research contribution to theory. This research seeks to illuminate the influences of culture in GCC megaprojects. It makes an original contribution to knowledge by identifying, describing, and analysing the phenomenon. It further illuminates the risks by identifying various cultural risk sources and prepares a cultural risk map to prioritise the individual risk, based on its severity. The study is one of the first to analyse the substantial impacts of cultural dissonances on a megaproject’s delivery for the parties impacted through the risk. The research goes beyond identifying cultural risks and their impacts, to consider risk mitigation measures, specific to GCC megaprojects (Chapter Ten).

This research is novel in its approach. This thesis explores the complex and dynamic phenomenon of megaproject risk management and provides much-needed insight into Western consultants' cultural challenges in their professional endeavours and providing insight towards managing the associated risk. Periphery studies suggest that national culture dissonances may have delayed or disrupted a few European megaprojects' execution, but little or no attention has been given to the powerful influences of national culture or cultural dissonance. This thesis finds that the risks associated with cultural dissonances should be added to the growing numbers of megaproject risks in the “modern era of risk management” (Walker & Greenwood, 2002).

Research contribution to practice. This research will also benefit parties seeking to enter the GCC, whether connected with the delivery of megaprojects or other GCC services. The study frames cultural dissonance as an identifiable risk factor in construction contracting and identifies the critical areas of dissonance and suggests managing and mitigating this. The research considers the significant financial and other losses associated with the impacts of cultural dissonances, the Western consultants' exposures individually as project directors and collectively as a consultancy practice. These financial exposures can be as high as US $1 million per project director to the Western consultancy firm and potentially US $6 million per month in delay costs to the megaproject (see Appendix Five). In this respect, the research makes a novel contribution to the application of this knowledge in practice. The study also identifies how Western consultants need to be vigilant and maintain ongoing cultural awareness throughout their tenure.

GCC Governance, Power and Wealth

Governance. There are fundamental differences between the governance of Western nations and the GCC states. Western nations are generally guided by democratically elected governments instead of the GCC states which are typically ruled by unelected and absolute monarchies. The Emir or other GCC royal leaders hold, what Weber (1891), describes as a “legitimate power”, where the ruling minority exerts a legitimate order over its subjects. In the GCC, these subjects are inclined to accept and incorporate the regal directives as a matter of course.

The Middle East region has a turbulent history of conflict and wars. Sørli, Gleditsch and Strand (2005), suggest that the Middle East competes with Asia for the position of the “most conflict-ridden region” since the 1960s. This thesis considers the Middle East, after World War One, when the British Empire had defeated the Ottoman Empire. During this period, the lands administered by colonial French and British forces were returned to Arab rule,

with the British forces' withdrawal in 1971. Khoury et al. (1991) suggest that their earlier colonisation had brought order and stability to this often-waring group of nations, transforming the region from a tribal society to more modern states, with internationally accepted borders and governance. The historical sources of GCC income included slavery, pearls and trading (Colton, 2011). The discovery of oil and gas provided the necessary resources to create modern cities, infrastructure, healthcare and educational systems (Khoury et al., 1991). Colton, (2011), suggests that this transformation was accompanied by unrest and political infighting, some barbaric succession attempts, some more peaceful coups and general turmoil.

Today the region appears more politically stable, however recent acts of aggression labelled as the "Arab Spring", during which GCC member State Bahrain experienced a minor volume of civil unrest, confirm that political tensions are always just under the surface for many GCC states. Salih (2013) contends that the "Arab Spring" is the population uprising against "ongoing corruption" and deteriorating living standards in Arab ruled economies. The Arab Spring started in Tunisia in 2010 and spread throughout North Africa into some areas of the Middle East. Bahrain was the most impacted GCC State. The revolt also serves as a reminder that there are many unsolved conflicts related to religious or political tensions in the region, often due to an unequal distribution of wealth, which may ignite at any time. The GCC's geographical location places it adjacent to areas of political instability and unrest. There are continual tensions between the USA, Saudi Arabia, the UAE and others with Iran in 2020[9] , and such conflicts serve as a stark reminder that expatriates need to exercise vigilance in the region.

Power. Colton (2011) was commissioned to research the governance of individual GCC member states.[10] Colton (2011) describes a "principal-agent" scenario where unequal

[9] See for example reports such as www.bbc.com/news/world-middle-east-51018120
[10] 'Programme on Development, Governance and Globalisation in the Gulf States'

power distribution, between the royalty and its subjects exists. The study finds that real power in the GCC is based “on one's affiliation to the ruling family, first and foremost” and then to all others. The study also finds that the ruler's partial distribution of the wealth from oil and gas has a significant impact on the region's stability and the loyalty of its subjects to their ruler. How natural oil and gas reserves are distributed creates greater wealth for some GCC states than others, as evident in their GDP (Table 1). Colton (2011) found that profit-sharing is unequally distributed throughout the GCC, with Bahrain and Saudi Arabia singled out for financially discriminating against Shia Muslim populations. Historically, turmoil, mini rebellions and further coups have taken place as some individual state rulers treated the wealth from oil as their “personal or private income”, while ignoring its citizens' needs.

Wealth. As successive Emirs and leaders distribute their sovereign wealth, they often provide free land/housing, subsidised utilities, health care and education to their subjects. They also attempt to provide suitable employment for their subjects. As the population grows, it creates a greater need for employment opportunities for locals, who manage increasing administration and bureaucracy layers, as the State seeks to occupy its citizens. This administration often contributes to long and complicated administrative procedures, such as obtaining residency permits. Most GCC states reserve government positions solely for their citizens, but there are increasing attempts to move the growing national workforce into private sector industries. Individual states frequently engage nationalisation policies, such as Qatar’s “Qatarization” programme or the UAE’s current target for 50 % “Emiratization” within the private sector. These strategies can impede Western consultants' recruitment strategies, as states such as Kuwait or Oman direct all employers to hire a certain percentage of local citizens. Colton (2010) confirms that these local, national staff “must be paid more (than non-citizens) and cannot be fired easily”.

GCC megaprojects and their state-appointed oversight committees are formally

managed by citizens from that GCC State, acting as the project's 'Sponsor'. Sergiu, (2010) describes how power relationships strongly impact professional/laity relationships, as the more powerful tend to overpower the weaker. During the execution of GCC megaprojects, the Arab project Sponsor effectively wields this power to regulate the consultancy agreement, dictating and directing the terms under which the professional consultancy service is governed. Foucault (1982, p.791) suggests that "power relations are rooted deep in the social nexus" and understanding these societal norms is pivotal to understanding GCC megaprojects' cultural dynamics.

In addition to such power imbalances, cultural interfaces can arise from differing belief systems, social and cultural norms, rules, and traditions governing interpersonal conduct and business relationships. Social cultures are filled with conventions and customs, such as respecting elders, not publicly criticising the leadership, or publicly embarrassing one's compatriot (Hofstede et al., 2002). Weber (1978) highlights how such traditions and customs are recognised within the community as binding and regulate order within that society. Another important GCC consideration is the significance of religion in the execution of GCC megaprojects.

Religious Influences

Islamic culture originated in the GCC state of Saudi Arabia, the prophet Mohammed's birthplace, in Mecca, around 570 (Cleveland & Bunton, 2018). Kamrava (2011) finds that up to 97% of the Middle East's indigenous population identifies themselves as Muslim. One cannot travel far in the Middle East without encountering a mosque or fail to hear the resonating voices calling the faithful to prayer, five times daily. These calls act as a constant reminder to the strong presence and importance of religion in the GCC. Religion is considered as a principal binder amongst this Muslim community. Muslims are followers of Islam, an Arabic word which translates to "surrender or submission to Allah or God" (Cleveland & Bunton, 2018).

Minkov and Hofstede (2014) assert that national cultural considerations are more influential than religious convictions. Irrespective of this philosophical debate, the importance of religion in the region should not be underestimated. Lewis, (2016), suggests that in the Arab states, “a good manager is a good Muslim” and that his daily language will make frequent references to Allah and align itself with the precepts and style of the Koran. Platteau (2008) highlights the difficulties separating the people from their religious convictions, particularly in his statement:

In particular, the fact that political and religious functions are not separated in Middle Eastern societies, this can create high risks for expatriate workers to misunderstand cultural norms, current forms of communication and the way teamwork can be done if the individual looks at the Arabic culture with an ethnocentric view from non-Islamic countries (p.330).

In Western societies, many cultural norms and politics are founded in Christian beliefs, similar to how Muslim virtues form a strong bond uniting the Middle East. Platteau (2008) suggests that:

> “ the difference between Christianity and Islam is so radical that it reflects a clash of cultures and civilizations: to the Western perception of the separation of religion from political life and the assertion of individual, rights, the Muslims oppose an all-encompassing view of the divine law that implies the amalgamation of religion and politics and the recognition of collective rights for all the Muslim faithful” (p. 333).

The GCC is strongly influenced by Islam's values and the Holy Quran.There are also more stringent interpretations of Islamic decrees, adopted by some Muslim practices, such as the *Wahhabi* sect of Islam, described as “puritanical” in cross-cultural researches by Lewis, (2016, p. 416). Both Qatar and Saudi Arabia follow a *Wahhabi* branch of Islam, resulting in

more significant social restrictions in these states.[11] Overall, the project directors contributing to this research, believe that Western consultants working in the GCC need to be aware of religious differences and review any practical limitations this may impose during professional and social interactions and respect and understand fundamental Islamic traditions and principles.

Research Focus and Delimitations

This thesis focuses on better understanding the cultural challenges that a Western consultant may encounter during a GCC megaprojects' execution. The main and supporting research questions (SRQ) addressed during this thesis are presented as follows:

Main research question - Is cultural dissonance present during the execution of GCC megaprojects to a significant degree, and if so, what form does this dissonance take, how and why does it arise and to what degree is it a mitigable risk factor?

SRQ one: What research is available to investigate the impacts of national culture during the construction of megaprojects?

SRQ two: What existing theories of national culture address the challenges that Western consultants face while executing GCC megaprojects?

SRQ three: What is an appropriate methodological strategy to investigate the extent of national culture's influence in GCC megaprojects' execution?

[11] Discussed further in Chapter Nine.

SRQ four: What do Western consultants identify as cultural challenges during the execution of GCC megaprojects?

SRQ five: Can cultural training benefit Western consultants transitioning to GCC megaprojects?

SRQ six: If cultural dissonance creates a risk to GCC megaprojects, how can such risks be managed?

Research delimitations. From the outset, it is necessary to detail the events that influenced the research, to allow a contemporary context. Firstly, the researcher is currently based in the State of Qatar. Between June 2017 and January 2021, the GCC states of Saudi Arabia, Bahrain, and the UAE imposed a blockade against Qatar's State, preventing inter-state air, sea and land travel. Despite the travel constraints, it was relatively easy to communicate with representatives from the other GCC states, and many of the respondents had worked in several GCC states to date. The measures taken to enhance reliability and reduce potential bias are detailed in later chapters. Appendix One provides details for megaprojects throughout the GCC and Chapter Seven details how the research was designed to mitigate this practical constraint.

Secondly, this study examines the phenomena of cultural dissonances from a wide range of Western consultants' perspectives. Variances in Western consultants' "positionality" or cultural biases are discussed later. It would have been difficult to record Arabic perspectives accurately. Practical considerations include the researchers' lack of linguistic competence, which can distort the findings by interpretative errors (He & Van De Vijver, 2012),

interpretative barriers (Wooffitt & Robin, 2005) and a lack of depth of exposure to the Arabic culture.

There are also critical social and professional imbalances between Western consultants and Arab project Sponsors. The GCC states have several laws and regulations to keep foreigners from permanently residing in their country (Colton, 2011) and therefore, Western consultants are excluded from the citizenship perks provided to State residents. Western consultants are mostly classified as temporary residents ("workers") and must leave the GCC State within 30 days of completing their employment (whether leaving by choice or at their Sponsor's wishes). A GCC citizen is generally provided with more privileged employment protection, is entitled to own property, has the right to a plot of land to build a residence free of charge from the State, has the right to free education, including secondary and university education and free medical services. Upon retirement, the Arab project Sponsor often benefits from a guaranteed income, close to their final salary.

As these fundamental employment considerations are considerably different, and due to the researchers' limited understanding of Arabic, an in-depth comparison of perspectives is beyond this analysis's scope.

Thesis Structure

The structure of this thesis is influenced by the methodological selection of a Constructivist Grounded Theory approach. One key differences, is that as a Grounded Theory emerged 'using as little force as possible', it created a need for additional literature reviews (as mirrored in more modern Grounded Theory techniques (Gioia, Corley, & Hamilton, 2013). These are necessary to tackle specific elements as they emerged creating a less linear structure to a traditional literature review as provided in Chapter 2. A further difference is that during the analysis of project directors lived experiences, Grounded Theory prioritises a 'bottoms-up' approach (Murphy, Klotz, & Kreiner, 2017). This lets the emerging data lead

and tell the story, as the project directors lived experiences to take the centre stage, resulting in a constant comparison of project directors experiences throughout Chapters 7, 8 and 9.

Chapter One – Introduction. The thesis commences by geographically locating the research and outlining the context of GCC megaproject construction. The introduction discusses overarching religious, political and cultural influences in the GCC, setting out the objectives to explore cultural dissonance between the Arab project Sponsors and their Western advisors. The main research question and the SRQs are defined, and the research motivation and study justification are discussed, in addition to bias and research delimitations.

Chapter Two - Literature Review. A review of pertinent research reveals a scarcity of information about how culture impacts megaprojects or GCC megaprojects studies. Extensive studies record developments in both culture and cross-cultural research, since the start of the late 1900s. Megaproject research has evolved after Capka, (2004) labelled construction projects valued at least one billion dollars as “megaprojects”. Research focusing on megaproject risks has also increased, as values and risk levels have evolved over the last decade.

Chapter Three - Conceptualising Megaprojects and Megaproject Risk Management. A more comprehensive understanding of megaprojects is achieved by examining their characteristics. These characteristics include high costs, time overruns, political impacts, stakeholder influences and organisational issues. Megaprojects are considered a significant source of risk and cultural risks are a potential risk, especially in the GCC, which engages a wide diversity of actors. Once the most common megaproject characteristics are isolated, the levels of risk associated with cultural issues are highlighted for further field research, including how such risks have been addressed in earlier megaprojects.

Chapter Four - Conceptualising Culture. Culture influences how people from differing nationalities relate to each other. This chapter discusses the relevance of

supranational, professional, national and organisational culture. The ability to measure national culture and the accuracy of culture measurement tools are explored. Arab and Western cultural differences are considered, highlighting how these differences practically impact GCC megaprojects.

Chapter Five - Findings of the Pilot Case Study. As an earlier part of this doctoral programme, the researcher carried out a pilot case study exploring the churn for senior Western Consultants in a GCC megaproject. The study found a high churn rate due to cultural dissonance in an ongoing GCC megaproject. The findings also identify potential sources of cultural dissonances and provide further insight into this phenomenon. These dissonance sources included disagreeing in public, appearing too slow or unproductive in carrying out tasks and failing to manage multi-cultural teams. The study also identified longer serving senior project directors[12] who shared their experiences of acculturation. The pilot case study provided a detailed analysis of how project directors churn is related to both national culture and other elected departures, whilst providing in-depth analysis for the churn specifically related to GCC cultural dissonances.

Chapter Six – Methodology and Research Design. The research paradigms and philosophical orientations are reviewed to consider an appropriate methodology to measure culture's intangible construct. The merits of potential methodologies are considered before the use of a pragmatic interpretation of Constructivist Grounded Theory (with situational analysis) is selected. The most appropriate data collection options emerged as semi-structured field interviews amongst purposefully selected project directors. The probability of researcher bias is considered and addressed before addressing the construction of Constructivist Grounded Theory.

[12] Project directors serving on the megaproject for periods of at least five years.

The pilot study details one GCC megaproject's findings by examining cultural churn during the project's lifecycle. Additional field research is required to consider if the results represent all GCC member states. The expanded considerations include exploring how Arab and Western cultures' fundamental differences may contribute to cultural dissonance in GCC megaprojects, the impacts, and how such cultural tensions can be reduced. Purposeful selection criteria for both the megaprojects and actors are outlined, and the construction of a Constructivist Grounded Theory approach considering four central interwoven themes as follows:

- Social acculturation
- Professional acculturation
- Culture shock and acculturation
- Cultural training

Chapter Seven The findings - Social Integration. Several factors can influence an expatriate's decision to integrate with (or depart from) a new culture. These may include considerations such as age, preferences, lifestyle, the support of family and their motivations for GCC engagement. These personal considerations are examined to see how they influence a project director's decision to continue or withdraw from the GCC.

Professional Integration. A professional is influenced by their professional culture, ethics and training. This investigation explores if Western professional standards apply in the GCC. Differences in the Western consultants working conditions and norms are investigated, before focusing on critical challenges and identifying the impacts of professional challenges.

Culture Shock. Culture shock describes the project directors' period of cultural adjustment to their host State. Cross-cultural researchers have identified different stages in the acculturation process and the impacts of assignment failure. The appropriateness of such

research to the GCC is considered, and the frequency of turnover and associated impacts and financial costs are reviewed.

Cultural Preparation and Training. The benefits and availability of project director training are explored. The relevance of generic cultural advice is evaluated. The potential application of cultural awareness software (the “culture compass” survey by Hofstede) is examined as a potential cultural awareness tool.

Chapter Eight Drawing the Research together. The findings are brought together to develop a fuller understanding of all the cultural challenges which may impact Western consultants’ tenure in GCC megaprojects. The findings highlight how cultural influence is a significant risk factor during a megaproject’s execution.

Chapter Nine - Analysing the Findings - Managing Cultural Risk in GCC Megaprojects. Megaproject risk management studies are considered in a GCC context. Specific consideration is applied for cultural advice for addressing stakeholders, leadership and interface issues. The severity of the exposed cultural risks is ranked in terms of significance, based on the project directors risk perceptions. Potential mitigation measures are considered, such as cultural training or selecting culturally sensitive directors to reduce GCC megaprojects' churn factor.

Chapter Ten- Research Conclusions. Finally, the research journey is reviewed against its stated research objectives. The principal research findings are reviewed, and potential further directions are discussed together with how this research contributes to new knowledge.

Research Road Map

A research road map is indicated in Figure 1.3.

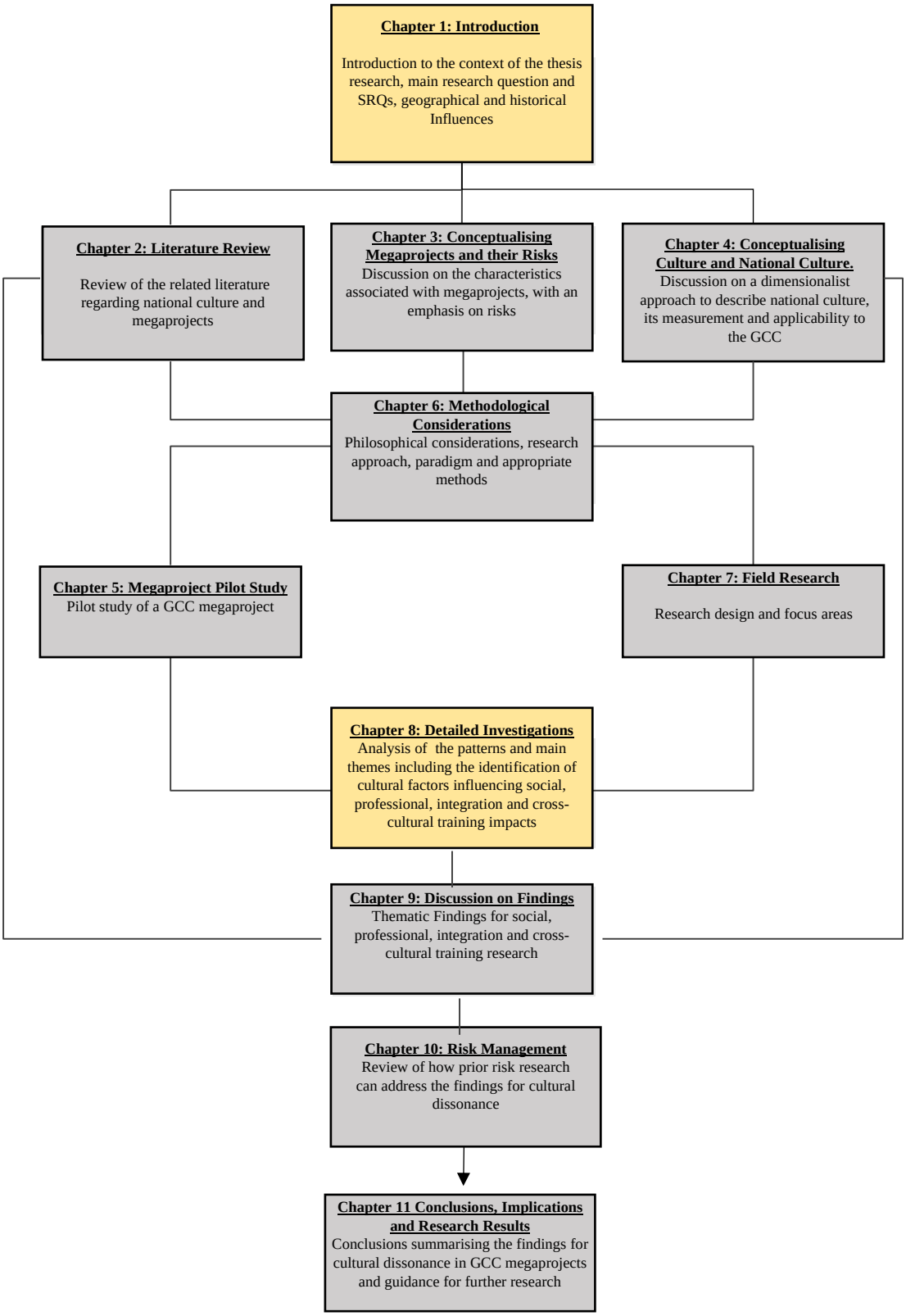


Figure 1.3. Research Road Map (Author, 2020)

Chapter Two - Literature Review

Introduction

The main research question evaluates the risks associated with cultural dissonance for Western consultants during a GCC megaprojects' execution. The literature review focused on research to help understand the impact of cultural dissonances in megaprojects, how and why it occurs, and the degree to which it is a risk factor.

The initial and subsequent literature searches suggest that such an in-depth study is novel in approach. There are significant bodies of research that individually consider “culture” or megaprojects and a limited number of studies that have exposed cultural dissonances during the execution of mostly European and central American megaprojects (Newman & Nollen, 2016; Smits & Brownlow, 2017; van Marrewijk & Smits, 2016). However, research which explicitly considers the impacts of culture in GCC megaprojects was not found. This thesis aims to reduce this knowledge gap and to identify cultural influences for the GCC region specifically.

Due to the lack of research, this research uses Constructivist Grounded Theory (Glaser & Strauss, 1967) working from the bottom up (Joslin & Müller, 2016) to help identify and understand Western consultants' perspectives for cultural influences during the execution of GCC megaprojects. Their tacit knowledge will be made explicit (Nonaka & Takeuchi, 2006), and the findings shall help understand the “black box” of culture (Tijhuis, 2003). A relatively new concept in the development and construction of Grounded Theory, is the need to expand the literature review to explore emerging links, as a relationship between the emerging theory and prior knowledge becomes exposed. After analysing the field research findings, some additional research was necessary to help understand specific cultural differences, such as the assignment failure rate for American expatriates (Black & Gregersen, 1999) or leadership skills

required for the GCC (Struggles & Heindrick, 2015).

Arabic and Western cultures differ significantly at both professional and social interfaces. Prominent research includes the research of Hofstede (2016), Hofstede, Hofstede and Minkov (2010), Smith, Peterson and Schwartz (2002) and Trompenaars (1993). Western consultancy practices are expected to engage individual construction experts, who possess a specialist knowledge base, institutionalised training, accreditation, peer control, a code of ethics and act free of bias (Foxwell, 2019).

Regional studies have also investigated the differences between Western and Arab cultures. Haak-Saheem, (2016), outlines specific social disparities, including attitudes to extramarital activities, government interventions on candidate selection, work visa requirements and property ownership restraints throughout the GCC states.

The research process is described, and the relevance of initial and subsequent online searches are discussed. Pragmatic definitions are offered for supranational and national "culture". An account is provided for the geography, history, and the influences of religion in the GCC. Before concentrating on characteristics that are most influenced by culture, the current trend of analysing megaprojects by their characteristics is considered to delve into culture's ability to influence a megaproject's execution.

The Research Process

The initial literature approach used online research searches for keywords. The search included combinations of keywords for megaprojects, megaproject risk, culture and the GCC, including the individual GCC states. The search was initially conducted between April and May 2018 and repeated in January 2020, using online research techniques (O'Dochartaigh, 2012). Only peer-reviewed journals, PhD theses and published works were considered, and the

findings are summarised in Table 2.1. There were no references provided through Scopus, OCLC Article First, highwire, Academic Search Review, ISI Web of Science and Jstor.

Table 2.1

Online Literature Searches in April 2018 and repeated in January 2020.

Online source	Found		Filter	
	2018	**2020**	**2018**	**2020**
Salford University website	48	90	2	3
Google Scholar	267	944	6	9
Professional bodies – RICS, CIOB, PMI, RIBA	4	5	1	1
Research Gate	50	76	2	6
Sage Journal	371	371	3	3
Worldcat	2	4	0	0
Doai	2	2	0	0
Elsevier ScienceDirect	0	4	0	2
Total	**744**	**1,496**	**14**	**24**

These search criteria yielded almost 1,500, potentially literature sources. A significant volume of data was discounted after critically reviewing abstract and contents pages of the documents, leaving 24 appropriate contributions (Figure 2.1).

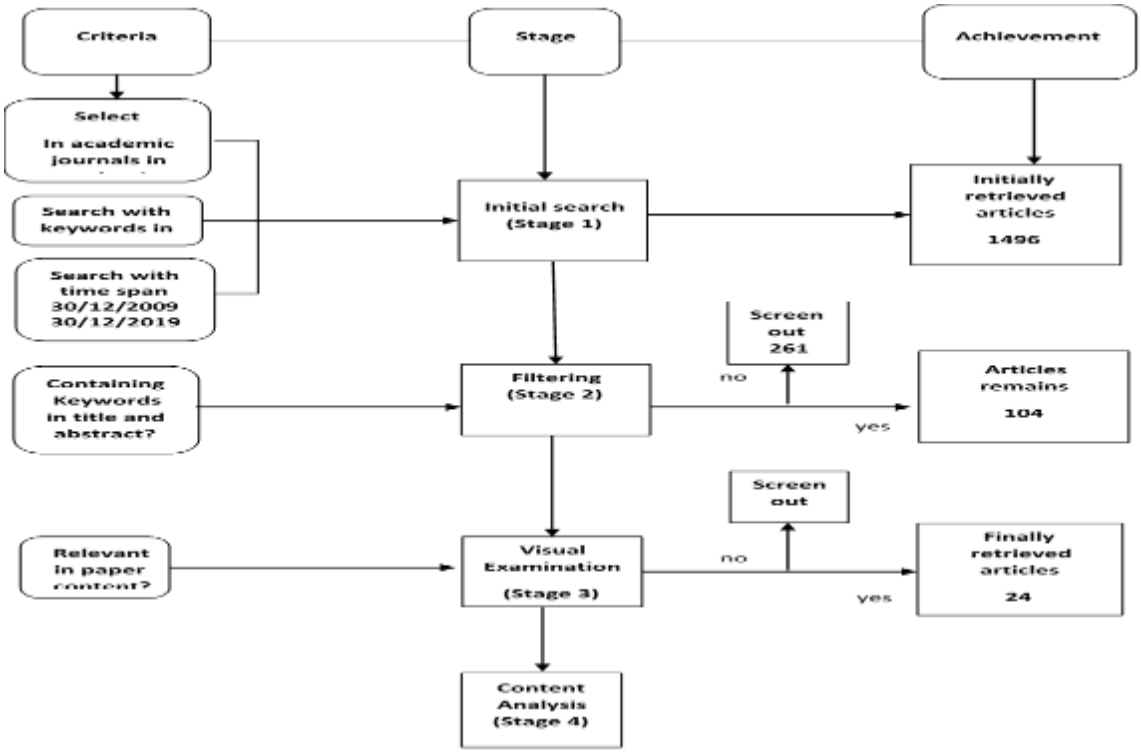


Figure 2.1. Filtering data for search keywords GCC + megaproject + culture + risk (Author, 2020)

The analysis confirms a significant literature gap for studies involving cultural issues related to GCC megaprojects or research that considers GCC megaprojects. With this weak research foundation, it was necessary to deconstruct the literature review process and examine its essential components (Torraco, 2005), similar to throwing all the information on the ground and reassembling the jigsaw (Mills, 1959). This strategic deconstruction of the research helped identify extensive studies related to culture and megaprojects and megaproject risks, as shown in figure 2.2. The research focus explores the cultural influences in contemporary GCC megaprojects' execution, as reflected by point D (Figure 2.2).

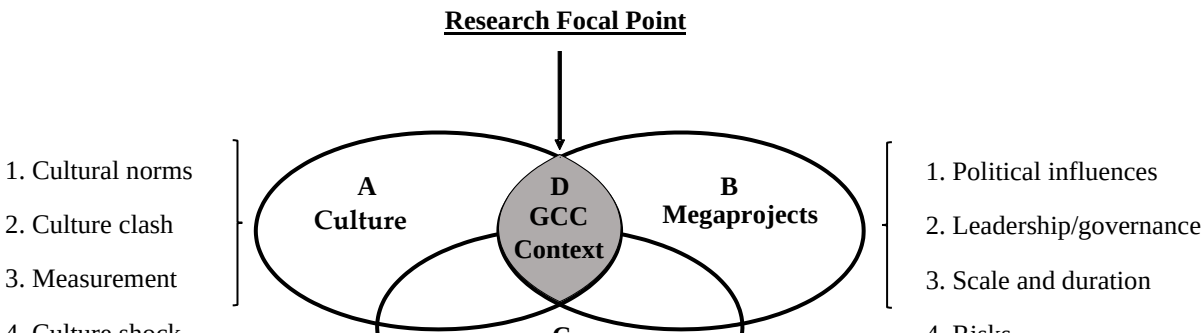


Figure 2.2. Research focal point area D (Author, 2019)

To consider contemporary research updates, automatic e-mail update alerts were created for several search engines including the repositories of Salford University, Google Scholar, Academia, Sage journals and Elsevier ScienceDirect. Research groups were also joined based on their relevance to the research objectives, including information sharing websites supported by Academia, Mendeley and ResearchGate. These updates provided additional information, and the final research library contains over 1,000 references.

The researcher used Mendeley software to store, categorise, manage, and cite research digitally. The library contains significant research for “culture” and its influences, with some articles dating back to the late 1930s. Cultural studies became more popular when White (1959), discussed the “concept of culture”. Cultural studies are far-reaching, diverse and appear to move across various issues and values (for example, the World Values Studies). To make the research process more manageable, culture references were segregated to sub-libraries explicitly dedicated to cross-cultural research, culture and project management, culture experts, culture measurement, organisational and national culture, and existing studies for GCC culture.

A second library was established to catalogue relevant megaproject research. This library contains the analysis of megaproject characteristics, cultural influences and risks, project management of megaprojects and specific data for the GCC market. Many sub-libraries are inter-related, but this process of subdividing libraries made searching more manageable.

A further library examined the history of the GCC and broader political and societal contexts, for example, societal texts by Weber related to economy and society and the interrelationship between order and social status as translated by Roth and Wittich (1968). Relevant research also considers work by Foucault (1982), which studied the influences of power relations between the institution (monarchy) and its subjects and Bourdieu (1990) who researched the "logic of practice" for examining the professional relationships expected by the Arab project Sponsor from the expert Western consultant. This library also collated specific GCC issues, such as the GCC's wealth levels, income sources and power/authority distribution.

Addressing the Research Gap

Focusing the literature review. The researcher was faced with multiple avenues of research while researching this thesis. While many of these were interesting, only the more relevant issues about the main and SRQs are discussed in this literature review.

There were many paths travelled in the search for relevant literature, which was later deprioritised. These included organisational culture, which considered how organisation culture might influence Western consultancy practices, to the extent that organisational policy from a consultant's Western headquarters may override regional consultancy practices. Strong organisation cultures such as McDonald's or Apple (Schein, 2004; Smith et al., 2002; Trompenaars, 2002; Waisfisz, 2015), are suggested to transcend local cultures. However, these cases appear more appropriate for repetitive manufacturing industries than in construction-related fields. Based on a better understanding of the localised workforce's multi-cultural nature and the autonomous reporting structures within their organisational structures, the researcher believes the relationship between organisational and national culture is less influential than first suspected.

Before discounting the potential influences of organisational culture, the researcher attended specialist training in organisational culture, which supported the strengthening of organisational culture, through looking at individual contributors and examining how individual goals may align with organisational goals. Attendance on the specialist training course required a pilot case study to analyse individual project directors' contributions to an organisation's organisational strengths and weaknesses. For the case study, the organisational goals and objectives of a Western cost consultancy practice were examined.

This case study involved interviewing all the practices consultants and senior management on a face-to-face basis and required all the consultants and local staff to complete a survey, which was later analysed by proprietary software. The study involved three months of close engagement with this local branch of a leading Western cost consultancy in the GCC to understand their organisational culture.

Upon completing the training course, the overall recommendations included changing practice standards within the consultancy practice to more acceptable GCC norms. The report also included recommendations to remove certain personnel from their current duties (or reshuffle roles), particularly where the person in charge was not open to cultural change.

After three months of investigating the potential impacts of organisational culture on national culture, it appeared that this avenue of research had begun to lose focus and relevance. While organisational and national cultures studies may overlap, this thesis's focal point is cultural differences between Arab and Western actors instead of how national culture may be more or less aligned with the consultancy practice's organisational culture.

Another fascinating subject was the difference between individuality and national culture. There can be significant differences between individual personality and the national culture of their country of origin. These differences were made more transparent while attending additional training at the Hofstede Institute. This confusion arises from the so-called

"ecological fallacy" (Brewer & Venaik, 2014; Maleki & de Jong, 2014; McSweeney, 2013; Smith, 2004), where one mixes psychology and culture. This concept took some time to decipher and essentially clarified how people are individual and unique, irrespective of nationality and that national culture and not individual personality (as elaborated in Figure 2.3) should be the study's focus. Hofstede describes the duality of being both an individual and a citizen belonging to a country was captured in "Every person's mental programming is partly unique, partly shared with others" (Hofstede, 1980). As a result of extensive travels, accompanied by family, the researcher questioned the continual blurring of geographical boundaries (Inglehart, 2018; Venaik & Brewer, 2016a) and how people are now more likely to come from a "cultural soup", frequently moving continent, (Zein, 2016a), resulting in lesser cultural ties to one's home nation.

Another seductive avenue of research is the association with employee churn and employer-employee issues. The researcher questioned the potential influences of so-called assignment failure and the employment dynamics between the individual and their employer. There is contradictory research allocating blame to both parties, and while a discussion on potential factors is appropriate to this research (further discussed in Chapter Ten), this so-called psychological breach could have become a thesis in its own right (Lee & Kartika, 2014; McNulty, De Cieri, & Hutchings, 2013; Mercer, 2015a; Naeem, Nadeem, & Khan, 2015).

Narrowing the Research Gap

Construction practitioners need to be alerted to the potentially harmful influences of national culture for GCC megaprojects. Findings of a pilot study have been published through a series of conference papers.[13] The first contribution was presented at the 14th OTMC Research conference at Zagreb, during the IPMA conference, in September 2019. A paper titled *The importance of trust in GCC megaprojects* argues that Western consultants must build trust-

[13] Available in Salford Depository.

filled relationships if they wish to execute GCC megaprojects successfully. This paper explored how trust and culture issues contribute to high levels of churn for Western consultants. The findings inform how trust is a crucial element for both a megaproject's success and the consultants' project engagement.

A second contribution titled *re-evaluating megaproject cost overruns: putting changes into perspective* was presented at the Salford 14th International Postgraduate Research Conference, in December 2019. This paper challenges Flyvberg's "Iron Rule" that megaprojects are "over budget, over time, under benefits, over and over again" (Flyvberg, 2012). This research was necessary to examine if Flyvberg's findings apply to GCC megaprojects. Results from three case studies contend that Flyvberg's "Iron Rule" may not apply in the GCC. These findings also question if Flyvberg uses the right comparisons between the initial and final costs, suggesting an increase in the contract price should not be considered an automatically "over-budget" megaproject.

The third contribution was presented during the World Academy of Science, Engineering and Technology Megaprojects and Macro-Engineering conference[14] in Rome, in March 2020. *An Examination of Cultural Risk for Western Consultants executing GCC Megaprojects* explores the need for Western consultants to address cultural risk. It considers the cultural barriers between Arab GCC sponsors and Western consultants and examines the key actors' cultural distance. Initial findings noted the presence, to a certain extent, of ethnocentricity and that some nations were more likely than others to experience dissonance issues. The paper also identifies a lack of appreciation of the customs, practices and traditions of "the other".

[14] Subsequently published in the International Journal of Social and Business Sciences, 2020 14 (08) pp. 315 - 324

The fourth contribution was prepared and accepted for the RICS COBRA conference in Florida, the USA, April 2020 titled *Looking Beyond Time and Cost Influences in Megaprojects*. This paper encourages megaproject researchers to refocus research from time and cost issues towards other critical project factors. The paper argues that a more holistic approach is needed, emphasising characteristics such as cultural influences. This paper proposes examining megaproject characteristics, excluding time or cost criterion. The fifth contribution again for the RICS COBRA conference with a paper titled *National Culture Influences on the Execution of GCC Megaprojects*. This article provided pilot case study evidence of a high turnover of staff in GCC megaprojects. It analysed the cultural distance between its actors, suggesting that many Western consultants are ill-prepared for GCC challenges.

The sixth contribution presented during the 2021 International Conference on Megaprojects in Dubai in January 2021 (Walsh, A., Walker, P., Ellis, M., 2021) was a collaboration of research examining *The Underestimation of Cultural Risk in the Execution of Megaprojects*, which was subsequently published in the *International Journal of Civil and Environmental Engineering*, 15 (1), 33 - 40. This considers the global multi-cultural collaborations and the influence of Contractors cultural interpretations of their execution obligations and cultural influences during the execution of megaprojects.

Geography, politics, and religious contexts of the GCC. The GCC is shaped by geographical boundaries established through numerous wars, home to the Muslim religion and controlled by a ruling elite. The discovery of oil and gas transformed its economy. Cleveland and Bunton (2018) and Kamrava (2011) help identify both the turbulent history of war and conquest throughout the Middle East and the rise of the Islamic faith. The Middle East continues to be politically volatile and is described as a “cauldron” of conflict and regional tension (Moran, Harris, & Moran, 2011). The influences of recent political upheavals such as

the Arab Spring (Salih, 2013) and anti-government protests and uprisings in the early 2010s are also recorded.

Lewis (2016), identifies a strong religious impact for work in the GCC, suggesting that "In the Gulf States, a good manager is a good Muslim". The effects of religion on the workday, are further discussed in Chapter Seven and Eight (Kamala et al. 2006; Burton, 2018), such as the significance of obligations such as *Sawam* (fasting during the holy month of Ramadan), help appreciate the depth of culture and religious duties for Muslim people (Oxford, 2010).

Colton (2011) informs how GCC sovereign wealth is administered by a limited number of the State's royalty, who generally nominate a preferred citizen to oversee their megaprojects' construction. This nominated citizen becomes the Arab project Sponsor, acting on behalf of the state, which effectively controls the land, the capital and the regulatory framework.

Through nominating a citizen to lead a megaproject, the State effectively retains control, as the Arab project Sponsor also controls and manages the terms under which the professional consultancy services are engaged. Foucault (1982) describes how the professional/laity "power relationship" requires a high degree of mutual trust to give this business efficacy.

The added complexity of the social/cultural interface with Western consultants arises from differing belief systems, social and cultural norms, rules, and traditions governing status, interpersonal conduct and business relationships**.**

Culture. One of the fundamental problems with cultural studies is the diversity and complexity in interpreting the term "culture". Different meanings and interpretations can vary extensively from an "appreciation of classical music" (Kendall, Gavin, & Wickham, 2001), to a more relevant application for this research, such as the "deep-rooted beliefs and core values of individuals and nations" (Hofstede, Pedersen, & Hofstede, 2002). However, even expert

anthropologists describe the concept of culture as “fuzzy” (Schein, 2004) and as a “complex and inconsistent phenomena” (Alvesson, 2002).

This lack of clarity has a direct impact on attempts to measure national culture. Anthropologists suggest that national culture can be measured by examining its core elements, such as symbols, rituals or values (Hofstede, 2018). Different anthropologists use different descriptors such as “cultural dimensions” (Smith, Dugan, & Trompenaars, 1996) “cultural values” (Schwartz & Sagiv, 1995) or “cultural characteristics” (Spony, 2014), using the sum of these attributes to form a national culture.

Once all dimensions (or equivalent) are identified, they can be combined, often using a bespoke set of calculations, to provide a numeric value for a nation's culture (Hofstede et al., 2010; Smith, Peterson, & Schwartz, 2002; Spony, 2014). These numeric values can permit comparisons to be made between different nations.

Dimensional approaches can only work if one believes in the reliability and appropriateness of a universally accepted mechanism for measuring national culture. Those working in the field often appear more inclined to support the findings of their own researched dimensions (Hofstede, 1991; Koopman et al., 1999; Schwartz, 2012). Some consider that culture cannot be measured as it arises from “an intangible construct” both “unmeasurable” (McSweeney, 2002; McSweeney, 2013) and “artificial” (Tsui, Nifadkar, & Ou, 2007).

Anthropological perspectives. Culturologists tend to concentrate on two leading research pathways, either at a holistic national level or a more focused study for particular cultural facets. Schwartz (1999, 2012) focuses on studying individual behaviour, with his “theory of basic culture values”. His interests include attitudes towards “religiosity and emotion regulation” (ResearchGate, November 2019). Trompenaars and Woolliams (2006) view culture as a means of achieving global competitive advantage and GLOBE, (2004) considers culture to advance international leadership skills. Hills (2002) reviewed some of the earlier

concepts of culture, including Kluckhohn and Strodtbeck's (1961) Values Orientation Theory finding "universal cultural values" through interpreting the "culture" of itinerant Navaho, Mexican-Americans, Texan homesteaders, Mormon villagers and Idohow Indians, forming "orientation profiles".

Chapter Four discusses the extensive nature and interests of cultural studies to date. This thesis mostly considers national culture and examines supranational factors, including the relevance of professional and organisational culture[15] (Karahanna, Evaristo, & Srite, 2005). Supranational considerations include the impact of migration and immigration factors (Waisfisz, 2015) or concerns by Fog (2019) who argues that war, peace or political unrest, strongly influence a nation's culture. Inglehart (2018) suggests an imminent cultural uprising is developing throughout the globe.

National culture research has evolved since Hofstede popularised the topic in the 1980s (Beugelsdijk, Kostova, & Roth, 2017; Venkateswaran & Ojha, 2019). Hofstede's 'Exploring Culture' uses storytelling to demonstrate cultural differences. These examples made cultural studies more popular and set the scene for more complex discussions on culture measurement, its attributes and dimensions (Hofstede, Hofstede & Pedersen, 2002). Hofstede labelled national culture as "software of the mind"[16]and provided a "dimensionalist framework" to measure and compare culture. Hofstede's separation of personality and cultural issues in Figure 2.3.

[15] Western consultants' professionalism and the standards of expertise expected from professional consultants working on megaprojects are considered, in addition to the Western consultants' organisational culture. Professional and organisational culture are discussed further in Chapter Nine.

[16] Published in 1991 and revised on several occasions. The Hofstede Institute currently endorse the third edition Hofstede et al., (2010).

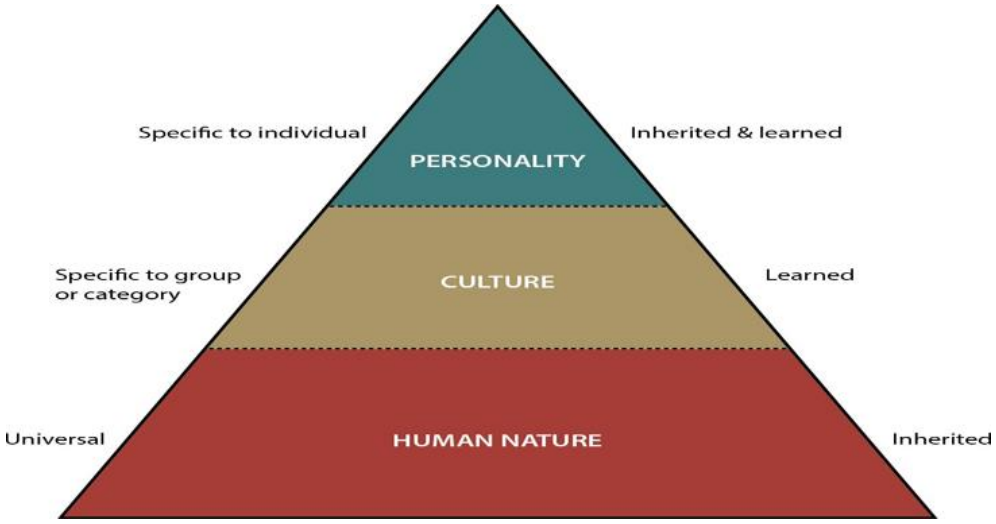


Figure 2.3. Differences between Personality and Culture (Hofstede, 1991)

Hofstede (2020), is one of the most frequently cited anthropologists, and his framework is commonly used to describe differences in national culture (Venkateswaran & Ojha, 2019). Notwithstanding his research's popularity, Hofstede's works receive as much criticism as it does support. Fougère and Moulettes (2004) suggest that his study is only relevant to Western societies and not applicable to the "backward rest". Others contend (with varying forms of statistical evidence) that his research findings are outdated (Minkov, 2018; Vas Taras, Piers Steel & Taras, 2016; Venaik & Brewer, 2016a). Some focus on specific components of his dimensional framework, such as Long Term Orientation (LTO), describing it as an "inaccurate and unrealistic dimension" (Fang, 2003). There are calls to abandon Hofstede's framework (Venkateswaran & Ojha, 2019) or update his works with more contemporaneous data, such as the World Values Studies (Beugelsdijk & Welzel, 2018).

All frameworks are considered to have flaws, such as capturing data (Devinney & Hohberger, 2017) or the use of antiquated data (Kirkman, Lowe, & Gibson, 2006, 2017). Both the reliability and credibility of the more popular culture frameworks are presented in Table 3.2. Researchers also identify errors with the application of a Likert scale to capture data (He

& Van De Vijver, 2012), with bias (Minkov, 2018) or with equivalency issues (Taras, Rowney, & Steel, 2009).

This research considers that there is no best-fit model for accurately measuring national culture and the phenomenon of measuring a national culture will perhaps remain a “black box” (Shenkar, 2001), while researchers select models from the 180 plus cultural measurement models (Taras et al., 2009). The research acknowledges that while the concept of national culture is credible, seeking a scientific measurement for each nation's culture appears unresolved to date and that further pursuit of a best-fit cultural measurement model will not further the research objectives of this thesis.

There are other approaches to assessing culture than the use of quantitative dimensional models. Cross-cultural researchers such as Meyer (2014) have developed a more qualitative “culture map”. Qualitative approaches compare factors such as communication styles, leadership attitudes or even such mundane issues as punctuality. Moran, Harris and Moran (2011) provide cross-cultural recommendations, such as how to transition through culture shock, identify cultural taboos and so-called “observable” cultural behaviours. Lewis (2016) offers international business leaders’ advice to reduce cultural ethnocentricity by dropping an “us” and “them” mindset. His cross-cultural research divides the world into linear, multi-linear[17] or reactive “cultural societies”. Lewis interprets multilinear activity as engaging simultaneously in multiple tasks, and that punctuality is not a critical factor. Table 2.2 identifies several primary types of research which addresses some of the qualitative characteristics commonly associated with Arab culture.

Table 2.2.

An Identification of Arab Characteristics

[17] Arabs into a ‘multilinear’ category.

Year	Arabic Focused Research	Author	Identified Arabic Characteristics
2012	*Towards better Understanding of Arabian Culture*	Jarrah	Arabs are religious, loyal, trustworthy, traditional and honest.
2016	*When Cultures Collide*	Lewis	An Arab is a good Muslim, believes in unity, sincerity, morality and teamwork.
2013	*The Culture Map*	Myers	Arabs have a high-context role, are relationship-driven and avoid confrontation.
	Specific GCC Focus		**Verified GCC Characteristics**
2014	*Expatriate Adjustment in the GCC*	Al Mazrouei & Pech	Leave questioning to juniors, consultative style, polite, do not directly refuse requests, have a different time concept, take time to build trust and can be offended easily.
2013	*Cross-cultural Project Management in the GCC*	Adair	Arabs are poor timekeepers, do not like uncertainty, make silent gestures, rely on trust and value personal relationships.
2018	*Adjustment of Western and Non-Western Expatriates*	Al Mahrouqi	Arabs are family orientated and operate within a high context society, collectivist, hospitable and honourable.
Sources	(Al Mahrouqi, 2018; Al Mazrouei & Pech, 2014; Jaeger & Adair, 2013a; Lewis, 2016; Meyer, 2014; Obeidat, Shannak, Masa' deh, & Al-Jarrah, 2012)		

Table 2.2 provides various researchers' high-level observations for Arab culture, its norms and its customs. While these qualitative researchers may suggest Arabic traits or cultural characteristics, the findings are quite generic. Minor (1999) suggests that while such generic cultural advice can be somewhat useful, it is too abstract to capture specific practices and cultural requirements. Tracey (2020, p. 101) cites Brannen's assertion that national culture is best understood by examining "multitextured, locally informed contextually sensitive perspectives" of those immersed in the culture setting. Chapters Seven through to Twelve provide Western consultants' perceptions about the more specific cultural challenges they encounter during a GCC megaprojects' execution.

Cultural differences and dissonance. Studies consider how Western nations need to be mindful of cultural differences in global regions, such as Asia where the Eastern

construction management style can differ significantly from Western norms (Webb, 2015). This thesis identifies and explores both causes and impacts of cultural dissonance between Arab and Western project directors during a GCC megaprojects' execution. The findings informed cases where cultural conflict causes an unrecoverable breakdown in trust between the individuals involved. This dissonance has resulted in the project directors' termination from the megaproject and occasionally from the GCC State itself.[18]

Factors associated with "expatriate failure" are well researched; they include difficulties with integration (Cole & Nesbeth, 2014; Kumarika Perera, Yin Teng Chew, & Nielsen, 2017), resultant staff retention issues (Nowak & Linder, 2016; Waxin, 2004) and the company's psychological obligations to the employee (Black & Gregersen, 1999; Harrison & Michailova, 2012). Many suggest that cross-cultural training may reduce staff turnover (Kiisk, 1998; Nowak & Linder, 2016; Collings, 2014) and specific GCC research for the UAE (Al Mazrouei & J. Pech, 2014) and Oman (Ertek & Tahir, 2017), link a lack of cultural awareness training with high GCC churn, as discussed further in Chapter Seven .

Construction-specific culture studies in the GCC. GCC-based research identifies cultural issues between Arab and Western nationals across different industries. Construction focused research such as Haak-Saheem (2016) found cultural clashes with a Western approach to public-private partnerships. Al-hashemi (2016) found that a Western management style failed during attempts to reorganise Kuwait's construction industry. Bakhtari (1995), Chapman (2004) and Jaeger and Adair (2013) discussed in later chapters, describe how typical Western management approaches may not succeed in the GCC. Alkharmay (2017) found that Arabic culture contributed to delays in project completion in Saudi Arabia and Sallam (2018) found

[18] Most of the GCC states require the expatriate to leave the State within 30 days of cessation of employment. The findings are detailed in Chapter Seven and Ten.

that cultural differences reduced the impact of introducing the project management body of knowledge guidance for project management techniques in Saudi Arabia and Kuwait.

Megaprojects. Historic "mega" projects are cited as including constructing the Great Wall of China or Egypt's pyramids (Pitsis, Clegg, Freeder, Sankaran, & Burdon, 2018) and have attracted considerable academic interest since the turn of the century. Megaprojects also attract publicity as they are frequently in the public eye, due to their vast expenditure and often their use of public funds and expected use by the public. Flyvbjerg (2017b), has coordinated the research findings of 43 active megaproject researchers, to create the *Oxford Handbook of Megaproject Management*. This handbook aims to identify the attributes and features typically present in a megaproject. Each chapter looks at differing characteristics, the titles of which are often self-explanatory, such as "Megaprojects as Games of Innovation" (Chapter 10- Roger Miller, Donald Lessard, and Vivek Sakhrani) where the use of the latest technology is adapted during the execution of the megaproject or "Power and Sensemaking in Megaprojects" (Chapter 11- Biesenthal, Clegg, Shankar Sankaran), where the more dominant stakeholders exert greater influences on the project's execution.

In Europe, a working group has been established to examine if megaprojects can be designed and delivered more effectively within the European Union (Barbero & Redi, 2015). Megaproject research is intensifying,[19] perhaps fuelled by more significant stake and risks. Megaproject researchers now suggest a maturity in terms of megaproject research instead of "project research". It has been suggested that "classic" megaproject texts exist, as cited in Table 2.3 (Flyvbjerg & Turner, 2018; Li, Lu, Taylor, & Han, 2018; Siemiatycki, 2018).

[19] Research by Pitsis et al., (2018) identified that articles containing the word 'megaproject' increased from 400 articles in 2011 to 1,800 by 2016.

Table 2.3

Classic Megaprojects Texts

No.	Authors	Title
1	Flyvberg, Holm and Buhl, 2002	*Underestimating Costs in Public Works Projects: Error or lie?*
2	Pickrell, 1992	*A Desire Named Streetcar: Fantasy and Fact in Rail Transit Planning*
3	Pitsis, Clegg, Marosszeky and Rura-Polley, 2003	*Construction the Olympic Dream: A Future Perfect Strategy of Project Management*
4	Hall, 1980	*Great Planning Disasters*
5	Miller and Lessard, 2000	*The Strategic Management of Large Engineering Projects: Shaping Institutions, Risk and Governance*
6	Stinchcombe and Heimer, 1985	*Organisation Theory and Project Management Administering Uncertainty in Norwegian Offshore Oil*
7	Kahneman and Lovallo, 1993	*Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking*
8	Flyvberg, Bruzelius and Rothengatter, 2003	*Megaproject and Risk: An Anatomy of Ambition*
9	Lovallo and Kahneman, 2003	*Delusions of Success: How Optimism Undermines Project Directors' Decisions*
10	Miller and Lessard, 2001	*Understanding and Managing Risks in Large Engineering Projects*

Source: *Flyvbjerg & Turner (2018)*

The texts identified in Table 2.3 mostly represent a review of challenges found in individual megaprojects studies. These texts more frequently consider significant time and cost overruns, reporting on frequent over-optimistic completion targets, failures to account for the sources of risks which impacted their planning or execution and discuss how management and governance challenges are continuously underestimated.

Some researchers have studied megaproject characteristics, particularly those that may hinder its execution. Mišić & Radujković (2015) considered critical success factors for performance, such as excellent coordination, constant monitoring, and higher management involvement at all delivery stages. Conversely, they identify failure factors such as over-optimisation and bureaucracy. A McKinsey & Company report (Garemo, Matzinger, Palter, & McKinsey, 2015), appropriately titled *Megaprojects the Good the Bad and the Better*, highlights financial and long term social concerns during the construction of megaprojects.

Di Maddaloni & Davis, (2017); Jia, Yang, Wang, Hong, & You, (2011) and Pitsis et al., (2018) identify social and community concerns for the impacts of large megaprojects. Jaeger and Adair, (2013b), Mok et al. (2015) and Perspective, Lundrigan and Gil, (2015) examined megaprojects from an organisational perspective, finding them hard to control due to their significant organisation size, control and bureaucratic matters. Struggles and Heidrick (2015) find recruitment difficulties in recruiting leaders to manage megaprojects. A thematic analysis of frequently explored megaproject characteristics is provided in Table 3.3, identifying 72 characteristics. Following a thematic analysis of these characteristics, four central recurrent themes emerge:

- Time and cost characteristics
- Stakeholder influences
- Leadership requirements
- Extreme levels of risk

Time and cost characteristics. Flyvberg frequently uses language intended to provoke a reaction, which includes “Cost Underestimation; Error or Lie” (Flyvbjerg, Holm, & Buhl, 2002) and suggests that a megaproject’s costs are deliberately underestimated for apparent political gains. He provocatively titled another paper, *The Majority of Forecasters are Fools or Liars* (Flyvberg, 2012). In this paper, Flyvberg suggests the falsification of cost estimates,

to gain approval to undertake the venture without recognising the real costs. Flyvberg, (2017) proclaims an “Iron law of megaproject management”, which states that megaprojects are over time and budget in 90% of cases suggesting a “hiding hand principle” (Flyvbjerg, 2016) is adopted to exaggerate megaprojects benefits and underestimate the costs.

The researcher has been involved in megaprojects' financial analysis for the last three decades and feels obliged to clarify that a degree of practical experience is required to evaluate the megaprojects' financial costings accurately. Those less familiar with megaprojects' finances, and the valuation of changes, may find the process challenging.

Flyvberg’s research has also been criticised as misleading and misrepresentative on several occasions. Some researchers claim that he has misinterpreted financial data and sensationalised his reports (Ika, 2018; Lepenies, 2018; Love, Ika, & Ahiaga-dagbui, 2019; Room, 2018). In retort, he dismisses such responses as “statistical noise”, suggesting the answer was prepared by people who “do not understand statistics” (Flyvbjerg et al., 2019).

Stakeholder influences. Eweje, Turner and Müller (2012) found that megaprojects typically receive more investment, have greater complexity, involve many stakeholders, and have more extensive influences than “regular” projects.[20] Stakeholder management is becoming an increasingly researched risk (Dyer, 2017; Mok et al., 2015; Rafindadi, Mikić, Kovačić, & Cekić, 2014), exaggerated by funders demanding more significant controls (Hillson, 2018b). There are suggestions that stakeholders or promotors, particularly in public megaprojects, adopt a “systematically, and significantly deceptive” approach which promotes unviable megaprojects due to political reasons, economic self-interest or the building of a legacy monument (Flyvbjerg, Holm, & Buhl, 2002, p. 290)

[20] Researchers suggest that there is more to a megaproject than simply size and finance, suggesting that there are multiple problems and unpredictable interactions between a megaprojects characteristics ‘linked to economies of scale and investment fragility’ (Ansar, A., Flyvbjerg, B., Budzier, A. & Lunn, D., 2016; Flyvberg, 2017).

Leadership challenges. Mišić and Radujković (2015b) found that the most senior person within the organisation usually requires exceptional leadership and management skills to deliver these large, complex and challenging ventures. Kardes, Ozturk, Cavusgil and Cavusgil (2013a) also highlight a need for extensive professional and field-related experiences. Megaproject leadership requires the project leader to demonstrate strong business acumen, be well versed in the construction industry and usually to have the specific knowledge necessary for the appropriate type of megaproject. These criteria depend on the project's specialist requirement, social, political, and regional needs. In Flyberg's words (2014), if the project leader of a conventional project requires "the equivalent of a driver's license to do what they do, then managers of megaprojects need a pilot's jumbo jet license".

Risk in megaprojects. Established construction industry-related risks include tight margins, a lack of resources, labour materials and shortages and a reputation for disputes (Egan, 1998; Foxwell, 2019; Latham, 1994). Cooke-Davies (2002) suggests that megaprojects are not merely the upsizing of risk from smaller construction project risks. Megaprojects have a more extended project and product life-cycles and are as a result "significantly less predictable in terms of time and scope". Megaprojects also demand substantial irreversible commitments, have high probabilities of failure, and a "skewed reward structure" (Miller and Lessard, 2000). Flyvbjerg, Bruzelius and Rothengatter (2003) describe a megaproject as an "Autonomy of Risk and Ambition" almost two decades ago.

Irimia-Diéguez, Sanchez-Cazorla and Alfalla-Luque, (2014) performed a meta-analysis for studies related explicitly to risk management megaprojects, which confirmed the dominance of studies pertaining to time and cost risks (mainly drawing on papers by Flyvberg). The criticality of a particular megaprojects' financial success, such as the Panama canal, Hong Kong's MTR or Dubai Airport, cannot be underestimated, as the financial exposure can be so significant that failure can lower the country's GDP (Garemo et al., 2015). However, it is

essential to understand that while they found that large volumes of research concerning time and cost studies, they also identified other critical risks including social risks, stakeholder risks and cultural issues. Identifying megaproject individual risk characteristics is one of the first steps in proposing suitable risk mitigation measures (Newell, 2003).

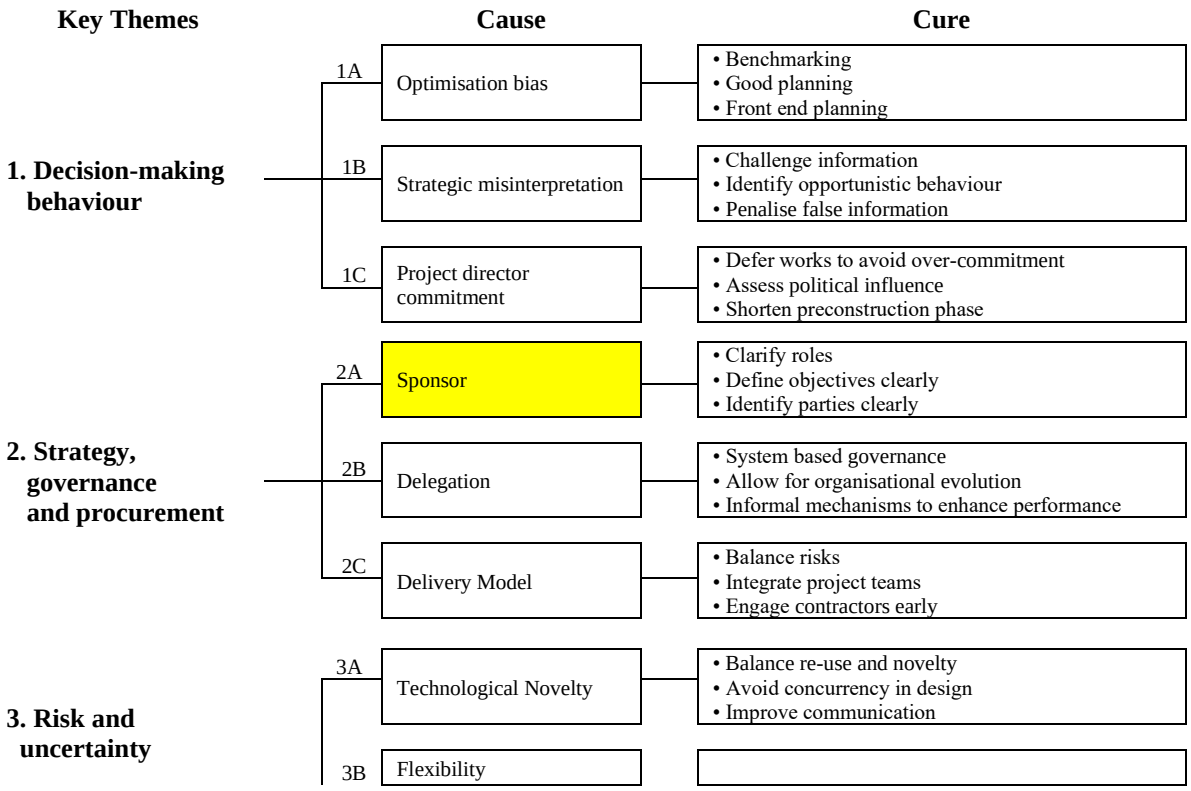
Cultural risk in megaprojects. This thesis explores cultural risks during the execution of GCC megaprojects. Smits, van Marrewijk, (2014); van Marrewijk, (2007); Van Marrewijk, Veenswijk and Clegg, (2014) and van Marrewijk et al., (2016) have found that cultural dissonance between a megaprojects' key actors disrupted the megaprojects execution. Cultural conflict has been identified in megaprojects such as the Panama Canal expansion, the OMEGA megaproject in France (a French high-speed rail system), Eclipse (a network associated management of large infrastructure projects in Europe) and Nabucco (a 1,300 km pipeline through Turkey, Austria, Bulgaria, Romania, and Hungary). The studies identify how cultural acceptance and trust are critical factors for completing megaprojects (Rafindadi et al., 2014; Suprapto, Bakker, Mooi, & Hertogh, 2016; Van Marrewijk et al., 2014). Biesenthal, Clegg, Mahalingam and Sankaran, (2018); Smits and Brownlow, (2017) and van den Ende and van Marrewijk, (2015) express how that cultural tensions amongst the management team are a significant risk that requires "special consideration" and management throughout the lifecycle of the megaproject.

Merron (1988) found that cultural factors contributed to a megaprojects' failure, while strongly recommending that cultural risk is considered in all future megaprojects. Van den Ende and van Marrewijk, (2015) show different forms of cultural risks, including differences in national culture, organisational culture or professional culture, as they suggest that megaprojects are "cultural phenomena". This thesis focuses on cultural risk exposure in the GCC.

Mitigation of megaproject risk. Research suggests that construction risks are best addressed considering "probabilities derived from both observation and past experience" (Walker & Greenwood, 2002, p.776). This thesis combines the project directors' findings with appropriate megaproject risk management studies.

Denicol, Davies and Krystallis (2020) provide an updated meta-analysis (March 2020) of over 6,000 articles related to megaproject risk management. They identified the causes and cures (risk mitigation strategies) for managing these risks. They group risk management under six major themes: 1. decision-making behaviour, 2. strategy, governance and procurement, 3. risk and uncertainty, 4. leadership and capable teams, 5. stakeholder management and 6. supply chain integration, which shall be discussed in greater detail in Chapter Nine.

A synopsis of this research is presented in Figure 2.4.



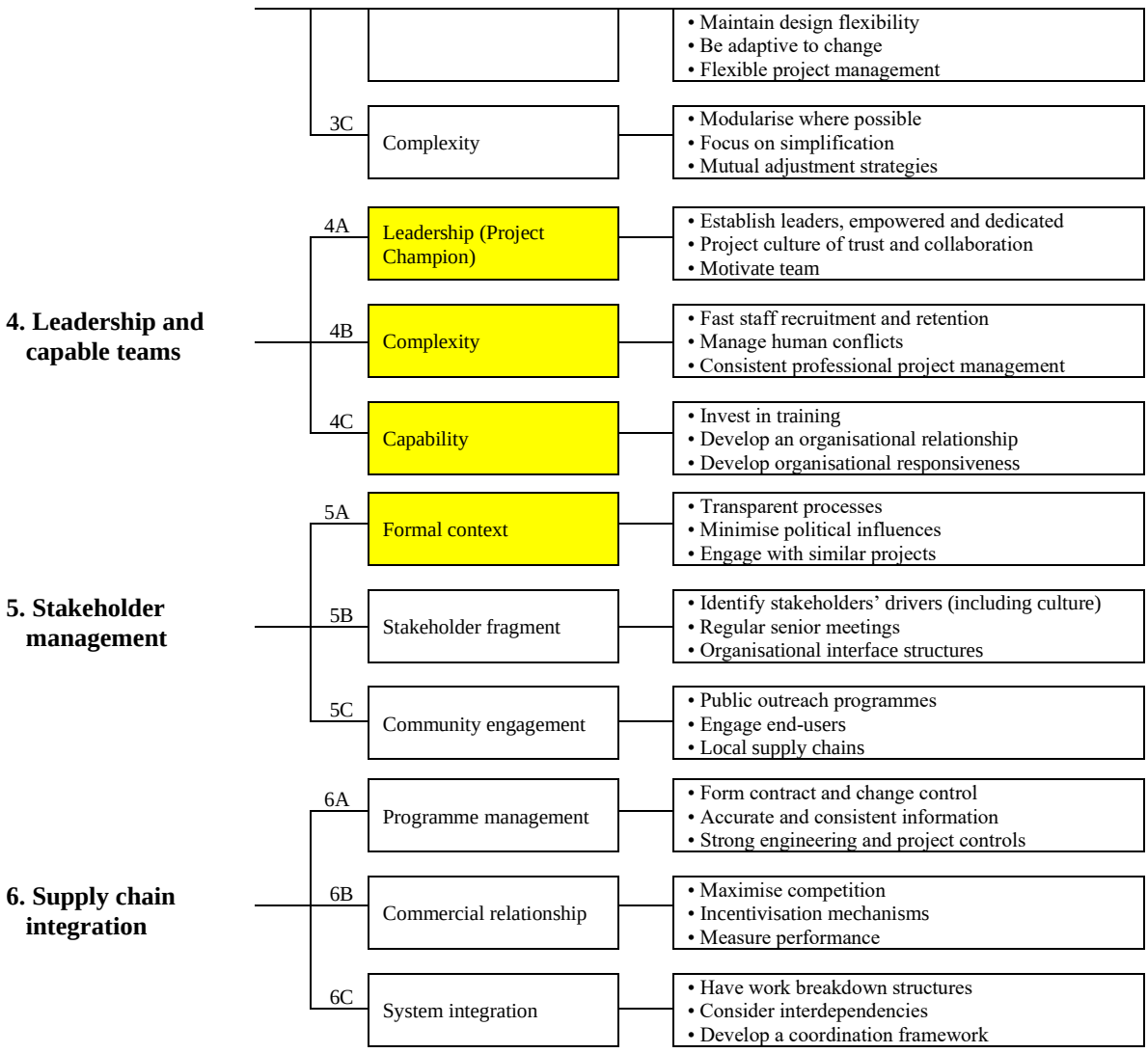


Figure 2.4. Causes and Cures of Megaproject Risk (Denicol et al., 2020).[21]

The relevance of megaproject risk findings to the GCC. There is limited research that explicitly addresses GCC megaprojects. Johnson and Babu (2018) and Mahdi and Soliman (2018) have discussed the causes of cost and time overruns in GCC megaprojects. Both studies applied qualitative analysis to high-level data from local consultants. However, these studies appear limited by a lack of independent financial verification.

[21] The risk characteristics that are most likely to be impacted by cultural issues are identified in yellow in Figure 2.3.

This thesis's introductory chapter informed how the GCC states are heavily reliant on a multi-cultural workforce and generally engage Western consultants[22] to provide construction consultancy services. GCC megaprojects appear more exposed to cultural risk, as a by-product of this dynamic mix of nationalities both in Western consultancy practices and through the workforce[23] (El-sabek, 2017; Zein, 2016b). This thesis shall gather the perspectives of project directors currently engaged in GCC megaprojects and then appraise and explore the impact of cultural risk.

Chapter Summary

The rationale for this research project is to consider the influences of national culture on Western consultants actively managing GCC megaprojects. Western consultants become exposed to different Arabic cultural influences during the exertion of their professional duties.

The initial literature review first carried out in April 2018 and repeated in January 2020 found that few studies are relevant to studying cultural influences in GCC megaprojects (or megaprojects). Individual searches were undertaken for GCC, culture, megaprojects and megaproject risk, before applying context to these studies from multiple fields and then re-assembling (Mills, 1959) the research findings. The literature review combines very different fields of study, ranging from national culture to considering cultural risks exposed through megaproject case studies (Smits & Brownlow, 2017; van den Ende & van Marrewijk, 2015; van Marrewijk et al., 2016).

The field research also exposed additional supplementary strands of research, in specific specialist areas, such as studies on Western acculturation and the “time to proficiency” abroad (Waxin, Brewster, Ashill, & Chandon, 2016; M. Waxin, 2005; Waxin, Brewster, & Ashill, 2019), or the influences of family on a project directors tenure (Cole & Nesbeth, 2014; L. Y. Lee & Kartika,

[22] There were 397 separate consultancy commissions in 2018, please see Appendix 1.
[23] Table 1.2 highlights the volumes of expatriates.

2014; Naeem et al., 2015).

Researching the GCC's history and development, informed an understanding of its turbulent history, geographical boundaries, and economic transformation due to the discovery of substantial oil and gas reserves. Cultural research attempts to define culture and measure its components, focusing on national culture. It also identified relevant GCC studies, such as business development or multi-national enterprises' entrance to the market.

Megaproject research has significantly evolved over the last 20 years, aided by dedicated bodies, such as the COST Working Group, (2015) or the International Centre for Complex Project Management in Australia. The suggested existence of classic megaproject texts indicates that megaproject research is maturing (Flyvbjerg & Turner, 2018; Pollack, Biesenthal, Sankaran, & Clegg, 2018). Megaprojects studies tend to be conducted at a project level or seek to examine individual characteristics. Typically, these characteristics include time and cost management, controlling stakeholders, team governance and leadership. Large volumes of risk have been identified for megaprojects to date, with emphasis on financial risk. The lack of research into cultural issues to date helps to focus the need for additional research. Furthermore, there is a noticeable shortage of publicly available research which explores the execution of GCC megaprojects.

National culture measurement is highly debated, resulting in no precise best-fit theoretical framework to apply to this research. While some researchers have investigated the influence of national culture on megaproject delivery, few studies attempt to measure cultural dissonances' impacts. The lack of evident research suggests that grounded research may be required to provide empirical research to understand the influence of national culture and consider Western consultants’ perceived realities of how national culture may influence their daily professional interactions during the execution of GCC megaprojects.

The conclusion drawn from this literature review is that a more nuanced and interpretive

approach may be required (through adopting Constructivist Grounded Theory techniques) to explicate fresh understanding of Western consultants' potential impacts, which may arise due to cultural dissonance.

Chapter Three - Conceptualising Megaprojects and their Risks

Introduction

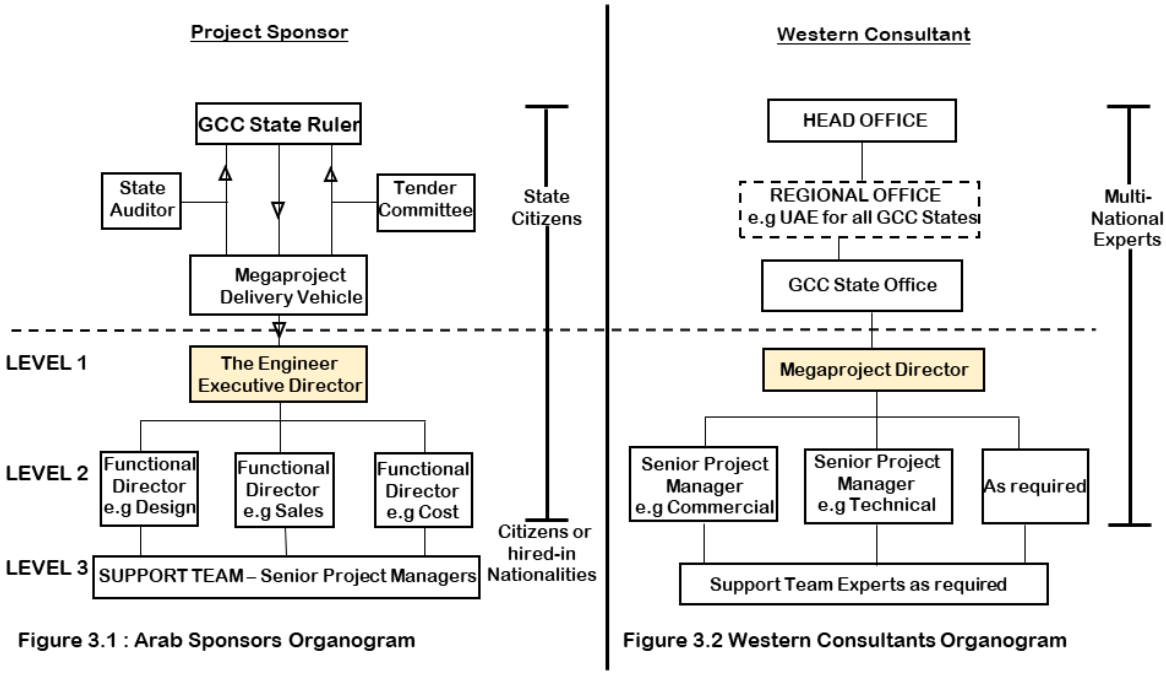
Megaprojects are often described as large-scale, complex ventures, typically with a cost of one billion US dollars or more (Capka, 2004). The size and willingness to undertake megaprojects have evolved considerably, and they are frequently in the public eye, due to their vast size and expenditure and their frequent use of public funds. Financial exposures can impact the country's GDP (Garemo et al., 2015). The value of megaprojects is increasing, as demonstrated by one recent Saudi Arabian project, NEOM, which is forecast to have a capital cost of US $500 billion (GSR news, 2017). Some megaprojects' increased values have resulted in upgraded titles or categorisations, to “Giga” or “Tera” projects (Flyvbjerg, 2014).

In principle, megaprojects take many years to develop (Flyvberg, 2017), carry high levels of risk (Davies, Dodgson, Gann, & Macaulay, 2017), involve multiple public and private stakeholders (Mok et al., 2015), are transformational and impact millions of people (Pollack, Biesenthal, Sankaran, & Clegg, 2018a). Megaprojects have been described as the “wild beasts” of the construction industry (Zidane, Johansen & Ekambaram, 2013), and owing to their unpredictable nature and were once considered as “privileged particles” of the development process (Hirschman, 1995 pp. vii-xi). The level of risk associated with megaprojects grows, as their outcome becomes ever more critical and more complex as their scale expands (Flyvberg, 2017; Hillson, 2018b). The main research question explores how the critical relationships between Arab project Sponsors and Western consultant representatives, national culture differences may influence a GCC megaprojects' execution.

Research context. GCC nations prolifically procure megaprojects for a wide range of interests including recent attempts to diversify their economies to become less dependent on

oil and gas reserves.[24] These range from power and water plants, oil and gas delivery and the generation of new cities to potential tourist resorts. Most GCC megaprojects are state-funded, which significantly reduces the number of interfaces with project stakeholders.[25]

Chapter Four discusses how cultural dissonance may occur between actors from different countries, commensurate with their different beliefs and customs. This research examines Arab -Western relationships during the execution of GCC megaprojects. The GCC states typically appoint one of its citizens[26] to lead the megaproject (the engineer in Figure 3.1). This thesis is most concerned with the actors most actively engaged in the megaproject's delivery (level one and level two positions in Figures 3.1 and 3.2).



Source: Author 2021

[24] As detailed in the *Megaproject Report* (Appendix One).
[25] The reduced number of stakeholders should reduce the approvals process, experience suggests that interdepartmental politics can also play a role in GCC megaprojects.
[26] Often limiting this power by imposing a financial expenditure ceiling and putting in place approval committees to oversee and approve additional expenditures or deviations from the scheme.

Megaproject Characteristics

Public interest has contributed to growing volumes of research, dedicated either to megaprojects as an entity (Biesenthal et al., 2018; Garemo et al., 2015; Merron, 1988) or for their characteristics (Ma, Zeng, Lin, Chen, & Shi, 2017; Pitsis et al., 2018). Megaproject characteristics frequently examined include their lengthy construction periods, high costs or significant environmental impacts. Syn and Ramaprasad, (2019) suggest that a systemic framework can provide a "big picture" to frame megaproject research[27] and perceive that the lack of a holistic study creates a significant risk of bias in the characteristics being researched. It is also becoming more frequent to see meta-analysis performed for overall megaproject characteristics, for example, Eweje, Turner and Müller (2012), Mišić and Radujković (2015), Pollack (2018), Garemo, Matzinger and Palter (2015) and Flyvberg (2017) in Table 3.1 and mapped in Figure 3.3.

Table 3.1

A synthesis of megaproject characteristics

Year	Focus of Research	Characteristics Identified	Nr
2012	Maximising strategic value from megaprojects -Eweje, Turner and Müller, (2012)	Conflict management, government influence, community management, JV management, HSE issues, location issues, project governance, local policies, core team and multicultural leadership	10
2013	Megaprojects - Challenges and Lessons Learned (Zidane et al., 2013)	Size, cost, time, success, complexity, singularity, stakeholders, uncertainty, implementation owner and knowledge	11
2015	Megaprojects: The good, the bad, and the better - McKinsey & Company (Garemo et al., 2015)	Over optimisation, over complexity, poor execution and weakness in organisational design and capabilities	3
2015	Critical drivers of megaprojects success	Legal, risk, political and leadership	4

[27] Their proposed framework is the identification of characteristics associated with stakeholders + temporality + translation (lifecycle) + scope + sublime (specific features) (Syn & Ramaprasad, 2019, p. 381)

	and failure - Mišić and Radujković, (2015)		
2016	Assessing Cultural Influences in Megaproject Practices Pau, Langeland and Njå, (2016)	Charismatic leadership, concept incubation, endorsement, governance, team culture, staffing, communication, control, accountability, failure fines, risk, politics, values, stakeholder management, ability to change and the environment	16
2017	The Oxford Handbook of Megaproject Management - Flyvbjerg, (2017b)	Inherently risk, frequently weak leadership, multiple stakeholders, unique projects, over-commitment at initial stages, optimism bias (financially), scope change, “Black Swan” effect (extreme events massively adverse outcomes), inadequate cost and time contingencies and results - cost overruns, delays and benefits shortfalls	10
2018	Applying Institutional Theories to Managing Megaprojects (Biesenthal et al., 2018)	Reach, duration, cost, risk and uncertainties wide, desperate actors, arenas of controversy, legal and regulatory issues, and value destruction	8
2018	Megaprojects redefined – complexity vs cost and social imperatives (Pitsis et al., 2018)	Size, cost, uniqueness, schedule, scope, governance, stakeholders, complexity, risk, and value optimisation	10

Source: Author’s Investigations , (2020)

Several meta-analyses of megaproject characteristics have been published in the last decade. Figure 3.3 maps some of the significant meta-analyses providing a broad picture of delivering megaprojects' uniqueness and complexities.

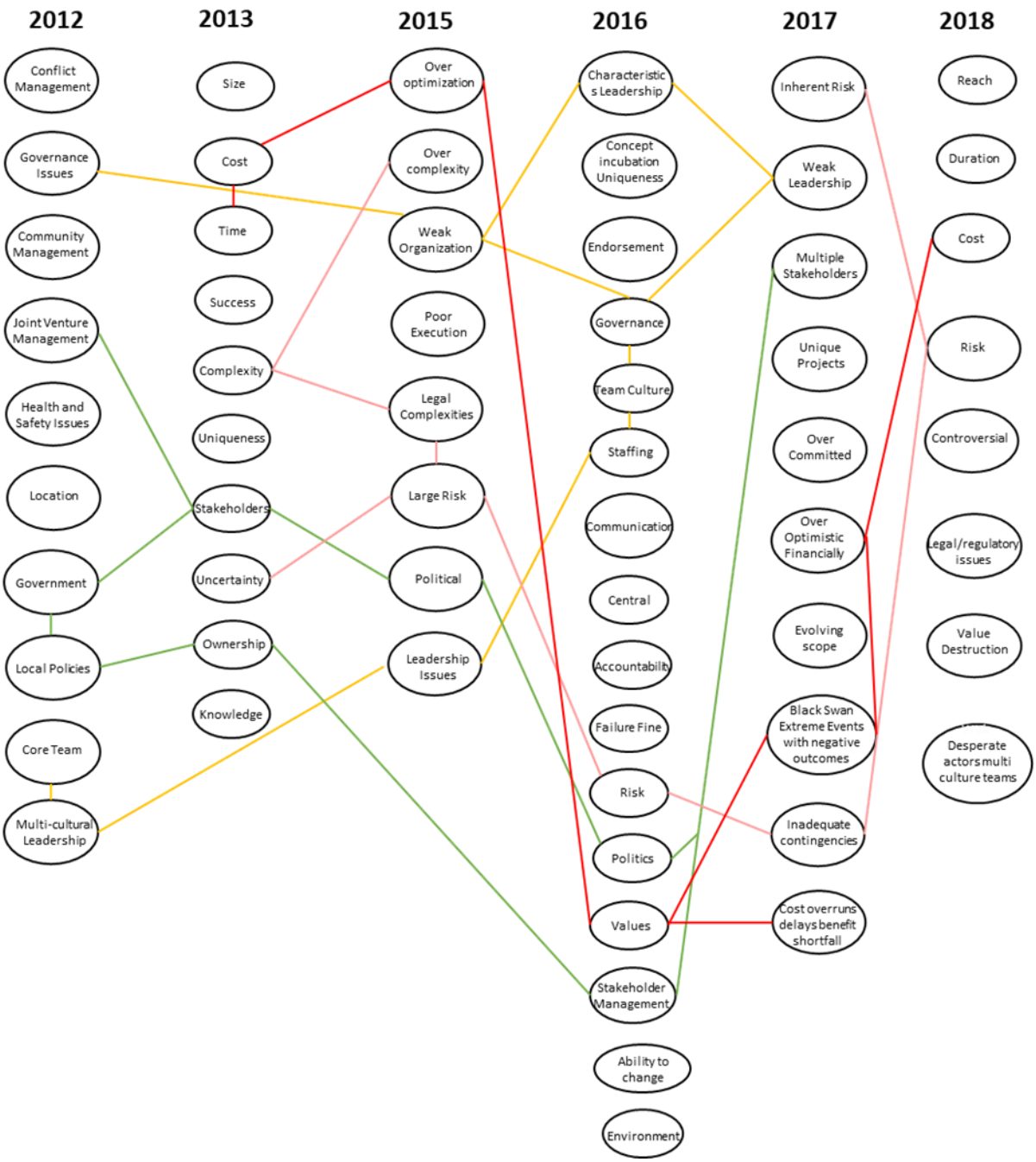


Figure 3.3. Mapping Megaproject Characteristics. Author's Investigations , 2021

The following core themes have emerged from this review: time and cost factors, stakeholder engagement, leadership issues and risk management and there are obvious dynamics and relationships between some megaproject characteristics, such as accountability with public funding.

However, there are difficulties in identifying a universally applicable set of attributes due to each megaproject's bespoke nature. As with other construction projects, megaprojects are performed by temporary coalitions of bespoke sets of stakeholders, contractors, consultants, and other relevant bodies. Most megaprojects are temporary endeavours, frequently five to ten years, which bring together regional expertise for relatively short durations (Brookes et al., 2017) and they are often known for their complexity, singularity and innovativeness (Sydow, 2017). Coalitions for larger megaprojects can exist for more extended periods, often exceeding ten years from inception to completion and in exceptional cases, such as a megaproject to build China's South-to-North Water Diversion (Wang & Li, 2019), a programme duration that spanned up to five decades. Van Marrewijk, Ybema, Smits, Clegg and Pitsis (2016) concluded that megaproject assignments' short-term nature could impact the time needed to form productive relationships.

Megaprojects are also becoming more international due to the participation of sponsors, funders and contractors from multiple countries (Kardes, Ozturk, Cavusgil, & Cavusgil, 2013b), requiring extensive cross-culture collaborations for their execution (El-sabek, 2017).

Jaeger and Adair (2013b), Lundrigan and Gil (2015) and Mok et al. (2015) studied megaprojects from an organisational perspective. Their research infers that as organisations, megaprojects attract a higher degree of complexity due to their vast size, temporary nature, control and bureaucratic issues. These factors lead to unstable organisations, making "collaboration critical, challenging and demanding" in these "one-off indivisible structures under pressure" (Lundrigan & Gil, 2015, p. 32).

Di Maddaloni and Davis (2017), Jia, Yang, Wang, Hong and You (2011) and Pitsis et al. (2018), examine social and community concerns for large megaprojects. Struggles and Heidrick (2015) highlight leadership issues as there are limited numbers of people with the capabilities and experiences required to deliver a megaproject.

Figure 3.3 maps the megaproject characteristics identified in Table 3.1 to identify the more frequently recurring themes. By analysing the collective findings, four core themes emerge. These four themes consider cost and time-related issues, stakeholder influences, leadership or governance issues and the high levels of risk, as synthesised in Table 3.4.

Thematic analysis of the core themes synthesises individual characteristics as follows:

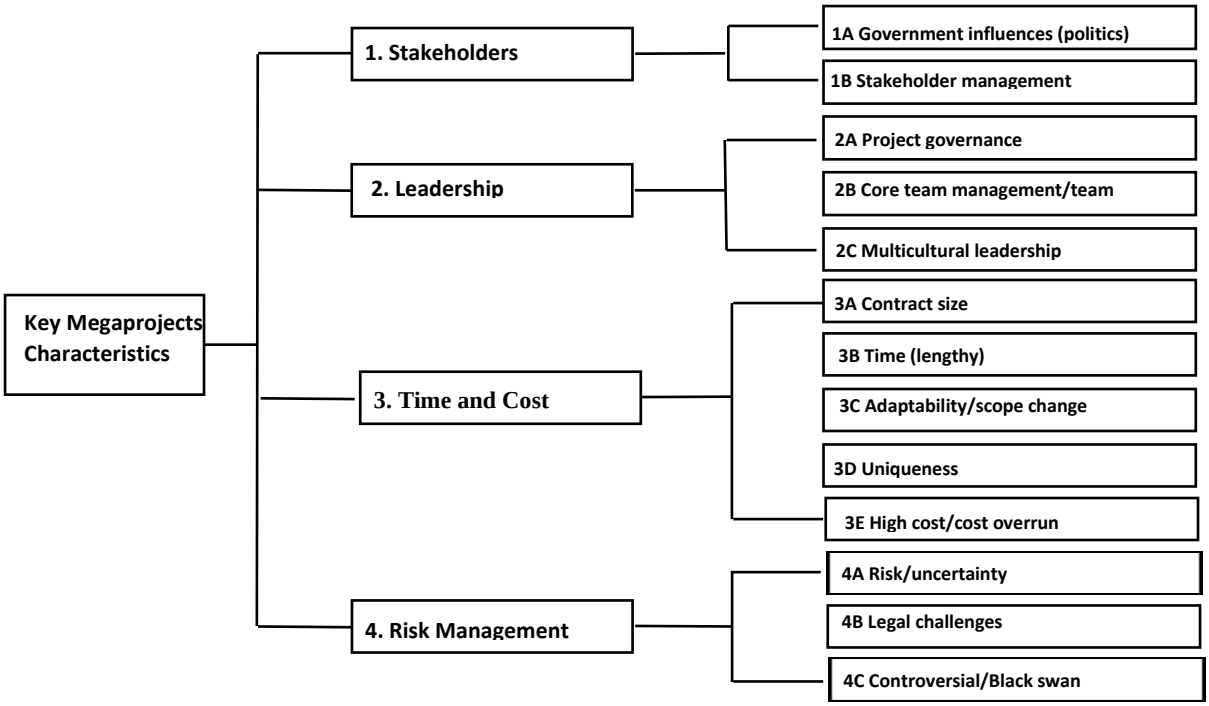


Figure 3.4. Thematic Analysis of Megaproject Characteristics (Author's Investigations , 2021)

As megaprojects are unique, each theme may not be relevant for every megaproject. Figure 3.4 demonstrates some of the many potential pressure points in a megaproject's execution. The four core themes are next discussed in more detail, before being considered in a GCC context.

Core Areas of Research

Theme one – stakeholders. Dyer (2017), Mok et al. (2015), Rafindadi et al. (2014) and others highlight the importance of stakeholder management and find that the high potential rewards associated with mega ventures, often attract significant stakeholder interest. Stakeholders typically include the project funding bodies, end-users, contractors and project

managers, together with their respective project teams and employers. These stakeholders inevitably prioritise their interests, which can lead to a lack of stakeholder congruence. Hillson (2018b) highlights how financial stakeholders are gaining more power, as funders seek to control the project's outcome. Hillson (2016, p.2) also suggests that stakeholders should be ranked by significance depending on their "position to exercise power within the context of a project". The role of the initiating project stakeholder (or Arab project sponsor in a GCC context) is crucial. Flyvbjerg (2014) suggests a "hidden hand" where stakeholders are more motivated by a political "sublime" to erect unviable monuments to help a politician's re-election chances (assuming the project is perceived or portrayed as a success).

Whether a project is deemed successful or a failure is a matter of perception and cannot be generalised due to a projects' uniqueness (Chiponde, Gledson, & Greenwood, 2019; Flyvbjerg, 2018). Completed megaprojects can be seen as successes or failures, irrespective of time or cost overruns as qualitative measures of success, such as the public's reaction to the completed megaprojects, may instead be used to consider the venture successful.

The type of megaproject and level of funding required, to a large extent, dictates the nature and number of stakeholders. In some contexts, public stakeholders such as environmentalists can delay or defer the execution of megaprojects. Erkul, Yitmen and Çelik (2016) identify the large volume of stakeholders impacted by infrastructure megaprojects, including the general public, advisory and public bodies, government departments and affected communities. The nature of stakeholder interests can be far-reaching, for example in Gazprom's 4,000 km Siberian power pipeline the project managers took into account the need to consider its social responsibilities and respect the risks associated with disrupting reindeer hunters (Sidortsov, Ivanova, & Stammler, 2016). It is also suggested that there is a responsibility to consider the whole project lifecycle, to reflect the wellbeing of society as a stakeholder (Ma et al., 2017). Hillson (2016, p. 2) suggests that some of the most significant

risks in megaprojects arise from its stakeholders, as they have the power to significantly disrupt a megaprojects outcome (such as a funder's failure to permit drawdown of funding) noting that they "pose a real risk to projects having a significant effect on whether the project succeeds".

In the GCC context, stakeholders are of lesser significance to GCC megaprojects, as the State is usually the primary stakeholder, providing public funding, control, and strategic decisions as a single entity, thus reducing exposure to divergent interests. Oil and gas income principally fund these megaprojects, and Table 1.1 informed that construction accounts for a significant portion of state spending. The table also shows that Bahrain, Oman and Kuwait, spend less of their income on megaproject construction than Saudi Arabia, Qatar and the UAE, commensurate with their sovereign wealth. Deloitte (2016) estimated the GCC has a US $2 trillion pipeline of projects in planning stages or under construction. In June 2018, 285 megaprojects were recorded at various implementation stages in the GCC (www.constructiononline.com)[29].

Theme two – leadership. Mišić and Radujković (2015b) find that cohesive group performance and exceptional leadership and management skills are required to deliver these large, complex and challenging ventures. The project leader is required to demonstrate strong business acumen, be well versed in the construction industry, and usually have the specific knowledge necessary for the appropriate type of megaproject. Flyberg (2014) highlights how managers of megaprojects need exceptional piloting skills. Kardes, Ozturk, Cavusgil and Cavusgil's (2013a) research finds that a healthy collaborative spirit is needed if the megaproject is to succeed.

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[29] Details of GCC megaprojects can be found in Appendix One.

In addition to individual leadership requirements, research has often considered the organisational leadership required for megaprojects. Perspective et al. (2015) studied three significant UK megaprojects organisations: the expansion of Heathrow Airport's T2 terminal, the Olympic Village and Crossrail. They suggest that underperformances in these case studies were not cost-related, but attributable to an inadequate organisational structure, considering such megaprojects as "structures under pressure" (Lundrigan & Gil, 2015, p. 32). In Chapter Five, a pilot study demonstrates the size of the teams' required for Western consultants to manage GCC megaprojects. This pilot case study had three supporting teams, providing different expertise, yet performing as one organisational unit to manage the overall execution.[30]

In the GCC context, one of the most critical challenges associated with a megaprojects' execution is the successful management of multi-cultural teams in the GCC. Struggles and Heindrick (2015) highlight challenges in integrating and uniting these culturally diverse groups. GCC consultancy practices are formed from an extensive gathering of culturally diverse hired experts from a pool of highly qualified resources worldwide (Archibald, 1991; Dulaimi, & Hariz, 2011; El-sabek, 2017). Within the GCC, individual states' reliance on expatriates, ranges from 32% in Saudi Arabia to 80% in Qatar, (December 2018). Beugelsdijk, Maseland and van Hoorn (2015) find that cultural distance between the actors heightens cultural tensions, in what Zein (2016) describes as "cultural soup". Karacay, Bayraktar, Kabasakal and Dastmalchian (2019) use the concept of cultural dissonance to measure gaps between cultural values and actual practices within the cross-cultural management to investigate effective leadership attributes in the MENA region.

[30] The pilot case study was supported by 833 specialists current GCC megaprojects and can be found in Appendix One. The Programme Management Construction Management held 289 people, the Cost Consultant 66 and the Supervision Consultant 478.

Theme three – cost and time. A billion US dollars benchmark is frequently set as criteria for a megaproject (Capka, 2004). Many countries consider a project "mega" when the monetary value reaches one billion or more of their currency. These include Hong Kong one billion Hong Kong dollars (Mok et al., 2015), the UK one billion pounds (Flyvberg, 2017) and European projects one billion euros (Pau et al., 2016). Flyvbjerg (2014) suggests that "there appears to be no limit on these ventures' evolving scale" (Flyvberg, 2017, 2018; 2013; Flyvbjerg et al., 2003). Larger valued megaprojects are particularly evident in the GCC, the focal point of this research, with projects such as Saudi Arabia's NEOM, expected to reach US $500 billion or Qatar's Lusail City forecast at US $48 billion (GCR, 2018; Lusail, 2019). The global scale and value of megaprojects draws significant public focus and often causes controversy.

In the context of the GCC, in monetary terms, the value of construction-related activities accounted for 19 % of GCC GDP in 2018 (World Bank, 2018), more than twice the construction-related[31] spend of Europe. Generally, GCC State departments publicly tender megaprojects, and this data gets conveyed through local or international construction periodicals, such as *Construction Week* or similar building magazines. It is difficult to validate this data, as few public records exist for GCC megaproject cost and time overruns. The awarded contract value is frequently published; however, this is generally the only data made publicly available. Most of the GCC states consider megaproject expenditure data to be sensitive. Usually, financial data is only provided to privileged parties, such as the State-run General Tenders and Auctions Committee or the State Audit Bureau.

It is also worth noting that Flyvberg and others were unable to investigate GCC cost and time overruns, due to their inability to gain access to financial records, leaving their research heavily reliant on large European projects (Flyvbjerg et al., 2002, p. 294)**.** Global

[31] 8% of GDP is allocated in Europe (European Building Confederation, 2019).

market conditions can impact the region, such as the global financial crisis affecting property values in the property crisis of 2007 or COVID-19. GCC wealth is essentially tied to its oil and gas reserves, and market volatility directly impacts its GDP (Colton, 2011; World Bank, 2020). Based on a reduced income from commodities from 2015 onwards, several states reduced their megaproject spending, including the postponement or cancellation of megaprojects considered as non-essential (RLB, 2017).

Theme four – risk. The Project Management Institute defines risks as "uncertain events or conditions that can positively or negatively affect one or more of the project's objectives" (Hillson, 2012). Davies et al. (2017), Flyvberg (2017), Mok et al. (2015), Pollack et al. (2018) and Turner (2018), each identify megaprojects as risk-filled ventures that can impact millions of people. Hillson (2014) suggests a correlation between megaproject risks exposure and the increased number of stakeholders, creating more interaction and potential volatility. *Megaprojects and Risk an Anatomy of Ambition* (Flyvbjerg et al., 2003) was an early study highlighting a "link" between megaproject execution and "extreme risk" (Flyvberg et al., 2003, p. 9). Flyvberg (amongst others) concentrates on megaproject cost overruns and the practice of deceptive initial underestimating to "mislead" governments, taxpayers and investor stakeholders. Many studies relate to specific areas of megaproject overruns, such as geotechnical risks in Nigerian infrastructure projects (Amadi & Higham, 2019) or cost increases in nuclear megaprojects due to a lack of standardised designs (Locatelli, 2018).

There are many other risks associated with megaprojects beyond time and cost issues. These include political risk (Flyvberg, 2018), social risk (Biesenthal et al., 2018), stakeholder risk (Dyer, 2017) and cultural risks (Söderlund et al., 2017). The interdependencies and relationships between these risks vary in accordance with the specific nature and objectives of the megaproject. The total of these risks' impacts will impact on the overall megaproject's

feasibility. This thesis focuses on a specific megaproject risk, the significance of risks associated with cultural dissonance.

GCC megaproject studies are rare and not often publicly available. Irimia-Diéguez, Sanchez-Cazorla and Alfalla-Luque (2014) performed a metanalysis for megaproject risk articles. Their review did not identify GCC based megaprojects despite considering 38 prominent megaprojects. The primary and secondary literature searches identified very few significant GCC megaproject studies, acknowledging studies by Johnson and Babu (2018) and Mahdi and Soliman (2018) which set out to identify the impact of delays to GCC megaprojects.

Managing Risks in Megaprojects

Almost three decades ago, Barnes and Wearne (1993, p.135) looked back at the last 25 years of project management to predict the most significant influences over the forthcoming 25 years; they indicated that "mastering risk management" is perhaps the most important thing for the future. This prediction appears validated to an extent by the continual rise in research related to megaproject risk.[32] Risk management considers how to control these uncertain events and is integral to a broad spectrum of industries, including construction and the financial and manufacturing sectors. Researchers tend to identify risk management principles in general or specialist risks, for example, megaproject risk. Megaproject risks are typically addressed, as shown in Figure 3.5.

[32] In 2020 Denicol et al., (2020) identified over 6,000 megaproject risk publications.

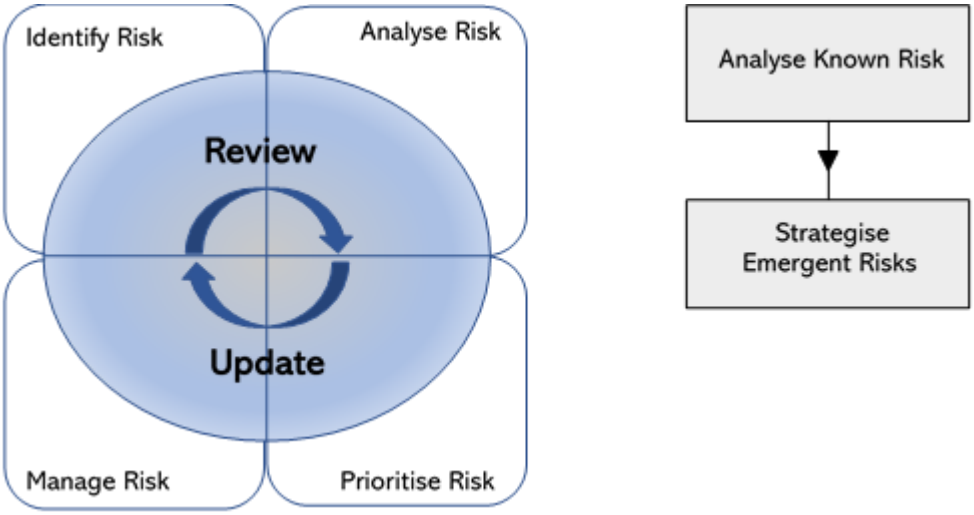

Figure 3.5. Risk Management in GCC Megaprojects (Author, 2021)

Although the research volume for megaproject risk is continually growing , there are still very few studies directly related to GCC megaprojects. This thesis aims to address the research gap by exploring cultural risk between its actors' national culture, Western consultants and Arab project Sponsors. An overview of risk management in megaprojects follows.

The risk management process. Many different models purport to manage risk and risk management strategies are used in a broad range of industries. This overview outlines the fundamentals of managing megaproject risk instead of the benefits of a particular model or method. Risk analysts identify several steps in assessing risk, with the exact number of steps in any particular risk management model of lesser concern than the methodological approach. Typical principles for a risk management process are outlined in Figure 3.6. Sanchez-Cazorla, Alfalla-Luque and Irimia-Dieguez (2016) selected this risk management model during their meta-analysis of megaproject risks.

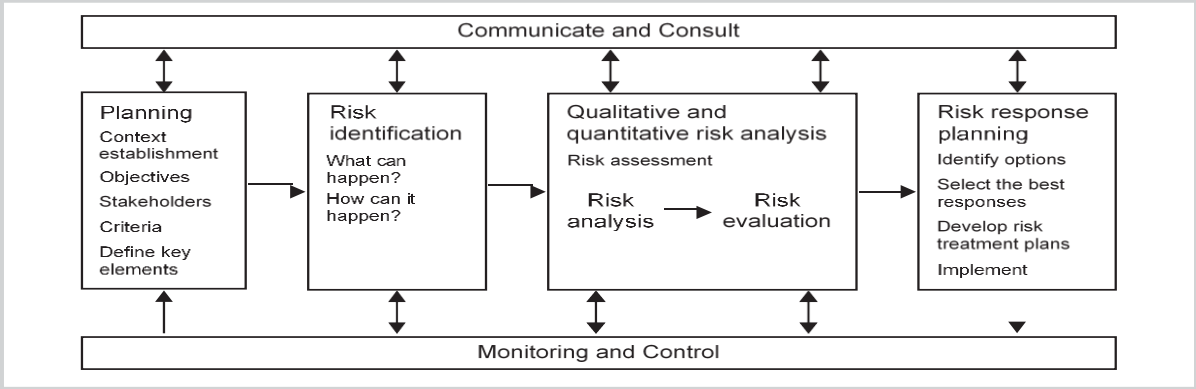

Figure 1: Risk management process (Source: Based on Cooper, Grey, Raymond, & Walker, 2004).

Figure 3.6. Standard Risk Management Process for Megaprojects (Cooper, Grey, Raymond and Walker, 2004).

In principle, risk management models purposefully plan and expect risk, identify risk, predict the risks magnitude, and prepare an appropriate response measure. Risk identification is the initial step, with the final objective risk management, whether predictable or unknown (Hillson, 2012).

While it is common for risk management to consider both threats and opportunities (Hillson, 2009; Zein, 2016a), this study primarily focuses on identifying a specific "threat" risk, i.e. cultural dissonance in GCC megaprojects. The field research has identified[33] that cultural issues can disrupt a megaproject and significantly impact Western consultants and megaproject project directors.

Approaches to risk management. Hillson (2018b) suggests that the best approach to managing risk is "to approach the uncertainty in a structured way to maximize success". This thesis later discusses mechanisms for structuring mitigation strategies to help to mitigate such cultural risks.

Denicol et al. (2020) provide an updated meta-analysis of the sources and potential mitigation measures for megaproject risk. Their analysis considers 18 of the most researched

[33] As expressed in Chapter Eight to Twelve.

threats to a megaproject's execution, together with 54 possible risk mitigation measures. Megaprojects are unique, and the level of risk varies according to the number of risks associated with each venture, and only when all these individual and often unique risks are combined, will the risk holder be able to consider "the effect of uncertainty on the project as a whole" (Hillson, 2014). A European based COST Working Group (2015) suggests that the earlier measures are taken, which they describe as "front-end" megaproject risk, the greater their chance of risk mitigation.

Megaproject risk management relies on mobilising knowledge and capabilities from the past (Grabher & Thiel, 2015). Turner, Maylor, Lee-Kelley, Brady and Carver (2014) recommend an "ambidexterity" considering megaproject risks. They suggest an ambidextrous approach by applying the ability to exploit (refine existing knowledge) and explore (develop new understanding) megaproject risks.

There is also a strong likelihood that several risks will coexist in practice, as many megaproject risks dynamically interact with each other, similar to the impact of COVID-19 impact, which will be discussed later. Denicol et al. (2020, p. 11) acknowledge the need to strategise for multiple risks and describe the drawbacks of looking at specific megaproject risks in isolation through their statement "What is missing in current research is understanding megaprojects as a complete production system".

Risk management strategies in megaprojects. The COST Working Group (2015) was formed to review the benefits of front-end planning for risks in European megaprojects. They produced several studies, such as analysing the use of risk management techniques in megaprojects (Figure 3.7).

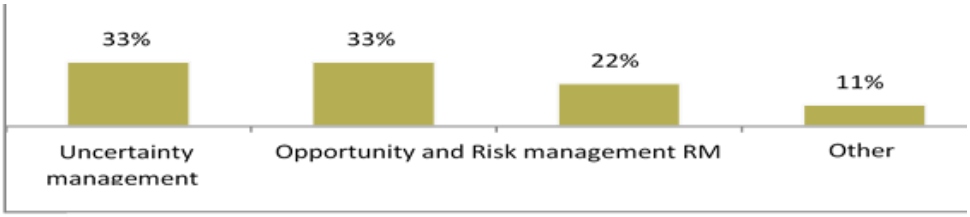

Figure 3.7. Risk Focus (COST Working Group, 2015)

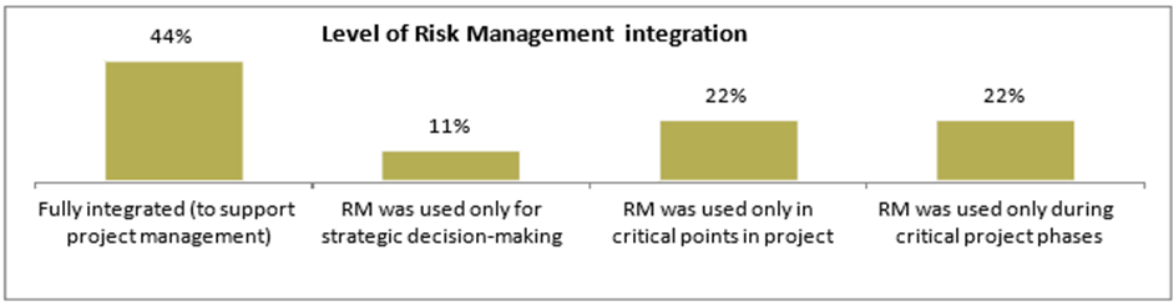

Figure 3.8. Implementation of Risk Management (COST Working Group, 2015).

Their studies find that risk management practices vary significantly amongst megaprojects. They find that more than half of European megaprojects do not have formal risk management procedures (Figure 3.8). A further issue of concern is a lack of consistency or qualification of the professionals assessing and managing megaprojects risks. COST found that most megaproject risk managers have no specialisation, qualification or education in risk management (Figure 3.9), and the risk management task was mostly allocated to project managers and project coordinators or directors.

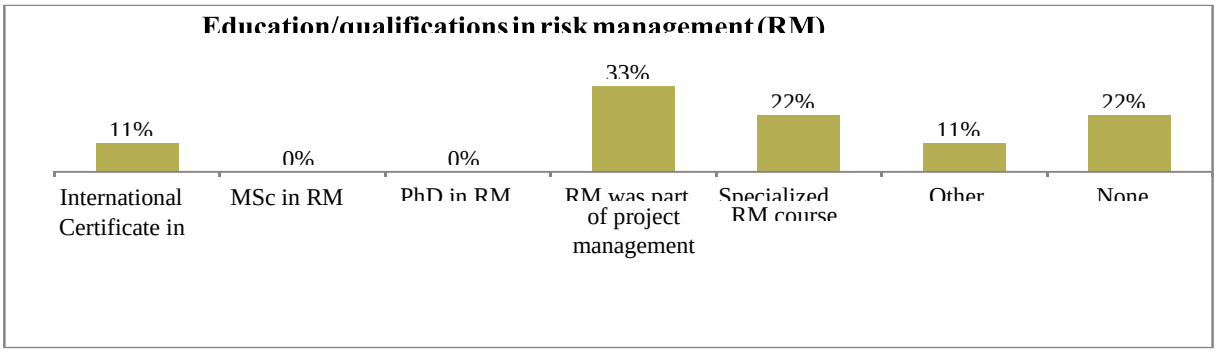

Figure 3.9. Risk Specialisation (COST Working Group, 2015).

Predictability of risk. There are two principal types of risks considered when assessing megaproject risks. These are “known” or “unknown” megaproject risks, as described by Hillson (2018a). Known risks are those who have been identified from the research and experiences of others. For example, megaproject risk studies identify that time and cost overruns should be considered risk factors (Flyvberg, 2012, 2017; Flyvbjerg et al., 2002; Pollack et al., 2018).

Several of the more common megaproject risks are identified in Figure 2.3. Studies have found that the earlier these known risks are provisioned (front-end loaded) the better chance of their containment (Figure 3.10). Kock, Heising and Gemundem (2016) found that the management of risk at the beginning of the project can lead to the most significant savings at the least cost, as cost uncertainty is more significant during the early stages of a project. Researchers have found that risk and uncertainty levels decrease, as the megaproject advances and more knowledge about the risk event is populated (COST Working Group, 2015). Cox (1993, p. 231) suggests that proper planning and strategy can identify risks earlier but ultimately cannot guarantee success.

Timeliness of risk management interventions.

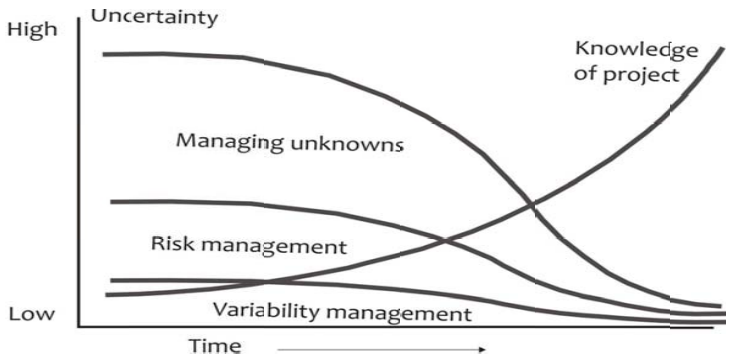

Figure 3.10. Relationships between Risk and Uncertainty Management over time (Dunovic, 2012).

There are, of course, unknown risks, outside the megaprojects control and construction contracts often make provision for such unforeseeable risks. Contractually, these provisions are often labelled as "force majeure events" which entitle the parties to a certain level of contractual or financial protections, under strict circumstances, if they occur. The protection is only offered if the risk was genuinely both unforeseeable and unavoidable when entering the contract.

Hillson (2018a) labels such risks as "future" or "emergent" risks and suggests that the only real strategy is to be "resilient" and "flexible" in dealing with such new risks. It is also clear that unknown or unforeseeable risks may arise and increase in intensity as the impacts become evident throughout a megaproject's lifecycle. The recent COVID19 pandemic, in January 2020, is an example of such an emergent megaproject risk.[34] In certain countries, such as the GCC, the risk was initially considered a manageable project risk.[35] By May 2020, the risk had become a pandemic, thereby reducing labour availability in the GCC; a substantial elevation to the original risk impact. Other emerging risks may include the level of funding available for megaprojects in the GCC and how this may be impacted by the dramatic and unexpected decline in commodity prices (RLB, 2017). The revenue from oil is was expected to average US $35 per barrel in 2020, a 43% drop from the 2019 average of US $61 per barrel[36] (World Bank, 2020).

Allocation of megaproject risk. Risks are often outside the control of any one party, and the Project Management Institute recommends that specific risks be transferred to the party or stakeholder best able to manage it (PMI, 2019). Beidleman, Fletcher and Veshosky (1990) suggest that financial risks must be transferred to the funding stakeholders. The COST Working

[34] Despite recent assertions by Flyvbjerg (2020) that pandemic risk should have been considered.
[35] As the first impact was suspected to only prevent the importation of some specified materials from China.
[36] Associated with the COVID 19 and OPEC disputes on production.

Group (2015) identify typical risk allocations for European megaprojects in Figure 3.11.

Stakeholders / Type of risk	**Public sector**	**Management company**	**Construction company**	**Shareholders**	**Financial institution**	**Consultants**
1. Design	x	x		x		x
2. Legal/political	x	x		x		x
3. Contractual	x	x		x		
4. Construction			x			
5. Operation		x	x			
6. Labour		x	x			
7. Clients/users/society	x	x				
8. Financial/economic		x		x	x	x
9. Force Majeure	x	x	x			

Figure 3.11. Risk Ownership (COST Working Group, 2015).

As GCC megaprojects are mostly state-sponsored most of these risks lie with the government as both the sponsor and the funder.

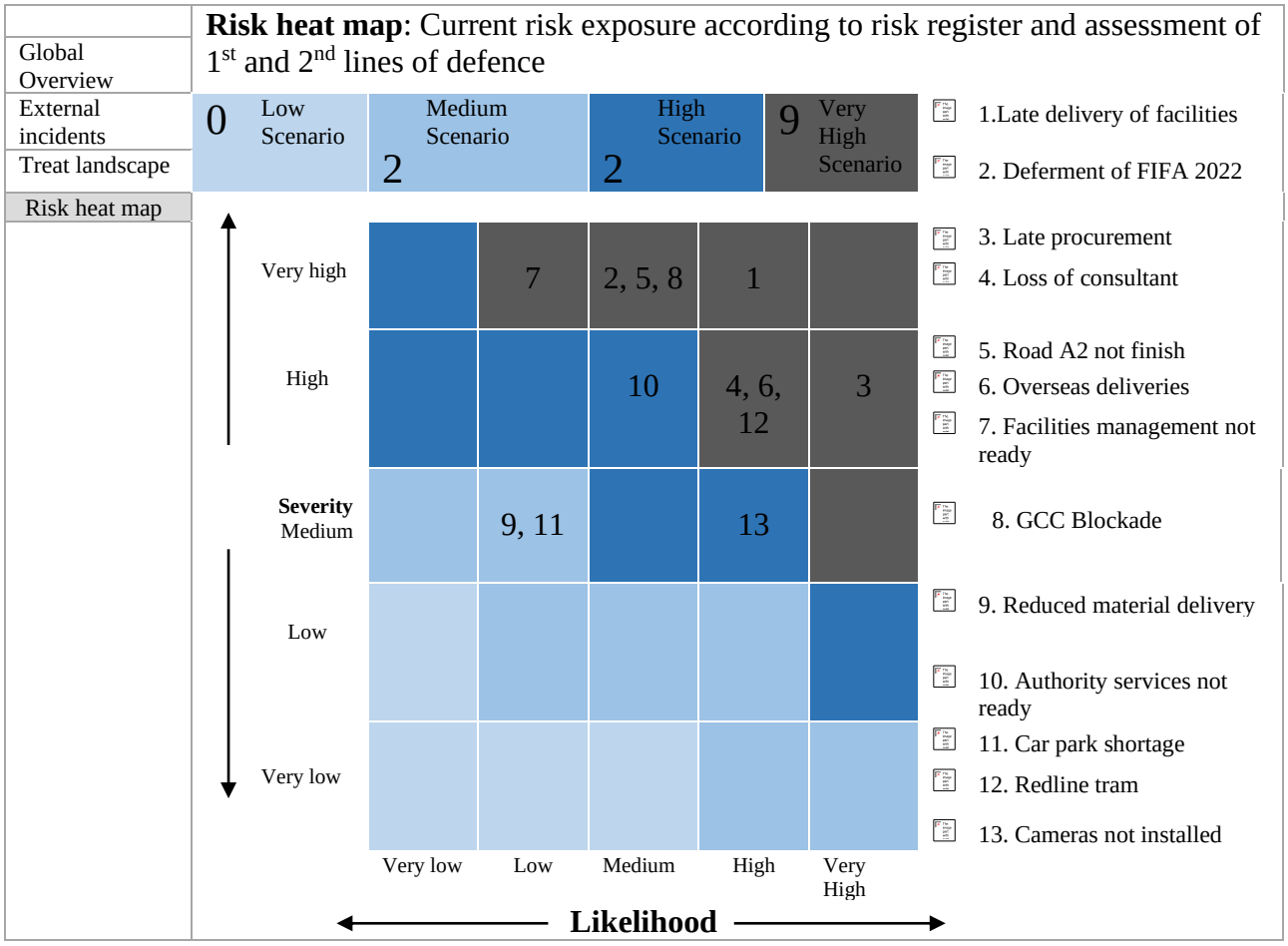

Figure 3.12. Risk Dashboard, LREDC, Qatar (April 2020) (Author, 2020)

Risk managers use a variety of tools and analysis to predict the likelihood of known or unknown risk. They often provide a statistical element to the assessment, which attempts to quantify the probability of the risk from taking place. However, a study by the (COST Working Group, 2015) found that up to 89% of risk management assessments in European megaprojects rely on qualitative assessments.as apposed to any model simulation software. These risk assessments can be less reliable due to the megaproject's unique nature and the risk assessor's forecasting ability.[37] Assessors within European megaprojects typically consider Monte-Carlo techniques, programme evaluation and review techniques (PERT) analysis, sensitivity analysis

[37] Figure 3.9 indicates how many megaproject risk assessors are underqualified for the role.

or scenario analysis techniques (Newell, 2013). Financial risks are typically reviewed by applying multi-criteria analysis or cost-benefit analysis (COST Working Group, 2015).

The PMI (2019) advises that the allocation and consistent consideration of risk helps understand a megaprojects' overall risk exposure. They promote the classification of risk according to the potential severity of the outcome. Figure 3.12 demonstrates the risk considerations for a GCC megaproject, in the form of a risk heat map,prepared by the author during his professional engagement, which graphically depict the most significant potential risks on a megaproject he is supporting. It is also standard industry practice, for the project directors to review their risk exposure levels and adopt risk mitigation strategies for potential risks beyond their “risk threshold” (PMI, 2019). Such risk heat maps provide the analyst with the tools to avoid/transfer/reduce/accept or elevate the associated risks (Hillson, 2018a). Chapter Nine deals with the treatment of specific GCC cultural risks.

Managing Cultural Risk

This research seeks to illuminate one of the lesser-explored megaproject risks, the risk associated with cultural dissonance. Outside of the GCC, limited research has identified how cultural issues can disrupt a megaproject’s execution. Culture related impacts have been present in megaprojects reviewed by Smits and van Marrewijk (2014); van Marrewijk (2007); Van Marrewijk, Veenswijk and Clegg (2014) and van Marrewijk et al. (2016).

Rafindadi et al. (2014), Suprapto et al. (2016) and Van Marrewijk et al. (2014) have identified that strong intercultural relationships and high levels of trust are critical requirements for successful megaproject completion. Biesenthal et al. (2018) and Ende and van Marrewijk (2015) find that cultural tensions amongst the management team represent a “significant risk” that requires special considerations and management during the lifecycle of the megaproject. Merron (1988, p. vi) recommends that cultural issues are addressed within all future megaprojects. There are multiple strands of culture which may exert influence over a

megaprojects execution, leading to Van Ende and Van Marrewijk (2015, p. 10) describing megaprojects as “cultural phenomena” identifying several cultural influences over a megaproject’s execution, including national culture, organisational culture, and professional culture.

Chapter Summary

While megaprojects are unique, they often share common attributes such as their large size, complexity, risk, social impact, cost and lengthy duration. Flyvbjerg and Turner (2018) suggest the emergence of “classic” megaprojects texts, primarily focused on time, cost, risk and governance issues. Central themes emerged as part of a meta-analysis of megaproject research over the last decade. These four core themes include time and cost, stakeholder control issues, leadership and governance issues and risk management strategies. Then core themes are considered for their relevance to the execution of GCC megaprojects.

Flyberg's research tends to dominate time and cost studies, despite suggestions of inaccuracies and errors in his publications by Free and Love (2018) and Love, Ika and Ahiaga-dagbui (2019). In specific global regions, such as the GCC, the criticality and importance of time and cost factors may not be prioritised to the same extent as other nations. In the GCC, stakeholder concerns are less evident, as the stakeholder is mostly the state, who engage an Arab project sponsor (a national of the country) as their senior representative. Having one primary stakeholder, usually the State itself significantly reduces the interface requirements for typical megaprojects which are frequently challenged by competing stakeholders’ interests, such as funders, taxpayers or investors. Effectively, through their appointed representatives, the GCC states wield control over the megaproject and conduct themselves in a manner that reflects their inherent beliefs and culture.

Research indicates significant risks to the megaproject management teams arising from cultural dissonance and that such risks are augmented due to the greater cultural distances

between the parties. Others suggest the benefits of a multi-cultural environment as a “strategic asset” (Hofstede Insights, 2018) as the projects gain from project directors global experiences (van Marrewijk & Smits, 2016). Hillson (2018) suggests that cultural risk is a risk which should be contained and an appropriate mitigation strategy devised to approach the uncertainty “in a structured way” to maximise the chances of success. The research findings (Chapter Seven to Eleven) explore cultural differences and impacts for GCC megaprojects. A good working relationship between the Arab project Sponsor and the Western consultant is an important contributor to a GCC megaprojects' successful execution. For this relationship to succeed a trust-filled engagement based on mutual respect and professionalism must be acquired. A failure to strike this balance between the Western consultants and the Sponsor has the potential to create cultural dissonance between the parties.

There are multiple sources and high levels of risk in megaprojects. More widely recognised megaproject risks include time and cost risks and project complexity, organisational culture and political and governance issues. This study illuminates how cultural risks are prominent in executing GCC megaprojects and developing a risk mitigation strategy for such cultural risks.

Chapter Four - Conceptualising Culture

Introduction

Williams (1976) suggested that culture is one of the most challenging words to define in the English language, owing to its multiple interpretations in different nations and differing fields. Definitions can range from a consideration of culture as an appreciation of classical music (Kendall, Gavin, & Wickham, 2001), to anthropological interpretations such as Hofstede's (2002) consideration of culture as the "collective group thought processes of a nation". Cultural research has an extensive focus, including many diverse fields such as suicide, religion and sexuality (Inglehart, 2018) or the association of culture with freedom of expression or security issues as signs of an imminent war (Fog, 2019). Anthropologists have also investigated the relationships between culture and wealth (Minkov, Dutt, et al., 2018) or the relationships between culture and education (Smith, 2004). This thesis explores national culture issues and investigates cultural dissonance between Arab project Sponsors and Western project directors during GCC megaprojects' construction.

This chapter first outlines cultural studies' evolution and then discusses more current cultural research labelled as cross-cultural anthropology. It examines supranational influences before interrogating more relevant "national culture" research. Beugelsdijk, Kostova and Roth (2017) highlight the difficulties in measuring and assessing a nation's culture, mainly due to this social construct's intangibility. Culture has been labelled as both unmeasurable (Mcsweeney, 2002; McSweeney, 2013) and an ill-defined construct (Tsui, Nifadkar, & Ou, 2007). The fundamental concept of national culture is that there is a novel combination of cultural characteristics for each nation, which can be evaluated, measured and used to compare differing countries. This chapter also reviews some of the more significant frameworks asserting to measure national culture and explores their suitability to this research.

The Evolution of Cultural Research

Cultural studies have evolved in distinct movements over the last century. Cross-cultural researchers suggest that cultural studies progressed through three different cultural phases to date (Bender & He, 2019). Research commenced with a "classic anthropology" movement, transitioned to "cross-cultural psychology" and is currently referred to as "cross-cultural anthropology". Minkov (2019b) suggests that classic anthropology forms a shell, underpinned by early anthropologists such as Geertz (1995); Mead (1934) and Taylor (2014). As the cultural movement evolved, researchers such as Hofstede (2010), Inglehart and Wayne (2000), Schwartz (1999) and Smith (2006) provided more insight to the inner layers of this shell. The foci of research have also transitioned from studies of specific ethnic groups to individuals and then to nations as depicted in Figure 4.1.

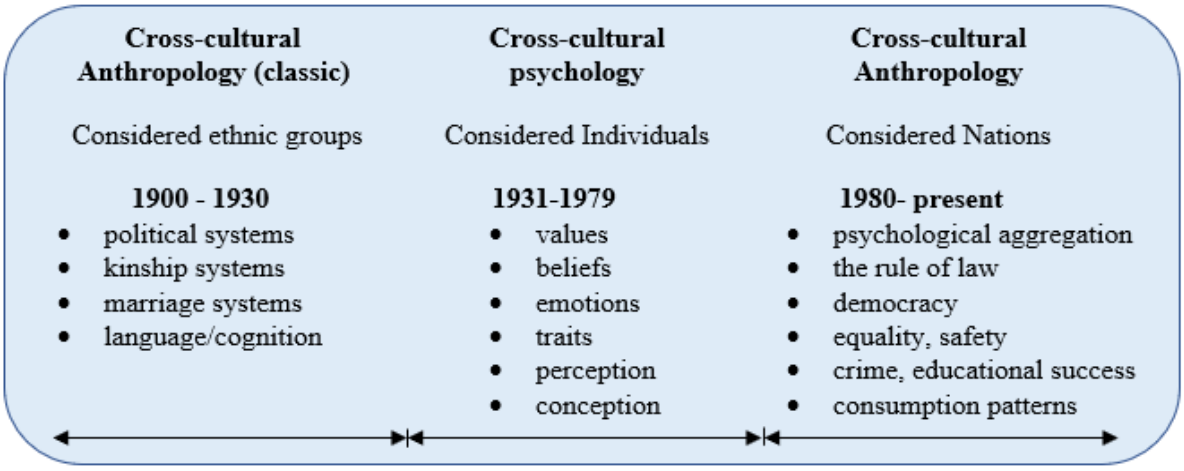

Figure 4.1 Tracing the Roots of Cultural Studies (Minkov, 2019c).

White (1959) labelled the analysis of culture as "culturology" and cultural experts as "culturologists". Culturology mushroomed from the early researchers such as Mead (1934) explored collective social attitudes (as opposed to individual beliefs), to a currently diverse and somewhat blurred range of cultural fields. Cultural research considers attitudes towards suicide, cheating on taxes, lying, euthanasia, divorce and abortion (Inglehart, 1997), happiness (Minkov & Bond, 2017) and even societal attitudes towards alcohol consumption (Pertti, 1995).

The diversity in current cultural research can be seen in a recent cultural study measuring the relationship between emotional happiness and religion (Minkov, Welzel, & Schachner, 2020). Minkov, Welzel and Schahner (2020) suggest that religious freedom is linked to happiness, as shown in Figure 4.2. Such research's scale is impressive, as the respondents included 52,300 selectively chosen participants from 54 nations for a study relating to religious freedom.

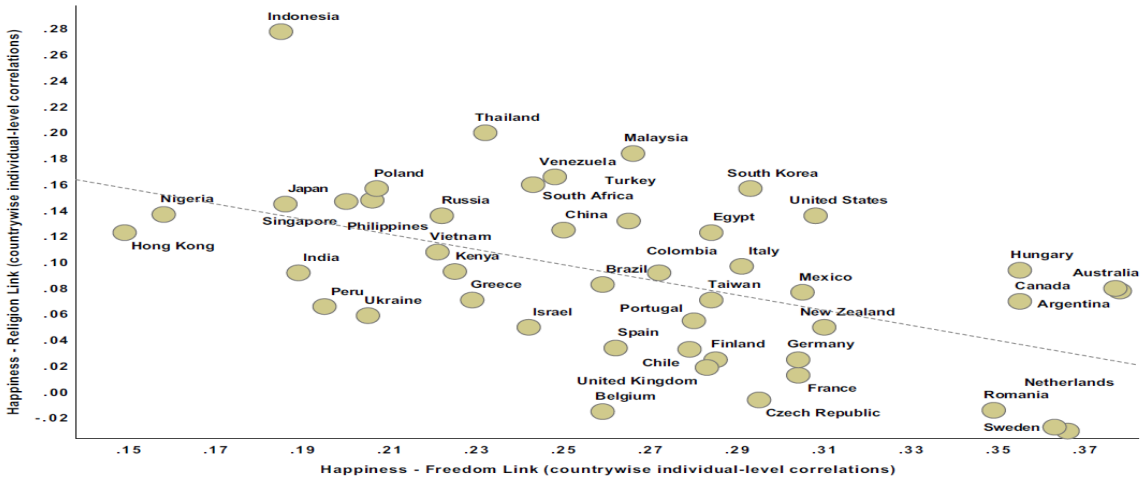

Figure 4.2. Happiness and Religion (Minkov, 2019b).

Supranational Considerations

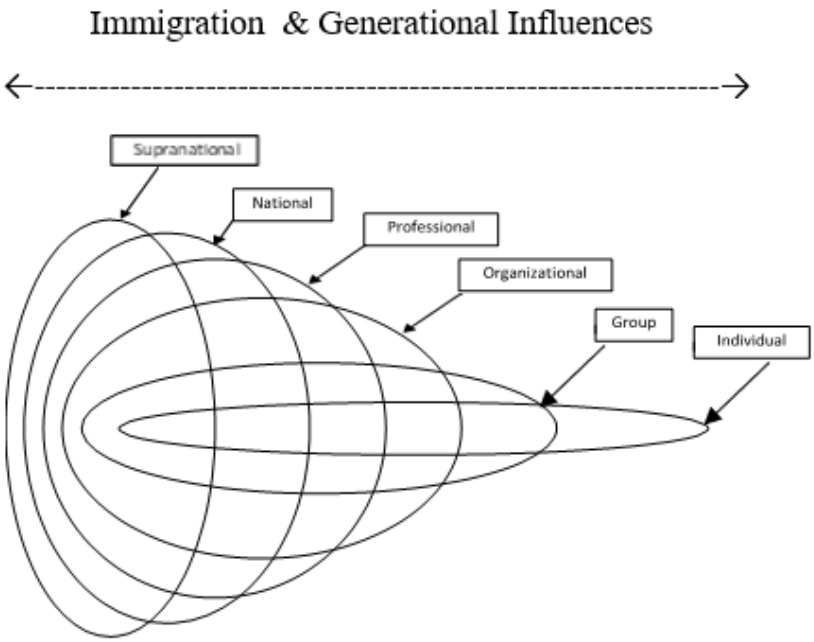

Figure 4.3. Supranational Culture. (Adapted from Karahanna, Evaristo, & Srite, 1998 Hammerich & Lewis, 2013; Inglehart, 2018; Karahanna et al., 2005; Waisfisz, 2015).

Karahanna, Evaristo and Srite (2005) highlight supranational cultural influences in Figure 4.3. Waisfisz (2015) or Inglehart's (2018) *World Values Survey* (WVS) suggests that the continuous population movement associated with migration, immigration and acculturalisation helps to shape supranational culture. Karahanna et al. (2005) consider supranational considerations as holistic considerations which include regional, ethnic, religious and linguistic influences. These supranational considerations are addressed while discussing the frequent clustering of nations by researchers.

Clustering nations. Several studies cluster nations based on the similarity of their national cultures. GLOBE (2019) refer to clusters such as an “Anglo” cluster or an “American” cluster. Ronen and Shenkar (2013) and Inglehart and Wayne (2000) refer to “English speaking” clusters. Coloured sections of Figure 4.4 demonstrate the clustering of nations. The coloured boundaries of Figure 4.4 cluster similar nations, according to Minkov et al. (2019a) during their study of a dimension capturing a cultural characteristic labelled as “Individualism-

Collectivism" and "Monumentalism-Flexibility". The similarity of each member's culture, as demarked by the coloured boundaries, reflect close cultural proximity in the group, which, in turn, generates an expectation of similar cultural characteristics within that cluster. These characteristics are then considered relevant to all nations within that group.

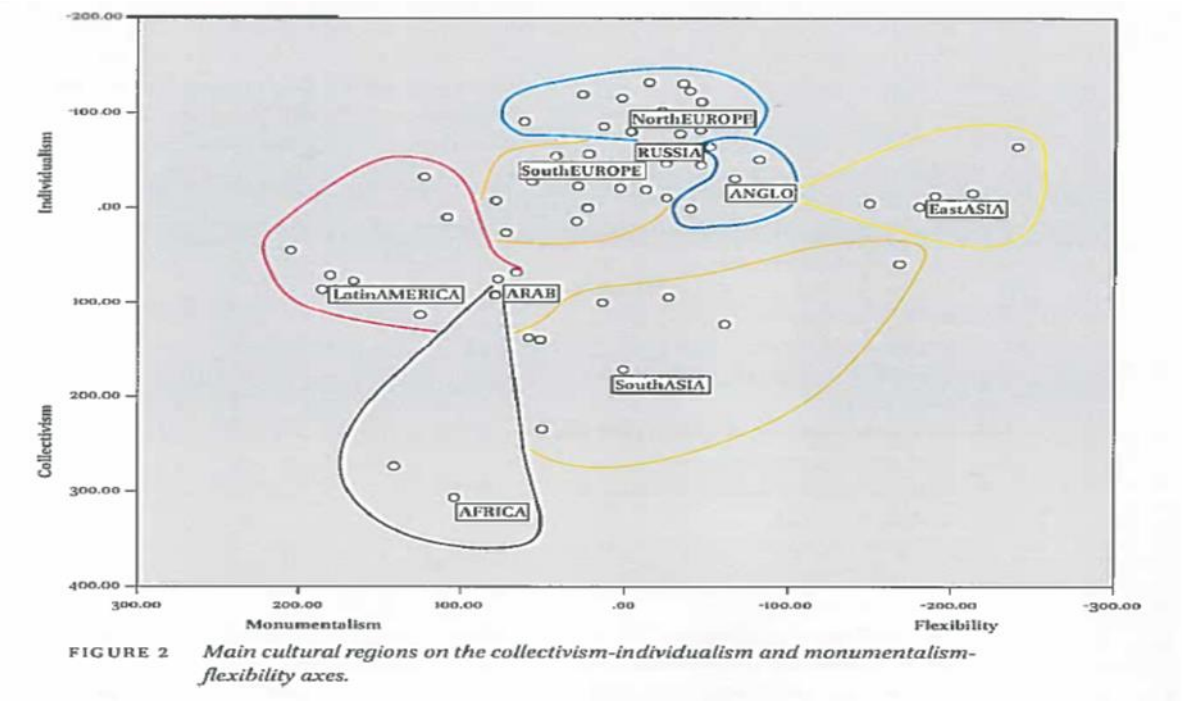

Figure 4.4. Collectivism-Individualism and Monumentalism-Flexibility Culture (Michael Minkov, 2019a).

The ability to cluster nations is often contested. Devinney (2017) suggests that existing geographical boundaries are no longer a valid basis for cultural research due to immigration and migration or events such as wars, land grabs and the breakup of nations that derail former associations. Venaik and Brewer (2016a, p.78) call for culturologists to ignore the artificial arbitrariness of established "geographic boundaries" which perhaps ignore tribal identity and stop "forcing cultures to fit the straitjacket of political boundaries". There are also regions or subsets within nations which may exhibit distinct "internal" cultural sub-clusters. These may include inner districts within Africa or Wales or England and Scotland within the UK. Minkov and Hofstede (2012b, p. 133) investigated the validity of sub-clusters in Africa, which found that while distinctive African regions appear to have their own culture, these sub-regions have

a 90.6% correlation between the cultural measurement for the individual region and overall cultural measurement (Minkov & Hofstede, 2012b, p.148).

This thesis considers that clusters of Western consultants engaged in GCC megaprojects form part of an Anglo cluster. Hofstede (2011a) found an 86.9% similarity within the “Anglo cluster” including seven nations Australia, Canada, England, Ireland, New Zealand, South Africa and the USA. This thesis considers the six GCC states as a part of Hofstede’s “Arab Cluster”.

Professional groups and organisations. Karahanna et al. (2005) describe professional culture as a distinction between loyalty to the employing organisation versus commitment to the industry. Western consultants' professional culture is fundamental to this research and is discussed in more detail in Chapter Nine.

Conceptualising culture. One of anthropology's fundamental preoccupations is the “historical and present study of humankind” to understand cultures' complexity (AAA, 2019). Cross-cultural researchers focus on systematic comparisons between different cultures (Ilesanmi, 2009). In practice, many researchers tend to focus on either national culture (Hofstede, 2002; Minkov, 2018; Bond, 2015) or specific groups of people irrespective of nationality (Inglehart, 2000 or Schwartz, 2012a).

Kirkman et al. (2006) identified the substantial differences between both approaches. Their meta-analysis of cultural research found that a standard error in cultural studies is the failure to distinguish between the two methods, resulting in false results.

This failure to identify the proverbial “forest from the trees” has been labelled as an “ecological fallacy” (Hofstede, 2011b) or confusing anthropology with psychology. McSweeney (2013) uses the example of a hung jury to explain ecological fallacy. He relates this fallacy to a situation where the jury members may be individually decisive, but overall, the

group is indecisive. When the researcher considers individuals instead of the entire group (or nation in our analogy), the results are not group representative.

Individual personality may be formed and influenced by cultural factors, such as the impact of religion (Vas Taras, Piers Steel, & Taras, 2016), individual and country-level wealth or GDP, personal security and a hierarchy of needs (Inglehart, 2018). Psychologists such as Piaget and Inhelder (1969), Siraj and Mayo (2012) and Vygotsky (1978) find that individual personality is established during formative childhood years. They argue that a child develops fundamental habits and norms, form both home and school, resulting in a unique perspective that reflects societal and parental influences. They suggest an individual's experiences and upbringing can often influence their openness to other culture. Hofstede described the relationship between personality and culture in Figure 2.3.

This thesis concentrates on national culture studies as opposed to individual behaviours. Hofstede (2006) and White (1959) describes how culture is a social construct and can only be related to group behaviour, as it exists only through comparison with other cultures (Waisfisz, 2015).

Ethnocentricity. Cross-cultural studies such as those of Cole and Nesbeth (2014), Kapuscinski (2006) or Naeem, Nadeem and Khan (2015) (discussed further in Chapter Ten) suggest that the ability of an individual to integrate into a new culture (acculturate) is shaped by their attitude and "openness to cultural diversity". Several studies, such as the early works of Oberg (1960), Ryszard (2006) or Kultur, Chalhoun and Justice (2005) have described difficulties in accepting new cultures or the "Other". This ethnocentric prejudice is suggested to be a significant cause of cultural tension (Hofstede et al., 2002; Naeem et al., 2015). Berry (2005, p.704) defines ethnocentricity as "the relative preference for maintaining one's heritage culture and identity, excluding contact with other ethnocultural groups".

Lewis (2006) refers to historic cultural legacies and feelings of superiority sometimes exhibited by geographical dominance of American, British, French and Spanish conquerors, enforcing the conquerors' culture on the incumbents. Trompenaars (1993) suggests that due to migration, immigration and acculturalisation, cultural attitudes changing across generations with global communications, cheaper modes of travel and better education standards, ethnocentricity is being reduced. However, Inglehart (2018) warns of a "current trend of cultural backlash" against the "Other" as he finds that racist phobias are re-emerging, in response to impending wars and influences of economic deprivation and large influxes of migrants. Hofstede et al. (2002) warn of inherent individual prejudice, as consciously or unconsciously, one tends to be biased because of one's experiences.

Acculturation. Berry (2005, p. 698) describes acculturation as "the dual process of cultural and psychological change resulting from contact between two or more cultural groups and their members". Oberg (1960) is credited with labelling such acculturation challenges as "culture shock". Hofstede, Hofstede and Minkov (2010) find that there are substantial risks associated with underestimating this process of culture shock, requiring the expatriate to "learn everything again from the beginning, which induces helplessness and hostility towards the new environment". Lewis, (2006) also highlights the disruption caused by "precious values and core beliefs are thrown into chaos" as the individual ventures abroad. Hofstede (1991), Moran et al. (2011) and Kay (2014) amongst others suggest that acculturation occurs in a phased cycle, as discussed in detail in Chapter Ten.

Conceptualising National Culture

The concept of national culture involves the allocation of cultural attributes to a country. Trompenaars and Wolliams (2003) consider national culture a nation's "group

collective experiences, society rules and norms". Hofstede (2002, p. xviii) considers it as a "set of attributes which distinguish the people of one country from those of another".

There are two approaches towards the consideration of national culture, a qualitative or quantitative approach. Cross-cultural researchers such as Meyer (2014), Moran et al. (2011) or Lewis (2016) provide qualitative observations. Quantitative approaches are adapted by cross-cultural researchers such as Beugelsdijk and Welzel (2018), Hofstede (2011a), Minkov (2019) and Venkateswaran and Ojha (2019). They offer a more quantitative means of modelling and measuring national culture; however, they have yet to reach consensus to an agreed definition for "national culture".

Qualitative Approaches to Measuring Culture

Arabic culture. There are several studies which suggest typical characteristics for Arab nationals, including the GCC states. These high-level considerations advise of norms or values to be expected. However, such findings are generic and lack sufficient depth to be globally applicable and need to be reviewed with a degree of context. For example, Obeidat, Shannak, Masa'deh and Al-Jarrah, (2012) suggest that Arabs are religious, loyal, trustworthy, traditional and honest, good Muslims and believe in unity, sincerity, morality and teamwork. Lewis (2016) suggests that Arabs are relationship-driven, avoid confrontation and operate in a high-context environment.

Meyers (2014 p.44, 172 & 205) examined cultural differences in business dealings between Arab and Western nations, finding that Arabs leave questioning of issues to juniors (which permits them to appear less confrontational and perhaps more knowledgeable on specific points of understanding), have a more consultative style, act politely, do not directly refuse requests, have a different concept of time, take time to build trust and can be offended easily. Meyers also suggests that Arabs tend to be poor timekeepers, avoid uncertainty, rely on trust, and value personal relationships. Jaeger and Adair (2013) suggest that Arabs are family

orientated and Al Mahrouqi (2018) indicates that they operate within a high context society, collectivist and act hospitably and honourably; however, such high-level generic descriptions are of limited value to specific research.

Quantitative Approaches to Measuring Culture

Dimensional models. Anthropologists generate frameworks or models to assign values to national characteristics to permit a holistic comparison of countries. Prominent research includes Trompenaars, Hofstede, GLOBE, or the World Value Survey, as shown in Table 4.3. They define elements of their models as "dimensions" (Hofstede, 2002b), "values" (Inglehart, 1997) or "orientations" (Strodtbeck, 1961). Despite the enthusiasm and support provided to the differing models, each model attracts significant industry criticism.

There is also a range of newer comparison models, such as a new framework which measures "Individualism-Collectivism" and "Monumentalism-Flexibility" (Minkov et al., 2018 p.39 & 399) promoted as outperforming older, more established models. They believe that their models are reinforced through better statistical validity and provide a fresher, more timely outlook on cultural dimensions.[38] However, despite such high aspirations, the new model also appears to suffer from a lack of empirical testing, a lack of proof of replication (Kirkman, Lowe, & Gibson, 2006), a lack of evidence and a failure to prove predictive powers (Minkov, Dutt, et al., 2018; van Witteloostuijn, 2016b).

With the availability of a variety of models, culturologists such as Bender and He (2019), Devinney and Hohberger (2017) or Nardon and Steers (2006) support a "multi-model" approach to the collection of data which concerns national culture. Devinney and Hohberger (2017) compare the search for such an accurate national culture model to chasing a chimaera.

[38] These assertions were made by Minkov during a cultural workshop in June 2019 in Tilburg.

Bender and He (2019) also recommend a more cautious approach when considering national cultural metrics, suggesting selecting a cultural framework tailored to the attribute under investigation.

Existing frameworks are heavily criticised for perceived issues surrounding inherent bias, a lack of equivalence in their findings and the failure to provide accurate predictive powers. Table 4.4 provides a sample of critiques of some of the more popular culture models. Nardon and Steers (2006), Shi and Wang (2011) and Smith (2006) question the appropriateness of current measurement models, due to an inconsistency of terms used and divergent means of measuring characteristics. They question the credibility of attaining accurate cultural measurements and note how different researchers disagree over specific nations' attributes (Mcsweeney, 2002; Taras et al., 2009). They find difficulty in the repeated use of similar words with different interpretations.[39] Fog (2019) also criticises the newer titles of dimensions for their "incomprehensible meanings" such as "harshness", "duty vs joy", or "monumentalism".

New modellers contest that earlier frameworks (and mainly focus on Hofstede) are based on outdated or biased results and argue that such flaws render earlier works unsuitable for present-day in-depth cross-cultural analysis (Devinney & Hohberger, 2017; McSweeney, Brown, & Iliopoulou, 2016; Triandis, 1993; Venaik & Brewer, 2016b). However, framework based models still retain considerable support, as demonstrated in Table 4.3. Beugelsdijk and Welzel (2018) find that models associated with Hofstede and Inglehart receive over 45 citations a day.

The researcher suggests that despite a lack of agreement on the best model and the continuous search for a universally acceptable cultural measurement model, national culture

[39] One example could be found by examining the characteristic labelled as "individualism". Hofstede suggests that individualism is "the degree of interdependence a society maintains among its members" (Hofstede, 1991, p.10). In contrast, Kluckhohn and Strodtbeck suggest it is the extent "to which identity derives from the self- versus the collective" (Newman & Nollen, 2016, p.758).

frameworks can provide a rudimentary basis to compare nationsas a consistent methodological approach to the measurement of different cultures, may allow for their relative comparison.

Measurement tools. There is a wide range of tools available which purport to measure culture. Trompenaars and Woolliams (2005) suggested that trainers and consultants continually ply their respective models across the practitioner and academic press for commercial benefit. Taras, Rowney and Steel (2008) found 180 different tools, each claiming an ability to measure culture accurately. Measurement tools are now available in an online application, such as “CultureMee”, Hofstede’s “Culture Compass” or Trompenaars' “COOL” applications. Some of these applications appear more suited to specific uses, such as tourist information, rather than in-depth cultural analysis.

In such models, country comparisons can be made instantly, such as comparing the U.K., Saudi Arabia and the UAE in Figure 4.5 indicating the differences between different cultural “dimensions”.

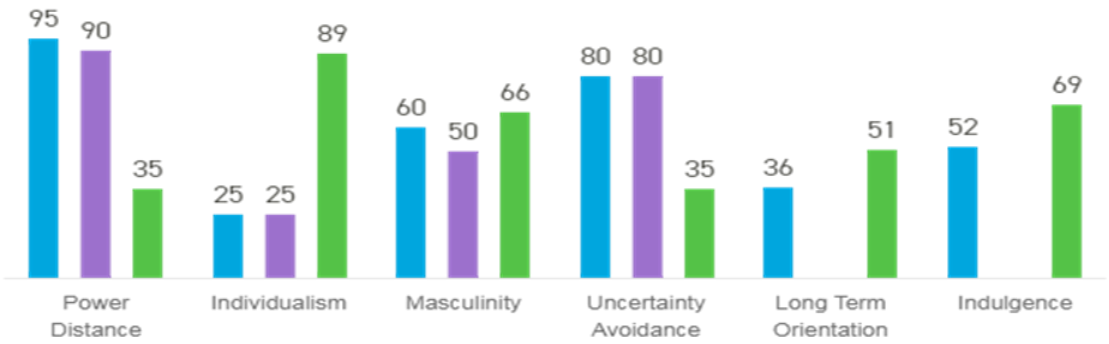

Figure 4.5. Country Comparisons UK, Saudi Arabia, and the UAE (Geert-Hofstede, 2016).The colours blue represents Hofstede’s dimension rating for the UK, purple Saudi Arabia and green for the UAE. Dimensional analysis is explained in Chapter Seven.

The usefulness of the information provided by one of the models, Hofstede’s cultural compass, (Figure 4.5) is discussed later in this research.

The reliability of national cultural measurements. There are significant challenges to locating accurate and reliable data for cultural studies (He & Van De Vijver, (2012); Leung & Van De Vijver, (2008); Van de Vijver & Poortinga, (2002); van Witteloostuijn, (2016a). A training workshop organised by He and Van De Vijver in Tilburg, Amsterdam, has identified common flaws in the attempted measurement of 'national culture'. The University has a programme to explain culture measurement bias, issues with equivalency, up to date cross-cultural research methodologies and how to mitigate the effects of frequent cultural misinterpretations. Measures which enhance the reliability and accuracy of results are identified in Table 4.1.

Table 4.1

Common Methodological Problems of Cross-cultural Research and their Solutions

Common Methodological Problems of Cross-Cultural Research and their Solutions			
	Problem	Solution	Application to this Research
1	Cross-cultural differences in scores cannot be interpreted due to rival hypotheses (e.g. Hofstede, Globe data)	Anticipate competing theories by including more cultures or measuring contextual factors	The study is not reliant on a model, just used as a guide
2	Cross-cultural similarities and differences are visually (and not statistically) tested the absence of a test of similarities of internal consistency coefficients	Explicit analyses of cross-cultural similarities and differences	The study is not reliant on a model, just used as a guide
3	Confounding differences appearing in samples	Adaptation of study design and assessment of confounding differences	Statistical interpretation is not adopted
4	Means of different cultural groups are compared without assessing the equivalence	Assessment of structural and metric equivalence should be a routine part of the analysis, as the systematic evaluation of internal consistency	Statistical interpretation is not adopted
5	Cultural characteristics are attributed to all individuals of that culture (ecological fallacy)	Awareness and distinction between individual-and culture-level characteristics and assessment of relevant characteristics, such as individualism, collectivism, at an individual level	Ecological fallacy explained and avoided
6	No check on the quality of translation/ adaptation of surveys	Awareness that translation - back translation is not always the best possible method and other approaches, such as committee approach could be more suitable	Sole considerations of the English language avoid this issue

7	Lack of rationale for selecting cultures - convenience sampling of cultures is by far the most common procedure in cross-cultural psychology, and the most common comparison is between Japan and the US	Explain why the culture was chosen	Adoption of a “Western culture”
8	There is a verification bias in studies of conventional paradigms	More critical appreciation of the boundaries of the construct, more focus on falsification	Adoption of Constructivist Grounded Theory (Charmaz 2014)
9	There is a focus on the statistical significance of cross-cultural differences. The implicit goal of cross-cultural psychology is not the establishment of cross-cultural differences. Focus on significance detracts attention from effect sizes	A balanced treatment of similarities and differences and the differences easier to interpret against a backdrop of similarities. More effect sizes should be reported, such as Cohen’s d and (partial) eta squares	SPSS or similar techniques not used
10	Results are generalised to large populations, often complete people of countries, although no probability sampling has been employed to recruit participants	More attention in reports for sampling frame and for consequences on external validity	Selection and focus on a specific group - project directors in Western Consultancies.

Source : Bender & He, (2019)

The validity of data is another fundamental concern in national culture comparisons and is frequently challenged (Kirkman et al., 2006; McSweeney, 2013; McSweeney et al., 2016; Minkov, 2019a; Minkov et al., 2017; Taras et al., 2009; Venaik & Brewer, 2016b).

Hofstede’s research findings are amongst those regularly criticised, as Hofstede insisted that his initial IBM 1980s findings remain valid. He used various studies to defend such validity (Hofstede, 1983; Hofstede & McCrae, 2004; Minkov & Hofstede, 2012; Inglehart, 2018). Typical assertions that the data remains valid include how Hofstede's dimensional scores for “individualism” and “indulgence” were reviewed and considered “generally stable” in studies such as Maseland and van Hoorn (2015). Hofstede suggests that the fundamental characteristics of a national culture remain either consistent or that real change happens at such a slow pace that such shifts cannot be identified; therefore his original findings remain valid indefinitely (Beugelsdijk et al., 2017; Beugelsdijk, Maseland, & Hoorn, 2015b; Kendall, Gavin, & Wickham, 2001).

In contrast, Inglehart (1997), in his role as head of the WVS, acknowledges a continual shifting of national culture and suggests that he would “never say” that he could predict what will happen with the culture of a nation in the future (Inglehart, 2018). The WVS produces longitudinal studies mapping cultural trends. They map global cultural shifts using an interactive mapping process (Inglehart, 2014). The WVS, updates its data in five-year cycles, through structured face-to-face interviews at the respondent’s home, currently in over 100 countries. The seventh wave was undertaken recently (2017 -2019) and included the UAE and an updated Saudi Arabia survey. The study seeks answers to 290 questions: cultural values, cultural differences, similarities between regions and societies, attitudes and beliefs towards gender, family, religion and other vital objectives (WVS, 2019). The research explores issues such as corruption, migration, national security, global governance, and homosexuality. Hofstede, (2011) described the data captured by the WVS as a “treasure trove” acknowledging that if he had to start his researches from scratch again, his prime choice would be the WVS.

Frameworks for national culture. Despite their substantial shortcomings, national culture frameworks can assist with the comparison of different countries. A consistent approach to the measurement process allows a comparative analysis to be provided. Minkov et al. (2017, p.377) suggest that individual dimensions exist on a continuum instead of a dichotomy, on a moving scale instead of rigidly fixed. They also argue that consistent use of measurement criteria is most beneficial highlighting how uniform standards are used in the process, the exact numeric values assigned to each unit are of lesser importance than the results' positioning.

The approaches of some of the more popular cultural frameworks are provided in Table 4.2.

Table 4.2

Significant Cultural Surveys and their Contributions.

Significant Cultural Surveys and their Cultural Contributions			
Researcher	Key Belief	Samples Considered	Model
Hofstede 1980s	Model of national culture	• 112,000 • 50 Countries • IBM employees	• Originally a 4-dimensions model expanded in 5 and 6
Schwartz 1990s	National culture based on Values	• 60,000 • 38 countries • Teachers & students	• Model of personal values and seven domains at the national level can be continued to three dimensions
Inglehart on-going	Values, beliefs, norms and attitudes	• 162,000 • 100+ • General population	• Surveys of values, beliefs, norms and values
GLOBE 1990s	Nations as organisations	• 18,000 • 61 • Middle managers	• Nine dimensions of national culture from stereotypes and nine from ideology. National stereotypes as practice and ideologies as values
Minkov Recent (2017)	Dimensions of national culture from self-descriptions	• 53,000 • 56 • Population randomly selected	• There are also new two dimensional models emerging, such as Monumentalism – Flexibility (Minkov, Bond, et al., 2018). The two dimensions are IDV-COLL and MON-FLX.

Authors synthesis of data from the following contributions (Hofstede, 2010; House et al., 2002; Inglehart, 1997; Minkov, 2018; Minkov & Hofstede, 2012; Schwartz, 1999).

Studies by cross-cultural researchers such as Bender and He (2019), Heine, Lehman, Peng and Greenholtz (2002) and Shi and Wang (2011) recommend the selection of a framework based on its appropriateness to the study itself. Anthropologists such as Hofstede, Globe, Trompenaars and the WVS have established frameworks that identify cultural differences in Arab and Western nations' behaviour.

Beugelsdijk and Welzel (2018) propose integrating the two most popular frameworks, Hofstede's 1980s cultural framework updated with Inglehart's WVS. Such a framework has the potential to alleviate some of the existing criticisms of each model. It has partial support from prominent critics of current models, such as Minkov (Alan Walsh Micheal Minkov personal

communication, June 2019). However, this potentially viable framework is insufficiently developed for the present research. The more common model criticisms can be summarised as per Table 4.3.

Table 4.3

Criticisms for Popular Cultural Measurement Frameworks

Researcher	Key Belief	Key Criticisms
Geert Hofstede 1980s	Model of national culture	Outdated Information. Dimensions for power distance and Individualism Collectiveness are the same. Anti-Popperian (lacks replication)
Shalom Schwartz 1990s	National Culture based on values	Fails to explain critical differences (East Asia – Africa) Poor internal consistency Likert evidence
Inglehart WVS (5 year waves)	Values, beliefs, norms, and attitudes	Over-analysis of data and no concise framework Too diverse Fails to explain cultural differences
GLOBE 1990s	Nations as organisations	Marketing management tool and not appropriate for measuring culture. Comparison of as-is vs how it should be not linked to culture. Complicated and disputed clustering of nations
Minkov (2017)	Dimensions of national culture from self-descriptions	Information under collection and data or research not replicated. Fundamental departure from previous works associations with Hofstede

(Author, 2019)

Measuring GCC Culture

This thesis examines Western consultants' perspectives on their cultural interactions with Arab project Sponsors during megaprojects' execution. Initially, consideration is given to using an existing cultural framework to provide meaningful data to support this research. Various cultural models are considered, both existing established measurement frameworks and one of the newer models, (IDV-COLL and MON-FLX (Minkov et al., 2017). The alternative to the use of an existing model is practice-based research.

Trompenaars' dimensions. Fons Trompenaars, a former student of Hofstede, developed a seven-dimensional framework to measure national culture. These seven dimensions are as per the following table:

Table 4.4

Trompenaars seven cultural dimensions (Trompenaars, 1994)

No.	Trompenaars cultural dimension	Meaning / Answers the question
1	Universalism vs. particularism	What is more important, rules or relationships?
2	Individualism vs collectivism	Do we function as groups or as individuals?
3	Neutral vs emotional	Do we display our emotions?
4	Specific vs diffuse	Separation of private and working life
5	Achievement vs ascription	How we prove ourselves to receive status?
6	Internal vs external control	Do we control our environment, or does it control us?
7	Sequential vs synchronic	Do we facilitate events things one at a time or several things at once?

Six dimensions differ from Hofstede's dimensions, while dimension two (individualism vs collectivism) is similar. Trompenaars considers how timeliness and multiple events require specific considerations, taking a twofold approach of looking at how things are and how they should be. Hofstede criticised his model heavily (Hofstede, 2006) and Trompenaars defended his findings vigorously (Trompenaars & Hampton-Turner, 1997). Trompenaars also incorporated earlier research by Hall (1959), which examined cultures attributes, considering if individuals simultaneously (polychronic) or sequentially (monochronic) manage tasks.

Regarding GCC coverage, Trompenaars considered Kuwait and Qatar and his

framework is less appropriate to a fuller offering of GCC states (Baumann, 2013; Shi & Wang, 2011, p. 95).

GLOBE dimensions. The GLOBE project merged the work of more than 170 researchers, who collected data from 18,000 managers in 62 countries to explore leadership management and culture (Deresky, 2011).

The GLOBE project team found nine cultural dimensions as follows:

1. Assertiveness
2. Future orientation
3. Performance orientation
4. Humane orientation
5. Gender differentiation
6. Uncertainty avoidance
7. Power distance
8. Institutional collectivism
9. In-group collectivism

There is a close relationship between Hofstede's framework and GLOBE's dimensional analysis of future orientation (dimension 2), uncertainty avoidance (dimension 6), power distance (dimension 7) and in-group collectivism (dimension 9). Their focus is on organisational behaviour and the leadership skills necessary to understand and manage different global leadership cultures. Their emphasis on leadership and management is somewhat relevant to this research. However, this thesis is more focused on the identification of cultural differences as opposed to leadership challenges.

Regarding GCC coverage, GLOBE data is also limited to Kuwait and Qatar and is therefore considered less relevant to full GCC consideration (Baumann, 2013; Shi & Wang, 2011, p. 95).

Monumentalism-flexibility and individualism-collectivism. Monumentalism-flexibility is one of the newer models. It introduces a new framework using 2017-2018 research in 56 countries with a sample of over 56,000 participants. However, this model does not contain any data concerning the GCC (Minkov, 2018).

The data within this most recent survey expressly excludes the GCC countries. The reasons provided for this omission included a lack of Arab representative samples from the highly expatriated GCC populations and a lack of credibility of survey data from Saudi Arabia.[40]

Hofstede. Hofstede established one of the earliest culture measurement frameworks. This framework proved popular as it provided one of the first means to evaluate and compare national culture (Minkov et al., 2017; Smith, 2006; Beugelsdijk & Welzel, 2018). Hofstede's research has received over 50,000 citations to date (Venkateswaran & Ojha, 2019). A study by Taras et al. (2009) reviewed 180 national culture measurement models and found that 97.5% of all models have his framework components.

Minkov (2019b) suggests that academics and scholars widely respect Hofstede. Beugelsdijk et al. (2017) suggest that his research has undeniable practicality, contributing to establishing an adaptable, versatile framework for cultural comparisons. His framework is credited with making an intangible construct appear tangible (Beugelsdijk & Welzel, 2018). Smith (2006), Taras et al. (2009) and Venkateswaran and Ojha (2019) suggest that his works provide one of the “better explanations” for many cross-cultural issues to date and its

[40] Personal communication with the researcher and Minkov (2019b) in Tilburg on the 6th of June 2019.

usefulness as a primary method of analysis is acknowledged. Venkateswaran and Ojha (2019) also find that his model has been applied for diverse purposes ranging from international business and management to law, politics, economics, health, architecture, medicine, urban planning, ethics, religion, language and spirituality.

The relevance of his early research and his 1980s fieldwork's ability to reflect contemporary cultural attitudes remain vigorously challenged and contested. Hofstede's framework has been used frequently in GCC studies to date. Baumann (2013) used Hofstede's model to review time overruns related to national culture influences. At-Twaijri and Al-Muhaiza (1996) studied multi-national corporations entry to the GCC and Jaeger and Adair (2013) provided a local perspective for Western projects.

Regarding GCC coverage, Hofstede measured Saudi Arabia, Kuwait and the UAE (Hofstede, 1991). Hofstede's cultural framework provides the most comprehensive set of GCC measurements available, covering 85% of the GCC population (Table 1.1).

Applying Hofstede to the GCC. Hofstede provides a mechanism for comparing national cultures, including Arab and Western nations. This research has reviewed many of the more well-known framework models that purport to measure or assess a value for a nation's culture. However, culture appears to be continually evolving and reactive to societal needs and wants, and as such, no clear superior measurement framework emerged as a definitive cultural measurement tool.

The research finds that such frameworks can provide a rudimentary comparative tool and, in some instances, refers to Hofstede's findings as a guide. Such guidance is not meant to endorse Hofstede's cultural framework's accuracy, but the framework demonstrates the "cultural distance" and potential differences between Western and Arab nations. The study concentrates on field research findings to review Western consultants perceptions' of cultural dissonance areas for project directors working in GCC megaprojects.

Chapter Summary

Hofstede, Trompenaars, Minkov, Schwartz, Inglehart and others have proposed multiple definitions, calculations, and measurement tools to help understand the phenomena of culture. Cultural studies have increased in popularity since the turn of the century and have developed to the point where there are now multiple and often contradictory definitions for "culture" (Giuse & Hampden-Turner, 2008; Hills, 2002; Hofstede, 1983, 1998; Triandis, 1993). There are significant studies which interrogate components of supranational and national culture. There are many factors which may influence the culture of a nation and its inhabitants, such as freedom of movement (Fog, 2019) wealth and religion (Minkov, Dutt, et al., 2018) or tolerance of societal deviances (Inglehart, 1997).

There are significant complexities in measuring national culture. These include attempts to select between various models each with different values and the inability of data to remain valid for extended periods (Hofstede et al., 2002; Karahanna et al., 2005; Smith et al., 2002). Framework models face challenges for bias and a lack of equivalency. The challenges include a need to authenticate the contemporary value for data selection (Venaik & Brewer, 2016a) and acknowledge changing geographical boundaries, once associated with nations. This research finds that despite such challenges in selecting a model, Hofstede's framework may assist, at a rudimentary level, to examine cultural differences between the GCC and Western nations. It uses Hofstede's framework as one tool to measure what has been described as cultural distance; such as the consistent gap between the Arabic and British cultures (Beugelsdijk et al., 2015).

This thesis mostly relies on new, novel research developed by exploring field dynamics between Western consultants and their Arab project Sponsors during GCC megaprojects' execution.

Chapter Five - Pilot Study

Introduction and Pilot Study Objectives

Between March 2018 and May 2019, the researcher investigated the contribution of cultural dissonance to churn in a GCC megaproject using a Qatar pilot study. The pilot study specifically explored the substantial churn for individual Western consultants on the megaproject. It examined the reasons for the churn, searching for links to cultural dissonance and used the findings to analyse cultural issues that critically impacted the Western consultancy practise. These findings are discussed, and cross-cultural research was reviewed to explain the findings, draw conclusions and present recommendations. This data was presented at conferences in Zagreb, and the USA[41], which detail the nationalities most impacted by cultural issues and details of the Arab project Sponsors perspectives for this particular megaproject.

Project location – Lusail City, 2012 – 2019. Qatar is a GCC member state, located on a peninsula with a single land border with Saudi Arabia (Fig 6.1). Lusail City is to the north of the capital city Doha (Fig 6.2). The developer, Lusail Real Estate Development Company (LREDC), is a subsidiary of Qatari Diar, the organisation responsible for managing the sovereign wealth fund on behalf of Qatar's State. Lusail was the largest megaproject under construction in Qatar in 2018 and 2019, according to the financial analysis associated with the Megaproject Report in Appendices 1.

[41] Walsh, A., & Walker, P.A. (2020, April). National culture influences on the execution of GCC megaprojects, in *COBRA at ARES 2020, 14th –18th April 2020*. - Fort Myers, Florida, USA.Walsh, A., & Walker, P.A. (2019, September). The influence of trust and culture upon Western consultants executing GCC megaprojects, in *Trust in Major and Mega Projects – 7th IPMA Research Conference, 4th-7th September 2019* - Project Managers Association Zagreb, Croatia.

Figure 5.1. (Left) Qatar within the GCC (Google maps, 2019)

Figure 5.2. (Right) Pilot case study location (Google maps, 2019)

Principle Actors - Western Consultants

Three Western consultancy practices are involved in managing the pilot case study, an infrastructure megaproject for Lusail. This pilot study explored professional interactions between the Arab project Sponsor and the Western consultant senior executives from different consultancy roles. The Head of State endorsed a citizen as the Arab project Sponsor (which is typical for GCC megaprojects) to manage the megaproject.

The consultants have their headquarters in Germany, the USA and the UK. The overall number of consultant personnel on the project was 733. This study was limited to the 28 senior-most positions typically project directors, deputy project directors or senior project managers, as shown in figure 5.3, as this senior personnel must regularly interface with the Arab project Sponsor.

The research participants were the Western consultants officially appointed as "project directors"[42] who hold "all authority necessary to act on the Consultants behalf under the

[42] The project director is contractually the single party empowered to endorse or receive formal communications, instructions, or act on behalf of the Western consultants, including the management of staffing requirements.

Contract".[43] As the focal point of contact for the Western consultant, these project directors are involved in all communications concerning staff, including dealing with personnel, management issues such as receiving or implementing decisions to hire or fire project directors or other staffing issues. The three project directors interviewed for this case study were from the UK, the USA and Canada, noting a high degree of churn for these particular positions (as shown in figure 5.4).

Individually, Western consultant senior management comes from a broad mix of nationalities[44] and each met stringent qualification criteria[45] for their functional role. The qualifications required by the managers increase incrementally depending on their seniority within the management team (following levels 1-3 in Figure 5.3).

The senior positions often require a Masters' level degree, membership of the most relevant professional association and 15 to 20 years of relevant experience in similar positions. Fluent written and spoken English is compulsory as this is the lingua franca developed from the regional colonial history and is the contracts' language and procedural documents have become embodied in regional frameworks for standards and regulations.

In addition to meeting the qualifications and standards outlined in the Consultancy Contract, the 28 senior-most positions must be vetted by the Arab project Sponsor's team. The vetting process usually entails being interviewed by a three-person panel from within the Arab project Sponsor's team. Because of the stringent imposition to match or exceed the stipulated criteria, directors reported difficulty filling several senior positions. One director reported that during their internal vetting processes, they turned down "three CVS for each applicant" and

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[43] It is stated in Article 4.3. of the Contractors Representative (FIDIC, 1999,) as follows: "All information, instructions and decisions by a PARTY shall be issued by the REPRESENTATIVE of that PARTY. All information, instructions and decisions from the REPRESENTATIVE of a PARTY shall commit that PARTY".

[44] The project directors came from America, Australia, Britain, Canada, Egypt, Croatia, Greece, Germany, India, Iraq, Ireland, Jordan, New Zealand, Pakistan, Portugal, South Africa, Spain and Syria.

[45] The State Audit Bureau frequently validates that the consultants meet the specified criteria.

the process was further complicated as the Arab project Sponsor frequently "turned down two of every three applicants" (PMCMPD03).

The authority of the sponsor. In addition to the lengthy engage selection processes for contract compliant senior personnel, the Consultancy Agreement (similar to most GCC consultancy agreements) provides a contractual right for the Arab project Sponsor to remove any party at will[46] unlike more conventional contracts such as the NEC or JCT suite of Contracts.

Western consultant senior executives. The consultant's organisational structures typically followed a pyramid hierarchy, as demonstrated in Figure 5.3, which shows the Project Management Construction Management consultant's approved organogram.

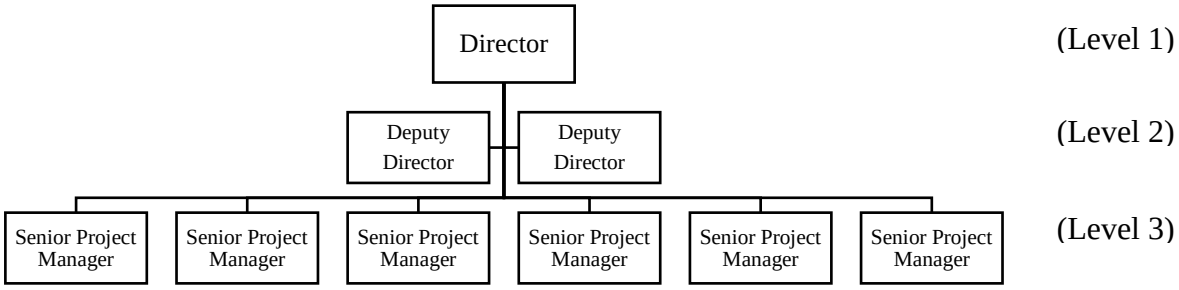


Figure 5.3. PMCM Senior Executive Organogram (in charge of 289 individual staff).

Level one of each consultancy organogram is the appointed Project Director. The next level of seniority (level two) consists of the Deputy Programme Directors for the Programme Management Construction Management Consultant, a Reporting manager and Budget manager

[46] "The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the Works any person employed by the Contractor in or about the execution or maintenance of the Works who in the opinion of the Engineer misconducts himself or his incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Engineer to be undesirable and such person shall not be again employed upon the Works without the written permission of the Engineer. Any person so removed from the Works shall be replaced as soon as possible by a competent substitute approved by the Engineer". (Public Works Authority Contract – Article 16.2).

for the Cost Consultant and six Deputy Chief Resident Engineers for the Supervision Consultant. The Programme Management and Supervision Consultancy practices had a further seniority level (level 3) comprising of Senior Project Managers and Senior Resident Engineers. The Sponsor approved 28 senior positions for the three leading consultancy practices, as shown in Table 5.1.

Table 5.1

Senior Positions Approved for the Consultants

Approved senior management positions		PMCM	SC	CC	Total
Level 1	Director/ Chief Resident Engineer	1	1	1	3
Level 2	Deputy Directors or Deputy Chief	2	4	1	7
Level 3	Senior Project Manager/Resident Engineer	6	11	1	18
	Total approved positions	**9**	**16**	**3**	**28**

Senior Executive Churn

The study began by tabling the senior executive positions approved by the Arab project Sponsor (Table 5.1). Next, the researcher reviewed and analysed the verified employment records[47] for those occupying the 28 approved positions and the staff turnover was analysed and charted.

[47] The content of the CV was reviewed and authenticated by the HR department, including checking references.

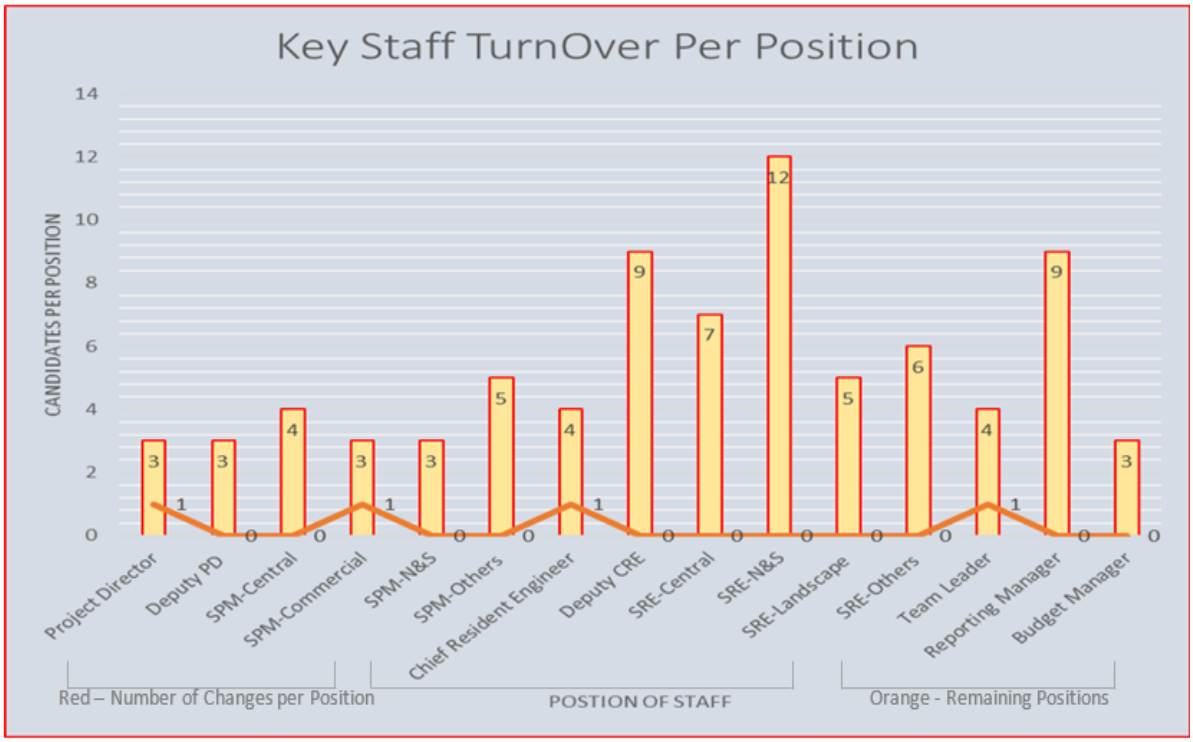
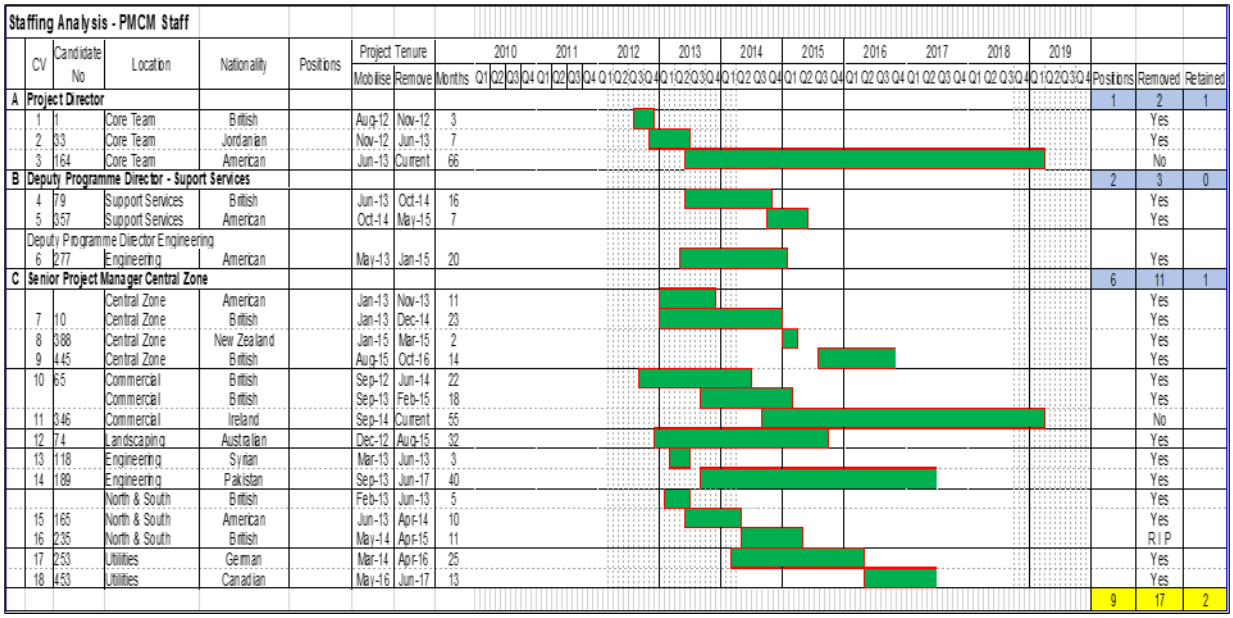


Figure 5.4. Key Staff Turnover per Position. (Author, 2019)

The tenure of the senior project executives was chronologically plotted and is partially reproduced in figure 5.5.



Staffing Analysis - PMCM Staff											
	CV	Candidate No	Location	Nationality	Positions	Project Tenure Mobilise	Project Tenure Remove	Months	Positions	Removed	Retained
A	Project Director								1	2	1
	1	1	Core Team	British		Aug-12	Nov-12	3		Yes	
	2	33	Core Team	Jordanian		Nov-12	Jun-13	7		Yes	
	3	164	Core Team	American		Jun-13	Current	66		No	
B	Deputy Programme Director - Suport Services								2	3	0
	4	79	Support Services	British		Jun-13	Oct-14	16		Yes	
	5	357	Support Services	American		Oct-14	May-15	7		Yes	
	Deputy Programme Director Engineering										
	6	277	Engineering	American		May-13	Jan-15	20		Yes	
C	Senior Project Manager Central Zone								6	11	1
			Central Zone	American		Jan-13	Nov-13	11		Yes	
	7	10	Central Zone	British		Jan-13	Dec-14	23		Yes	
	8	388	Central Zone	New Zealand		Jan-15	Mar-15	2		Yes	
	9	445	Central Zone	British		Aug-15	Oct-16	14		Yes	
	10	65	Commercial	British		Sep-12	Jun-14	22		Yes	
			Commercial	British		Sep-13	Feb-15	18		Yes	
	11	346	Commercial	Ireland		Sep-14	Current	55		No	
	12	74	Landscaping	Australian		Dec-12	Aug-15	32		Yes	
	13	118	Engineering	Syrian		Mar-13	Jun-13	3		Yes	
	14	189	Engineering	Pakistan		Sep-13	Jun-17	40		Yes	
			North & South	British		Feb-13	Jun-13	5		Yes	
	15	165	North & South	American		Jun-13	Apr-14	10		Yes	
	16	235	North & South	British		May-14	Apr-15	11		RIP	
	17	253	Utilities	German		Mar-14	Apr-16	25		Yes	
	18	453	Utilities	Canadian		May-16	Jun-17	13		Yes	
									9	17	2

Figure 5.5. Tenure of Senior Project Executives - Project Management Construction Management. (Author, 2019)

The turnover of these positions was identified and mapped for a period between 2012 to 2018. The researcher performed detailed studies and scheduled senior-level tenure to check

for potential patterns in later discussions for churn. This included analysing the candidates CVs to confirm their nationality, GCC experience, career to date and educational background. With this information, the researcher engaged in a series of confidential interviews with the current project directors (level one directors) to understand and establish the factors contributing to the directors' churn rate.

In summary, 15 semi-structured interviews were held with the principal Western consultants' overall project directors, the Programme Manager/Construction Manager, the Supervision Consultant, and the Cost Consultant.

During these interviews, the appointed project directors were asked to discuss why individual consultants had been removed. The appointed directors discussed a high level of churn for all senior positions. In particular, they noted that their position as a project director (the most senior post for the consultancy practice) also suffered from a high churn, as there had been several directors in their current position before their engagement. Figure 5.2 maps the senior executive churn for each position within the consultancy practices. This churn identified the replacement of Programme Management Construction Management Services directors manager (four times), the Supervision Consultancy directors (four times) and the Cost Consultant director (three times).

The timeline provided in Figure 5.2 also demonstrates how level two positions (the next most senior management layer in the consultants’ on-site organisation), including deputies director positions for the Programme Management and Supervision consultancy practices, had been entirely removed by December 2017. The final layer of senior project managers was also significantly reduced. As of December 2020, three senior consultants (out of 26 approved positions) remained in their post.

Categorising staff turnover. Over a series of interviews held over six months, the project directors provided details of each displaced executive's departure, and the findings were thematically analysed. The sources of churn are shown in Table 5.2.

There were several reasons for such displacements, which were broadly categorised as either churn resulting from “natural” or “forced” reasons. Natural churn included retirement, career progression, or completion of tenure. Tenure completion occurs when the building cycle has evolved to the extent that a function is no longer required or the project is complete. Individual consultants also make lifestyle choices to work abroad for a fixed duration and then return home as planned (Cole & Nesbeth, 2014). During the thematic analysis of causes of natural turnover, two sub-clusters emerged. Category A is the fulfilment of the project's needs; category B is a departure for personal choice. Forced churn is categorised as category C.

Natural churn (category A and B). Construction megaprojects are mostly temporary endeavours, and the roles have a limited but necessary function for a period within the megaproject's construction cycle (Brookes et al., 2017; Dwivedula et al., 2018; Turner, 2018).

Category A considers specific time related or functional roles, reviewing if the project requirements had been fulfilled or if the position had been optimised. Optimisation occurred where staff were reduced to save management costs, retaining a reduced number of consultancy staff to complete the tasks. Several state-funded GCC megaprojects were subject to optimisation measures due to reduced state funding between 2015-2018 when the market price of oil declined (Deloitte GCC, 2016). The findings show that 21 executives were impacted when their role had been fulfilled or optimised and a further 14 executives either elected to retire[48] or return home following their completion of service overseas.

[48] However, a review of the candidates LinkedIn profiles suggests that two members had since come out of retirement.

Category B considers another “natural” reason for churn in the megaproject that of personal choice. Examples include consultants who left due to retirement issues, returned to their home country as they had planned or where they received a better employment offer. The executives' CVs analysis clarified that most project directors in this megaproject held 25 to 30 years plus of post-graduate experience. Three participants elected to retire during the project. In total, 14 executives were categorised in category B, including those who had chosen to leave and including three members who elected to retire.

Overall, approximately half of the churn related to natural turnover (35/75). The balance of the remaining executives removed from the megaproject. The causes for such removals were investigated until each specific reason for “forced” churn became evident.

The clusters are summarised in Table 5.2.

Table 5.2

Senior Executive Churn 2012-2018

Turnover Analysis of Senior Management		PMCM	SC	CC	Total
Category A	Departure because of the fulfilment of the role, project optimisation or promotion within the organisation.	3	13	5	21
Category B	Departure because of Employees choice to return home, retire, engage in a better employment opportunity.	3	8	3	14
Category C	Departure required by Employer for incompatible culture-related issues.	15	17	8	40
		21	38	16	75

Source: Author, 2019

Forced churn (category C). The factors contributing to the churn of the 40 remaining staff (Table 5.2) were analysed to examine if cultural issues may have influenced the Arab project Sponsors' decision to remove them from office. The Hofstede Institute (Egbert Schram,

personal communication, June 2019) advises that many organisations tend to blame cultural differences without investigating all relevant factors and that one should only consider cultural impacts "if all other factors have been considered and eliminated". This analysis has considered all such factors (categories A and B).

Following the categorising of churn to categories related to natural (category A or B) or forced churn (category C), in-depth interviews were held with each consultancy practice's project directors to seek to understand the extent of how cultural influences may have impacted this megaproject. This investigation found that 40 senior executives were removed because of cultural dissonance, distributed between the consultancy practices, as shown in Table 5.3.

Table 5.3

The Displacement of Senior Executives due to Cultural Dissonance

Senior Management Position	PMCM	SC	CC	Total
Sponsor Approved Positions	9	16	3	28
Staff removal related to Cultural issues	15	17	8	40

In total, 40 senior staff were replaced due to issues of cultural dissonance on the megaproject. The Arab project Sponsor requested the removals of these 40 senior positions directors, including 15 from programme management, 17 from the Supervision Consultant's role and eight from the Cost Consultant's role. As the Arab project Sponsor had previously sanctioned 28 senior executive positions (Table 5.1), this churn rate reflects that the whole team[49] may have been replaced at some juncture in the project. The reasons for this culturally related churn became the focal point of the pilot case study.

[49] This held true for each position; however, six project directors had been promoted within the group to higher positions at various junctures.

Detailed interviews probed the circumstances surrounding each executive's exit, and the findings were outlined and analysed, applying further codification, until five distinct sub-clusters emerged. These sub-clusters are summarised in Table 5.4.

Table 5.4

Culture related Executive Churn

Thematic Identification of factors in the removal of Positions		Frequency
(1) Slow in their performance or not active enough	(Inactivity)	11
(2) Public displays of criticism and the sponsors' considerations of unacceptable behaviour.	(Face)	10
(3) Overly rigid interpretations and not enough professional experience and judgement demonstrated.	(Inflexibility)	9
(4) Failure to manage the designated team by management requirements.	(Inexperienced)	7
(5) Ethical concerns.	(Ethics)	3
	Total of	40

Source : Author, 2019.

The Arab project Sponsor approved 28 senior project positions, and 75 individuals filled these roles to put the overall numbers into perspective. After investigation, the churn of 35 individuals was related to natural reasons, while cultural dissonances influenced the churn of 40 individuals.

In terms of seniority, project directors were replaced on seven occasions, the chief resident engineer on four occasions and those remaining on 29 occasions (Figure 5.2). Some positions were subject to higher rates of churn. For the Cost Consultant, a Reporting Manager position was replaced nine times and the Supervision Consultant's resident engineer position in the North/South district 12 times.

The study finds that culture-related issues significantly impacted the rate of churn for senior project directors.

Arab project Sponsors' Perspectives

Cross-cultural research has identified significant cultural differences between Arab and Western communities (Hammerich & Lewis, 2013; Hofstede, 2010; M. Javidan, 2009; Moran et al., 2011; Trompenaars, 1993). There are also specific GCC-related studies that help identify some of the challenges associated with different cultural styles for managing GCC construction projects (Archibald, 1991; Minor, 1999; Obikunle, 2002). This existing research is referenced to help make sense of the findings.

In summary, five main themes emerged from the research findings. The findings emerged through three sources: official Arab project Sponsor correspondences, project director interviews and subsequent analysis and verbal communications between the Arab project Sponsor and the Western consultant's director concerning the replacement of executives.[50] The factors associated with the churn were categorised through inductive coding to allow for thematic analysis (Corbin & Strauss, 2014).

It was uncovered that formal communication channels are frequently bypassed during the Arab project Sponsor requests an executive's replacement. The project director is informed unofficially and must then inform their staff of the Arab project Sponsors request (or demand), and the executive receives a formal termination from the Western consultancy.

Depending on the nature of the dispute or cultural dissonance, which gives rise to the churn, the Western consultancy may attempt to seek alternative commissions for the impacted executive. The Western consultants may require similar roles on different megaprojects (or in the differing GCC states) where they may relocate the executive (if they feel that the executive had been unjustly removed).[51]

In this pilot case study, 40 senior executives were removed due to issues of cultural

[50] Written requests were evident for 18 dismissals and the balance was verbally orated.

[51] Individual contracts are generally harmonised with the contracted Consultancy Agreements so that where the Sponsor releases an executive there is generally no obligation on the consultancy practice to continue their engagement with them.

dissonance. The project directors relayed their communications (often verbal) with the Arab project Sponsor related to the executives' churn, these included recurring themes about the individual project directors' actions or demeanour.

The Arab project Sponsors relayed their feedback on removed executives' performance to the appointed project director for the consultancy practices, including their findings or perceptions that some of the removed individuals were "slow", "confrontational", "not positive enough" and "not hands-on". They also described project directors as "inflexible" and "rigid" and described some project directors as "arrogant" and "obstinate". The contract conditions expressly permit the termination of project directors and in particular for culture-related issues.[52]

The core causes for executive churn included:

1. A perception of being too slow or not active enough (inactivity)
2. Public displays of criticism or unacceptable behaviours (loss of face)
3. An impression of overly rigid interpretations of specifications or insistence on applying home country standards (lack of flexibility)
4. An inability to manage or lead the team by the overall directives (inexperienced with GCC culture and norms)
5. Ethical concerns

A summary of each theme is explained in the following findings.

Finding one - A perception of being too slow or not active enough (inactivity)

There are several instances where the Arab project Sponsor perceived that the executive did not appear productive enough to justify the level of expertise that the position required. They requested their removal informing the project director of such justifications including an

[52] "LREDC requires, and CONSULTANT shall ensure that all CONSULTANT PERSONNEL are law-abiding, peaceful, and respectful of local cultural traditions" (LREDC, 2019, Article 4).

instance where they considered that the executive had acted “slowly like the [sic] tortoise and not defending the employer” (scsre18) or “too slow and confrontational” (scsre11). One consultant was removed in a related incident as “team formation was overly delayed” (pmcmpd001).

Cross-cultural researchers describe an Arabic ability to multitask. Lewis (2016) describes how Arabs exhibit “multi-linear, multi-active tendencies”. Such groups exhibit traits including being “extrovert, impatient, talkative, inquisitive, does several things at once, not punctual, changes plans, juggles plans, delegates to relations, seeks out a top person or frequently interrupts” (Lewis, 2016, fig. 3.2). On the other hand, the Western project director may be displaying more linear tendencies (using Lewis’s analogy) and ensuring one task is satisfactorily complete, before moving on to the next, potentially giving an inaccurate perspective to the more multi-active Arab project Sponsor.

Finding two - Public displays of criticism and unacceptable behaviours (loss of face)

The Arab project Sponsor removed several executives due to dissonance following a public confrontation with the Arab project Sponsor or senior team members. These incidents were more frequently documented and the Arab project Sponsor expressly required the executive to be “eliminated with immediate effect” (including pmcmdpd 03; pmcmspm 08 and pmcmspm 12). In one particularly heated design team meeting, an executive requested the Arab project Sponsors' design manager **“**to stop behaving like an idiot” (pmcmdpd 02) prompting instant dismissal. Arab project Sponsors also removed executives who displayed a **“**lack of respect for the client” (scdcre 07) or publicly challenged their authority and capability.

The emotional dimension “face” is derived from a Chinese concept described as “dignity based on a correct relationship between a person and the collectives to which he belongs” (Hofstede, 1983 p.7). Inglehart (2018) suggests that while society has become more tolerant of cultural differences over the years, the concept of face is still prominent within the

Middle East. Hammerich and Lewis (2013, p. 222) suggest that a lost face occurs through "insult… or criticism in front of others". Meyer (2014, p. 190) suggests that a good personal relationship is the "single most important factor" when doing business with the Arab world.

Finding three - Overly rigid interpretations of contract documents and insistence on home country standards can be interpreted as non-professional (inflexibility).

The proportional representation for the home country residences for the executives is shown in Figure 5.6.

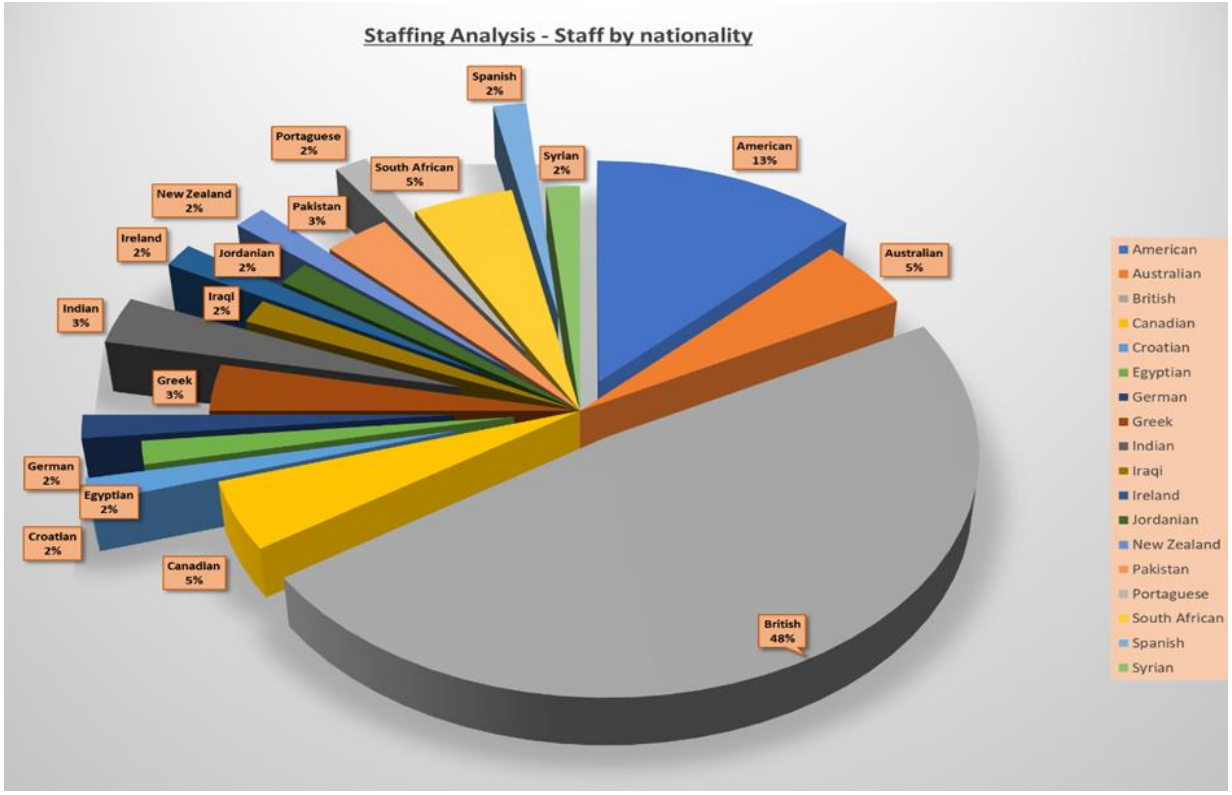


Figure 5.6. Nationalities of Senior Executives Displaced by Culture. (Author, 2019)

The Arab project Sponsor expressed concerns about the executive's behaviours as **"**not positive enough" (scsre 02) or "not positive enough and failure to work in a timely manner" (ccrm08). One respondent advised of a situation in which an executive had informed the Arab project Sponsor "You don't know what a cost estimate is or what you are doing" (cctl02). In other examples, some executives were described as "obstinate and unproductive" (pmcmspm

08) “over principled” (pmcmpd 03), “arrogant” (pmcmspm10), “Over confrontational and not up to challenge” (scdre 04), “constantly questioning authority” (scsdre 13) or “inflexible and arrogant” (scsre 23). The potential influences of pressure, excessive working hours and general frustration at the bureaucracy and procedure are discussed later in the thesis, together with the standards of professionalism for Western consultants in the GCC (Chapter Nine).

Global consultancies are continually struggling to harmonise their core policies globally (Schein, 2004; Trompenaars & Woolliams, 2005). There are some regional differences, so rather than insist on replicating each specific standard from one’s home country, a “healthy dose of particularism is” often required (Trompenaars & Woolliams, 2001). A further analysis of the churn for differing nationalities found that British and American senior executives (22/40) suffered most from cultural churn (Walsh & Walker, 2020). In the pilot case study, the Arab project Sponsor addressed the use of different local standards (Qatar construction standards) and felt that the project executives often ignored local standards, citing that either British or American Standards were superior and should be used.

Hofstede’s cultural framework identifies the differences in cultural behaviours between British and American cultural attitudes and the Arab states, provided for comparison purposes in Table 5.5. (the impacts of such differences are identified in Chapter Four).

Table 5.5

Comparing Hofstede’s Cultural Dimensions for the UK, USA and Arab States (Hofstede, Hofstede, & Minkov, 2010)

Index Scores for Countries and Regions				
Country	Power Distance Index	Uncertainty Avoidance Index	Individualism/ Collectivism Index	Masculinity/ Femininity Index
Great Britain	35	35	89	66
United States	40	46	91	62
Arab Countries	80	68	38	53

Waxin, (2004, p. 15) highlights how successful expatriates must be culturally sensitive "open to adjustability, communicate, socially orientated, stress-resistant and openness capacity are crucial to the adjustment process".

Finding four – Failure to control a multicultural team (inexperienced).

The Arab project Sponsor perceived that some senior executive managers were unable to control their multicultural teams. These failures were communicated as "the team leader allowed speaking over the projects team" (scsre 25 and scsre 9) "policies and approaches wrong" (pmcmspm01) "too rigid and not productive enough" (pmcmspm14), "not hands-on" (pmcmspm15) and "fails to communicate properly" (scdre10) mostly addressing the ability to manage the diversity within the groups.

Team management is also linked to an Arabic multi-linear tendency (Lewis, 2016). The sponsor expects hands-on, leadership and guidance for the consultant and perhaps fails to recognise how effective Western managers can be efficient and effective without outward displays of multi-linear actions.

Finding five - Ethical concerns.

The final concerns centred around ethical considerations. On two occasions, the Arab project Sponsor suspected the employees to be working too closely with a contractor and one consultant was removed for "crossing boundaries" with a female Qatari member staff.

Arab nations are identified as family orientated, conservative, religious and consultative (Bakhtari, 1995; Erin, 2014; Moran et al., 2011). Traditionally, it has been customary for men to enter a business and the women to act as homemakers in the GCC. This tradition is being modernised with many GCC states promoting more balanced gender equality in the workplace. Family orientation has resulted in a small percentage of females working in the GCC. When they are at work, they are to be carefully treated under local custom. Specific guidance

concerning not seeking direct eye contact or shaking hands are available and must be respected, as women would be treated differently by Western standards.

Implications for Practice

The executives removed from the megaproject for culture-related issues had mostly been engaged previously in several GCC commissions.[53] They included seasoned professionals with an average of 27 years' post-graduate experience. The displaced executive's average tenure is eleven months; however, seven were removed within two months. The reasons for this churn were related to the Arab project Sponsors' perceptions of inactivity, reputational or face issues, inflexible approaches, failure to take control or ethical issues. The findings of the pilot study were further analysed to consider the nationalities most impacted by churn and the impact of cultural distance and tenure. Such findings included that the nationalities with the greatest level of churn, came from the UK and the USA, followed by Canadian and New Zealand. These issues are considered in papers Walker, P., & Walsh, A. (2020) 'The Significance of Cultural Risks for Western Consultants Executing Gulf Cooperation Council Megaprojects'. *International Journal of Social and Business Sciences, 14 (08),* 315-324. A related paper, Walsh, A., Walker, P., Ellis, M. (2021) 'The Underestimation of Cultural Risk in the Execution of Megaprojects', *International Journal of Civil and Environmental Engineering*, 15 (1), 33 – 40, finds that cultural awareness deserves a more significant consideration if megaprojects' execution is successful.

These findings from the pilot case study suggest that potential cultural dissonances arise from the following:

Public dissonance issues - a severe cultural mistake would be to misjudge the consequences of embarrassing the Arab project Sponsor in public, leading to a loss of face; is

[53] Prior GCC experience was a contracted requirement for most positions.

it a matter of “degrees of sensitivity”. One of the easiest ways to cause someone to lose face is to “insult an individual or criticise them in front of others” (Hammerich & Lewis, 2013, p. 222). The Arab project Sponsor must be advised of any potential disagreement in private rather than publicly.

Ethnocentric issues - some aspects of professional practice may need to be adapted to local norms and practices, and a “healthy dose of particularism” is sometimes recommended (Trompenaars & Woolliams, 2001). Cross-cultural commentators often use the adage “when in Rome do as the Romans” (Hammerich & Lewis, 2013; Meyer, 2014). Elena, (2010) suggests reviewing the countries “cultural mindset” before engagement, through following a framework including “understanding the type of culture and the differences with your own, respecting the differences and enriching yourself through the new”.

Customs and convention considerations - there are several professional and social conventions to be considered in the GCC (Lewis, 2016; Myer, 2018; Trompenaars & Woolliams, 2001), such as accepting an appropriate dress code and professional conventions. Traditions to be respected include punctuality, language and manners (Al Mahrouqi, 2018; Archibald, 1991; Jaeger & Adair, 2013b). Cross-cultural experts also warn of bureaucratic, professional procedures as “nothing happens quickly”, and “trust is paramount” (Moran et al., 2011). Cultural experts also recommend approaching a new venture with an open-minded approach, conscious of the dangers of leaving one's home to escape back home issues, such as relationship or career issues (Moran et al., 2011).

Culturally sensitive executives. During the analysis of this pilot case study, it was observed that senior executives were frequently removed due to cultural dissonance, on average within ten months of their commencement. However, an analysis of all CVs revealed that seven executives held project tenure for between three and five years.

These seven executives agreed to provide interviews to discuss their acculturation to the GCC megaproject. Four of these executives had been progressively promoted throughout the project.

These “long-serving” consultants suggested that the high churn rates are to be expected in GCC megaprojects and how “everything is perceived as urgent yet proceeds at a frustratingly slow pace” (CC003), “unrealistic deadlines are set” (A002), and there are “frequent changes of mind” (SCDRE05). The executives suggested that Arab project Sponsors were “demanding, make frequent changes and are very reactive”. They report local practices of working long hours, staying neutral and learning not to overreact.

They recommended addressing work professionally, not overreacting to change, and contention points should be communicated privately and advise that disagreements are generally business-related and should not be considered personal issues.

Chapter Summary

The pilot case study exposed cultural dissonance as a real and significant phenomenon during the execution of at least one GCC megaproject and identified some specific cultural dissonance sources. It identifies a significant executive churn rate for the megaproject, considering that 28 senior executive positions were approved and that 75 individuals occupied these positions. The factors leading to the churn were investigated, and many natural reasons for departures, such as the project directors decided to leave the GCC, the fulfilment of their role or their retirement were discovered. However, in more than half of the cases (40), it was found that cultural dissonance had played a significant factor in the executives' removal, making cultural dissonance a risk factor during the execution of GCC megaprojects. Several cultural issues resulted in the dissonances, such as the public criticism of the Arab project Sponsor, a failure to adopt local standards, a perceived inability to cope with culturally diverse teams and displays of ethnocentric behaviours.

Despite the purposeful selection of this pilot case study (Yin, 2006), the findings could reflect a single GCC megaproject's uniqueness or represent practices in one GCC state. There are known constraints with the reliance on a single case study (Yin, 1994a, 1994b) and the expansion of the research boundaries is preferred to enhance the reliability and verify the findings by reviewing a wide range of megaprojects, widely distributed throughout the GCC. The pilot study only identifies the problem; it does not investigate the project directors' perspective of the cultural issues they face and their impacts on their personal and professional needs.

Further research is necessary to explore both social and professional cultural differences impacting the acculturation of Western consultants. By identifying the specific sources of cultural dissonances, it may be possible to identify potential mitigation measures for cultural dissonance risks.

Chapter Six - Methodological Considerations

Introduction

The main research question and the SRQs portray the thesis objective to explore the occurrence and significance of cultural dissonance for Western consultants during megaprojects' execution in the GCC. Chapters two to four provided a review and critical analysis of research that identifies culture as a megaproject risk source.

Kirkman, Lowe and Gibson (2017), Tsui, Nifadkar and Ou (2007) and Vas Taras, Piers, Steel and Taras (2016) emphasise the difficulties in measuring national culture, describing national culture as an intangible, complex multi-faceted construct. Selecting an appropriate methodology to measure this complex phenomenon is challenging. This chapter reviews potential approaches before choosing an appropriate methodology based on the research focus and the geographical context. A pilot case study (detailed in Chapter Five) provided evidence of a high rate of churn for Western consultants in a GCC megaproject, establishing a potential link between cultural dissonance and the rate of executive churn. This thesis seeks to explore this phenomenon in more depth and illuminate the critical role that cultural dissonance may exert over a megaproject's execution, in what is always a dynamic environment and make recommendations as to the management of such risks.

Research Focus

The research focus is the exploration of cultural risks for Western consultants executing GCC megaprojects. It is expected that these research findings will have a broader application beyond megaprojects. Prior studies (Al Sadi, 2015, Kogut & Singh, 1988 or Tihanyi, Griffith, & Russell, 2005) have indicated that Westerner practices often encounter difficulties when operating in the GCC market. The cultural challenges faced by Western construction consultancies are likely to be replicated in other fields, such as accountancy practices or the provision of financial services in the GCC. A suitable research methodology is necessary to

examine the influence that culture may exert for Western-Arab relations, specifically those that may occur during the execution of GCC construction megaprojects.

The main research question queries whether cultural dissonance is present during the execution of GCC megaprojects to a significant degree and if so, what form does this dissonance take, how and why does it arise and to what degree is it a risk factor?

The pilot case study provided evidence of high levels of churn as a result of cultural clashes. Should such findings be replicated throughout GCC megaprojects, this phenomenon may be a significant risk factor for the impacted parties. This expanded investigation seeks clarification about the replicability of the pilot case study's findings and explores the factors contributing to this phenomenon; it permits a more comprehensive understanding of cultural dissonance impacts. The selected methodology needs the flexibility to examine the factors associated with Western consultants' professional and social integration, address other potential sources of cultural disharmony, and explore Western consultants' experiences with acculturation and cross-cultural training.

After reviewing the available methodological approaches, a blended approach is used, principally using a pragmatic version of a Constructivist Grounded Theory approach (Charmaz, 2006), as the primary methodology to investigate this potential phenomenon. This study also makes use of situational analysis, to consider the regional influences of the GCC. The methodological merits for the adoption of this grounded approach are discussed.

Firstly, the chapter considers the study at an ontological and epistemological level. Next, potential methodological choices are reviewed, and the benefits and limitations of such approaches are evaluated. The certainty of bias and potential reduction measures are discussed, concluding with the strengths of adopting the selected methodology, before considering research methods, data collection and analysis.

The Researcher's Positionality

Streubert and Carpenter (1999, p.150) describe the attempts to retain objectivity[54] in collecting and analysing data while being intimately involved as a "significant challenge". Corbin and Strauss (2008) maintain that personal experience could be brought into the analysis, but warn that "vigilance is needed to maintain the empirical data primacy". Gentles, Jack, Nicholas and Mckibbon (2014) advocate continual reflexivity to address the presence of researcher-respondent interactions. These occur at multiple stages of the research process: during topic selection, while formulating the topics for semi-structured interviews, throughout the research design, while interviewing and during analysis and interpretation of the data.

Initially, the researcher felt that their prior experiences prevented the selection of Grounded Theory. The initial concept of Grounded Theory (Glaser & Strauss, 1967) involves entering the research without prior knowledge or experience. However, subsequent Grounded Theory practitioners have addressed issues such as the presence of existing research and previous experiences (Timonen, Foley, & Conlon, 2018) to the extent that the researcher's idea as "a blank slate" is no longer a realistic proposition (Charmaz, 2014). Gentles et al. (2014) suggest that a significant problem with the "popular desire to legitimise qualitative research through reflexivity" is associated with this approach's increasingly uncritical adoption. Their studies find that most researchers explicitly fail to state their understandings, positions and approaches. This chapter discusses the issue of prior experience upfront and other efforts to reduce any natural bias.

[54] The researcher found prior experiences to be both an aid and a continual source of conflict. Throughout the research, it was felt that there was a constant battle between the disparities of experience and objectivity.

Research Approach and Conceptualisation

A conceptual representation of factors considered while selecting a suitable research approach is tabled in Figure 6.1.

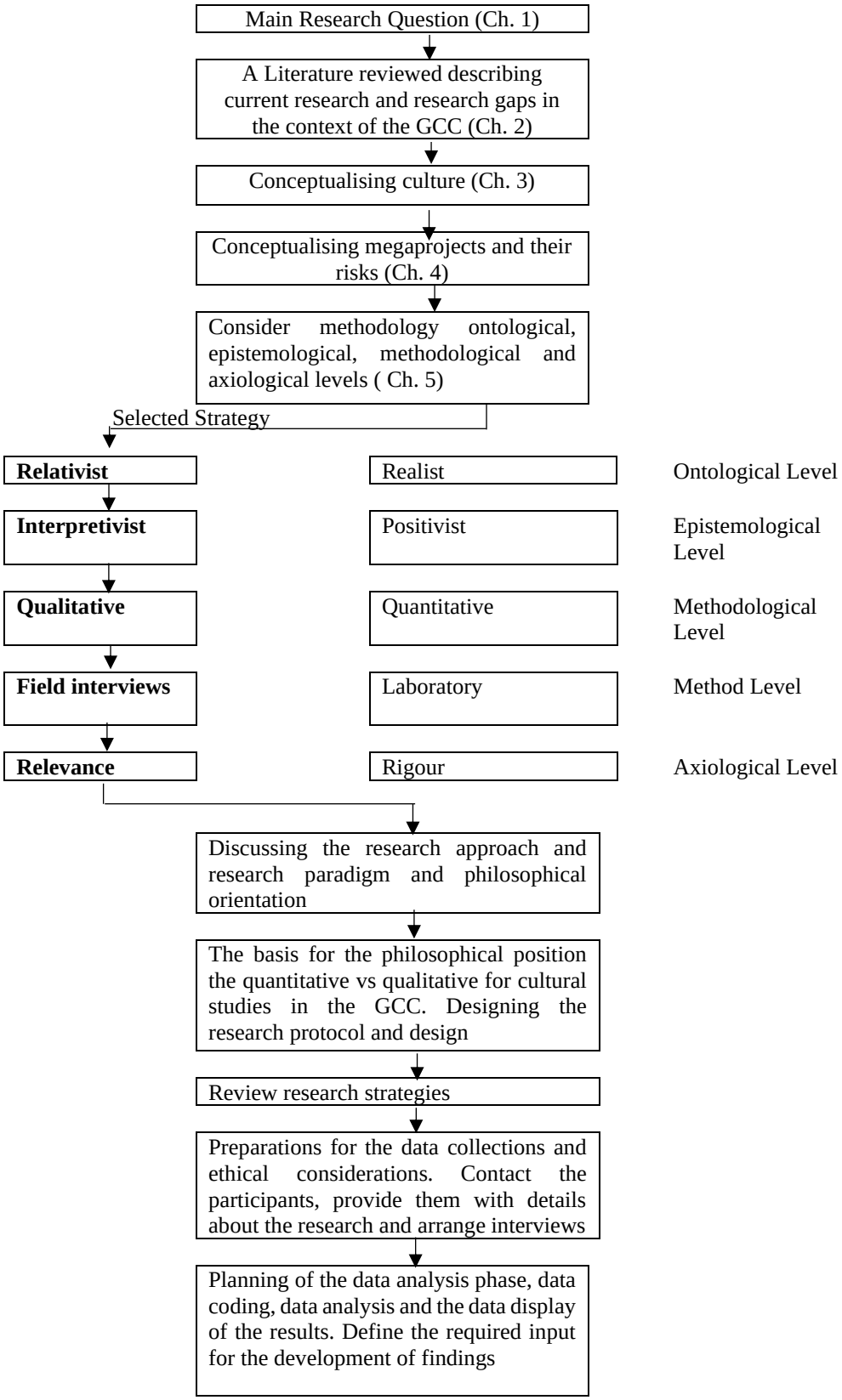


Figure 6.1. Research Approach.

The Research Paradigm and Philosophical Orientation

The research paradigm of this thesis is interpretivism. Interpretivism advocates the need to "understand the differences between humans in our role as social actors" (Saunders, Lewis, & Thornhill, 2008, p. 147). Culture is a latent, hypothetical construct and is for this thesis explored as part of the social sciences as examined by others in this field (Hofstede, 2002; Tsui et al., 2007). Given the exploratory nature of this research and the intangible nature of culture, social sciences are considered more suitable philosophical grounds on which to base this research instead of attempts to identify a more exacting scientific orientation rigorously.

Pertti (1995) recommends a two-phase approach to qualitative research: purification of the data observed, followed by an "unriddling" process – deconstructing the data and seeking answers to the riddle. This study is developed from empirical reality observations with the epistemological position guided towards interpretivism (Yin, 2006).

The methodological review is structured based on identified "research building blocks' (Grix, 2004).

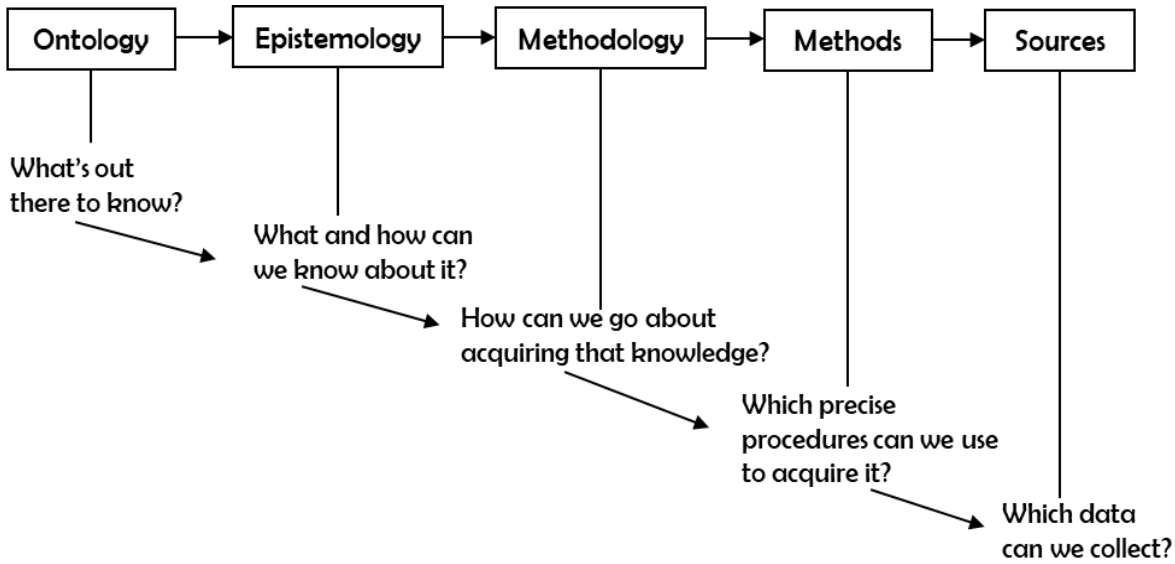


Figure 6.2. Building Blocks of Research (Grix 2004).

Ontological considerations. Researchers promote quantitative, qualitative or mixed methods approaches to research. Some researchers are quantitatively orientated and argue that quantitative analysis is essential to summarise "social facts" before any analysis element commences (Amaratunga, Baldry, Sarshar, & Newton, 2002). Qualitative advocates argue that non-quantitative methods are a better methodological approach where the research is undertaken with human interpretations of events or situations, in contrast to the more scientific approaches (Bryman, 2016). Qualitative studies are endorsed by researchers for their appropriateness in assessing social sciences (Alvesson, 2002; Dainty, 2010; Pertti, 1995) to provide unscientific flexibility in questioning the project directors. The process has been described as "studying observable clues to find common understanding methods to make the phenomenon understandable" (Pertti, 1995, p. 36).

Epistemological considerations. At an epistemological level, this research is orientated towards an exploratory and inductive approach. This research explores some of the causes of natural tension between the parties of different cultural orientation. It considers explicitly how a lack of cultural congruence may impact upon the execution of megaprojects. This thesis seeks to understand the tacit knowledge and experiences gained by project directors engaged in GCC megaprojects by using a Mode 2 style of learning (Gibbons, 1995), blending existing cultural research with field practices. Research has identified the need for frequent cycling between theory and data, as the links between existing cultural research and actual practice are examined and reflected on (Eisenhardt, 1989b). As there is little specific research to date on cultural influences within GCC megaprojects, it makes greater use of project directors experiential learning (Nonaka & Takeuchi, 2006) which will be abstracted through tacit knowledge transfer (Kolb, 1984) with the findings and subject to thematic analysis (Clarke & Braun, 2017).

A conceptual representation of the study is set out in Figure 6.3 below.

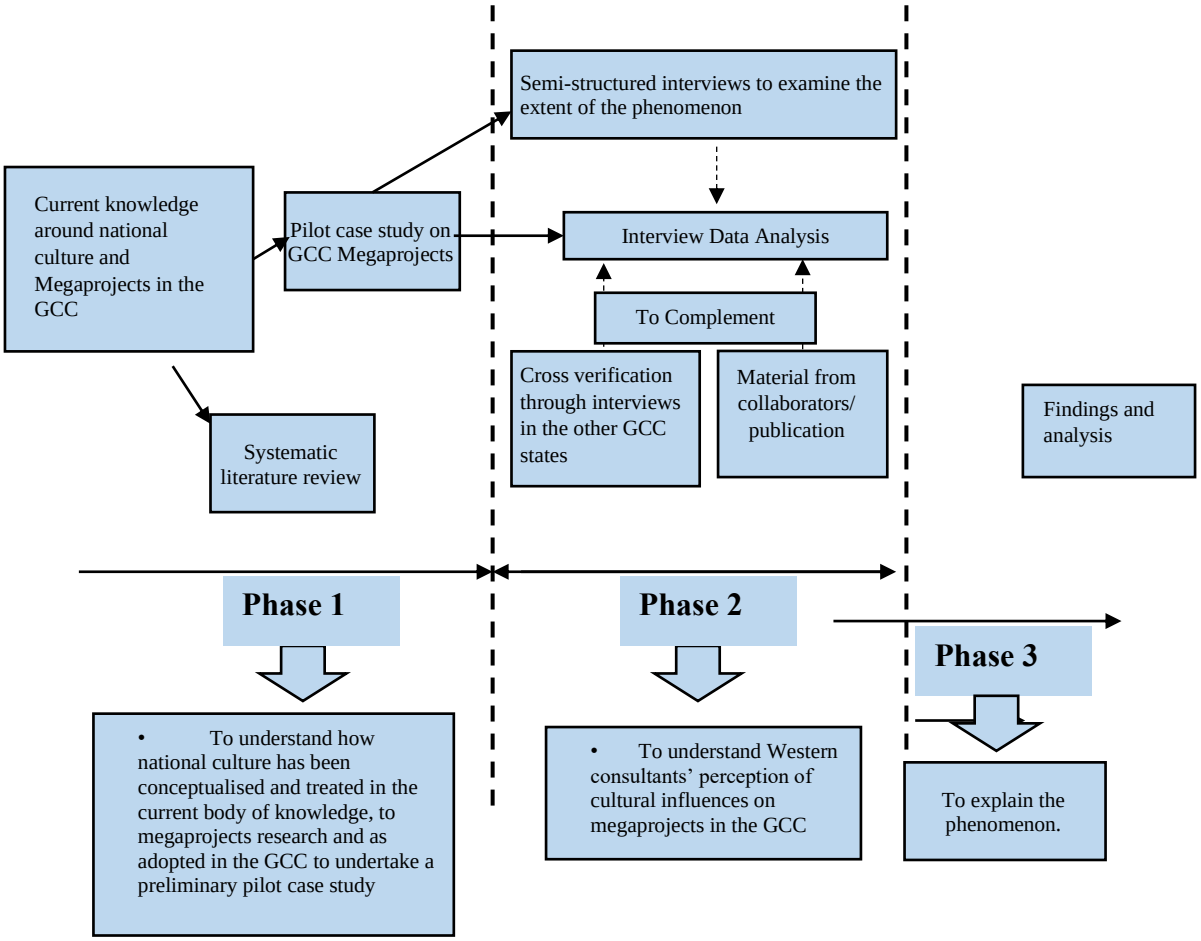


Figure 6.3. Conceptual Representation of the Research (adapted from Teo & Loosemore, 2014).

Qualitative Methodological Considerations

Qualitative research methods are prominent in the built environment. Amaratunga et al. (2002) suggest that qualitative research allows sufficient to capture a real-life experience. Punch (2016, p.5) suggests that qualitative research is about collecting ways of thinking about social reality. Leedy and Ormrod (2015, p. 276) advocate the most appropriate qualitative research considerations are ethnography, case studies, phenomenological studies, grounded theory studies and content analysis. In this research, content analysis studies are discounted as they rely on an existing research body that is not present at this juncture.

The following section briefly discusses ethnography, case studies and

phenomenological studies' suitability for this study.

Ethnography. Saunders et al. (2008, p. 591) describe ethnography as research focused on describing the world through an individual's first-hand field experience. Ethnography is also considered suitable for the study of groups within a culture. Pertti (1995) researched Finnish drinking habits through his immersion into Finnish secular society, to experience and record their drinking habits. Hoggart uses ethnography to consider his working-class background to discuss social segregations (Owen 2008, citing Hoggart's The Uses of Literacy (1957). An ethnographic approach was considered based on the researcher's first-hand experiences with three GCC megaprojects. Hart (2015) questions the ability to generalise ethnographies. For this research, the researcher felt that their failure to document prior experiences accurately might result in an over-reliance on memories and potentially allow inaccuracies to be reported. Given such potential to undermine data reliability, the researcher preferred to use more accurately documented records using purposefully captured data from active megaproject field project directors.

Charmaz (2011) describes the "blurred boundaries" between Grounded Theory and ethnography; both are derived from symbolic interactionism. Both are used to investigate the phenomena in naturalistic settings, and the observation is salient with the data emerging through the data analysis. Pettigrew (2000) suggests that there is a potentially happy marriage between ethnography and Grounded Theory. Charmaz (2014, p.27) finds that "methodological eclecticism" negates the views that ethnography and Grounded Theory are mutually exclusive. Charmaz (2014 pp. 35-41) promotes the sustained participation of ethnographic observation, which helps the researcher go deep to experience an interpretative rendering, which may add to the generation of new knowledge and theory.

Case studies. Researchers promote case studies for complex projects such as

megaprojects, as they allow the investigator to retain “the holistic and meaningful characteristics of real-life events”, together with providing an ability to “capture vibrant and complex data” (Barrett & Sutrisna, 2009). Yin (2006, p.3), supports the use of exploratory case studies to assist with understanding complex social phenomena. Eisenhardt (1989, p. 548) highlights the positive aspects of case study research, including “novelty, testability, and empirical validity”. A pilot case study acted as a precursor to this broader empirical investigation.

There are, however, known challenges with a case study approach. These include a perceived lack of transferable results from a single case study (Yin, 2009) in addition to the dangers of selection bias (Barratt, Choi, & Li, 2011; Bitektine, 2008). Other practical restraints led to discounting a full adoption of case studies for this research. These included the time required to undertake further case studies and the crucial difficulties in obtaining sensitive materials. The pilot study required sixteen months of research and the lack of access to sensitive documents, confidentiality and ethical issues, prohibit further in-depth case studies.

Phenomenological studies. The primary intent of phenomenology is to describe phenomena (Koch, 1995) or describe how such events are interpreted according to the investigators' perceptions of events (Rapport, 1995). Phenomenology describes the study of experience through reflection, a concept founded by German philosopher Edmund Husserl. This methodology is associated with a constructivist approach where the researcher asks participants to reflect on their experience of a phenomenon and describe what was fundamentally meaningful (Given, 2008, p. 117). For Husserl, phenomenology is the “rigorous, human science of detailing and explaining all conceivable phenomena” (Given, 2008, p. 615). Phenomenology has been described as most useful, for example, for clinical practitioners and others who need to understand patients' lived experiences (Starks & Trinidad, 2007).

Phenomenology is developed from a philosophical background, whereas Grounded Theory is developed from sociology. Phenomenology also differs from Grounded Theory as it describes the lived experience of a phenomenon, as opposed to an explanatory theory of the basic social processes. There are other important similarities and some subtle differences between phenomenology and Grounded Theory approaches.

Phenomenology emphasises the information obtained from analysing interview data exclusively, whereas Grounded Theory considers this data in addition to other materials and external data. Phenomenology can work with small sample sizes if the interviews are relevant (Marjan, 2018). However, small samples are not advisable for Grounded Theory applications, as they risk being disconnected from their social contexts and situations (Charmaz, 2006a, p. 131). Grounded Theory consistently compares and analyses emerging data (Charmaz, 2006a), whereas phenomenology concentrates on eliciting participants' experience to reveal the phenomenon (Wimpenny & Gass, 2000). For these reasons, phenomenology was considered too restricted for this exploratory study at this juncture given the early phases of identification of cultural dissonance as a phenomenal risk factor.

Grounded Theory. Glaser and Strauss conceived Grounded Theory to allow for a new approach to be developed for “the purposeful, systematic generation of theory from social research data” (Glaser & Strauss, 1967, p. 40). Grounded Theory was derived from socially researched data originating from a need to record chronically ill patients (Goulding, 2002, p.4). The methodology was created in defiance of a movement which considered that theory should solely be based on a “grand theory” concept. Grand theorists believe that the purpose of social research was to reveal rigid and pre-existing universal explanations of social behaviour (Suddaby, 2006, p. 633). Glaser and Strauss asserted that grand theory was too removed from real people and problems (Goulding, 2002). Goulding (2002, p. 41) suggests that before accepting Grounded Theory as a valid method of theory development, qualitative work was

considered “unsystematic, unscientific and unworthy”. Such criticisms are reported to have inspired Glaser and Strauss to “seek fresh understandings about these relationships and the constructed reality of the actors” (O'Reilly, Paper, & Marx, 2012, p. 248).

Barrett and Sutrisna (2009, p. 936) suggest that Grounded theory is particularly suited to explore areas about which little is known, similar to the focus of this research - the exploration, explanation and potential mitigation of the risks associated with a lack of cultural congruence in GCC megaprojects. Modern Grounded Theory is also becoming more frequent in “black box” research, investigating topics that, despite having been heavily studied in prior work, contain vital processes that are not well understood (Murphy, Klotz, & Kreiner, 2017, p. 294). Timonen et al. (2018) highlight that the most common outcome from a Grounded Theory study is the provision of greater conceptual clarity. It could be argued that cultural dissonance is an established phenomenon, but its application to GCC megaprojects has not been exposed to date. Grounded Theory may elicit fresh insights to help understand this complex process. Grounded Theory refers to both the method of qualitative inquiry and the products of that inquiry (Given, 2008, p. 374). It involves deriving theory from data collected in its “natural setting and accumulating interrelationships from an integrated central theoretical framework” (Leedy & Ormrod, 2015, p. 276).

The fundamental tenets of a Grounded Theory approach, including the research focus as an exploratory study, examining a little-known subject, working in the natural settings of the phenomenon, are considered appropriate to this research. This potential methodology warranted further investigation.

Exploring Grounded Theory

The original objective of Grounded Theory is to “discover” theory, through systematic analysis of data obtained from unscientific, social research (Glaser & Strauss, 1967, p. 2). Some

confusion arose when the concept founders, Glaser and Strauss, later disagreed on the conceptual interpretation and use of Grounded Theory. Both effectively took differing paths, resulting in the suggestion that there are multiple methods for adopting Grounded Theory approaches (Goulding, 2002, p. 256).

The core conflict between Glaser and Strauss concerned whether the verification processes should be the outcome or not. Goulding, (2002, p. 47) suggests that Glaser favoured a “highly complex and systematic coding system”, whereas Strauss preferred to “let the data tell its own story”. Glaser also focused on the emergent theory's need to be inductive only (Glaser, 1992). In contrast, Strauss considered emerging theory to be possible from either an inductive or deductive fashion, with data verification essential (Strauss, 1987, p.12).

Glaser's focus on a highly complex and systematic coding system is frequently criticised (Goulding, 2002, p7). Melia, (1996, p. 376) suggests that such an overemphasis on coding is “the technical tail wagging the proverbial dog”. Notwithstanding their fundamental disagreements, Glaser and Strauss both agreed on crucial Grounded Theory principles. O'Reilly et al. (2012, pp. 248–249) suggest that these uncontended principals include:

1. The constant comparison of the data
2. Apply theoretical coding to results
3. Theoretical sampling
4. Data saturation
5. Theoretical sensitivity

Modern Grounded Theory also prioritises a bottom-up approach to theory building (Murphy et al., 2017). This thesis's bottom-up approach allows the project directors' lived experiences to take centre stage and provides additional literature reviews once the theoretical model has taken shape (Gioia et al., 2013).

Developments in Grounded Theory. Ralph, Birks and Chapman (2015) advise that Grounded Theory itself is adaptive, “a product of its time, against the background of disciplinary developments of the time”. Grounded Theory has taken several different forms to date. These are not necessarily competing and sometimes seen as complementary, forming a dynamic “family of methods” (Bryant & Charmaz 2007, pp. 11–12) (Figure 6.4) for Grounded Theory research.

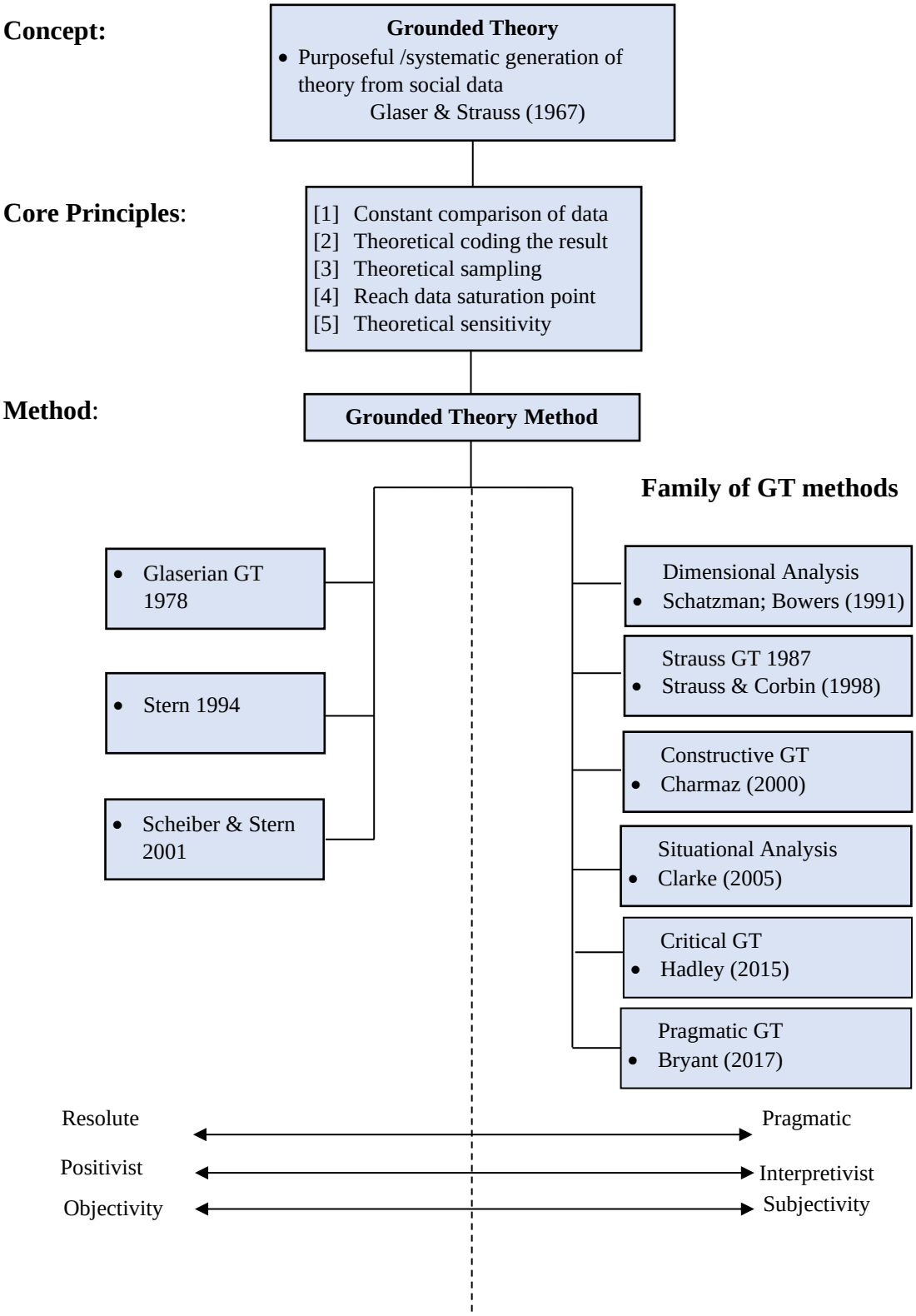


Figure 6.4. Genealogy of Grounded Theory (Bryant, Charmaz, Mruck, et al., 2019; Clarke, 2019; Hadley, 2019)**.**

Criticisms of Grounded Theory. Experienced researchers report that misuse of Grounded Theory techniques frequently results in an incorrect application and suggest that Grounded Theory is “little understood” (Partington, 2000, p. 83) and further “complicated” by competing versions (Charmaz, 2006, p.176). O'Reilly et al. (2012, pp. 249-256) consider Grounded Theory's application as “elusive and misunderstood by many, even those who advocate its use”. Their research found that 83% of studies that claimed to apply a Grounded Theory approach had only considered a Grounded Theory's ability to code or analyse data. The typical errors found included common mistakes by researchers including getting trapped in data collection, failing to see the story in the data, content-coding instead of theory coding and the attempted application of Grounded Theory when the methodology was not suited.

Charmaz, (2003, pp. 268-269) also confirms “that qualitative research reports are not so straightforward as their authors represent them to be” and that Grounded Theorists need to take a “deeply reflexive stance toward their preconceptions, positions, and research actions” before undertaking a Grounded Theory approach (Charmaz, 2020).

Pragmatism in Grounded Theory. Constructivist Grounded Theory refers to a theory being ‘constructed’ (Charmaz, 2006a) rather than “emerging” (Glaser & Strauss, 1967) as influenced by the pragmatist philosophical tradition (Bryant, 2009; Charmaz, 2014). Timonen et al. (2018) suggest that pragmatic concerns include a methodology which is “pragmatic in the colloquial sense of the term: sensible, realistic, practical, feasible, and attainable”. Strauss's pragmatic view of Grounded Theory was also supported as he reportedly “neither built social theory from scratch nor did he centre it on one key idea” (Bryant, Charmaz, & Strübing, 2019, p. 51). Strauss endured significant health issues since his youth, which may have influenced his pragmatic outlook. Bryant, Charmaz and Strübing (2019, p. 53) suggest that during his academic studies Strauss developed a practical empirical strand of sociological research, which

he blended with the theoretical depths of the sociologists “Dewey-Mead-Blumer line” of pragmatist-interactionism. As a pragmatist, Strauss himself did not consider his theories as “complete” or “final” but as “just a pause in the never-ending process of generating theory” (Glaser & Strauss, 1967, p. 40).

Timonen et al. (2018) describe further advancement in Grounded Theory techniques, including those of a critical realist perspective, where “the existence of one reality that is open, fluid and shaped by how people interpret (construct meaning) in it”. Critical realists “commence with critical observations and experiences of the critical issues before the study” and enact change. Critical realism involves a combination of induction, deduction and abduction to gain conceptual clarity about phenomena. Hadley (2019, p. 584) suggests that critical Grounded Theory is currently in “a state of becoming” and that other theorists will further add to or subtract from its current form. While Hadley (2019, p. 574), cites Bryant’s 2017 acknowledgement that “most approaches to Grounded Theory methodology are always idiosyncratic”, he suggests a current autopoietic relationship in Grounded Theory methodologies as represented in Figure 6.5.

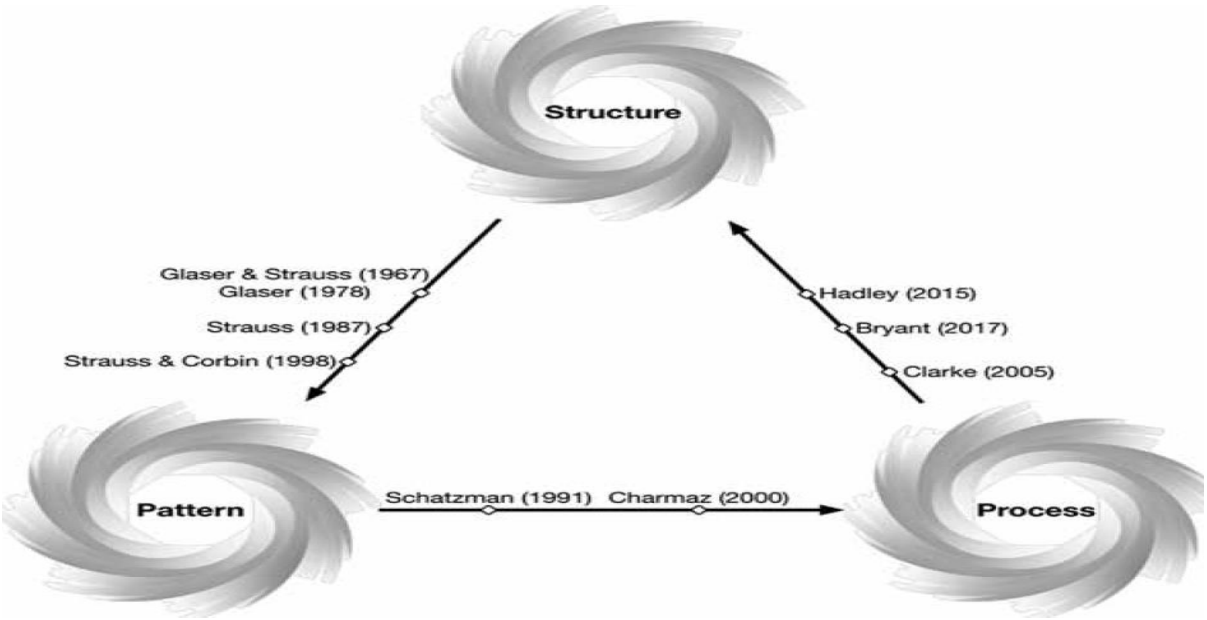


Figure 6.5. Autopoietic Interpretation of Grounded Theory Methodologies (Hadley, 2019)

Hadley (2019) further suggests that Grounded Theory methodology forms a spiral that starts in a traditional form and is adapted to reflect various "moments of philosophical thought that have guided qualitative research" (p. 573). Hadley (2019) suggests that the researcher's ontological and epistemological position determines the form of Grounded Theory methodology they undertake.

This researcher sees merit in applying critical Grounded Theory methods, noting how the transformative dissemination may occur (Figure 6.6). However, during this study, it would not be possible to comply with the fundamental Critical Grounded Theory procedures for repeat interview cycles. To pursue the requisite volume of repeat interviews, respondent confidentiality and respondent availability, would act as a restraint. Accordingly, the researcher considers that a Constructivist Grounded Theory Methodology, more appropriate to this research.

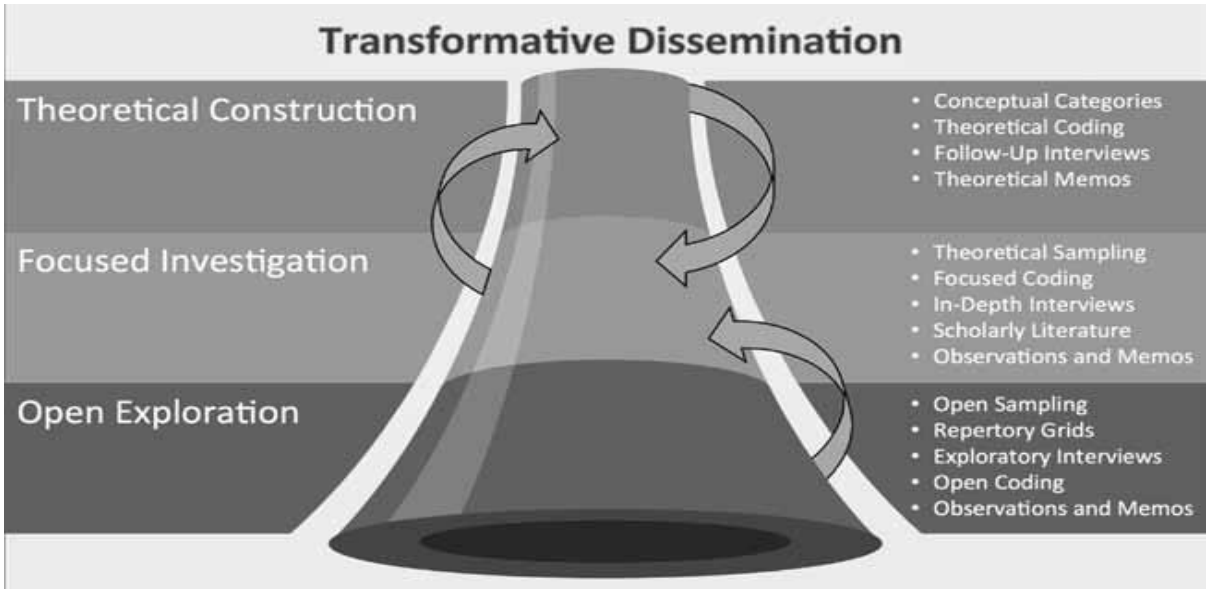


Figure 6.6. Methodological Stages of Critical Grounded Theory (Hadley, 2019, p.574)

Adopting a Constructivist Grounded Theory approach. Grounded Theory supports symbolic interactionism. Symbolic interactionism considers how people interpret the meaning of the object in the world "their lived realities, and the social construction of social behaviour"

(O'Reilly et al., 2012, p. 248). Grounded Theory evolves during the research process and is considered as a constant interplay between the analysis of data and data collection (Goulding, 2002, p. 42). Grounded Theory practitioners do not claim to offer an absolute truth, describing the emergent theory as a "possible solution or a set of relationships that provide a plausible explanation" of the phenomena under study (Goulding, 2002, p. 45).

Charmaz (2006, p. 9) identifies two fundamentally different approaches to Grounded Theory, constructivist or objectivist (which can also be described as interpretivist or positivist). An objectivist (Glaser's viewpoint) considers an "external reality" and assumes the existence of "real objective facts" from which the researcher will unearth and derive an appropriate theory (Charmaz, 2006, p. 131). A constructivist will approach Grounded Theory without assuming that the events are real. They consider how people see their situation and "acknowledge that the resulting theory is an interpretation". Constructivists accept an ever-changing contextual world, which acknowledges "diverse local worlds and multiple realities" (Charmaz, 2006a). Finalised Grounded Theories are also emergent theories, which reflect the researchers emerging construction of concepts. Theory formation is a by-product of continual adoption and reflection, as the theory emerges and gets shaped by new data in a process appropriately described as "fluid, interactive and open-ended" (Charmaz, 2006a). This research adopts such a constructivist interpretive approach.

Applying context to grounded research – situational analysis. Clarke (2009) suggests that the constructivist Grounded Theory approach developed by Charmaz (2006) needs to be further considered by considering its context or situational analysis. Situational analysis is described as an expansion of Grounded Theory (Clarke, Friese, & Situational, 2018), which acknowledges of the context of the research, described by Charmaz as considering both the "messiness" of conducting Grounded Theory research and the "messiness" of the imperial

world (Clarke, Friese, & Washburn, 2016). Situational analysis highlights how the enquiry itself becomes a fundamental unit of analysis, and that situational analysis helps shed light on implicit meanings, tacit actions, and discussions.

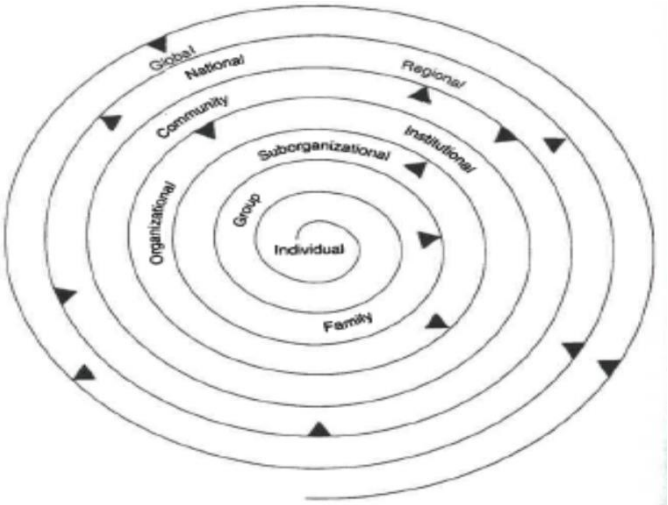


Figure 6.7. Conditional Matrix of Situational Analysis (Strauss & Corbin, 1998).

Clarke was a Strauss student and proposed three types of maps based on Strauss and Corbin's (1998) conditional matrix (Rankin, 2013). The principle in situational mapping is that everything in the situation both constitutes and affects everything else in the situation, with no "right map" (Clarke, 2009, p. 209)

Table 6.1

Situational Analysis, a Summary of Rankin's (2013) Findings

1. Situational maps – layout the significant human, nonhuman, discursive and other elements in the research situation of inquiry and provoke analysis of relations among them. **2. Social worlds/arenas maps** – layout the collective actors and the arena(s) of commitment and discourse within which they are engaged in ongoing negotiations and meso-level interpretations of the situation. **3. Position maps –** layout the major positions taken, and not made, in the data vis-a-vis particular axes of difference, concern and controversy around issues in the situation of the inquiry. Seek to account for the full array of elements in the situation: human, nonhuman and discursive.

Reflexivity, Relationality and Objectivity Considerations for Grounded Theory

Reflexivity. Gentles et al. (2014) argue that reflexivity is becoming progressively more accepted within contemporary Grounded Theory methods and describes how researchers employ reflexivity in different ways and at various research junctures. They advise of a need to consider how to neutralise, acknowledge, explain, facilitate and capitalise the influences of reflection throughout their studies. Gentles et al., (2014) also cite how numerous authors have exposed the potential dangers (and distortions) that may arise from the excessive use of "reflexivity" (Chesney, 2001; Cutcliffe, 2003; Finlay, 2002; Hall & Callery, 2001; Pillow, 2003).

Finlay (2002, p. 541) cautions against the use of reflexivity to the point of self-indulgence, as one risks shifting the research's emphasis and "blocking out the participant's voice". Similarly, Bryant, Charmaz, Mruck and Mey (2019) caution how researchers must "critically self-reflect on how their background, assumptions, positioning and behaviour impact on the research" as they "strive to preserve the contexts and voices of the research participants for each stage of the research process" (Charmaz & Keller, 2016). Charmaz (2017) also highlights the likelihood that the researcher's stand-points change with their experience as their knowledge is enhanced through intensive research.

Relationality. Hall and Callery (2001) describe relationality, which addresses power and trust relationships between participants and researchers, as holding the potential to increase the validity of Grounded Theory studies' findings. The researcher generally has equal standing to the project directors in the survey, having similar educational and professional experiences as most of the project directors.

Objectivity. While a critical component of Grounded Theory is the immersion within the research environment, it is equally crucial for the researcher, an experienced practitioner,

to be vigilant in addressing potential bias. Leedy and Ormrod (2015, p. 319) suggest that “pure objectivity probably is not possible” in qualitative research, as the researcher acts as a “human instrument for the data collection and study” (Hoepfl, 1997, p. 49). In its many forms, bias has the potential to reduce the credibility of the researcher's findings. Anthropologists consider that those engaged in cultural studies have an inherent prejudice, as consciously or unconsciously, they are biased by their lived experiences (Hofstede, 2002, p.7). Bryman (2016), Denzin (2007), Hart (2015) and Saunders et al. (2008) highlight some of the critical concerns with bias within cultural studies. To offset and minimise the impact of research bias the researcher applied recommended strategies by considerations such as “result triangulation, exception finding and reporting and continuously questioning the truth” (Leedy & Ormrod, 2015, p. 104).

The field interviews that support this thesis were subject to a triangulation of results by continually interpreting the themes' meaning and cross-referencing the raw data to earlier findings (Creswell & Creswell, 2018). Exceptions were noted and explanations sought for any deviations from the contemporaneous norms as they arose. The documenting of semi-structured interviews followed a lengthy and arduous verification process to ensure the data captured reflected only the respondent's actual views and was not tainted by the researchers' recollections. Data was firstly replicated in the form of meeting records. Secondly, it was sent to the participant for validation; thirdly it was adjusted if necessary, and finally, this record was endorsed by the respondent on completion. Adopting this approach, the researcher strove to adapt the maxim to “work hard to report all evidence fairly” (Yin, 2006b, p. 10).

Data Collection Considerations

After selecting a Constructivist Grounded Theory approach as the methodological choice for this research, appropriate data collection strategies were considered. The researcher evaluated industry-specific factors, such as a general inadequate response rate to surveys (Saunders et al., 2008), confidentiality issues and the research's exploratory nature. Data

collection requires extensive field consultations with project directors to explore and understand their perceptions of cultural dissonances in GCC megaprojects. Similar attempts (Baumann, 2013), to use field interviews in the GCC to measure cultural influences, were constrained by the Arab project Sponsors' refusal to provide field access.

Qualitative studies require the engagement of purposeful sampling and the continuation of such selection until the data received reaches saturation point (Barrett & Sutrisna, 2009; Given, 2008; Glaser & Strauss, 1967; Saunders et al., 2008). The researcher considered that interviews with practising GCC megaproject project directors would be the most appropriate means for obtaining data. Purposeful interviewing supports the selected methodology (Hoepfl, 1997; Leedy & Ormrod, 2015) and both structured and semi-structured interviews were considered.

This research examines lived practical experiences associated with cultural interactions with local Arab project Sponsors, which appears most suited to face-to-face engagement between the researcher and the respondent. Barrett and Sutrisna (2009) endorse less formal semi-structured interviews that come close to normal conversation. Their studies found that semi-structured interviews can provide rich data while permitting them to reflect and expand on potential questions. It also allows the researcher more scope to probe and seek examples of incidents and explore feedback. A fully structured interview or pre-set survey may restrict the expansion of such findings. Saunders et al. (2016) suggest that structured interviews are too rigid to allow for a diversity of responses and are also coloured by the researcher's preconceived ideas.

The researcher found some potential conflict with the use of fully structured agendas, fearing that such procedures may limit Grounded Theory's emergence, which should be allowed “to rise using as little force as possible” Pertti (1995). Despite reservations about potentially limiting the emergence of theory, it is necessary to provide structure to enable

analysis and ensure responses' consistency. The researcher considered that better reliability and consistency could be achieved if a framework were available to guide the answers. The questions were designed to cater to an expected variety of responses and flexible enough to adapt to earlier answers and react with early interventions. A pilot interview was performed, covering a broad range of social and professional engagements, training, and cultural shock. The outcome was tested, updated, reviewed, and retested three times. A proposed question framework was established and updated as the interviews progressed.

The unexpected GCC blockade on Qatar's State and subsequent travel restrictions limited the researcher's ability to travel to the GCC states of Saudi Arabia, Bahrain, and the UAE. This restraint was mitigated using Skype and other conferencing methods. Two parties also arranged to meet up in the UK during their summer vacation to provide an interview. It would have been more time-efficient to have visited each GCC state and interview the megaproject consultants in the field, as part of this analysis.

The participants gave their input voluntarily, outside their working hours. The venues were restaurant or cafés, and project directors were provided with a coffee (occasionally with a cake), in exchange for their services.

Informational discourse analysis. Discourse analysis is a process which seeks meaning in how language is used to analyse personal, social and political issues (Starks & Trinidad, 2007, p. 1374). The interviewers' goal in discourse analysis is to capture the participant's language, including any references or appeals to other discourses. The researchers and participants' use of language is not considered an exact literal interpretation, even if they use the same words. However, the actual words may not be considered the finite meaning, reflecting how it was communicated during the interview. The interviewer may need to clarify the meaning the participant intends through their use of specific terms (Starks & Trinidad, 2007; p. 1375). There are experienced discourse analysis researchers, who consider the

interpretation of data as social psychology. Wetherell (1998) finds that discursive social psychology examines the flow of discourse, also considering psychological states, interactional and intersubjective events believing that data emerges a sense of practical interpretation. Wooffitt and Robin (2005, p.43) identify the inherent dangers of interpreting this complicated procedure, which researchers describe as is a “craft skill” heavily reliant on tacit expertise. The overall objective of an interviewer is to capture more than the participant's language. There is a fundamental realisation that the researcher and participant do not necessarily mean the same thing, when they use the same words, as they may have different interpretations. While discourse analysis and the interpretation of body language (Lewis, 2016) can benefit an interview process, I lack the specialised training required to do justice to this skillset. Data from the interviews is used at face value and clarified with the project director where necessary.

Ethical considerations. One of the main challenges of the interview process was the need to protect highly sensitive information. Ethical approval was sought and gained from the University of Salford (Appendix Two) and updated as required.

For confidentiality reasons, details are kept on a password-protected drive to avoid unintentional disclosure. The information provided was considered highly sensitive, and several project directors expressed concerns about the release and possible misinterpretation of their personal views (should they become known to the Arab project Sponsor) potentially harming their career development. Despite the reassurances of confidentiality, six participants did not follow through to a documented interview, citing confidentiality concerns. One party advised that head office approvals would be required (from Australia). When no further response was received after three months, this potential participant was removed from the survey. In another case, a formal confidentiality agreement was endorsed. It became evident throughout the interviews with willing participants that some were concerned that their contributions could potentially be revealed to an Arab project Sponsor, potentially impacting

their consultant-sponsor relationships.

Data Analysis

Following Grounded Theory's principles, the research findings were reviewed through analysis, which allowed common themes to emerge in a technique labelled as thematic analysis. Thematic analysis is a method for identifying, analysing and interpreting patterns of meaning (themes) within qualitative data (Clarke & Braun, 2017, p. 297). This process was engaged during the analysis of interviews. A six-step framework was followed during thematic analysis (Braun & Clarke, 2006) sequentially organised as follows:

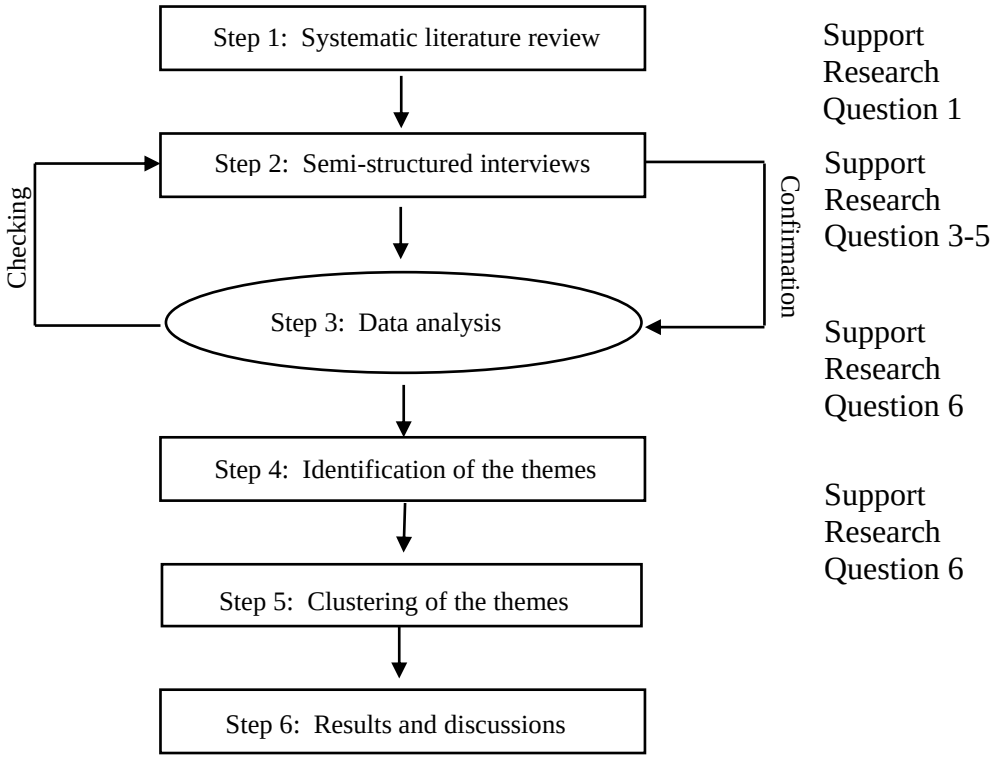


Figure 6.8. Thematic Analysis (Clarke & Braun, 2017).

As part of the Grounded Theory strategy, continuous interplay occurs between research findings, until a theoretical saturation point is reached. This research took place between

November 2018 and February 2020, considering the original interpretation of Glaser and Strauss, (1967, p. 61) that saturation is the stage where "no additional data are being found whereby the sociologist can develop properties of the category". The saturated data is used to construct a Grounded Theory, as described in Figure 6.9 and Chapter Seven.

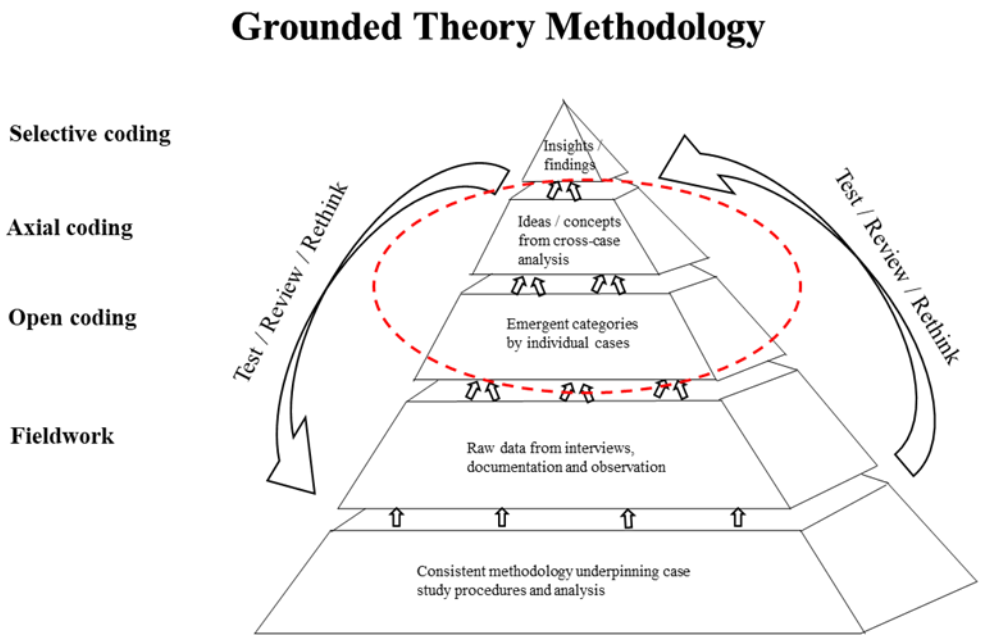


Figure 6.9. Interpretation and Analysis in Grounded Theory (Barrett, 2015).

Abstracting theory from the data. The codification process (Figure 6.9) describes the process of deriving theory from the raw interview data. During the information collection process data were categorised and coded. Data obtained through semi-structured interviews allowed the identification of themes and further analysis of findings.

Open coding is the term used to describe how the raw data uncovered during the interviews was abstracted. Raw data took multiple formats such as statements, interviews, field notes and observations (sometimes classified as memos). The researcher assembled, separated, identified and labelled each idea or concept.

Axial-coding follows on from this open-coding process, by reprocessing and re-assembling this raw data. Axial coding was developed to support Grounded Theory's formation

(Corbin & Strauss, 1998; Glaser & Strauss, 1967). The process of relating categories with their sub-categories is labelled as "axial" because coding occurs around the axis of a type, linking types at the level of properties and dimensions (Corbin & Strauss, 1998, p. 123). Axial coding permits these concepts and categories to be further refined to systematically pursue relationships (Given, 2008, p. 52). Linked concepts were filtered and regrouped, in closer proximity to each criterion. Key interrelationships and interdependencies are continually explored. There is also a constant comparison between the data as it emerges and the previously identified data until a continual refinement in this data results in identifying core categories, allowing an explanation of the phenomena (Charmaz, 2006a).

A sense of generality emerges from the analytical process, reflected by the continuous arrows in Figure 5.7 during the “test/review/rethink” phase (Barrett & Sutrisna, 2009). Charmaz (2007, p.13) confirms that this data is continuously emerging and changing and that any analysis is “contextually situated in time, place, culture and situation” before the theory emerges.

Overall methodological Considerations

This chapter commenced by examining the main research question, exploring the influences of culture from a Western consultants' perspective while executing GCC megaprojects, before adapting a research strategy that accounts for both the research objectives and the (interpretivist) research philosophy (Leedy & Ormrod, 2015).

After considering several methodological approaches, a Grounded Theory methodology is selected (Charmaz, 2006a; Glaser & Strauss, 1967). The thesis adopts a Constructivist Grounded Theory approach, which “emphasizes action and meaning inherent in pragmatism” (Charmaz, 2017a), blended with situational analysis. The thesis captures project directors' experiences throughout the GCC to better understand this phenomenon of cultural dissonances. The participants' tacit knowledge and experiences were then analysed (Nonaka &

Takeuchi, 2006), thematically clustered (Clarke & Braun, 2017), and the overall findings provided in Chapter Eight to Twelve.

The researcher considered phenomenal logic, content analysis, ethnography, a pilot case study and Grounded Theory approaches before finding that Constructivist Grounded Theory methodology (Charmaz, 2006a, 2017a) best supports this research. Figure 6.10 provides an overview of the methodological considerations and the selected strategy for this research.

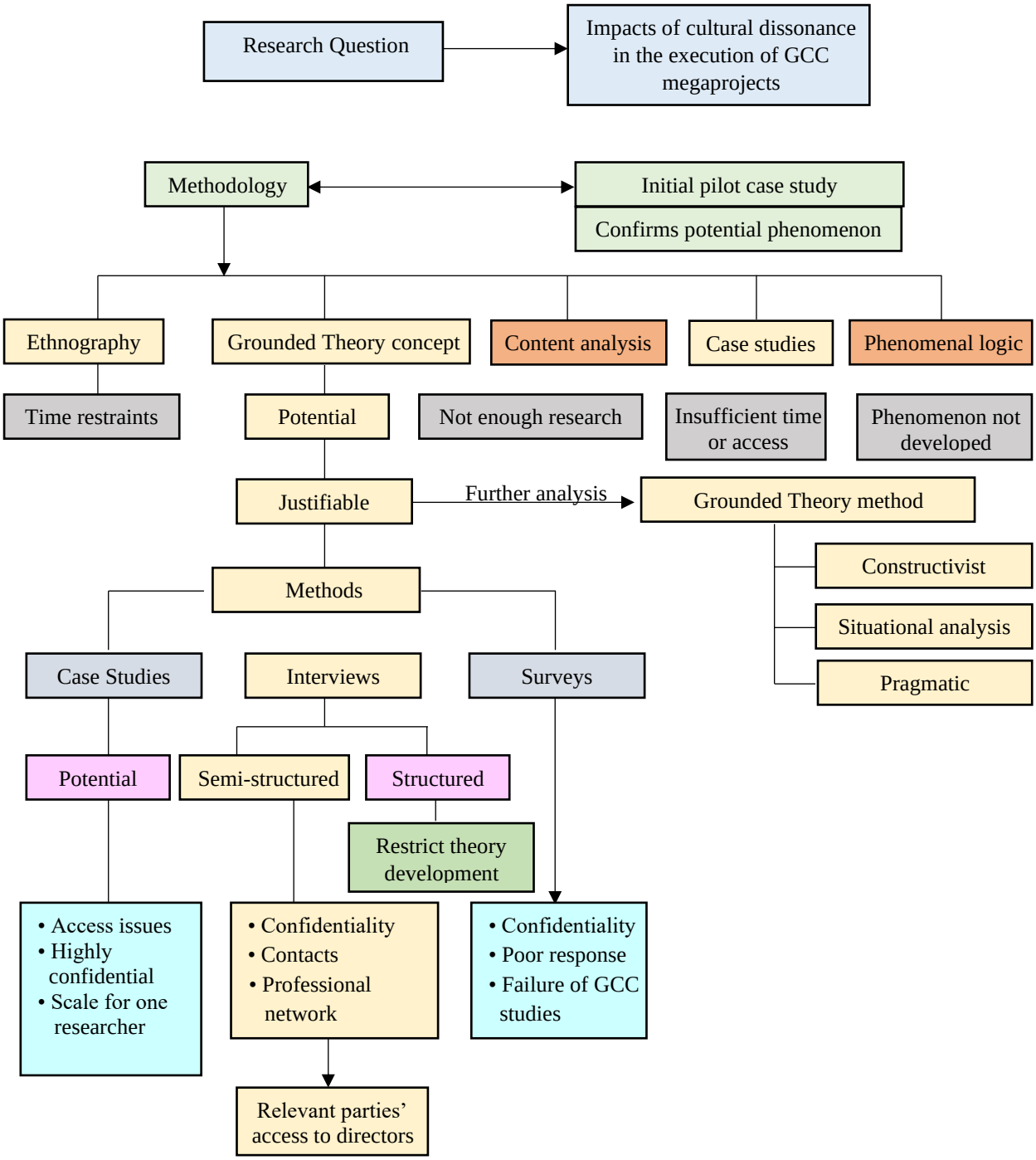


Figure 6.10. Methodology Decision Tree. (Author, 2020)

Specific Research Design Considerations

Following the selection of a Constructivist Grounded Theory approach (Charmaz, 2006a; Glaser & Strauss, 1967) including the use of situational analysis to understand its GCC context (Clarke et al., 2018), it is necessary to consider the specific research design approaches to implement this research. The research is designed to generate new knowledge (Gibbons, 1995), combining prior research and new tacit understanding from field project directors (Eraut, 2005). The hitherto undocumented cultural experiences of Western consultants executing GCC megaprojects is made explicit using a learning cycle (Kolb, 1984). A pilot study (Yin, 1994b, 2006) identified a high cultural dissonance for a GCC megaproject in one GCC State in Chapter Five. This research now considers a broader range of GCC megaprojects and addresses how the findings will be interrogated until a Grounded Theory emerges.

Purposeful Selection of GCC Megaprojects and Actors

The number of "live" GCC megaprojects tends to fluctuate, as most take a lengthy period to emerge from the concept stage to the construction phase. There is also additional confusion in quantifying the precise number of megaprojects, as some can be considered "gigaprojects" (Flyvberg, 2017), creating multiple stages or components that can be classified as megaprojects on their own merits. Particulars of GCC megaprojects are available on a commercial basis, for example, ProTender or provided free of charge (to the reader) from construction periodicals such as *Construction Weekly*[55]. The primary data sources are generally the same, as the GCC states usually tender megaprojects publicly.

Construction Weekly provided a searchable database for GCC construction projects labelling the construction projects as either megaprojects or projects. It also categorised megaprojects by their sector (for example, infrastructure or oil and gas), providing their

[55] www.constructionweek online.com and www.protenders.com

contract award values[56] and details of the Arab project Sponsor. This data is summarised in a GCC megaproject report in Appendix One.

This megaproject report was created to act as a guide to indicate the extent of GCC megaprojects. Based on the researchers' experience, megaproject data can be interpreted differently, as analysts sometimes apply a financial categorisation of US one billion dollars or count phases within large megaprojects as individual megaprojects. For example, the survey consists of the ongoing megaprojects for Lusail City in Qatar US $48 billion and Neom in Saudi Arabia for US $500 billion. These particular megaprojects' value contains multiple megaprojects considering Capka's (2004) one billion dollars suggested value. Accordingly, such reports can be interpreted in many ways and provide a useful guide but lack consistent rigour and require some analysis beyond their headline announcements.

A review of the potential GCC megaprojects most suitable to this study was undertaken when ethical approval was granted (November 2018). At that juncture 118 GCC megaprojects were at various completion stages. Appendix One indicates that of the 118 then active megaprojects, 91 were complete, about to be fully completed or placed on a temporary hold and 27 megaprojects were considered “active”. The report also provides nine specific analyses, one of which details the construction consultants' scope of services for each megaproject, allowing for purposeful sampling (Leedy & Ormrod, 2015).

The study actively sought to include contemporaneous data from each GCC State member, and the final distribution of projects per State, is provided through Table 7.1. Factors influencing the number of available megaprojects per project, such as the GCC blockade or the relatively low GDP of some nations are detailed in the Megaproject Report in Appendices 1.The megaprojects considered in this thesis are presented in Table 7.2 and 7.3. The researcher

[56] This represents the initially estimated cost forecast which is often subject to escalation for a number of reasons (Flyvberg, 2017).

visited each of Qatar's live megaprojects and key megaprojects in the UAE[57] and Oman. The GCC megaproject report for megaprojects (Appendix One) identifies relatively low numbers of GCC megaprojects for Kuwait and Oman, which is perhaps related to those states' relatively low GDP detailed in Table 1.1. It was necessary to include a recently completed megaproject in Kuwait to cover the entire GCC region.

Table 6.1

The GCC States that Participated in this Study.

As at November 2018	**Bahrain**	**Kuwait[58]**	**Oman**	**Qatar**	**Saudi Arabia**	**UAE**	**Overall GCC**
Ongoing Megaprojects	2	0	1	8	6	10	27
Projects in this Study	1	0	1	8	2	2	14
Coverage	50%	100%	100%	100%	33%	20%	52%

(Author, 2019)

Table 6.2

Qatar Megaprojects.

	Name of the project	**Category**	**Classification of Project**	**Consultant**		
				Designer	**Project Manager**	**Cost Manager**
1	Musheireb Development	Building	Mixed-use	Gensler	AECOM	RLB
2	Doha Metro	Infrastructure	Metro	Multiple	Multiple	Louis Berger
3	Lusail Development	Building	Mixed-use	Halcrow + Others	Parsons	T & T
4	New Doha International Airport	Infrastructure	Airports	HOK	Parsons	DG Jones
5	The Pearl Qatar	Building	Mixed-use	Collison	Dar	DG Jones

[57] Travel to all megaprojects was restricted due to the GCC blockade which started on the 5th of June 2017.
[58] Data from Kuwait for recently completed megaprojects (Appendix One).

6	New Doha Port	New port	Marine	Worley Parsons	AECOM	AECOM
7	The 7 Stadium FIFA World Cup 2022	Building	Mixed-use	Multiple	AECOM	KEO
8	Qatar Water Reservoirs	Water transmission	Water transmission	Hyder	Energo-Projects	Energo-Projects

GCC

	Country	**Name of the project**	**Classification of Project**	**Consultant**		
				Designer	**Project Manager**	**Cost Manager**
1	Saudi Arabia	NEOM City	Mixed-Use	Multiple	AECOM	Turner & Townsend
2	Saudi Arabia	Jabal Omar	Mixed-Use	Foster	DIWI	Hill
3	Oman	Expressway	Infrastructure	Atkins	Parsons	Driver Trett
4	UAE	Etihad Rail	Infrastructure	Atkins	Jacobs	Jacobs
5	UAE	Airport	Airport	ECG	AECOM	Turner & Townsend
6	Kuwait	AL Subiya Road	Infrastructure	DAR	DAR	DAR
7	Bahrain	Water Garden City	Building	HOK	HOK	Turner & Townsend

Actors. This research principally explores Western consultants and Arab project Sponsors' project directors' cultural interfaces as shaded in the organograms in figures 6.11 and 6.12

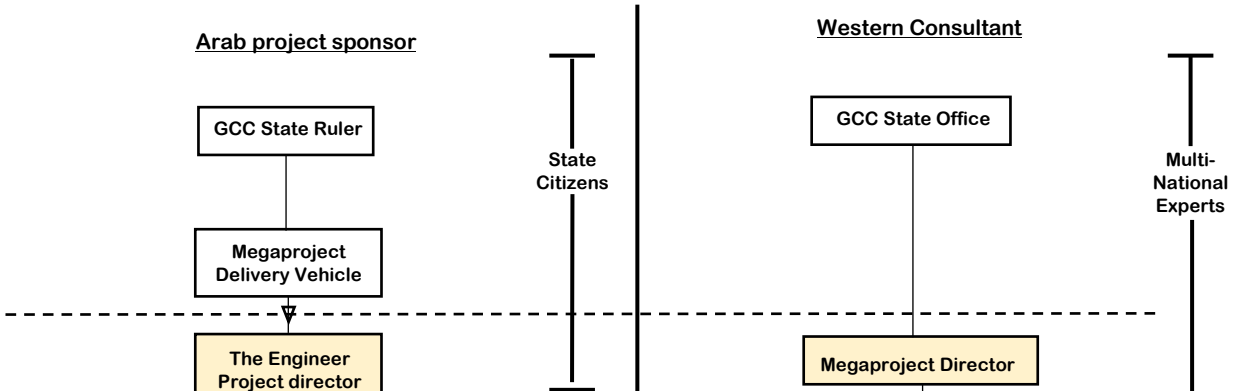


Figure 6.11 Arab Project Sponsor Organogram. *Figure 6.12* Western Consultants Organogram.

Source : (Author, 2020)

These Western consultant directors have significant daily interaction with Arab project Sponsors, making them the most appropriate sources of rich empirical field-based data.

Western consultants frequently specialise in dedicated types of construction throughout the GCC. The megaproject report identifies how many Western consultants specialise in delivering specific types of megaprojects throughout the GCC.[59] It shows that Parsons (an American-based firm of consulting engineers and project managers) has several commissions for airports in Qatar, Saudi Arabia and the UAE; Worley, an Australian headquartered firm of consultants and engineers, provides advice for deep seaports in Saudi Arabia and Qatar and Jacobs an American-based firm of programme and construction managers deliver several rail networks in Qatar and Saudi Arabia and the UAE. Typically, a Western consultancy firm has offices in several GCC states or accepts commissions throughout the GCC. Western consultant project directors frequently interact as they provide their specialised expert services. The frequent movement and frequent communication between GCC states' construction professionals help keep them updated with regional trends.

A prerequisite number of participants was not determined, as the research focused on

[59] www.Parsons.com; www.Worley.com,www.Jacobs .com

reaching a data saturation point, a point at which no new evidence is emerging (Glaser & Strauss, 1967). To capture contemporary data, the researcher deliberately targeted contributions from Western consultants actively engaged with GCC under construction megaprojects as of November 2018.

Conceptualising the Interviews

The researcher first reviewed prior studies which discuss cultural issues between Western and Arabic societies. Knight & Ruddock (2008) find that focus groups are gaining more popularity in built environment research. A research focus group was formed. The focus team held more than 35 years of GCC megaproject experiences, combining three different Western consultancy professions, the researcher (contracts and project management), a cost director and a programme director to select appropriate questions.

The team met and debated vigorously until four cultural areas of exploration emerged: social, professional, integrative and training. Five subsequent meetings of the focus group helped establish an interview framework to identify prominent research considerations to support the main research question. This framework was subjected to three interviews over four weeks until a firm questioning matrix was established. During these trials, changes were incorporated to allow a sharper distinction between professional and social integration issues.

Interview feedback was continually reviewed, in cycles, after batches of five to six interviews. Additional minor changes were made during this period, mainly to alleviate some confusion concerning integration to social culture (question 12) and cultural obligations (question 19). Both questions were rephrased, and the interviews progressed without further significant refinements. All of the interviews were conducted in English.

Framing the Interviews

Themes set for semi-structured interviews. The discussions first validated the project director's suitability for the empirical enquiry. Only one potential respondent was disqualified

during this stage (due to their explicit expressions of Islamophobia during the initial interview). Next, the project directors were asked to describe their perceptions and experiences of social, professional, integration and training issues in core "thematic units" of research (Ryan & Bernard, 2000, p. 780), as outlined in figure 7.3.

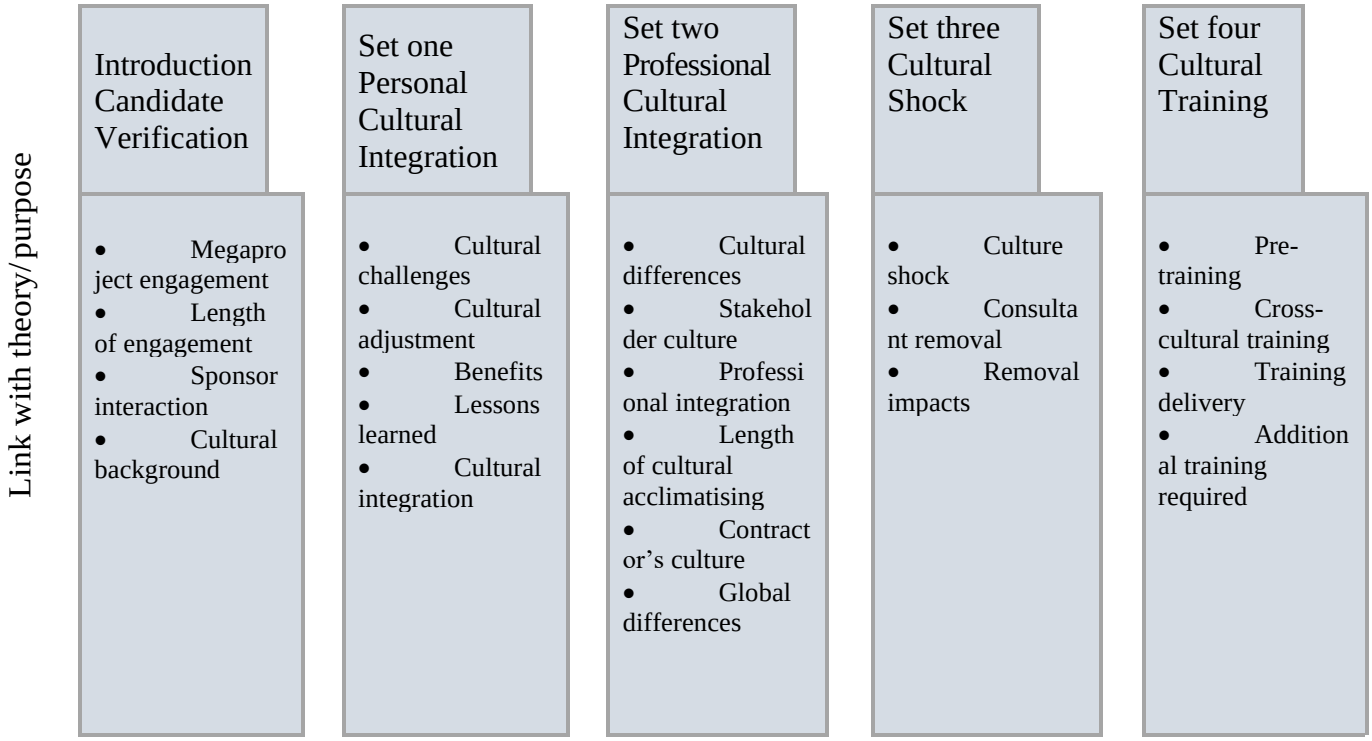


Figure 6.13 . Linking the Questionnaire with the Theory. (Author, 2019)

Candidate verification. The initial questions were designed to ensure that each project director could provide meaningful contributions to the research, mostly that they regularly interface with the Arab project Sponsor. The interviews were also designed to capture relevant details of the project directors' professional activities. Most project directors are either addressing financial services[60] or delivery services[61] , and the research is designed to allow these potential biases to be considered, to examine if their professional orientation may impact

[60] This function is undertaken by Cost Consultants.
[61] These functions are normally provided by Programme managers, Designers or Supervision Managers.

their perceptions. The research was designed to capture a broad range of services, typically found in megaproject execution, including Programme Managers, Construction Supervisors, Designers and Cost Consultants' perspectives.

The initial questions reviewed the extent of their GCC megaproject exposure and the frequency of their interaction with Arab project Sponsors. The project directors' experience in the various GCC states and their involvement in specific megaprojects were recorded. The final introductory question sought details of the directors' home domain, to check the potential of cultural response bias. Hofstede, Hofstede, & Pedersen (2002) found an inherent cultural prejudice as consciously or unconsciously, individuals personally relate their cultural experiences with their home country.

The study examined the findings for interrelationships between the responses to the interview for different thematic sets (Figure 6.14) of questions, for example, to consider how the maladjustment of a director's family (to schooling or lifestyle issues (social influences)) may contribute to a project directors' assignment failure perhaps irrespective of their professional acculturation.

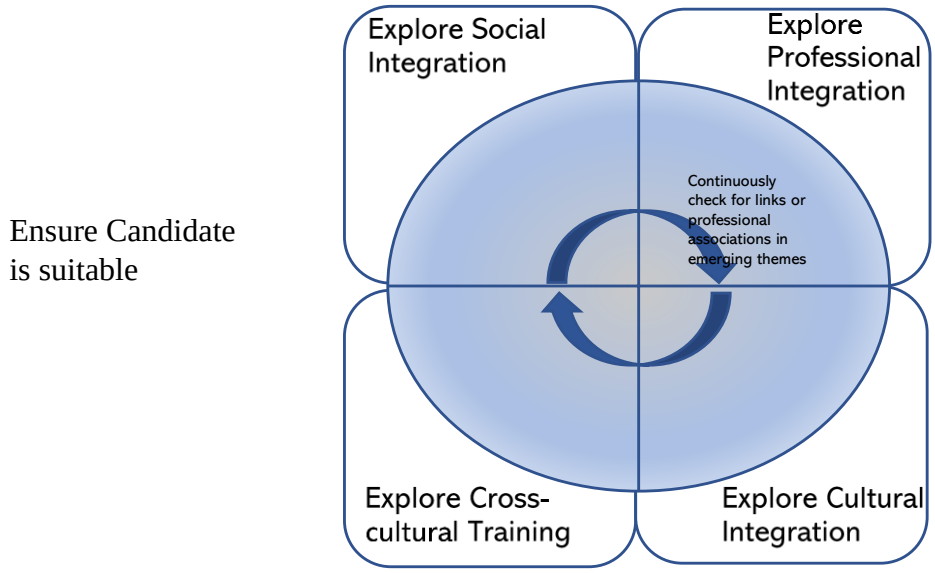


Figure 6.14 . Analysis and Integration of Cultural Themes. (Author, 2020)

Theme one – social acculturation. This first set of questions was designed to understand the project directors' social acculturation. Existing studies which inform of Arab social culture were reviewed, including an Arab association with strong religious convictions such as Lewis' (2016) suggestions that “good Arabs are good Muslims” or that Arabs are “family-orientated” and operate within a “high context society” (Al Mahrouqi, 2018) or that Arabs, are “relationship-driven and avoid confrontation” (Erin, 2014). The questions were also designed to consider the project directors' work-life balance such as longer working hours, six-day working or an accompanying family in the GCC.

Theme two- professional acculturation. The second set of questions explored professional acculturation to understand any professional concerns that project directors may hold concerning work practices or ethical issues. For example, there are some fundamental differences in the construction of megaprojects, such as the mass engagement of less-skilled migrant workforces, notable wage imbalances and unequal living standards (Amnesty International, 2018). The project directors are also asked for their opinions of any impacts associated with globalisation or organisational culture in their professional practices (Trompenaars & Woolliams, 2005, 2011), to seek clarification as to any fundamental regional practice differences, such as the different roles and responsibilities of Supervision Consultants between Western norms and Chinese norms in the East (La & Greenwood, 2004). Professionalism is also considered a critical factor within the Construction Industry (Egan, 1998; Foxell, 2018; Karahanna et al., 2005; Latham, 1994). The final questions asked for the project directors' views on significant professional challenges and whether they would recommend the GCC’s professional environment to a contact.

Theme three – culture shock. The third set of questions explored the project directors' experiences with acculturation and culture shock. To avoid ambiguity, the project directors

were provided with a definition of culture shock as “a state of anxiety and frustration resulting from the immersion in a culture distinctly different from one's own” (Naeem et al., 2015). The discussion asks if they feel that cultural issues are linked to assignment failure (Harrison & Michailova, 2012; Kumarika Perera, Yin Teng Chew, & Nielsen, 2017; Nowak & Linder, 2016). Failure is considered the “early return from a scheduled expatriate duty” (Cole & Nesbeth, 2014). Participants were asked to provide details for any project directors which may have been displaced due to cultural clashes with the Arab project Sponsor. Brockmann, Brezinski, Ibn and Agadir (2013) reported a high turnover of Western Consultants (project directors) in a GCC megaproject due to perceived cultural dissonance.

Theme four – cultural training. The final set of questions examined if the project director had been provided with any form of cultural preparation, such as cross-cultural training, before their GCC engagement. Nowak and Linder (2016), Al Mazrouei and Pech (2014) and Collings (2014) suggest that cross-cultural training can both reduce expatriate turnover and extend their tenure. GCC based studies support such findings and recommend cross-cultural training to extend expatriates' tenure and increase their contentment levels (Ertek & Tahir, 2017; Kiisk, 1998). The project directors were also requested to reflect on their experiences and provide their views on other appropriate training for Western consultants engaged in GCC megaprojects. Finally, the participants were asked to participate in an online cultural survey. This survey was the “Culture Compass Survey” by Hofstede Insights (Appendices six) and is discussed as potential risk mitigation later in Chapter Nine. A summary of the relationships between the exploratory themes and the interview questions is provided in Table 6.14 .

Table 6.14 : The Relationship of the Research Questions to the Research Design.

Interview Design		Research Objectives 1 Understand GCC Social Culture	2 Understand GCC Professional Culture	3 Understand Cultural Integration & Culture Shock	4 Understand Cultural Training Needs	Nov 2018 - Nov 2019 Research Focus
A	Candidate Profile					
Q1	Exposure to GCC mp					Ensure relevent experience
Q2	Delivery role		Yes			Ensure relevent experience
Q3	Engagement Frequency		Yes			Ensure relevent experience
Q4	Current megaproject					Ensure relevent experience
Q5	Geographical background			Yes		Cross check for Cultural Bias
B	Social Considerations					
Q6	Most challenging aspects	Yes				Explore social experience
Q7	Adjustment to new culture	Yes				Explore social experience
Q8	Beneficial aspects to culture	Yes	Yes			Explore social experience
Q9	Recommend the GCC socially?	Yes				Explore social experience
Q10	Most important cultural considerations	Yes				Explore social experience
Q11	Social departure from the GCC			Yes		Explore social experience
Q12	Integration to the social culture			Yes		Explore social experience
C	Professional Considerations					
Q13	Professional differences		Yes			Explore Professional Differences
Q14	Key challenges		Yes			Explore Professional Experience
Q15	Stakeholders differences		Yes			Explore Professional Experience
Q16	Overall professional differences		Yes			Highlight Key Differences
Q17	Recommend the GCC professionally		Yes			Explore Professional Experience
Q18	Acclimatiation period		Yes			Review Effectiveness
Q19	Contractual cultural obligations		Yes			Explore Professional Experience
Q20	Adequate preparation		Yes		Yes	Review Cultural Training
Q21	Professional opinion Valued		Yes			Explore Professional Experience
D	Culture Shock					
Q22	Culture shock and impacts			Yes		Explore Criticality of Integration
Q23	Staff removal due to cultural clash			Yes		Explore Criticality of Integration
Q24	Departure impacts to megaproject			Yes		Explore Criticality of Integration
Q24A	Normal turnover for GCC?			Yes		Explore Criticality of Integration
Q25	Contractors behavior		Yes			Explore Professional Experience
E	GCC Training					
Q27	Training prior to commencement ?				Yes	Review Cultural Training
Q28	Strengths / weaknesses of same.				Yes	Review Cultural Training
Q29	Need for intercultural training				Yes	Review Cultural Training
Q30	Delivery of Training				Yes	Review Cultural Training
Q31	Additional training requirements		Yes			Review Megaproject Training
Q33	Adoption of Head Office policies		Yes			Review globalisation effect
Q34	Agreement with the changes?		Yes			Review globalisation effect
Q35	Hofstede Institute survey participation	Yes				Cultural Expertise validation

The Interview Process

The interview programme.

		2018		2019												2020		**Total**
		Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	
Phase	**1**	1	5	2	3	5	1											**17**
Phase	**2**							9	0	0	0	1	1					**11**
Phase	**3**													4	1	1		**6**
Totals		**1**	**5**	**2**	**3**	**5**	**1**	**9**	**0**	**0**	**0**	**1**	**1**	**4**	**1**	**1**	**0**	**34**

Phase 1 **Primary Data Collection Strategy**
Phase 2 **Address Consultancy Bias**
Phase 3 **Strengthened GCC Representation**

Figure 6.15 Interview Programme. (Author, 2021)

The interviews took place between 2018 and 2020 after first obtaining ethical approvals in November 2018. Three distinct phases emerged during the data collection process. Phase one (November 2018 to April 2009) involved interviews based mostly from Qatar and comprised of 16 interviews. After in-depth analysis and reflection, an unintended bias became visible due to the overreliance on project directors who were predominantly Cost Consultants. This unintended potential bias could have resulted in an analysis of findings only related to one professional body and render the findings unsuitable for other professions, such as Programme Managers or Designers. Phase two (May 2019 to October 2019) added 13 interviews broadening the professional mix. The responses appeared to have met the saturation criteria for most questions; however, a further holistic review revealed a potential discrepancy concerning some of the GCC states' omission through a shortfall in Bahrain and Kuwait's data. Phase three (November 2019 to January 2020) added five interviewees with experience in the previously

mentioned states to correct this underrepresentation. Finally, 34 usable responses were provided, and all of the GCC states were represented.

Face-to-face interviews. Saunders, Lewis and Thornhill (2008) advocate that there are distinct advantages of face-to-face in-depth interviews in capturing more precious data during meetings, including more interaction, better analysis and the ability to expand on answers from the project directors. Face-to-face interviews were preferred, but the researcher used Skype facilities when necessary. The researcher also met some of the Western Consultants residing in the blockading countries, in Europe, during their annual vacations. This study concluded a total of 34 interviews with 29 on a face-to-face basis and five through Skype. Three-quarters of the GCC megaprojects considered in this study were visited in person to appreciate their scale and context. Those visited included all megaprojects in Qatar, the mid-field airport in the UAE, the rail project in the UAE and the infrastructure projects in Oman.

Recording interviews. During the trial interviews, each of the three trial project directors was asked if they would permit electronic recordings of the meeting. Two of the three participants raised concerns about the potential record, which the researcher suspects may be attributed to confidentiality issues. It was elected to continue using handwritten notes. With hindsight, while frustrating at times, the constant repetition of data and continual typing, editing and clarification process, contributed to the continuous comparison method of writing up, coding and analysing data (Starks & Trinidad, 2007, p. 1376).

Verification process. In general, each interview took between four and six weeks to complete, considering the period between initial informal contact through to the endorsement of a final verified record.

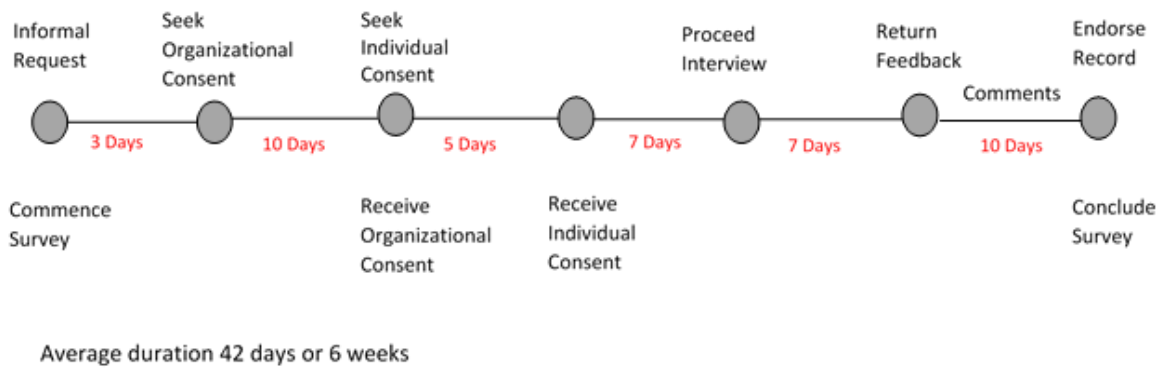


Figure 6.16 Interview Timelines (Author analysis, 2021)

Project Director Profiles - Participant Diversity, Positionality, and the Influences of Colonialism

Participant diversity. The project directors provided a wide range of perspectives and represented the multi-cultural workforces present in the GCC. Amongst the research participants for theses case studies, most project directors were European (19), followed by Middle Eastern (11) and relatively low numbers of project directors from Asia (two) or the USA (one). The lack of more American project directors is perhaps unusual,[62] given that American firms were most prominent in the programme management of GCC megaprojects, yet only one programme director came from the USA. A GCC megaproject pilot case study[63] found that over 18 different nationalities were involved in the pilot study's management, identifying that only one out of 29[64] senior executives in the American headquartered Programme Management Construction Management company executing the case study megaproject came from America.

Participant positionality. Just as Chapter Six described the researchers' positionality, it is necessary to consider that the individual project directors' opinions may be unique and related to their cultural upbringing and circumstances. By adopting a Constructivist Grounded

[62] Table 7.2 and 7.3 identified that at least three of the programme managers were American head-quartered.
[63] See Table 6.7.
[64] See Table 5.2.

Theory approach, a collective group experience emerged after individual findings and circumstances were continually analysed and reduced, until a common theory emerged, through reaching a "saturation point" in the responses where no new findings emerged (Glaser & Strauss, 1967).

In dealing with Western professionals, the paradox is that while Western practices and procedures are instantly recognisable to the project directors, the local culture is not. Western systems such as professional protocols and practices ignore Arab norms and practices such as the *wasta* tradition or recognition of status based on birthright and other customs discussed later.

The influence of colonialism. In *Orientalism* (Said, 1978) Said observes that "the Middle East" is a Western construct by which we understand (and at one time controlled) "the other". As colonialism can influence this research, and as some of those interviewed may have internalised this construct, this needs to be considered and addressed.

The GCC states were subject to the Ottoman Empire's rule until the 1920s and later European colonisation which lasted until the late 1940s. British colonial influences are suggested to have "dominated local politics" until the early 1970s when the GCC formed sovereign independent states (Kamrava, 2011). Some of the regional Arab teachings suggest a degree of mistrust at the colonising forces such as Karboul's (2015) viewpoint that "colonial powers supported passivity and inferiority among Arab people"**.** Other viewpoints suggest that one should understand the "powerful legacy" of colonialism and how these historical views diverge from Gulf states' perspectives on global engagement and the motivations and objectives that guide current policymakers in their decision-making processes (Ulrichsen, 2010, p. 17), as the Gulf states' reposition themselves within a "changing global order" in shaping the nature of their business (Ulrichsen, 2010, p. 89).

Postcolonialism aims to gain a deeper understanding of the systems involved by examining past colonial influences. On the other hand, decolonisation considers postcolonial thinking and aims to dismantle lingering colonial structures and thinking. The influences of colonisation or potential of nations believing in colonialist superiority has advanced. For example, in addressing criticisms of his interpretation of "colonialist behaviours" in *Orientalism Reconsidered* (Said, 1985) Said promotes greater awareness and respect for the context of the region and the "political, methodological, social, historical contexts - in which intellectual and cultural work is carried out".

However, one legacy of colonialism is the dominance of many "Westernised" rules of law, contracts, systems, procedures and practices frequently imposed on GCC megaprojects' governance. Westernised systems are mostly applied to administrate issues such as a GCC megaproject's contractual systems, FIDIC based contracts, the adoption of the UK or American standards for approving materials or recording systems such as minutes of meetings each have their roots in British/French colonial practices and customs.

During their interviews, the project directors' comments indicate that such Westernised "background, assumptions, positioning and behaviour" may have influenced their professional approach. Another legacy is through the language, where written and spoken English is compulsory as the lingua franca that has also developed from the regional colonial history and is the language of the contracts, procedural documents which have become embodied in regional frameworks for standards and regulations.

Gender participation in the survey. A total of 34 usable interviews from active project directors helped to shape these findings. If the survey were analysed based on gender, 31 male project directors and three female project directors contributed to the findings. Accordingly, female directors represented 9% of the research sample.

In 2018, a construction-based periodical, *Middle East Construction News*, prepared a report on the number of women specifically involved in construction management in the Middle East. They used two research methods, consultation with professional bodies and interviews with female project directors actively involved in local construction practices. They consulted two major construction professional bodies, the Chartered Institute of Building (CIOB) and the Royal Institute of Chartered Surveyors (RICS) (Construction News, 2018). They found that the CIOB had 1,300 middle east members (including 190 females), while the RICS had 2,806 regional members (including 213 females). The figures provide a gender ratio (female/male) of 13% in the Middle East for the CIOB and 8% for the RICS. The second part of their field analysis, based on the perspectives of 31 females active in GCC construction, suggested that the Middle Eastern construction market is "heading towards a better gender balance" but remains a "boys club".

Gender imbalance is a hallmark of construction practice in many regions. A recent construction-related gender participation study for the UK highlighted a similar gender imbalance for women in the UK (Naoum, Harris, Rizzuto, & Charles, 2020). This study found that many women experience a zigzag employment cycle in their construction careers, based on field research comprising professions including project managers, architects, engineers and surveyors, similar to the professionals considered in this GCC survey. The survey explored the perceptions of 60 males and 57 females. The research identified found that females were impacted by the industry in general (including a failure to promote construction activities for girls at school-going age, women's situations (including family commitments) and organisational barriers. Their research finds that one of the most significant barriers to women entering and working in the construction industry is its "masculine-culture" and that support is necessary for both structural and cultural changes in the industry, to make it "more accessible and appealing" to females. Their statistical findings (86.3% of women and 75.9% of men)

perceived that the percentage of women in the industry is likely to remain within 10% of the construction workforce, until significant changes are made (Naoum et al., 2020, p. 20)

According to such research, while gender participation in this GCC sample appears low (9%), it reflects the general levels of female participation in the construction industry.

Interview Questions

To verify their suitability for this research, potential contributors (each a project director) were asked the following questions:

1. How long have they been involved in the construction of GCC megaprojects?
2. What is their specific role in the delivery of GCC megaprojects?
3. Typically, how frequently are they directly engaged with GCC stakeholders?
4. Please provide details of the megaproject which they are currently assisting?
5. Kindly confirm their most appropriate geographical background from the following: Americas/Europe/Asia/Africa & the Middle East/Australia.

Question one – the depth of experience. The project directors participated in GCC megaprojects for an average of seven years. The survey outliers included one project director holding less than two years' experience and four project directors where each held more than ten years' experience. More than half of the project directors (19) had a previous engagement on megaprojects within two or more GCC states.

The project directors were not requested to provide their age as part of the interview. However, most participants appeared over 40, and while the question was not asked, one programme director believed "he was not doing a bad job for 73". Another respondent indicated that "In the GCC, they value age and experience and are immediately suspicious if the consultant does not have grey hair or appears less than 40 years old when providing expert advice".

Question two – the role of the respondent. The project directors came from a variety of backgrounds: programme management (15), financial management (14), design management (3) and claim consultancy (2).

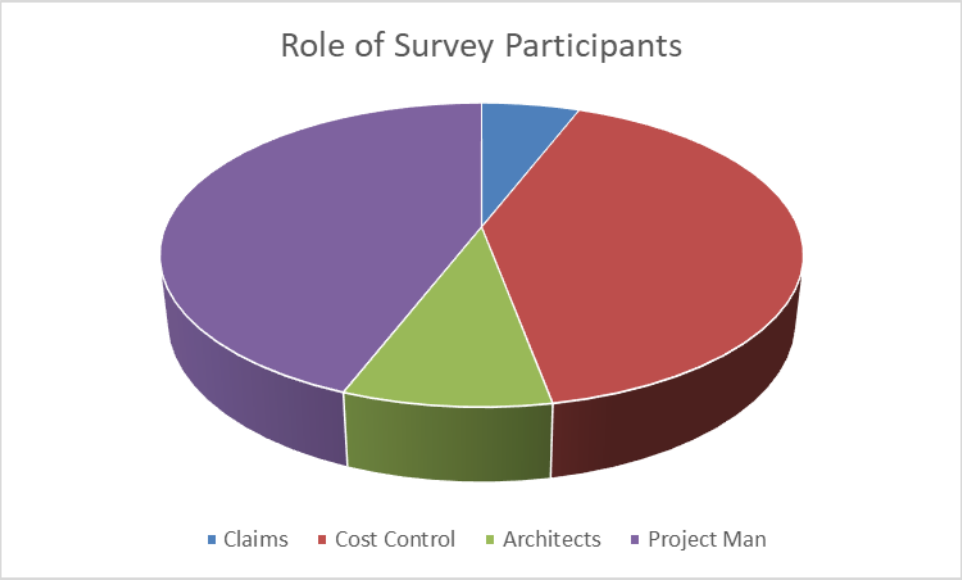


Figure 6.17 . Professions of the Project Directors. (Author, 2021)

Question three -stakeholder interaction. All parties reported frequent interaction with Arab project Sponsors. In general, the Programme Managers Construction Managers daily and the Cost Consultants were interacting between three and five times a week. The Designers reported frequent interaction with a lapse in between presentations and times of design preparation.

Question four – GCC megaprojects. Over half the project directors had worked in two or more GCC states (a few in three). All were involved in "live" megaprojects[65] and megaprojects under construction, as opposed to in planning.

[65] As at the time of the research initiation in November 2018.

Question five – geographical basis. Most project directors[66] stated that they came from Europe (19) followed by Africa/Middle East (11), Asia (two) and the USA (one). Positionality considers how people view the world from different embodied locations (Qin, 2016). A geographical bias has the potential to influence the researchers' interpretation of project directors' findings.

The project directors are from a broad mix of nationalities. Zein (2016) highlights how expatriation has resulted in many children having different citizenship than their parents, due to birth location, resulting in a more multi-cultural society with blurred boundaries creating a "multi-cultural soup". Venaik and Brewer (2016, p. 78) highlight the dangers of "forcing culture to fit the straitjacket of regional geographic boundaries, which is at odds with what culture is and how it should be learned and understood".

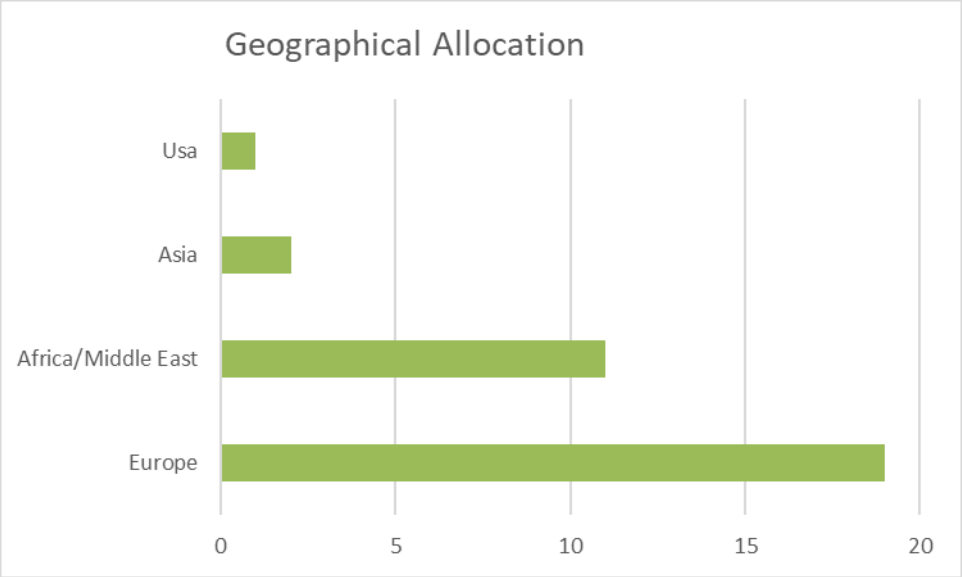


Figure 6.18 . The Origins of the Project Directors. (Author, 2021)

[66] The researcher suspects that some participants (three or four) may have responded based on citizenship they had been granted, the stated nationality is used, assuming that the participant is honest.

Interpretation and Analysis of Emergent Data

The findings set out in Chapter Eight in four sections, sequentially exploring the project director's experiences and perceptions of social and professional integration, culture shock and cross-cultural training within the GCC. Chapter Nine consolidates the findingsand the emerging themes addressed, noting and discussing any key exceptions, group or idiosyncratic findings. Finally, the most important outcomes of each chapter are analysed and further evaluated.

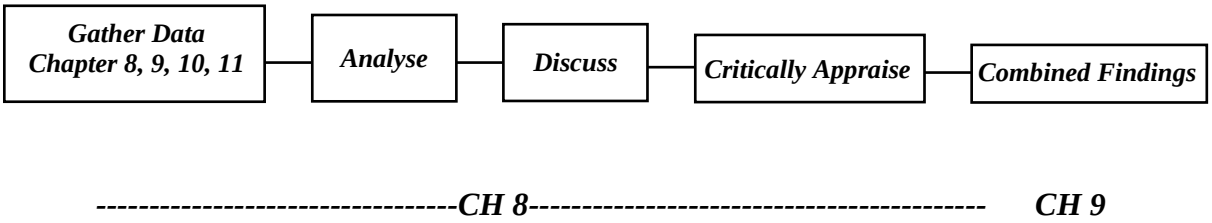


Figure 6.19 The Integration of Field Findings.

The respondent's responses are referenced using italics and the participant code. The project directors come from many countries, including those where English may not be the first language. The texts reflect their verbatim responses (Ryan & Bernard, 2000) to retain authenticity. Each respondent's opinions reflect their experiences only, and when all these individual experiences are collected and analysed, common trends emerge. The collective overall findings are used to illuminate the research and provide rich data.

Using a Grounded Theory approach to process data. The research methodology considers a Grounded Theory approach which involves abductive thematic analyses of the extensive empirical material which emerges from the research.

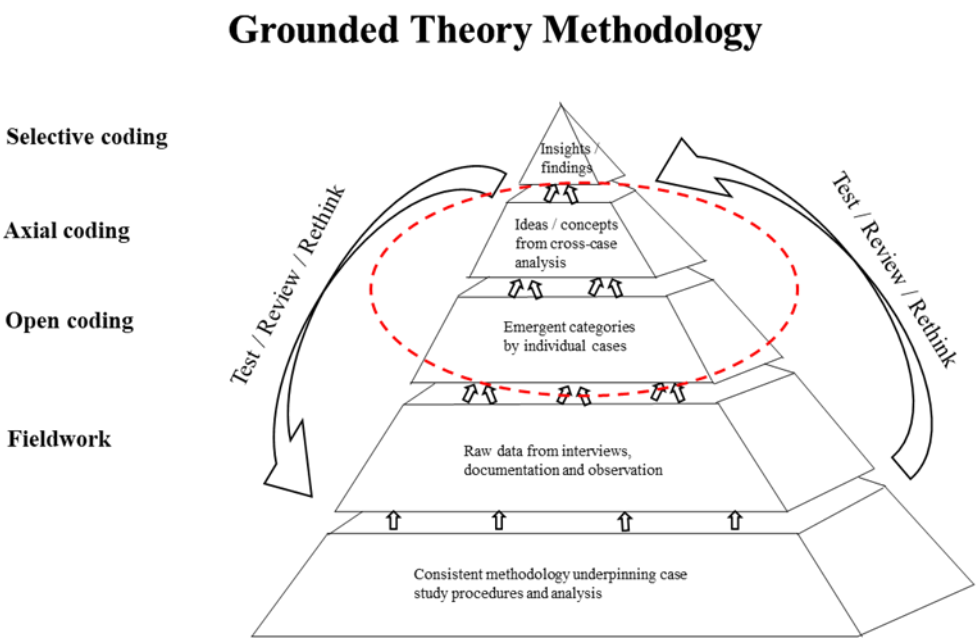


Figure 6.20 Interpretation and Analysis using Grounded Theory methods (Barrett, 2015)

Coding was used as a "way of engaging with the data, in a means which stretch our views and expanding our knowledge, at a particular point in time" (Tracey, 2020, p. 149 citing Charmaz, 2017). The project directors' data was analysed using the base principles of Grounded Theory (Glaser & Strauss, 1967). Emerging field data was different processes of coding using open, axial and selective coding techniques. Partington (2000) suggests that open coding looks at the raw data, axial coding reassembles the data in a new way, and selective coding involves selecting the core ideas and reflating this to other categories.[67]

Field data. Handwritten notes from interviews and personal observations (or memos) frequently scribbled on the back of field notes during the meetings provided the study's raw data. The field notes were transferred to minutes and sent to the respondent for review. After verification, they were re-read several times to ensure they reflected the respondent's statements to commence their content analysis.

[67] Some researchers apply different names to these stages such as (Charmaz, 2017b,) who labels the coding stages as "Initial Coding, Focused Coding and Categorisation followed by Theoretical coding".

The interviews covered four core thematic categories for further analysis: social, professional, integration and training. The researcher compared and then tabulated all the answers continually checking for discrepancies, reviewing, questioning and addressing the issues. Errors found were mostly associated with the researchers' input, but on a few occasions, the researcher sought clarification from the respondent to ensure the responses were accurate. An abstract of one interview section is shown in Figure 7.11 (this interview and other samples are replicated in A4 size (Appendix Four)).

CULTURAL RESEARCH SURVEY – INTERVIEW		002FDQASAY
Section 1 General Background		
Q1	How long have you been involved in the construction of megaprojects in the GCC?	12 years
Q2	What is your specific role in the delivery of GCC megaprojects?	Generally that of Team Leader or Cost Management Lead
Q3	Typically, how frequently are you directly engaged with GCC stakeholders?	On a daily basis.
Q4	Please provide details of the megaproject which you are currently assisting?.	The Red Sea Development - Hospitality Project North of Jeddah in remote location. Approx. SAR 50 billion
Q5	Kindly confirm your most appropriate geographical background from the following:	
	Americas / Europe / Asia / Africa & Middle East / Australia	Africa and Middle East
Section 2 (personal GCC Integration)		
Q6	Can you describe the most challenging aspects of adjusting to the social culture of the GCC?	The Middle East nations all are slightly different. In Qatar I found that the management team wanted answers that are in accordance with their views. Challenging them directly, especially in front of their peers was unacceptable and would lead to a negative outcome. Emirates are less involved in the day to day issues than the Qatari's. Saudi nationals are mixed in that their are high level locals as well as junior locals working within the business. Overall the Qatar and Saudi nationals seem to be more approachable on a day to day basis and are willing to learn provided that the learning pace is on their terms.
Q7	Please outline how you / if have adjusted to this culture?	Always treat the locals with respect and be patient when introducing a new concept. Understand that mind set changes is a slow and arduous process.
Q8	Can you please outline any beneficial aspects to working in the GCC?	It would seem that the UK and USA is focus more on a management consulting methodology (from my experience) whereas the Middle east seems to focus more on older style deliverables. The general construction market is also not as mature and the mix between local companies and international companies is clearly visible in their approach to dealing with issues.
Q9	Would you recommend living in the GCC to colleagues in your home country?	Yes, it is an enjoyable experience. For a family unit with younger children I would recommend KSA, and Qatar as the community spirit is more noticeable and expat tend to group together making the transition easier. UAE seems to be overpriced and more unattached young adult environment.
Q10	What would you suggest are the most important cultural considerations whilst living in the GCC?	Try to understand their culture and respect it. This does not mean you have to agree with it, but it is their culture and their country.
Q11	Can you please advise if you have encountered examples of personnel leaving the GCC voluntarily, due to a reluctance to accept the GCC social culture, for reasons which are not related to the work environment?	Yes. Previously I worked with staff members (2 in particular) that did not last in the Middle East. They did not agree with the local way of doing business and was to forthright in stating that this should be changed. Insistence to the point of being overbearing and rude. Both individuals did not last. The middle east is more a discussion and verbal agreement culture around a family importance and "wasta" methodology as opposed to a contractual negotiation.
Q12	Do you feel that you have integrated to the social culture of the GCC?	The cultures between western and middle eastern will never fully integrate. It is more about understanding each other and respecting the other person.
Section 3 - (professional GCC Integration)		

Figure 6.21 . Typical Interview Data.

Bryant, Charmaz, Mruck et al. (2019, p. 484) describe memo-writing as a core principle of all Grounded Theorists methodological approaches, citing Glaser's (1978) definition of memos as "the theorizing write-up of ideas about codes and their relationships as they strike the analyst". The researcher made use of highlighting repetitive data, voice memos and notes (transcribed on the right hand of the figure) to interrogate the data as demonstrated in Figure 6.22 (the abstract uses the same interview abstract in Figure 6.21 for ease of demonstration).

Section 2 (personal GCC Integration)			Examples of Memos
Q6	**Can you describe the most challenging aspects of adjusting to the social culture of the GCC?**	The Middle East nations all are slightly different. In Qatar I found that the management team wanted answers that are in accordance with their views. Challenging them directly, especially in front of their peers was unacceptable and would lead to a negative outcome. Emirates are less involved in the day to day issues than the Qatari's. Saudi nationals are mixed in that their are high level locals as well as junior locals working within the business. Overall the Qatar and Saudi nationals seem to be more approachable on a day to day basis and are willing to learn provided that the learning pace is on their terms.	It suggests that public criticism ire unacceptle - Hofstetes findings are similar Check why Saudi and Qatari are said to be similar Check a potential link experience of participant with GCC states of Qatar and Saudi- Has he worked elsewhere or are these perceptions?
Q7	**Please outline how you / if have adjusted to this culture?**	Always treat the locals with respect and be patient when introducing a new concept. Understand that mind set changes is a slow and arduous process.	
Q8	**Can you please outline any beneficial aspects to working in the GCC?**	It would seem that the UK and USA is focus more on a management consulting methodology (from my experience) whereas the Middle east seems to focus more on older style deliverables. The general construction market is also not as mature and the mix between local companies and international companies is clearly visible in their approach to dealing with issues.	
Q9	**Would you recommend living in the GCC to colleagues in your home country?**	Yes, it is an enjoyable experience. For a family unit with younger children I would recommend KSA, and Qatar as the community spirit is more noticeable and expat tend to group together making the transition easier. UAE seems to be overpriced and more unattached young adult environment.	Review for family perspectives
Q10	**What would you suggest are the most important cultural considerations whilst living in the GCC?**	Try to understand their culture and respect it. This does not mean you have to agree with it, but it is their culture and their country.	
Q11	**Can you please advise if you have encountered examples of personnel leaving the GCC voluntarily, due to a reluctance to accept the GCC social culture, for reasons which are not related to the work environment?**	Yes. Previously I worked with staff members (2 in particular) that did not last in the Middle East. They did not agree with the local way of doing business and was to forthright in stating that this should be changed. Insistence to the point of being overbearing and rude. Both individuals did not last. The middle east is more a discussion and verbal agreement culture around a family importance and "wasta" methodology as opposed to a contractual negotiation.	
Q12	**Do you feel that you have integrated to the social culture of the GCC?**	The cultures between western and middle eastern will never fully integrate. It is more about understanding each other and respecting the other person.	Has the participant tried and failed to integrate?

Figure 6.22 Creation of Memos. (Author, 2020)

The final output is the transfer of every interview on an excel spreadsheet, with the questions on the vertical access (pink in figure 6.23) and the responses on the horizontal access (green in Figure 6.23). While newer software such as NVivo was procured, the researcher's

familiarity with excel allowed the use of a greater range of functions, such as filtering by profession or the respondent's regional background.

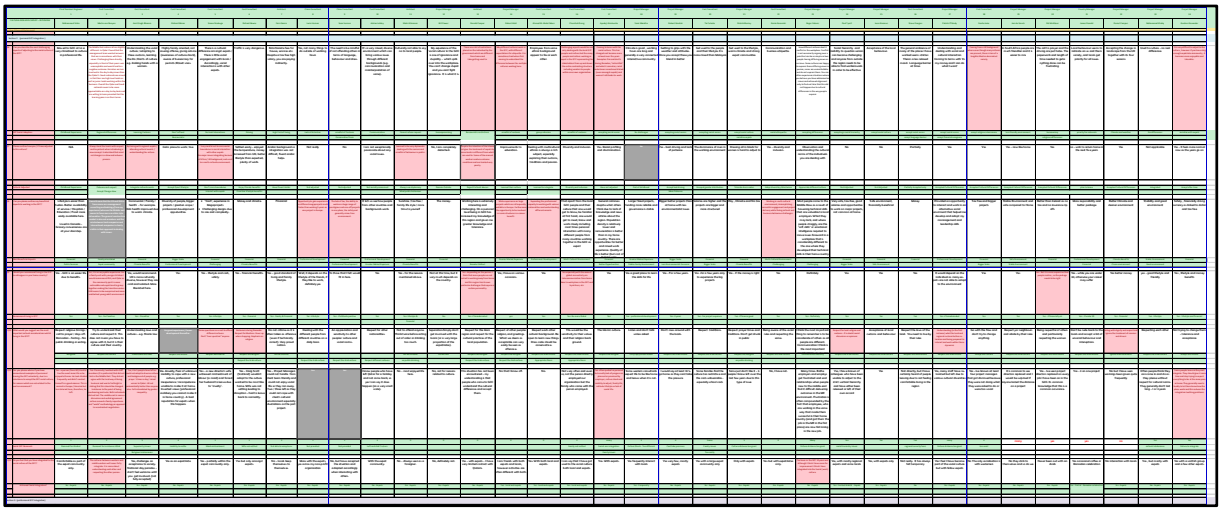


Figure 6.23 Overall Data Analysis.[68]

Open coding. The 34 approved interview records (endorsed by the project directors) to each of the 35 questions and responses were taken from word and transferred to Excel. The researcher compared, then tabulated all the answers, continually checking for discrepancies, reviewing, questioning and addressing the issues and on a few occasions, the researcher sought clarification from the respondent to ensure the responses were accurate.

The researcher then prepared 35 separate sub-analysis reviewing each of the 34 responses in detail. The researcher considered each answer and summarised the responses using three words (sometimes four) acronyms. For example, in question 31, project directors shared their perceptions of additional megaproject training requirements. The proposed training was abbreviated to a three-word acronym, “inclusion and diversity” or “language and communication”. Each response was tabled to review their frequency. An example is shown in Figure 6.24

[68] The coloured cells allowed the researcher to locate references which most reflected the project directors’ perspectives and were used in the formation of the Grounded Theories.

Q31	Additional MP training	Code		One- Off Themes	Lang / Commun	Inclusion & Diversity	People Managemnt	Contract Man	Inter cultural training	Teamwork	Emotional Intelligence	Leadership
1	Chief Resident	001PDQAUEY	Yes		Languages							
2	Cost Consultant	002FDQASAY	Yes			Inclusion and Diversity						
3	Cost Consultant	003FDQAXXY	Yes			Hierarcy of Cultures						
4	Cost Consultant	004FDQAXXY	Yes				People	Contract				
5	Cost Consultant	005FDQAXXY	Yes						Intercultural			
6	Cost Consultant	006FDQAXXY	No	No								
7	Architect	007DDQAKTY	Specific	Presentations					Culture Norms			
8	Claim Consultant	008FDQAXXN	Yes							Teamworking		
9	Claim Consultant	009FDQAXXY	Yes						Cultural Norms			
10	Cost Consultant	010FDQAXXN	Specific		Communication							
11	Architect	011DDQAKTY	No	No								
12	Project Manager	012PDQAOMY	Yes	Powers of								
13	Architect	013PDQAXXN	No -		Communication	Tolerence						
14	Project Manager	014FDQAXXY	Yes		Clear communication							
15	Cost Consultant	015FDQAXXN	Yes			Cultural diversity				Teamwork		
16	Cost Consultant	016FDQASAN	Yes			Cultural Integration						
17	Cost Consultant	017PDQAUEY	Yes								Emotional	
18	Project Manager	018PDQAXXY	Yes			Cultural diversity						
19	Project Manager	019PQQASAY	Yes			cultural Diversity						
20	Cost Consultant	020PQQAUEY	Yes							Group		
21	Project Manager	021PDQAUEY	No	None								
22	Cost Consultant	022PDQAXXY	Yes			Cultural intelligence					Emotional	
23	Project Manager	023PDQASAY	Yes								Emotional	
24	Project Manager	024DDQAXXN	Yes -		Communication							
25	Project Manager	025DDQAXXY	Yes			Cultural intelligence						
26	Cost Consultant	026FDQAUEY	Yes			Cultural patience						
27	Project Manager	027PDQAXXY	Yes			Cultural awareness						
28	Cost Consultant	028PDQAUEY	Yes			Cultural Tolerence						
29	Project Manager	029PDQAUEY	Yes				Ego management					
30	Project Manager	030FDQAONY	Yes									Leadership
31	Country Manager	031FDQAUEN	Yes									Leadership
32	Project Manager	032DDQAKTY	Yes		Languages							
33	Project Manager	033FDQAONN	Maybe	Body language								
34	Project Manager	034FDQABNN	Yes				Management					
				6	6	12	3	1	3	3	3	2

Figure 6.24 The Open Coding Process.

The research commenced with each answer in the first column and always considered "one-off" themes. The first acronym is then used (in this example, a recommendation for language or communication skills) in column two and more columns and categories are added until no further categorisation is required. The spreadsheet recorded the number of times similar themes were repeated, capturing the most group representative responses.

Axial coding. The relevant responses were then reassembled to their core thematic categories: social, professional, acculturation and training, for more in-depth analysis and to check for any trends within the response fields. At this juncture, clear patterns began to emerge, discussed in detail for each of the findings Chapters (Eight to Eleven).

The data repetition became so frequent that it often became possible to recollect what each respondent had reported in tandem with challenging the differences between their responses and others. For example, in response to question 13, concerning points of professional challenges, 16 project directors had indicated that they find the GCC "less professional" yet nine found it "more bureaucratic". The researcher queried why the results

were not consistent and why the 16 project directors were inconsistent, before concluding that some may accept a higher bureaucracy level.

The constant questioning of responses searched for links both within and between different themes and professional groups. For example, the researcher queried why there were differences between responses to some questions, to see if this was linked geographically or functionally. This process was made easier through filtering the responses by group or profession (Row one or five of Figure 6.23)

		Chief Resident Engineer	Cost Consultant	Cost Consultant	Cost Consultant	Cost Consultant	Cost Consultant	Architect	Claim Consultant
CULTURAL RESEARCH SURVEY – INTERVIEW		1	2	3	4	5	6	7	8
Section 1 General Background									
Q1	How long have you been involved in the construction of megaprojects in the	6 years	12 years	7 years	10 Years	10 Years	7 years	9 Years	5 Years
Q5	Americas / Europe / Asia / Africa & Middle East / Australia	Africa and Middle East	Africa and Middle East	Africa and Middle East	Europe	Africa and Middle East	Europe	Africa and Middle East	Europe
Section 2 (personal GCC Integration)									
Q6	GCC Social Adoption	Childhood Experience	Regional differences	Learning Customs	Don't offend	No local Interactions	Driving	High Cost of Living	Lack of Activities
					Bureaucratic				
Q7	Cultural Adjusted	Childhood Experience	Patience and respect	Integrate cultural events	Accept Quiet lifestyle	Don't cross boundaries	Enjoy Climate benefits	Have Fluent Arabic	Not adjusted
			Accept Change slow			Interact with expats	Prioritise lifestyle benefits		
Q8	Most Beneficial Aspects	Financial	Family orientated	Financial	Bigger Scale	Financial	Financial	Financial	Professional Development
		Public Services	Expat community	Climate Benefits	Professional Development	Challenging	Climate Benefits		
Q9	Recommend GCC Living	Yes	Yes - For Families	Yes - Friendlier	Yes	Yes -Lifestyle	Yes - Financial	Yes - Family & Financial	Yes -Lifestyle
Q10	most important GCC cultural considerations?	Religious	Respect the culture	Understand the Laws	Respect the culture	Respect Boundaries	Respect the Religion	Do not criticise	
							Respect the Arab culture		Respect the Arab culture
Q11	Social GCC Removals	Removal for Alcohol	Removal for insistance MSlids	Superiority Issues	Inability to settle	Maid mistreatment	Wife not settled	Not able to accept env	Not provided
				Religious Intolerances					
Q12	Achieved Social	No - Expats	No - Expats	No - Expats	No - Expats	No - Expats	No - Expats	No - Expats	No - Expats

Figure 6.25 Axial Coding Process.

The researcher continued to observe constant dynamics between the themes, yet with some inconsistencies in individual responses. These diversities were continuously analysed until core findings became apparent for each specific question. (Charmaz, 2017b) suggests that the initial descriptions of axial coding are too limited in pragmatic grounded theory, suggesting the use of "focused coding" (Figure 6.26) to identify the most significant and

frequent categories to emerge based on thematic similarity.

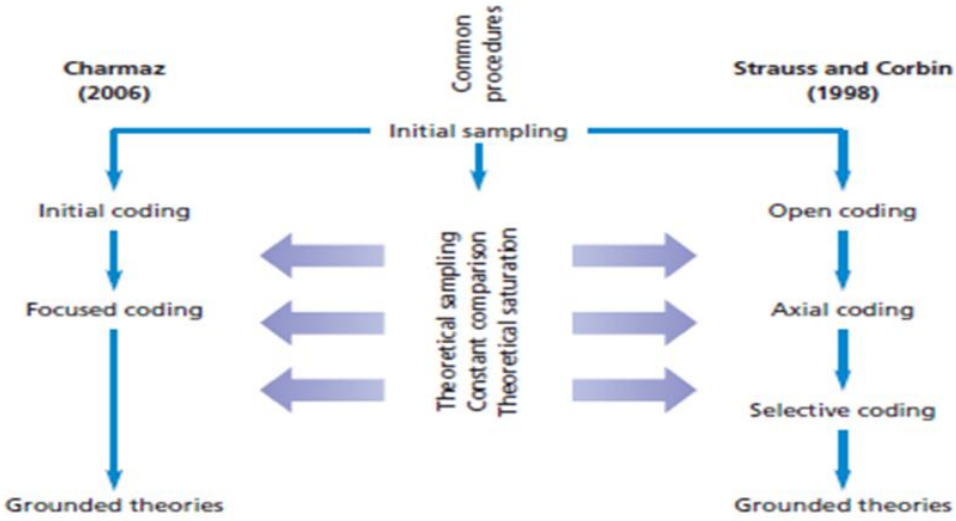


Figure 6.26 Coding Terminologies a Comparison of Axial Coding of Grounded Theory and Constructivist Grounded Theory (Saunders, Lewis, & Thornhill, 2015, p. 596)

Occasionally the researcher chased proverbial rabbits down proverbial holes trying to establish patterns. These frustrations were somewhat alleviated by one of the founders of Grounded Theory's statements “sometimes one has to use common sense and not get caught up worrying about what is the right or wrong way” (Strauss & Corbin, 1998, p. 295).

Test, review, rethink. The findings which emerged from each interview were analysed, reviewed and tested until patterns began to emerge. One of the critical sources for testing and review were the memos or observations as the interviews progressed. Even when consistent answers began to emerge from the project directors, any slight deviation was noted for further investigation.

Personal voice memos were used as a reminder to investigate unusual findings as they arose. Results were compared continuously with the next response, both searching for plausible explanations and seeking a saturation point in the data.

Selective coding. During selective coding, new insights and new findings emerged, as described in Chapter Eight. The results prove that cultural issues are a significant risk for Western consultants during a GCC megaprojects' execution. After summarising the findings, it is recommended to test the quality of the evolved theory (Thornberg, Charmaz, & Thornberg, 2020, p. 10) by asking the following fundamental questions:

- *Fitness* - does the theory fit the substantive area to which it will be applied?
- *Understanding* – does the theory make sense and is understandable to non-researchers working or living in the substantive area?
- *Generality* - is the theory sufficiently general to increase its applicability?
- *Control* - does the theory help the users to understand and analyse their social reality?

These findings were presented in six individual follow-up meetings with participants from the research to review and test the Grounded Theory's quality, which emerged from the findings.

Chapter Summary

This research was designed to consider all GCC states and gather data from a broad selection of GCC megaprojects and a full spectrum of Western consultants in various roles. The study purposefully targeted contemporaneous megaprojects as of November 2018. A focus group and prior research helped develop a questioning framework, and interviews progressed until reaching the data saturation point in February 2020. Thirty-four senior project directors participated, and the data were analysed using Grounded Theory techniques. The findings are detailed in the forthcoming chapters, during which a theory is constructed.

ChapterSeven- The Research Findings - The Social Acculturation of Western Consultants to the GCC

Social Experiences This chapter explores Western consultants' perspectives (through their project directors) about their social acculturation to the GCC and reviews the potential for social dissonance to impact the project director's tenure. The project directors in this research come from diverse nations, potentially providing differing, culturally biased perspectives (Banks, Waisfisz, Corn elissen, & Slotboom, 2004; Waisfisz, 2015). The gap or cultural distance between the project directors' home and the GCC may influence their social acculturation (Hofstede, Hofstede, & Minkov, 2010). The GCC can also be considered a multicultural environment, as different nationalities account for up to 80% of some GCC states' local population[69] creating what Zein refers to as a "cultural soup" (2019, p. 3). In the GCC states Western consultants (amongst all non-nationals) are classified as temporary residents (often referred to as "workers"), typically permitted to reside for a fixed temporary duration with the permission (called sponsorship) of a local Arab project Sponsor.

This chapter first considers how differing national perspectives and individual motivations may influence the project director's social acculturation, before considering the influence of accompanying family (reported as a significant source of assignment failures (Kramer & Sommer, 2013; Naeem et al., 2015)). The project directors provided their perspectives on social acculturation, responding to the following questions:

Question 6 - Describe the most challenging aspects of adjusting to GCC social culture?

Question 7 - Have social issues impacted their views?

Question 8 - Describe any beneficial elements to working in the GCC?

Question 9 - Would they recommend living in the GCC to colleagues?

Question 10 - What do they consider as essential cultural considerations for the GCC?

[69] See Chapter One, Table1.1.

Question 12 - Have they acculturated into the social culture?

Consultants' Perspectives and Motivations

A surge in GCC income, through the discovery of significant oil and gas deposits in the early 1970s, resulted in millions[70] of temporary migrants (legally classified as "workers") to enter the construction and service industries to such an extent that the indigenous Arab is now referred to as "a powerful minority in the workforce" (Waxin et al., 2020, p. 1). This diverse group of nationalities creates a multicultural society (El-sabek, 2017; Webb, 2014; Zein, 2016b), considering "multicultural" as the "ethnic composition of the population" (Heckmann, 1993). However, there is an essential distinction between a multicultural society, based on those within a settled multi-ethnic population, such as London or Berlin and the interpretation of a multicultural society in the GCC.

GCC states are not attempting to consciously build a multicultural society; indeed, this is institutionally resisted. Workers appear to be considered temporary supports, and the region continuously seeks ways to reclaim prominent positions, encouraging their nationals to attain senior roles within the workforce (Waxin, Kumra, & Zhao, 2020). Citizenship rights are seldom provided to non-nationals, and unlike many Western societies, state citizenship is usually only conferred on the offspring of GCC citizens and their spouses. Simultaneously, the progeny of expatriates born in GCC states retain their parents' nationality and do not acquire any GCC rights (Colton, 2011). These restrictions mean that Western consultants can only consider their tenure as temporal, which may influence their longer-term perspectives and their desire or motivation to acculturate.

Some of the directors have close cultural and geographical ties to GCC states. Four project directors in this research had spent significant periods of their childhood in a GCC state and as a result, reported that they were more familiar and accepting of the GCC social culture;

[70] Table 1.2 provides details of the multi-cultural societies in GCC states.

or to use their words “more in tune” with the local culture. Hofstede, Pedersen and Hofstede (2002) find that the length of time taken to become at ease with a new culture is directly related to the “cultural distance” between the parties. Jun and Gentry (2005) define cultural distance as the degree of similarity in cultural norms between countries. Wang and Varma (2019) emphasise that the greater the cultural distance between the parties, the shorter it may become for the newcomer to “adjust and perform effectively”.

Project directors with a greater cultural distance (more Westernised) described challenging aspects of their acculturation to Arab culture and the GCC's multicultural environment.

One project director started that there are “Many different cultures work in the GCC, with varying expectations for etiquette. It is sometimes hard when first moving [there] to understand the difference between the multiple cultures working here” (project director 14). Another project director said, “Challenging aspects would be not only dealing with the local GCC people and culture but the many people and culture working as an expatriate in the GCC representing the stakeholders from up and down the entire contracting structure including vendors to people within one’s organisation” (project director 16).

The project directors discussed the need to consider how multicultural GCC societies are and “to be mindful of not offending others in terms of language, behaviour and dress” (project director 09).

Motivation. Psychologists such as Maslow (1965) or Herzberg have broached the complex subject of an individual’s motivations, or motivation versus needs. Maslow found that people are motivated by five levels of needs in ascending order: 1. physiological, 2. safety, 3. social, 4. ego and 5. self-actualisation. Herzberg’s “Motivation-Hygiene” suggests that salary, working conditions and job security are extrinsic considerations that merely prevent dissatisfaction and intrinsic factors, including the work itself, achievement and recognition

motivate individuals (Kovach, 2001). This study finds that this specialist group of project directors are motivated to temporarily reside in GCC states, for professional purposes, to pursue work opportunities and fulfil short or medium-term work contracts.

The project directors described two primary motivating factors for their GCC entry: professional development and financial gain. Most believed that working in the GCC would enhance their career through involvement with larger-scale projects found in the GCC, and a few were most interested in perceived financial benefits. Project directors were motivated by "Extensive experience on large projects are infrequently available in Europe. Furthermore, the opportunity to be involved in iconic structures is a career benefit" (project director 14) or "more opportunities to gain experience in challenging and complex high-value megaprojects" (project director 08).

While this research did not profoundly probe individual consultants' motivations, Kramer and Sommer (2013), examined American construction professionals' motivations when they work abroad, including the Middle East territories. They found that 67% of surveyed construction professionals travelled abroad to enhance their career (Kramer & Sommer, 2013, p. 48). Their survey also found that 29% of travellers had entered the Middle East for other reasons, including unemployment factors in the USA. Two project directors in this field research had advised that they had come to the GCC due to lack of home opportunities following the financial crisis of 2007.

Financial motivations. Most project directors received better economic benefits working in the GCC where workers do not currently pay local income tax. Many received additional benefits, including allowances for housing, flights, health insurance, bonuses and schooling. Project directors also indicated that the GCC states were safe and clean environments to live and work. One project director captured all the reported benefits as "The

lack of tax, the ability to work on a huge range of prestigious and one-off projects in one place, the safety and generally crime-free environment" (project director 9).

Project directors warned of high costs of living in the GCC, pointing out differences in the cost of living, including housing, schooling and the cost of eating out in the GCC regions, (reporting the highest costs in Qatar and lower costs in Saudi Arabia). Independent reports suggest a significant spread in the cost of living between GCC member states[71] making the GCC more expensive than many project directors' home countries. Overall, the project directors are most motivated by professional reasons but are mindful of family and financial issues.

Family considerations. Extensive research suggests that the family plays a large role in an expatriate's tenure. Andrade & Miller (2019) consider that family positively influences project directors in one of the most popular GCC destinations (Dubai), where they found that a spouse accompanies 61% of managers. Lee and Kartika (2014) found that family support and adaptability positively impact an expatriate's adjustment.

Existing studies, however, also associate adverse effects with accompanying family. Mercer, (2015b) cites that 41% of expatriate assignments end prematurely due to the spouses' dissatisfaction with their new surroundings. Sterle, Fontaine, De Mol and Verhofstadt (2018) find that acculturation is more challenging when accompanied by family, for reasons such as adverse family reactions to the temporary loss of their home, increased disruption due to finding new schools, language uncertainty and the different responses by young children, adolescents and sometimes resentment of change by the "trailing partner".

The project directors were generally at a senior level where they were offered the opportunity to work in the GCC on a "married" or "single" basis. The family accompanied half

[71] Using World Data (2020) indices for 2020 and New York as 100, the cost of living for is 81.9 points for Qatar, 77.9 points for the UAE and 62.2 points for Saudi Arabia.

of the project directors in this study, and the other half (depending on their circumstances) came out on a single status or opted to leave them in their home country for personal, financial or educational reasons.[72] Naeem et al. (2015) found that a failure of family acculturation is a common social dissonance source, influencing project directors' GCC tenure.

Project directors reported social differences between the GCC states one said:

> Yes, it is an enjoyable experience. For a family unit with younger children, I would recommend KSA, and Qatar as the community spirit is more noticeable, and ex-pat tends to group, making the transition easier. UAE seems to be overpriced and more unattached young adult environment (project director 02).

Those travelling on a single status frequently recommended some states for a "busier social life", such as provided in the more tourist-oriented UAE state of Dubai.[73] In contrast, those with families appeared more favouring quieter, more family-oriented GCC states, such as Oman or Qatar. However, family considerations were not reported to impact the tenure of the project directors in this study.

Social differences. While the project directors came from a diverse group of nations, they highlighted their perceptions of cultural differences in the GCC states which differ from Western societies, such as cultural taboos, religious impact and a perceived excess of administration for social issues.

Cultural taboos. The project directors informed how GCC attitudes on living together outside of marriage and homosexuality and the greater prominence of religion could be substantially different from Western societies. There are differing tolerances of unconventional

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[72] Private education was reported as a significant consideration in the project directors' decision to travel alone or on family status as state education is free for GCC nationals and all other nationalities need to enrol their children in private schooling. The cost of educating a child in the GCC states can cost up to $45,000 per annum in the UAE (PwC, 2020).

[73] The GCC emirate of Dubai, was rated as the world's fourth most visited tourist destination in 2019 in a spending analysis by Mastercard (Robino, 2019).

sexual identity, suicide, religion and other personal freedoms. There are other social differences than typically found in Western societies, such as the restricted sale of alcohol in the GCC states of Saudi Arabia, Kuwait or Sharjah in the UAE. In the UAE, bachelors who engage in consensual sex may be given a minimum jail term of one year followed by deportation.[74] Furthermore, same-sex partnerships are also prohibited by law (Haak-Saheem, 2016). While the project directors were mindful of the cultural differences, they suggested they needed to be understood and respected, as opposed to being of concern one said: "Understanding (in the first instance) what the local and regional customs before re-location and being prepared to interact and work within these dynamics" (project director 27).

The impact of religion. Some project directors found that religious practices were more strictly followed in the GCC than their home country, with the holy month of Ramadan considered more socially restrictive; however, this depended on the director's religious beliefs. One director said "coming to terms with the social and religious culture. This has changed and become more relaxed over the years—examples: Dos and don'ts during Ramadan" (project director 17). Another director said, "Coming from a UK background where even though many cultures are present, there is less of a tangible Muslim dominated society" (project director 28).

In contrast, other project directors suggested that religious impact is less noticeable than before, potentially influenced by the region's project directors' tenure. The project directors were not asked to disclose their religious beliefs but were generally discussing the impacts of religious observations in business meetings and social events meetings. Project directors suggested that religious interruptions can disrupt schedules or social routines, although they reported that such disruptions are treated with sensitivity, and religious pauses are part of daily routines.

[74] Article 356 of the UAE Penal Code.

Bureaucracy. Several of the directors suggested that "There are a lot of restrictions placed on the individual by the government, which are different from home and take getting used to" (project director 13). They referred to perceived bureaucratic issues in attaining temporary residency permits, visas for visitors, sponsorship of their spouses work, entry/exit clearances and the like. While they expressed frustration at these processes, the project directors reporting these issues were mostly from the USA or Europe, and their perspectives may be at odds with the significant "bureaucratic issues" trying to process a Schengen visa to travel to Europe or a green card for America.

A social divide. A minority of project directors expressed concerns over the treatment of the large volumes of Asian and Indian workforces that support the construction industry and the large numbers of domestic staff assisting Arabs in childminding, with suggestions that "some of the manual workers endure extreme [bad] conditions and are treated very poorly" (project director 13). Another suggested that they ignored what they felt was the unequal treatment of some service providers by "Acting with dignity and respect and ignore the treatment of nannies and drivers" (project director 32).

There is a large gap in wealth distribution throughout the GCC, but financial inequalities are perhaps more global phenomena. An income inequality report ranks GCC income decile[75] at 64% compared to 37% in Western Europe or 47% in the USA (Alvaredo, Assouad, & Piketty, 2018). Most project directors did not note the wealth gap, perhaps related to a tendency to socialise within their cultural circles.

Western Consultants' Social Acculturation

[75] Income distribution is described by means of tenths or deciles. The persons are then arranged in the order of their income and divided into ten groups of equal size. Each income decile then has 10% of the population.

Willingness to integrate. Approximately one-third of the project directors referred to closer cultural ties with their fellow countrymen. Some directors found it difficult to integrate, and one said: “It is very difficult to adjust to the culture. However, if you have a big enough expatriate community, it becomes more enjoyable and tolerable” (project director 34). Another project director said, “The clustering together of specific groups of expatriates was also a feature in another interview where the participant commented that employees from ‘the same ethnic background’ appear to favour each other by sticking together” (project director 15). Others considered that they had partially integrated with the society, still holding reservations concerning aspects of the local culture, such as the enforcement of dress code restrictions, including the *Hibiya* and the need to dress more conservatively in most GCC states.

When project directors were asked if they felt part of the social GCC community (question 12), many responded that there was a divide, such as “The cultures between western and middle eastern will never fully integrate. It is more about understanding each other and respecting the other person” (project director 02). However, a relatively small number of project directors described how they had made the conscious effort to integrate through “attending cultural events/understanding the culture” (project director 03) and many project directors acknowledged their reluctance to make an effort to socialise. One project director said, “I’ve been in the GCC 12 years, and although I think I have room for improvement, I think I have partially integrated into the Social (work) culture” (project director 23).

Overall, while many project directors perceived an unwillingness of the local GCC population to socialise, it appears that they have not exerted sincere efforts to establish social Arab-Western relationships, perhaps influenced by the temporariness of their tenure in the GCC. Nonetheless, all the project directors’ recommended living in the GCC (question 9).

Summary of Social Findings

Project directors are most motivated by career opportunities in the GCC and financial factors, and family considerations may impact their choice of GCC states. The project directors were part of a diverse group of nations holding different social and religious beliefs, impacting their social acculturation. Project directors describe the GCC as a "very multicultural environment" (mostly concerning the broad mix of nationalities they encounter during their professional and social acculturation), but rarely socialise with the indigenous populations and seem to prefer similar social communities to their own. Some preferred GCC states that were seen as "more Westernised", such as Dubai, but most project directors focus on career progression or benefits.

This section contributes to new knowledge by identifying that social differences exist between GCC and Western norms, but this appears to cause little impact or risk to the project directors' tenure. In contrast with some studies, it finds the accompaniment of family a neutral risk which does not contribute to director churn for these research participants contrary to prior GCC studies (Cole & Nesbeth, 2014; International, 2017; Sterle et al., 2018; Wagner, 2012).

The theory emerging from these findings is that social differences and dissonances may arise, however, as the project director has accepted the temporary nature of their assignment in the GCC, it appears that social imperatives are low-level risks which appear to have little impact on their tenure.

Findings - Professional Acculturation with the GCC

Professional Experiences The concept of professionalism in the construction industry is fundamental to this research, as Western consultants are appointed to provide their expert knowledge and professional advice to aid GCC megaprojects' construction. Western consultancy practices are typically required to "warrant that they have the experience and capability, including sufficient and competent personnel to efficiently and expeditiously perform the services"[76]. This study considers Western consultants' perspectives on the standards of professionalism contracted for and expected and reviews GCC stakeholders' professional expectations.

The research participants are all practising project directors in Western consultancy practices, and their perspectives compare and contrast similarities and differences between their home country and the GCC. There are significant differences between European and GCC megaprojects concerning the levels of contractual authority delegated by Arab project Sponsors to Western Consultants, such as delegated powers to control a contractor's performance. After highlighting similar practices and more generally acceptable practice differences, the project directors describe the more challenging professional issues they face and expose the cultural challenges which arise during daily work interfaces. The questions included:

Question 13 - Describe any professional differences they have encountered?

Question 14 - Describe any challenging aspects of professional life?

Question 15 - Describe any differences in interaction with stakeholders?

Question 16 - Overall, could they describe any professional differences?

Question 17 - Would they recommend working in the GCC to colleagues? Please provide the rationale behind this answer.

Question 18 - How quickly did they acclimatise to the professional working environment?

[76] Typical requirement abstracted from LREDC General Conditions of Contract 3375/ page 7 of 25

Question 19 - Are they aware of any obligations to respect to GCC culture?

Question 21 - Do they feel that the Sponsor values their opinion with the same level of respect?

Question 25 - Based on their experiences, do they feel that contractors engaged in GCC megaprojects, behave similarly?

Question 26 - If there are noticeable differences, could they elaborate on these impacts?

Question 33 - Have policies from Head Office been adopted to suit from local administrations?

Question 35 - If so, which policies and are they in agreement with the changes?

Professionalism. The concept of professionalism has been widely examined and forms a crucial concept in work, occupations, professions and organisations (Evetts, 2013). Burns (2019) suggests that new "professions" continuously emerge and that professionals are expected to stand outside their interests to consider the broader society while providing their services. Hall (1979) suggests that the social construct of professionalism provides a dual responsibility, one to its members and the second to provide reassurances to its outside stakeholders. More importantly, Burns (2019, p. vii) describes how modern professionals should also critique wrong practices and explain poor and undesirable professional performance to help address and improve their service. The following are considered as pillars of professionalism:

- *Specialisation* - The professional holds specialised skill, knowledge and service.
- *Training* - The professional has received intellectual and practical training, and regularly commits to continual professional development (CPD).
- *Independence* - The professional is expected to engage with a high degree of professional autonomy and responsibility.

- *Trust* - The professional is expected to hold a fiduciary relationship with the client, principally based on trust (which arises from the high degree of hidden knowledge and hidden action).
- *Collaboration* - The professional is expected to consider a collective responsibility for the profession (their professional body).
- *Ethics* - The professional is expected to apply high ethical standards and refrain from some methods of attracting and doing business.
- *Rules* - The professional is expected to abide by occupational organisation testing competence and regulating standards.

Western construction professionals' ability to fully implement these pillars of professionalism, namely specialisation, training, independence, trust, collaboration, ethics and rule-compliance, is fundamental to this research. The individual pillars are reviewed in more detail while addressing professional differences between Western and Arabic cultures.

Professionalism in construction. The concept of professionalism in the construction sector has developed since Roth, (1974, p. 16) first queried if “engineering really is a profession?”. The construction sector now includes a diverse range of construction professionals, including Architects, Project Managers, Quantity Surveyors and Engineers, each represented by their professional bodies (Chynoweth, 2009). The project directors participating in this research offer different skillsets and are considered construction professionals, with the relevant “knowledge, personal conduct and control over their practice” to be considered competent in their field (Fournier, 1999, p. 1).

Foxwell's (2019) review of professional construction practices in the UK, suggests that a construction consultant should be “above commercialism” and is expected “to act independently”, “refrain from bias” and have the “all-important commitment to the greater

good", even though professionalism in the construction industry is sometimes described as a seldom attained "ideological mechanism" (Smithers & Walker, 2000, p. 790).

Recent reports in the UK have levied a degree of criticism of professional standards in the construction industry. Egan (1998), Foxwell (2019) and Latham (1994) highlight stakeholder concerns which are critical of current professional standards, which they perceive contribute to late project delivery, overinflated costs, and a general erosion of public confidence.

Professional bodies (and for some professions State legislation)[77] sets guidelines and standards required by codes of conduct as a condition of continuing membership. Significant professional institutions include the CIOB, ICE, PMI, RICS and the CIARB (Table 7.1) aim to "uphold professional standards" (RICS, 2019) for the construction industry, including their members engaged in GCC megaprojects.

The influence of professional bodies. GCC states require Western consultants (and their members) to comply with local regulations[78] which require the firms to be approved by the State to practice as Construction or Engineering Consultants.

Consultancy firms' project directors are typically required to be members of professional institutions for their field, provide attested evidence of their educational qualifications and are usually required to pass local competence tests in state-administered testing centres. Professional institutions have several dedicated offices or resource centres throughout the GCC, as detailed in Table 7.1.

Table 7.1

Professional Bodies in the GCC as of June 2020.

[77] In some cases (as with architecture in the UK) there is statutory control (by the Architects Act) and in the US by state license.

[78] Typical requirements would include Dubai Local Order 4 -1999, Regulating the Practice of Engineering Consultancy or registration in Qatar through the Ministry of Municipality and Environment.

Professional Association Representative Offices in the GCC			Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
	Full Name	Abbreviation						
1	Royal Institution of Chartered Surveyors	RICS	●		●	●		●
2	Chartered Institute of Building	CIOB						●
3	Project Management Institute	PMI					●	●
4	Chartered Institute of Arbitrators	CIArb	●			●		●
5	Institution of Civil Engineers	ICE			●	●		●

Source: Author, 2020

Professional bodies certify that their members have reached prescribed competence levels in their specialisation within the construction industry and that these standards apply globally. These institutions distinguish between skill levels for their members according to levels of competency achieved, typically ranging from a “student” through to a “fellow” (the lowest to the most senior rank). Typically, professional bodies require their members to comply with mandatory ethics regulations, rules of conduct and professional competencies. They are self-regulating bodies that rely on their members' reputation and behaviour and apply sanctions or penalties if their actions fall below the set levels.

The “grand bargain”. The Arab project Sponsor contracts with Western consultants as experts in their field of engagement, appropriately trained, professionally accredited, subject to some form of governance and ethically driven (Foxwell, 2019). Moore (2020, p.47) refers to a “grand bargain” where professions have agreed with a society that “competence and integrity are exchanged for trust from the client and society” in exchange for financial compensation for such services.

A contractual document governs the agreement between the Western consultant and the Arab project Sponsor often referred to as a “Consultancy Agreement” or “contract”. This contract typically details the Consultant’s roles, responsibilities, and scope of service, sets out terms and conditions, establishes communication protocols and sets administrative procedures to be followed. The agreement provides detailed obligations and terms such as payment mechanisms, dispute resolution, and outlines the Western consultants’ obligations to replace personnel executives, including project directors, (which will be reviewed later).

The contract also sets strict criteria for the engagement of the Western consultant’s project personnel, typically identifying levels of professional training (such as requiring a certified engineer qualification), prior GCC experiences, relevant specialist delivery experience (such as ten years’ aviation experiences), a master’s levels qualification in the technical fields and membership levels within their appropriate professional body. The key pillars of professionalism were earlier summarised as specialisation, training, independence, trust, collaboration, ethics and rule-bound. By setting out such personnel engagement criteria, the Arab project Sponsor has set predetermined non-negotiable contractual terms to cover five of these pillars, namely specialisation, training, collaboration, ethics and rule-bound.

Two critical pillars cannot be fully addressed by the recruitment process: professional trust and independence. The importance of these criteria become evident in later discussions. The next section provides project directors’ perspectives about professionalism standards, outlining similarities, differences and significant challenges during the megaprojects’ execution.

Similarities

Global consistencies. The Western consultancy practices in this study each provide professional advice for different roles related to construction. Each of the research participants

is a project director within their consultancy practice, responsible for ensuring that their consultancy's professional standards are upheld and that their services (and their team) perform and achieve their contract obligations.

Individually, project directors come from a broad mix of nationalities[79] and each met the set qualification criteria for their role. For this study, Western consultants are considered to be those firms with Headquarters in Europe, North America, Australia and New Zealand (Hellmann et al., 2014). Many of these firms have a global presence, with regional offices covering the Middle East. Consultancy services have become more global (Trompenaars, 1993) as the boundaries between nations blur and migration and immigration factors reduce boundaries (Devinney & Hohberger, 2017). The operational location of a company's headquarters appears to have less importance today. Today, it is suggested that powerful global brands such as Samsung or Siemens can operate on a fully global basis due to their robust organisational structures (Waisfisz, 2015). Schein (2004) and Smith, Dugan and Trompenaars (1996) argue that a company's policies and procedures should be adopted with a "healthy dose of particularism" to suit the local region and meet global requirements. As professional consultancy firms get bigger and operate globally, they may apply different professionalism levels in different regions. These consequences of different standards can include difficulties with professional indemnity liabilities or human relations issues related to employees' equal treatment.

Project directors were questioned about any regional variations in the standard of professional advice provided. They were asked whether any specific rules or other systems in their Western-based head office had been tailored to suit the GCC and if they considered these changes significant (question 33 and 34). Their responses follow.

[79] The project directors in the pilot case study chapter seven came from America, Australia, Britain, Canada, Egypt, Croatia, Greece, Germany, India, Iraq, Ireland, Jordan, New Zealand, Pakistan, Portugal, South Africa, Spain and Syria.

Compliance issues. In the GCC, all professional firms must adhere to GCC legislation (typically described as "Labour laws" for that state) through mandatory local legislation.[80] Such legislation typically governs the maximum working hours, other pay and conditions. They also set out a minimum provision for holidays, generally 21 days a year in addition to religious holidays, to prevent the exploitation of workers. They set forth provisions for minors' employment, accommodation provision and other such employment rights. The laws also stipulate a minimum notice period for terminating employment contracts (one month notice unless terminated for a stipulated breach of contract), probation periods (a maximum of six months) and a requirement for all employment contracts to be endorsed by the appropriate State department, including the validation of their work permit.

Project directors confirmed that there are administrative and minor compliance differences "only to comply with legal rules in specific countries" (project director 02). Western consultants regard the changes as cumbersome formalities yet note that while these laws are often time-consuming, they result in little functional changes. One project director stated: "Generally, these are relating to labour law and conditions of employment. We have to apply these as a business working within the region, but as a global company, we also need to be consistent with our approach globally" (project director 02).

Project directors also acknowledge legal duties to respect religious timings and festivals, such as allowing Muslims to pray and a commitment to respect a conservative dress code, in line with local custom. "Policies related to working hours during observation of Ramadan and Eid holiday. Dress code for women has been regulated to conform to cultural beliefs and requirements" (project director 22).

Project directors were generally conversant with better-known labour regulations regarding rights to paid holidays, with most aware that GCC workers (including Western

[80] For example, 'Labour laws' 3 (1962), 14 (1992) or 5 (2002) for the State of Qatar.

consultants) are guaranteed a minimum of three paid working days holiday for Eid El-Fitr, and Eid Al-Adha and that legislation directs reduced working hours, to a maximum of six hours per day, during Ramadan. The employees' right to this paid vacation is legally protected, for example, by the state of Qatar through Article 77 and 73 of the Labour Law. Many are aware of stricter penalties for the illegal consumption of alcohol in the GCC. GCC labour law permits an employer to instantly terminate any party's employment found in a state of drunkenness and under the influence of drugs during working hours.[81] The right of Muslims to observe daily religious prayers and some restrictions on food and alcohol are also commonly understood, and there is a heightened awareness of specific limitations in Saudi Arabia (referred to as KSA by one participant), as emphasised by the following project director, "KSA has many religious requirements that are unique to KSA. Everything closes for prayer time five times a day. Alcohol and pork are illegal. Once a month during Ramadan, you cannot eat/drink in public during daylight hours etc." (project director, 23).

Generally, workers' rights are not as protected as they are in Western nations, for example, through the Employment Rights Act 1996 [82] , which is applied to all employees, regardless of their country of origin. In Western societies, such Acts provide Western consultants with a certain degree of protection from unlawful termination and in general, better protection of employment rights. In the GCC, foreigners are not granted the same rights as locals and are all classified as "workers", with significantly less employment protection.

Summary of similarities. Overall, most Western consultants felt that their organisational practices were mostly similar with minor changes to accommodate localised legislation. Many of the Consultants advised that their professional practices and disciplines conform to professional guidelines (such as RICS standards for Cost Consultants) or that

[81] Article 120 of UAE Labour law
[82] www.legislation.gov.uk/ukpga/1996/18/contents

benchmarking is applied on a consistent global basis. Contracts specialists informed that the contract terms were mostly similar to international contract styles such as FIDIC. However, many contract advisors voiced concern about the cultural interpretation and application of key contractual terms, as discussed during a review of practice differences.

In general, many project directors demonstrated a strong internalised professional belief that there are correct ways to read and enforce rules, standards and contracts, and sometimes they considered that there was only one correct interpretation of how things should be conducted. Any conflicting approaches would not be compatible in setting professional standards.

At an individual level, project directors confirmed that their employment contracts were typically adjusted for differences to salary, tax and other benefits and further changes to suit local working hours, allowing time off for religious observation and compliance with local legislation concerning labour laws, such as the end of service gratuity.[83]

While the organisations' practices and the expected professional standards may be similar to home, the project directors advised differences and challenges in GCC practices.

Differences

Contractual differences. Consultancy Agreements are tailor-made to suit the megaprojects requirements[84] and contain full and extensive details of the delivered services. While construction professionals are generally familiar with their specific roles and duties, there are subtle and less subtle differences in many terms, some due to the project's bespoke

[83] End of Service Gratuity is a Statutory provision to pay a fixed gratuity based on the length of service.

[84] The contract typically details the consultant's role and scope of service and sets out contract terms and conditions, establishes communication protocols and sets administrative procedures which must be followed, detailing procedures such as payment mechanisms, dispute resolution and outlines the Western consultants' duties to replace personnel executives, including the project director.

nature and others due to the Arab project Sponsors' interpretation of the assignments. Project directors were asked to discuss abnormal terms or expectations, and how these may have restricted their ability to provide a professional service (question 13).

There were varying levels of differences reported, depending on the service provided. One sub-group, Cost Consultants, found very little difference in how they report costs. It is found that the RICS generally regulates how Cost Consultants present data, such as cost reports and financial forecasts, in line with accepted global "templated" systems. One project director compared the standardisation of such reporting to air traffic control as follows: "It has to be same due to professional issues. Work is like air traffic controllers - cannot mix different styles for different countries - the same standards/RICS/global standards" (project director 04).

The other professions reported differences in the delegation of duties by Arab project Sponsors with particular Western norms and contracted authority, most notably with their contractual powers to issue instructions and regulate contractors (the parties undertaking the physical works).

Consultant authority. In Western megaprojects, the employer typically hires professional construction consultants to manage the construction process and contractors (Figure 9.1) on their behalf, which can differ from GCC approaches (Figure 9.2). The crucial difference is that Western megaprojects stakeholders typically trust and delegate greater authority levels to their Programme Managers. In contrast, Arab project Sponsors retain full authority and control, employing the Western consultants to provide project expertise, for their consideration, following the "best practices" for consultants in their profession.[85] This delegation of authority fundamentally changes the working relationships.

[85]"Best practices and accepted professional standards" means the practices, methods and procedures usually employed and that degree of skill, diligence, prudence and foresight which would reasonably be expected to be

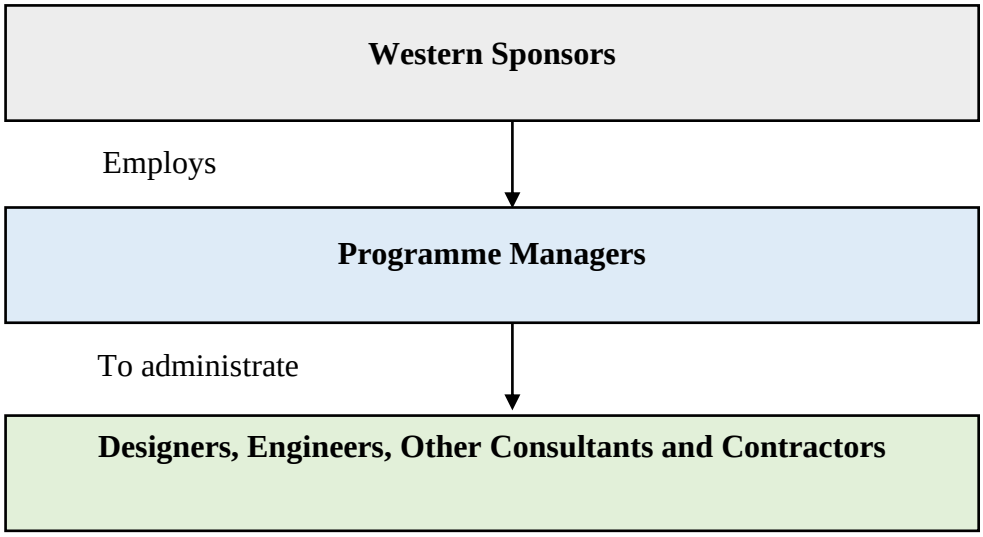

Figure 7.1. Typical Western Megaproject Management. (Author,2020)

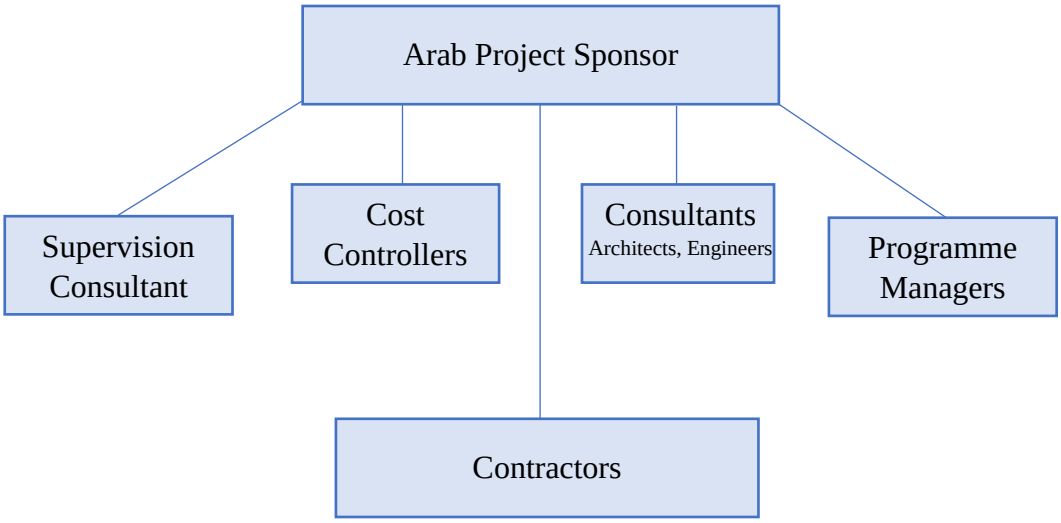

Figure 7.2. Contractual Nexus in GCC Megaprojects. (Author, 2020)

Contractors. Contractors physically construct megaprojects, by providing labour, tools, plant, and equipment to perform the construction-related activities. There are fundamental differences between Western and GCC contractors; GCC operations are mostly

observed by a skilled, qualified and experienced consultant engaged in carrying out activities the same as or similar to the services under the same or similar circumstances (LREDC, 2012 p.11).

larger-scale operations, employing high numbers of foreign lower-skilled Asian and Indian labour forces and providing labour camps for their workers. As a contextual reference, the contractor appointed for the pilot study megaproject engaged 44,979 international workers daily at its peak in May 2016.

Project directors were asked to discuss the differences in their professional dealings with GCC contractors (question 25). They responded that the labour force is substantially less productive. Hasan, Baroudi, Elmualim and Rameezdeen (2018) assert that lower GCC productivity is attributable in part due to the GCC's climate and primarily through its use of a "large unskilled foreign workforce" in comparison to Western regions.

The project directors identified differing managerial styles with one-third of the project directors reporting that contractors operated in a very similar manner, noting that one professional group, Cost Consultants felt that GCC Contractors adopted a less professional approach. One project director said the following:

"At home (the UK in this instance), I think there is a more mature approach by contractors based on less focus on cost and more on quality. The approach here is very much the traditional one where the contractor looks to cut as many corners as possible, leading to far lower quality outcomes than at home. This results from selection processes where the minimum cost will always win, and sponsor-influence during the tender process. The difficulty in getting variations agreed, approved and paid also adds pressure for contractors to cut corners" (project director 13).

As contractors play a large part in the execution of GCC megaprojects, project directors were asked to provide more information as to what they perceived to be the most significant differences in contractors' performance (question 26). Several voiced concerns that in addition to lower skillsets amongst the GCC's labour force they believed that contractors were more claims conscious. Two Site Supervision Project Directors suggested that there was less of a

focus on safety by some contractors. Other project directors commented that the GCC contractors are less co-operative, saying that “Most contractors in the East are more co-operative with the clients' team and are more equal as stakeholders” (project director 16).

Again, it is worth repeating that the project directors came from many nations. For example, this Malaysian project director (project director 16), highlighted that their perceptions relating to their home experiences might not be generalisable to all GCC contractors. Several project directors provided their unevidenced opinion that contractors frequently try to evade some of the contractual procedures.

The project directors also identify a less conventional approach used by GCC contractors to resolve disputes and claims, reporting how they frequently attempt to bypass Western consultants and use political connections (Arab to Arab) to bypass official procedures. Meyer, (2014, p. 191) describes the Arabic *wasta* system, making decisions based on relationships, which goes against Western consultants' professional principles. A principle indoctrinated in most Western professionals is the obligation to act “as an honest broker” while administering the contract, reacting contractually instead of relationship-based responses.

Cost Consultants also reported a more aggressive approach in contractors’ pursuit of claims, one noting “in my home country, the culture is less adversarial. There is more of a team approach” (project director 26). Other project directors concurred that GCC contractors have a robust claims culture[86] and reported how the contractors frequently disregard the notification periods set out in GCC contracts and are often late in providing the required notices. One suggested, “that contractors are more relaxed about deliveries and more claims orientated in GCC” (project director 15). There were several reasons provided for this seemingly lethargic approach, including certain legal principles (under Sharia law) which translate to “a just claim

[86] In practice some contractors frequently make “claims” or requests for extra financial reimbursement for items they believe were not correctly identified in the Contract.

is never invalid", and local contractors attempts to use Arab political contacts to bypass the claims procedures, which describes a cultural tendency to circumvent the processes, reported as "Locals believe that they can negotiate in a "Majlis" using their most important members (highest ranking family) in the company, while international companies tend to be more by the book" (project director 02). Another said, "They are not the same as they believe that they can bend all the rules through political connections" (project director 30) and "Contractors are more corrupt here and are likely to be trying to do deals with the management and ignore the procedures and the PMCM" (project director 19).

Figure 7.3 depicts ho relationships to settle contractual disputes. Such approaches di llaborative approaches in Western nations, such as the UK wh collaborative employer–contractor approach is pu rgeted, albeit date (Green 012).

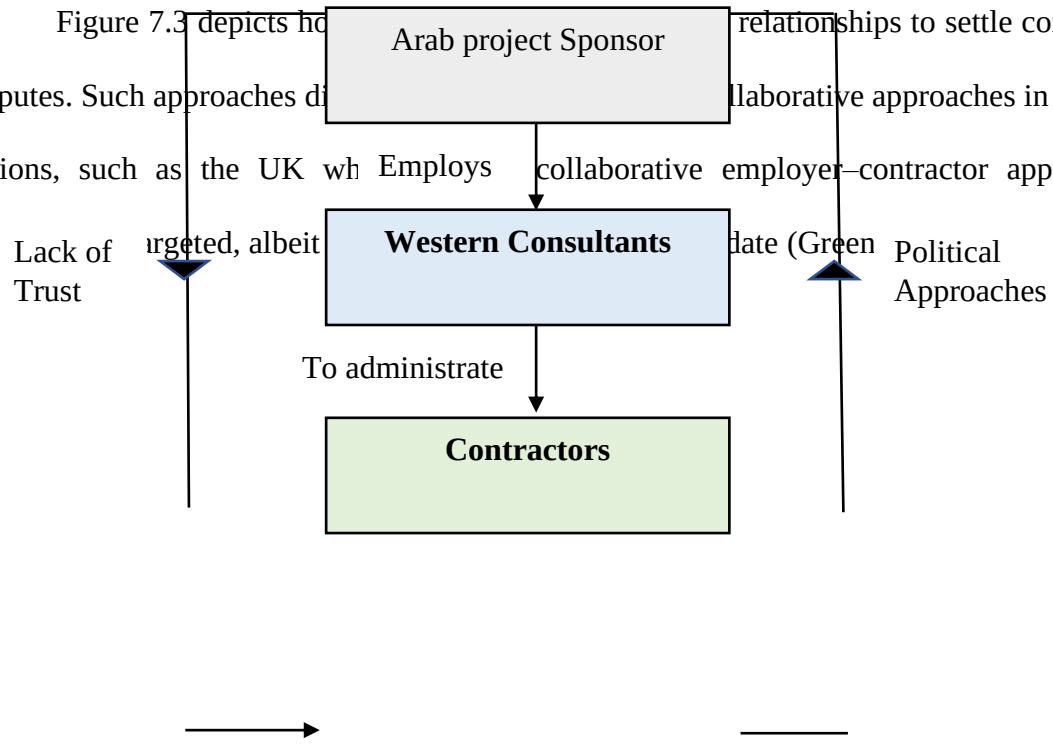

Figure 7.3. The Contractor's Circumvention of Procedures. (Author, 2020)

Overall, the most significant differences in contractor practices include the scale of their operations, their pursuit of claims and their frequent attempts to adapt or re-shape the contractual regulations and practices.

On-call services. Project directors were asked to identify challenging professional differences (question 14) and reported several critical challenges, including perceived layers of

bureaucracy and politics, adjustments needed to cater to multiple cultures, and a need to protect the Arab project Sponsors' image. The most-reported perception of professional differences (16 occasions) is the need to address "high levels of bureaucracy" during the execution of megaprojects. Another source of dissonance arose as project directors frequently reported that GCC sponsors encouraged and expected long working hours. One project director said "Your daily working hours 48 officially, 37 hours in home country, min 60 hours - start 7 am -7 pm, but they don't care about ringing at any time day or night." (project director 04). Another said "You are on call here and also more constrained through clock-in/clock-out system. You receive constant calls on Fridays night time for "non-emergencies" (project director 01).

The project directors' feedback suggests that it is typical to work up to 60 hours a week and still face interruptions over the weekend. These factors contribute to "tiredness professionally and physically" (project director 04). The Arab project Sponsor's working hours were at odds with those of Western consultants, as the project directors reported that the Sponsor often worked "from 8 am to 2 pm, takes long and frequent holidays and does not work hard/or at home" (project director 05). The most persistent personal challenges, for the project directors, included "the Sponsors unrealistic [sic] demands and especially timescales" (project director 07).

While such demands may cause discomfort to many Western project directors, other European based construction studies suggest that construction "long working hours, role conflict, role ambiguity, and lack of job security" are familiar sources of tensions amongst construction professionals (Yip & Rowlinson, 2009). It is more likely that a combination of forces is in continuous play, where a combination of practice related issues such as organisational project management, project management and staff management issues co-exist with more job-related stresses proportionate to issues such as the project particulars, objective management and stakeholder management (Yang, Li, Zhu, Li, & Wu, 2017, p. 1283).

Summary of differences. Overall, the project directors find a differing contractual nexus with GCC contractors and less than expected authority, providing a lesser ability to control the construction process. The study identified professional differences between Western and Arab norms. The extent of professional differences is related to the role undertaken by differing professional groups. While some reported very consistent standards (Engineers and Cost Consultants), others found that while similar standards were present, such as contract provisions, they are sometimes (often deliberately) misinterpreted.

Project directors expressed their frustration at higher-than-expected levels of bureaucracy and politics during the megaproject's management. This bureaucracy creates long working hours and associated challenges. The scale of ventures and size and modus operandi of contractors were frequently discussed, with GCC contractors perceived as more political and claims conscious, likely to bypass the contractual formalities and engage in high-level communications. The project directors also perceive Arab project Sponsors as more demanding and less experienced, creating higher than expected frustration and working hours.

Cultural Challenges

Employer/Arab project Sponsor experience levels. Project directors were asked to compare GCC sponsors' professional experience levels (question 15) with their home country sponsors. Many directors perceived that Arab project Sponsors' were less experienced, "as evidenced by" frequent alterations to the programme and specification. The project directors were also reporting a "blame culture" with many project directors suggesting that Arab project GCC sponsors are less accountable for their decisions than home country stakeholders. One project director said:

"Decision-makers in my home country are more heavily influenced by facts/figures/reports etc. The decision to move forward with a project will be heavily influenced

by market studies, projected returns etc. In Australia, a decision-makers peer group have much less of an influence on the decision-making process" (project director 23).

One sub-group, Architects, described a **"**tendency to have to over-simplify issues to ensure understanding by inexperienced stakeholders" (project director 25). For the most part, project directors complained about the high "frequency of change by the by inexperienced stakeholders" (project director 25), as reinforced through a designer's comment that "goalposts keep changing and can lead to being out of pocket for fees" (project director 11).

However, such comments must be tempered with a reported high frequency of disputes in the construction industry for additional fees battles that can occur between design consultants and their employers as to what forms part of their scope and what forms a variation to their scope, thus entitling them to additional fees for additional services rendered (Arcadis, 2018; Latham, 1994).

Communication issues. Some project directors noted cultural differences in Arab communication styles, explaining how Arab project Sponsors frequently communicate in differing pitched voices that may appear as arguments instead of regular inter-cultural communication. One project director explained:

"How different cultures deal with their [sic] conflict in the workplace. Conflict is not necessarily arguing over a point but can be as simple as two people having differing views on an issue. Some cultures are happy to express these differing views in person; some are uncomfortable and do not express them. You can often experience situations where you believe you have addressed issues and achieved alignment only to find out later that this did not happen due to cultural differences in the way people express themselves" (project director 23).

Myers (2014) finds that Arabs can be loud and emotionally expressive and may appear to be fighting when they speak loudly or move bodies expressively; however, this "speaking with passion" should not be misconstrued as an automatic sign of disagreement.

Bureaucracy. Most project directors perceived that there were (significantly) higher bureaucracy levels compared to their home country. They cited "a lot of cumbersome procedural requirements that are time-consuming and expensive that do not add to the benefit of the project in terms of quality, cost or time" (project director 13). Similarly, project directors indicated "that the works progress at slow speed which ignores its criticality". Most project directors felt that the extensive bureaucratic procedures, both in terms of their professional duties (such as processing payment applications or variations) and often could be reduced significantly, suggesting that "In a more trusting environment, a large extent of this paperwork could and should be eliminated" (project director 34).

Previous studies have identified several cultural differences between Arab and Western cultures. Lewis (2016) recognises how Arabs frequently change course and have a slow collaborative decision-making process. Colton (2011) suggests that policymakers in the GCC may strategically accept more bureaucratic processes. One of the more frequently contested processes agrees on variations (changes to the original design intent).

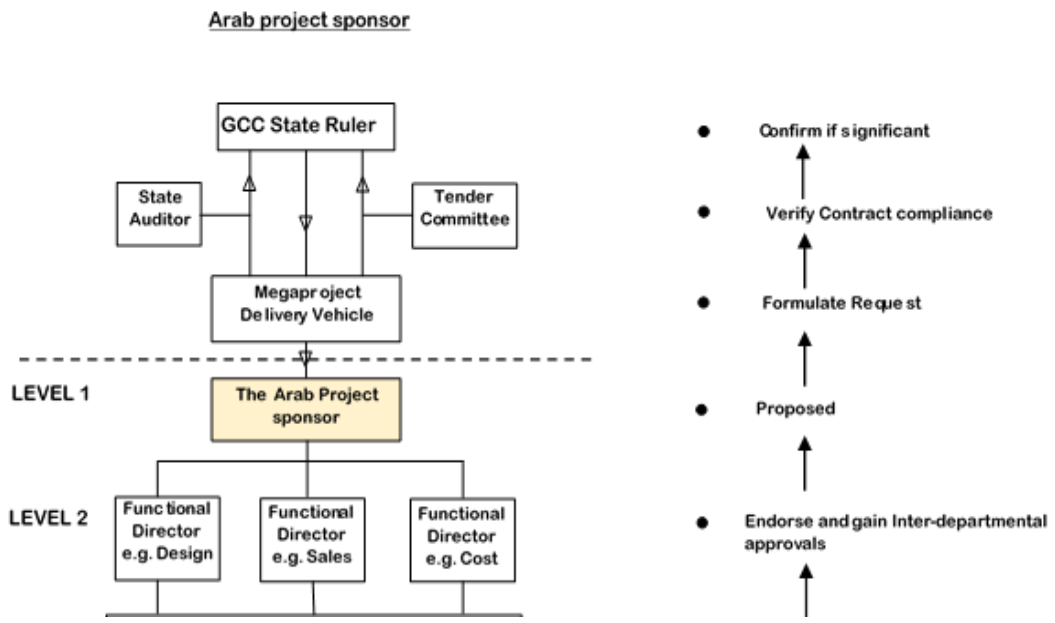

Figure 7.4. Variation Approvals Process for GCC Megaprojects.

Source : Author, (2020)

Figure 9.4 indicates the approvals procedure for authorising variations on the pilot case study, noting that there are five layers of approval required before a decision with a financial impact is approved and that this process takes a minimum of 122 days[87] with 22 individual processes to attain contractual approval of a variation (with the final variation attaining 15 to 20 signatures, in line with each department's approval procedures). According to three leading UK cost consultancies, the average length of time required to process a UK megaproject variation[88] is around 45 days.[89]

Inconsistent contract interpretation. Rees-Caldwell and Pinnington (2013) identify fundamental cultural differences between the UK and Arab approaches when entering contracts. Their studies found that Arabs believe more in the philosophy that "a promise is binding" while the UK approaches prefer to be very "specific when stating and agreeing to terms in the Contract" (or known agreed and fixed at the point of contract). Project directors frequently discussed this principle, where the Arab project Sponsor appeared to interpret the agreement more loosely than their professional assessment of the agreement. Project directors frequently reported this lack of consistency (or perhaps deliberate misinterpretation) as:

There is a different approach to the contract between client and consultant/contractor. At home, the contract is regarded as a rule book to be followed and fairly enforced. In contrast, here, there is a distinct lack of fairness applied in contractual matters by clients, and the consultant /contractor is expected to do whatever the client wants regardless of the provisions of the contract (project director 13).

They suggested that while the Arab project Sponsor was aware of the contract requirements (or should be aware based on their recommendations), Arab project sponsors are

[87] This timescale is outlined in the Appendices.
[88] A variation is the official method for changing the contract scope.
[89] Based on telephone interviews in June 2020 with RLB, DG Jones and T&T.

inconsistent in applying the contract terms. Many project directors considered this a breach of trust between the parties, giving rise to a belief that their professional opinion was less valued in the GCC.

Power imbalances. In the opening chapters, the general unequal distribution of power was discussed, acknowledging how the local Arab project Sponsor effectively wields this power to regulate the consultancy agreement, dictating and directing the terms under which the professional consultancy service is governed. Project directors appear to acknowledge how the Arab project Sponsor appears more powerful. Foucault (1982) describes how the more powerful tend to overpower the weaker parties based on perceived authority levels beyond their actual powers or authority. Arab culture is described as *wasta* culture, allocating higher power levels depending on royalty relationships' closeness (Colton, 2011). The Arab project Sponsor role is mostly a trusted citizen appointed by the ruler of the GCC State. Some project directors reported a need to acknowledge this authority by recognising that “It is a tribal culture based on hierarchy and respect where respect among Arabs must be kept, so there is no “loss of face” (project director 04).

The directors also suggested that a power imbalance can be evident in decisions to accept or dismiss the advice of professional advisors such as a comment that the Arab project Sponsors only “value your opinion only when it matches their own” (project director 19) and some reported perceptions of an obligation to protect the Arab project Sponsor from being seen to be responsible for “mistakes”. While rationalising these perceptions, it appears that the project director ignores the potential that their advice may be inaccurate or wrong, or that the Arab project Sponsor may be more familiar with local practices and procedures. Hypothetically, if the project directors are always right, this would reduce the reported growing

financial burden on Professional indemnity insurers,[90] underwriting design and construction risks, who report a global increase in compensation claims for inaccurate advice by professional construction consultants.[91]

The project directors frequently described how the Arab project Sponsors often pressure the consultants to accept their interpretation of the contract, or approach to a problem where the "Client refuses to listen to you if they do not like what you say - sometimes you are forced to change" (project director 06) or that "the Arab project sponsor was more interested in finding support for their own opinion than seeking fresh advice" serve as classic indicators of a Foucault style of power imbalance. It is plausible that some project directors may, at times, yield to the more powerful authority, or be they may fear for their tenure, based on the Arab project Sponsors ability to have them replaced.

Power to replace. A key concern raised by most project directors is the churn of directors during the megaprojects' execution. State contracts include contract provisions which place obligates all Western consultants to ensure that their staff "are law-abiding, peaceful, and respectful of local and cultural traditions and practices". If the consultant fails to act in this manner, they may be removed at the Arab project Sponsors convenience.[92] These grounds had been used on several occasions to remove staff from the pilot case study megaproject.[93]

There are typically fewer grounds for removing a project director (or other executives) in Western regions. The contract clauses within GCC consultancy contracts are often enhanced versions of the contract provisions governing the megaproject's execution, such as FIDIC (1999) (one of the most used forms of contract internationally). Under normal FIDIC (1999)

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[90] Professional indemnity insurers provide cover for design or advice errors.
[91] Such as reports on increased claims against professional indemnity insurance by provider AON (AON, 2020).
[92] for example, Article 3.9 of the General Conditions of Contract - Qatar
[93] LREDC requires and CONSULTANT shall ensure that all CONSULTANT PERSONNEL are law abiding, peaceful, and *respectful of local cultural traditions,* and not under the influence of any type of alcohol or intoxicating substance.

conditions of the contract, there are specific and limited grounds for the removal of construction personnel, specifically for "misconduct or lack of care; carries out duties incompetently or negligently or fails to conform with any provisions of the contract or persists in any conduct which is prejudicial to safety, health or protection of the environment"[94].

In Western megaprojects, the power to remove a person would be more restricted, for example in a popular UK form of contract such as the Joint Contract Tribunals (JCT) (2016) provides for the "exclusion of persons from the works" (clause 3.21) by the instruction of the Architect or Contract Administrator (but states that this term shall not be applied unreasonably or vexatiously) to exclude from the site for any person employed thereon.

The majority of project directors were aware of the removal project directors from GCC megaprojects without valid justification (in their perspectives).

Organisational politics. Some project directors referred to a perceived need to protect the Arab project Sponsor from appearing errant to safeguard against potential criticism. They reported a "culture of blame in the GCC. Client representatives are incredibly reluctant to agree to or approve changes to avoid blame" (project director 25) or a suggestion that they may have mismanaged the contract. The Arab project Sponsor is often described as being "extremely reluctant to make decisions and wants every aspect of the project to come as a recommendation from the consultant so that the employer Representative can rubber-stamp it" (project director 31). One project director explained:

"In the Middle East, the employer's representative in the norm believes he is in a position of strength and more often than not, will disregard the discussion until it is forced to a conclusion via the threat of arbitration or litigation. In the home country, the employer's

[94] The more recent version of FIDIC (2017) added two further grounds for removal, based on reasonable evidence, to have engaged in corrupt, fraudulent, collusive or coercive practice; or has been recruited from the Employer's Personnel in breach of Sub-Clause 6.3 [Recruitment of Persons]

representative is more focused on finding a suitable outcome that is in the best interest of the project" (project director 02).

Another said "At home, settlements are made by reference to fair, even-handed contracts and legal bases. In the GCC, it is all about influence and making deals regardless of the contract or rights and wrongs of the case" (project director 09).

Project directors also cited how they discover secretive agreements between the Arab project Sponsor and the contractor's local sponsor. In these instances, a sense of frustration was expressed for "not knowing the politics behind the decisions… A deal has already been done often before we hear about it" (project director 19).

The project directors perceived that this practice was more prevalent in the GCC, despite suggestions that political interference forms an integral part of many European megaprojects (Flyvbjerg, 2014, 2016; Ika, 2018).

Professional trust. The concept of respect for one's opinion and trust has been researched in many industries, from several perspectives, such as social science, organisational and social psychology. Mayer, Davis, and Schoorman (2014, p. 712) describe trust as the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party". There appear to be fundamental cultural differences in creating trust between the parties, where many Western societies appear to place a greater emphasis on professional abilities. In contrast, various studies have shown that trust in Arab nations is also based "on relationships" (Meyer, 2014, p. 171). Jaeger and Adair (2013) found that personal relationships with the GCC host party representatives are more critical than written agreements and intimate knowledge. The project directors frequently reported how high-level agreements, once made, appear to override any contractual provisions.

Trust was earlier highlighted as one of the pillars of professionalism. The professional is expected to hold a fiduciary relationship with the client, which appears to be missing or less evident in the GCC. The project directors believed that their professional opinion was less trusted or valued than their home countries' experiences. The Arab project Sponsor/Western consultant or "owner/laity' power relationship" (Foucault, 1982) requires a high degree of mutual trust. Seale (1995) describes trust as an "invisible structure of social reality" and is considered an essential component of the relationship between project stakeholders, consultants, and contractors.

Wu, Li, Wu and Hu (2020) researched "trust issues" for the execution of Chinese megaprojects and identified that the temporary nature of relationships in most megaprojects is also a critical obstacle in the development of trust between the parties. Critically, they found that the temporariness of the relationships prevents the cultivation of trust between the principal actors (Wu et al., 2020, p. 905) and one of their key findings (based on examining 330 Chinese megaprojects) [95] is that the "strength of (stakeholder-consultant) ties is largely overlooked" (Wu et al., 2020, p. 905).

While their study focuses on the trust between sponsors and contractors executing megaprojects,[96] they find that all megaproject stakeholders need to "continuously integrate and communicate" during the execution phases. Communication helps to improve understanding and develop and enhance trust.

Weigert (1979) suggests that trust generally grows as the parties become more familiar with each other and strengthen over time. Some project directors identified how their relationships had become more robust as they worked longer together, however, overall, the

[95] Interpretation of Table 1 (Wu et al., 2020 p. 899) and allowing for all megaprojects cited despite potential that up to 87 megaprojects could fall shy of a $1 billion criteria (circa $900m based on exchange rates on 27 June 2020).

[96] Their proposed solution includes performance reviews of potential contractors based on reputation of fairness during execution (Wu et al., 2020, p. 906)

project directors are uncomfortable with what they perceive as a significant shortage of trust between the Western consultants and Arab project Sponsors.

The importance of good relationships. In the built environment, the International Project Management Association (IPMA) have highlighted that trust is critical in the construction industry "to form stable (working) relationships, in the built environment" (IPMA, 2015, p. 72 & 89). There is perhaps a realisation that the temporary nature of megaproject assignments, the high rate of director churn and the temporariness of a director's assignment overseas largely preventing homeownership or guaranteed resident status for the individual and their family, are factors which can contribute to a more protracted process of forming relationships between the parties.

Most project directors felt that their opinion was less valued. The project directors frequently became emotional while answering this question. A frequently reported issue was that the sponsors often form an opinion and attempt to take matters into their own hands, irrespective of the expert advice one said: "No, because he does not always listen and feels he is right. I feel that often, my opinion is used as a "back-up" (project director 05). Different professional groups reported differences in the level of respect, with very few respondents, (6) believing that their professional opinion carried the same level of respect. Several were critical that the sponsor did not take their opinion seriously saying that "European clients are more experienced and alert. They generally trust your expertise and do not second guess you at every opportunity" (project director 34) or a project director's suggestion that "that they only needed advice after the event when the situation had become a claim".

One project director said, "No - GCC sponsors constantly question your opinion/challenging you until they understand the issue themselves" (project director 01) and another said, "No - my experience is that GCC clients tend to operate and base their decisions

on the preconceived opinions and ideas as opposed to considering the facts surrounding the issue at stake" (project director 22).

Sometimes the language used by the project directors to describe the acceptance of their advice was revealing. After the initial interviews and while writing up the research findings, the researcher realised that several of the project directors might not have been professionally engaged in their home country for more than a decade, raising the possibility that perhaps project directors were comparing an idealised idea of home (where all is perfect) and that the realities may be distant from their understandings.

The researcher reached out to three of the previously interviewed project directors to challenge this doubt. They responded that their advice and practices were kept updated through their internalised networks (mostly working with global Western consultancy practices that frequently provide consultant services in the project directors home country) which continuously update their groups. They firmly believed that their relationships with Arab project Sponsors are not as strong as at home and that similarly, their advice is not accepted to the same extent in their home countries.

The project directors' responses open up a complex issue about the professional's expectation of respect and automatic right to expect a high degree of independence, autonomy and responsibility (an integral element of professionalism). There seems to be a pervasive social construct that most interviewees have internalised, of some entitlement that their advice is always and automatically trusted.

Summary of challenges. Project directors consider that Arab project Sponsors are less experienced, introduce and promote higher bureaucracy and political levels and allow contractors to bypass contractual protocols. The project directors were often conscious of a significant power imbalance, less reliance on their professional advice and a more selective

interpretation of the contract at times. They identified a higher degree of organisational "politics" and a lack of trust between the Arab project sponsor and the project director.

The ultimate question. Project directors were asked if they would recommend working in the GCC to colleagues (question 17). Despite the professional challenges they associated with GCC megaprojects, the project directors advocated gaining some level of experience on GCC megaprojects, as they believed that such exposure would help with the individuals' career development. A small number of project directors (4) appeared most focused on working on GCC megaprojects for financial gain.

While project directors recommended working in the GCC, several warned that entrants should be prepared for a more contentious environment than home, such as unrealistic time expectations or a lower work/life balance. Others suggested that the professional should first become acquainted with his profession's principles in a more Westernised environment, with the fundamental concepts and basics of their professional core topics, before embarking overseas. One such qualification was "Recommended only after five to six years of home experience in Western countries. He needs to know what he should do. If they came fresh, they would develop bad habits, very bad habits" (project director 07).

A few project directors reported that they held no desire to adapt to the GCC environment, while others suggested that the potential entrant also needs to be open-minded and flexible or refrain from entering the GCC "If you have the desired ability to adapt, then yes and if not, then no" (project director 27).

Summary of professional findings

The findings suggest that Western consultants attempt to provide consistent services in the GCC, making small administrative changes necessary to comply with local legislation. They identified professional practice differences related to contract formation and the authority delegated to the consultant and the contractors' performance. They accepted that Arab project

Sponsors appeared less experienced than home, together with a lesser acceptance of some frustrating bureaucratic procedures and policies.

While the project directors seemed to have accepted practice differences more readily and despite frequently complaining that they felt “on-call”, many advised that some of the more culture-related differences contravened their professional values and beliefs. However, such professional challenges also require a sense of perspective. Earlier studies that identify motivation and demotivation factors for working construction professionals found many of these are industry-related challenges. Smithers and Walker (2000, p. 837) have identified how operating in a “hostile organisational environment”, “failing to have one’s work recognised” and “working long hours” are universal characteristics and common factors which demotivate construction professionals. Interestingly, and despite these (sometimes significant) challenges, the project directors recommended what some described as “the adventure” of working on GCC megaprojects.

The most troublesome findings relate to two key pillars of professionalism: first, how their advice is trusted and acted upon and secondly through the restriction of their professional liberty to operate with greater autonomy levels, as frustrated by bureaucracy and reduced contractual authorities. The most critical risks emerge when the project directors resist different cultural approaches, such as project politics, demanding sponsors and frustration at perceived inconsistent approaches by Arab project Sponsors. The most significant personal risk for the project directors was described as the ease at which the Arab project Sponsor enforces provisions for their removal.

This section contributes to new knowledge by identifying differences between megaprojects' execution within and external to the GCC and exposing the Western consultants' cultural challenges through project directors' experiences. These include adapting to reduced project authority levels, facing higher bureaucracy degrees and receiving less acceptance of

their professional advice. The output of these cultural frustrations is the creation of cultural dissonance during the megaprojects execution, which results in high levels of churn.

The theory emerging from these findings is that dissonance occurs between Western professional standards and Arab project Sponsors' cultural standards during GCC megaprojects.

Findings - Acculturation and the Impacts of Dissonances

Acculturation Experiences

Lewis, (2016, p. 588) describes culture shock as "the feeling of shock or being disoriented that someone has when they experience a different and unfamiliar culture". Acculturation describes "the dual process of cultural and psychological change that occurs as a result of contact between two or more cultural groups and their members" (Berry, 2005, p. 698).

The length of time necessary to become acculturated is referred to as the "time to proficiency" (Waxin, Brewster, & Ashill, 2019) or pragmatically, the time to settle into a new role. This time to proficiency will vary according to the individuals' motivations and desire to acculturate, their professional roles and duties and their prior experiences or training (Waxin, Brewster, Ashill, & Chandon, 2016; Waxin, 1997). This chapter considers the acculturation of project directors providing different services for Western consultancy practices. The time to proficiency varies according to their role and the professional demands of the Arab project Sponsor.

The project directors were provided with the following definition of culture shock, a "state of anxiety and frustration resulting from the immersion in a culture distinctly different from one's own" (Naeem, Nadeem & Khan, 2015) and asked to discuss their experiences in acculturation. The questions included:

Question 11 - If they are aware of people leaving the GCC, due to a reluctance to accept the GCC social culture?

Question 18 - Querying the length of time it had taken for their proficiency in their role?

Question 22 - Requesting their observations or specific examples of failure to adapt to GCC culture and its impacts?

Question 23 - Requesting if staff members had been removed from their megaproject due to cultural clashes with GCC stakeholders? If so, which position(s)?

Question 24 - Requesting their assessment of any impacts of such churn (if applicable) and whether they associate churn with GCC megaprojects.

The thesis sought the project directors' perceptions of social or professional cultural challenges, which may lead to cultural dissonance, assignment failure and any resulting impacts.

Culture shock and Assignment Failure

Culture shock. Oberg (1960) coined the term "culture shock" to describe a "state of anxiety and frustration resulting from the immersion in a culture distinctly different from one's own" (Naeem, Nadeem & Khan, 2015). Hofstede (1991) and Kay (2014) amongst others suggest that those entering a new country go through different adjustment processes, such as an initial feeling of achievement (or euphoria) before acculturating, at a social and professional level.

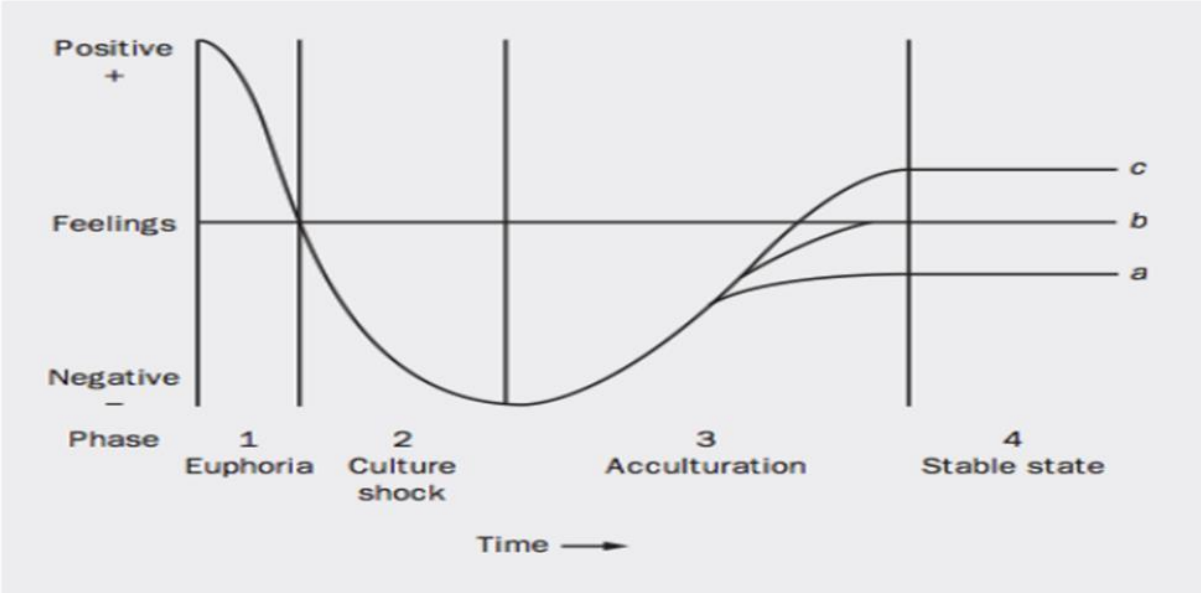

Figure 7.5. Stages of Culture Shock (Hofstede, 1991a, p. 385).

Project directors were asked to consider their time to proficiency between stages one and four in Figure 10.1 (question 18).

In Chapter Eight and Nine, the project directors identified social and professional cultural differences that influence GCC megaprojects' delivery. Professional dissonances were related to differing bureaucracy levels, contractors' behaviours, politics, authority levels, trust and power. Social challenges were less prominent than professional challenges in this study group.

During the semi-structured interviews, one-third of the project directors perceived that their acculturation had occurred after six months, increasing to two-thirds within twelve months. A further eight directors acculturated within 18 months and the remainder within 24 months.

Five project directors confirmed that they did not feel part of, nor wish to accept the professional standards they perceive as applicable in the GCC. They suggested that they were “tolerating the environment but do not like the constant requests to change things” (project director 20) or “not adapting, more accepting” (project director 21).

Table 7.2.

Acculturation Timelines

Professional Role	Acculturation period
• Cost Consultants	• 6 to 24 months
• Architects	• 7 to 12 months
• Claims specialists	• 12 months
• Project managers	• 6 to 12 months.

These findings are specific to this group of Western consultants and act as a guide to the time to proficiency for differing professionals; however, it is impossible to conclude the profession's acculturalisation period given such a relatively small sample. Despite the inconclusiveness of the time to proficiency associated with sample size, trends emerged amongst differing consultancy roles such as the Cost Consultants' extensive period (24 months).

Cost Consultants expressed significant professional frustration at the lengthy paperwork procedures, with one cost consultant linking their acculturalisation with “deadlines and pressure, with resultant high blood pressure” (project director 06). Another cost consultant “found the GCC harder and very frustrating at times” adding “I do think you should not stay too long to not fall behind on how things are progressing in the rest of the world” (project director 26). This project director infers that professional service levels may deteriorate based on prolonged exposure to “lower standards” in the GCC. The non-evidenced suggestion that GCC professional standards are somehow lower (presumably compared to their home country) emerged during several interviews. Despite a lack of evidence, this is a study of perceptions, and the assertions are interesting to note. It raises suspicion as to whether this perception has any basis in fact or the extent to which this view is internalised and may be a cause by which the Western consultant consciously or unconsciously modifies their behaviour and believes their knowledge or training as somehow superior (for example by behaving in a way that could be termed “patronising”). Such beliefs would represent a potential barrier extending their acculturalisation process and therefore act as a risk factor.

Assignment failure. Expatriate assignments (the terminology applied to those leaving their home country to work overseas) play a significant part in globalisation strategies for multi-national companies and attract significant interest, due to the high levels of costs associated with overseas tenure (Black & Gregersen, 1999; Guttormsen, Francesco, & Chapman, 2018; Kumarika Perera et al., 2017; Wagner, 2012). While differing terminologies are used, this research mainly considers the employers perspective, seeking a profitable return on their investment, based on a perceived cost-benefit analysis of the outgoing costs against total income.

This research considers assignment failure as a project director's premature return from his planned tenure (Wang & Varma, 2019). Hechanova, Beehr and Christiansen (2003) describe specific adjustment areas that occur during acculturalisation, including a general adjustment to the new country, interactional adjustment towards how people interact or work practice adjustments and personal factors (such as job satisfaction), as shown Figure 10.2.

Figure 7.6 Professional Acculturation Challenges (Hechanova, Beehr, & Christiansen, 2003, p. 216)

Harzing and Christensen (2004) find that multiple factors impact a decision to leave, arguing that both the phrase and concept of assignment failure should be updated. They identify 14 categories of assignment failure with 29 root causes, such as underperformance, "poaching of successful staff" and or low productivity.

The most common causes of assignment failure are thematically grouped in Figure 10.3.

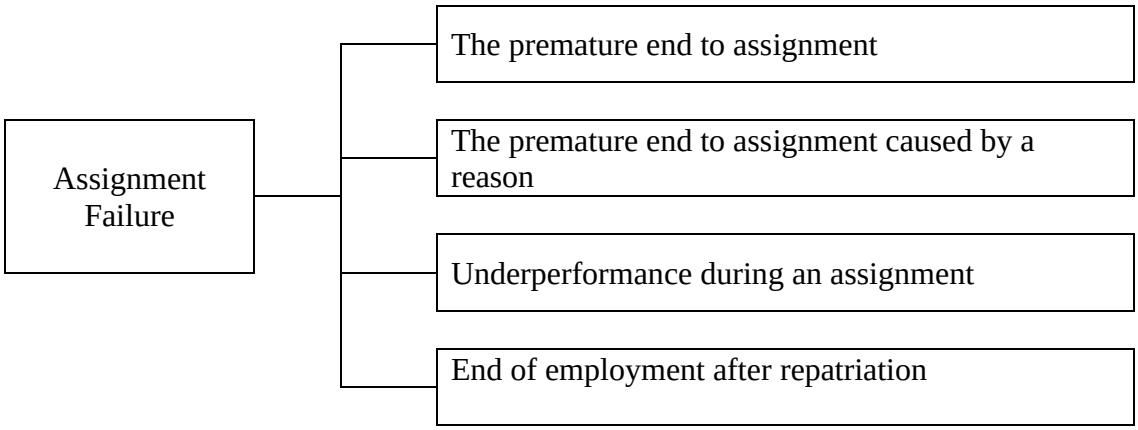

Figure 7.7 Common Causes of Assignment Failure (synthesised from research by Harzing and Christensen (2004 p. 616-626)

Additional GCC issues. The pilot case study (Chapter Five) examined churn for all senior executives[97] on a GCC megaproject. This study identifies additional novel causes for GCC consultants' assignment failure, such as decisions to retire, move home or live elsewhere. The pilot case study examined all assignment failures incidents to seek a potential link between assignment failure and cultural dissonances. The pilot case study and later findings identified that some megaproject project directors were removed due to downsizing due to economic factors. Several GCC megaprojects have been delayed or cancelled due to lower than expected oil and gas income between 2015 and 2018 (Deloitte, 2016).

The Acculturalisation Process

Project directors were asked to discuss how they acculturated to the GCC (question 22). Chapter Nine and Ten describe some of their cultural challenges, which they believed contribute to cultural dissonances.

Table 7.3.

Summary of the Findings of Social and Professional Dissonance.

Social differences	• Single/accompanied directors prefer different states due to perceived similarities with their home countries. • A perception that on-call services provide a low work-life balance. • An awareness that residency in the GCC is temporary. • Religious and social restrictions.
Professional differences	• Sponsors appear to have less experience. • There is a lesser delegation of authority. • Contractors behave differently. • There are perceived higher levels of bureaucracy. • There appears to be an inconsistent application of procedures. • There is a perception of greater levels of politics.

Is it culture? Rees-Caldwell and Pinnington (2013) found that it is essential to distinguish between problems that result from cultural dissonances and difficulties that are

[97] Director or senior specialist in their role.

performance-based or related to personal, social or family events. Factors may include spousal discontent, a failure of the assignment to provide perceived career opportunities or the professional relationship contracted between the new assignment parties (Collings, Scullion, & Morley, 2007; Naeem et al., 2015; Wagner, 2012).

There are also issues related to expatriates' unwritten perceptions, which are perceived to augment the formal employment contracts, such as expected career advancement on return from an overseas assignment. Kumarika Perera, Yin Teng Chew and Nielsen (2017) label such informal contracts as “psychological contracts” and find that they frequently lead to expatriate–employer dissonance. Their study finds the dissonances related to inconsistencies between the role to be delivered overseas, disagreements over levels of compensation or expected career outcomes, that the manager believed were informal benefits associated with their assignment. Cole and Nesbeth (2014) also found such psychological breaches contribute to assignment failures in the GCC. A study by Ertek and Tahir (2017) found that Western project directors leave the UAE for such issues; however, their research finds that such psychological factors are only one factor in their decision to leave. They find that the real reasons people depart are a combination of factors such as their performance being lower than expected or an inability to adjust to the GCC host country and culture. Only one project director discussed a psychological breach as a factor in Western consultants’ assignment failures. One project director said, “Yes, it is often quoted as personal but usually lack professional progress as planned or promised by an employer, combined with culture shock and inability to adjust, family life, solitude lifestyle or lack of social life” (project director 17).

As other project directors did not raise such concerns, it is inferred that the majority of project directors in this study were not affected by disputes between the Western consultancy practices (as employers) and their project directors (as employees).

Cultural ethnocentricity. The project directors reported that, at times, some project directors' attitude and to a certain degree, their ethnocentric views, impacted both their social and professional life. One commented how “often foreigners come to the GCC and attempt to tell the employer how to do something and that he is right, and they are wrong. They always seem to forget that the GCC has been constructing megaprojects for decades” (project director 18).

The project director referred to new GCC entrants, who provide advice based on their home experiences, without considering how other advice may be more appropriate for the GCC. Another project director compared fresh expatriates to members of a “John Wayne[98] school of management” where the project director feels they are always right (project director 04).

The concept of wishing to appear correct considers the concept of the “other” and ethnocentricity where someone from one nation may feel somewhat superior to the host nation (Kapuscinski, 2006). Ethnocentricity may take many forms, and several project directors were removed as they were unwilling to consider the different cultural perspectives of the Arab project Sponsor or causing public embarrassment for the Sponsor, sometimes through suggesting that the Arab project Sponsors opinion was without merit (irrespective of the whether the Sponsor was correct).

Project directors advised that it is crucial to deliver information carefully and consider “how professional advice is delivered, suggesting they witnessed several colleagues being removed, sometimes for telling the truth and trying to make the employer see sense” (project director 20).

[98] John Wayne is a renowned actor who was popular in the 1950s as an actor in western movies. In these movies the role he played suggested that his actions were always right.

Cultural churn. Project directors were asked if they were aware of any senior staff members' removals due to cultural clashes with sponsors (question 23). Five project directors did not witness this personally but were aware of such incidents locally. The majority of directors described how “several” colleagues on their megaproject had been removed, across a broad spectrum of roles. One said “Yes. A commercial manager. He was confrontational, would not acknowledge the input of or respect members of the stakeholder management team" (project director 17). Another said “He was in a design meeting and commented that the design was “shite” and should not go to tender. The Qatari (female) architect-designer was present. He was removed from office for insulting her” (project director 06).

A project director working on the construction of GCC airports “witnessed six programme management directors in five years, 40 seniors lost in five years with the most common cause on this project suggested as “erupting” in front of the client” (project director 04).

A long-serving project director (20 years’ in the GCC) involved with megaproject design advised that:

> “they were not aware of a single project where either the project manager or director remains after a few months. Usually, two to three people are changed at least per project. One port director received a lot of shouting and insulting (in Arabic). He got depressed, left. It is frequent for projects to lose people due to culture issues” (project director 07).

Another said “Yes - mostly project managers and rarely cost managers. We try to relocate them on other projects” (project director 28).

The research then queried the seniority of churned staff and asked the directors whether they considered such churn to be expected for GCC megaprojects (question 24b). They

reported that staff (and particularly directors) are frequently removed from significant or "key" positions.[99] Key positions include senior design managers, contracts managers or project directors.

Almost all project directors perceived that churn rates are higher in the GCC than in their home countries, with two project directors referring to this as a "fact of life in the GCC" (project directors 19 and 27). Project directors also suggested that a consultants project tenure can be short-term, so "it is apparent that you need to be well compensated as a short lifespan can be expected. This leaves you on edge at all times during the working day and leads to high-stress levels" (project director 32).

Uncovering specific data for churn is difficult as such data is considered sensitive, and it was challenging to gain access to research that fully triangulates these findings.[100] Compatible research was identified concerning expatriate managers[101] churn is provided by Black and Gregersen (1999), who found that churn for expatriate managers can be twice that of home.[102]

Project directors reported that some churn relates to senior staff "not understanding the employer" (project director 19). The project directors identified such dissonance sources, including instances where the project directors may have appeared arrogant or aggressive and where the proper communication protocols were not followed. While many individual cases were unique, the higher churn rate than that of their home country was believed to disrupt the megaproject's planned execution and significantly impact all.

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[99] Key positions are identified in the Contract as critical senior staff positions, such as the project or commercial directors. It is usual to see a penalty imposed if the key positions are not present at site.
[100] In the pilot study project directors were subject to an average tenure of nine months.
[101] Equivalent ranking to a senior consultant's project directors.
[102] Based on an American study.

The Impacts of Churn

Project directors were asked to describe any impacts attributable to project directors' churn (question 24); the responses are explored in the following sub-sections.

No impact. Three project directors perceived that "megaprojects are larger than one person" (project director 23), and the megaproject can continue without some project directors. Another project director believed that megaprojects are "not impacted due to dependence on assistants" (project director 04), implying a duplication of service in some sectors, however, this opinion was not widely shared. One reported that "The project teams seem to have adapted and know when to expect turnover" and another reported that "It is a normal process for the GCC and should be expected" (project director 33).

Further analysis revealed how these comments originated from one professional group, the Cost Consultants. Of course, this may be a coincidence and reflective of a relatively small proportion of the overall sample group, or it may be linked to previous reports that cost consultancy services are often standardised in most regions.

The other project directors identified what they suggested are "significant impacts to all parties" because of culturally-induced churn, including the Western consultancy practice, the project directors (as individuals) and the megaproject (at the expense of the Arab project Sponsor).

Impacts for the consultancy practice. This research does not focus on impacts which may be associated with standard construction-related "business risks"[103]. Western Consultants are exposed to business practice risks in the GCC and globally, which occur during tendering for the services and after being appointed as consultants. During this research, many project directors often described such risks. They discussed tendering risks and suggested that

[103] Such as profitability, low margins, difficulty in finding resources (Egan, 1998; Latham, 1994)

Consultancy Agreements' bidding process takes longer to tender and conclude. They advised[104] of higher potential to encash performance or tender bonds, the allowance for a greater probability of claims for professional negligence than European megaprojects and a requirement for significantly higher limits of public indemnity insurance augment commercial and business risks. They also reported a likelihood of delayed payments, as frequently contractually agreed payment terms are exceeded for various reasons.

They discussed the on-going risks of removing their staff and especially project directors, from awarded GCC megaprojects and confirmed that cultural dissonance was a significant reason why project directors experience a high churn level. The impacts for the Western consultancy for a project director's removal were reported to include:

- *Loss of revenue* - the Western consultancy firms are generally reimbursed based on physical attendance at a megaproject designated site office. When a project director is removed, the Western consultant will not be reimbursed for that service, despite the consultants' obligation to pay the project director for a statutory notice period, varying from one to two months' salary. There is also a loss of income where a handover period[105] is required as the Arab project Sponsor will only reimburse one position during this handover period.
- *Penalties* - it is common to find penalty clauses in Consultancy Agreements, to pay the Arab project Sponsor a financial penalty (per day) for the lack of key personnel. While Consultancy Agreements generally contain procedures to remove staff, the project directors felt that this contract provision is applied more frequently (than their home country) by Arab project Sponsors, without substantial grounds.

[104] The practices reported a more litigatious approach to making claims against the Western practice for a lack of professional service.
[105] When the Arab project Sponsor requests that a project director is removed, they sometimes demand a handover period, where the outgoing project director transfers his project knowledge to the incumbent director.

- *Loss of reputation* - GCC State Sponsors request details of the Western consultants' other State engagements during the negotiation of additional commissions. Hence, a poor referral in one megaproject often precludes consideration in other megaprojects.
- *Loss of opportunity* - multiple consultancy agreements are often awarded on the same megaprojects (or gigaproject). The Arab project Sponsor can quickly delist the Western consultant from tendering for other packages if dissatisfied with its project directors' perceived performance, their focal point of contact.
- *Lack of staff development* - Western consultants often loses the ability to promote directors to more senior levels or to get their skills and performances recognised, in the event of dissonance, as such promotions generally require Arab project Sponsor approval.

Impacts for the project directors as individuals. While the project directors relayed impacts for the consultancy practice, they also advised how they, as employees, are strongly impacted by removal from a megaproject, including:

- *Discontinuity of employment* - the project directors advised that frequently their termination from the megaproject results in their dismissal from the consultancy practice. Although their employer is most often the consultancy, their employment contract becomes effectively cancelled where the megaproject no longer requires their services.
- *Short notice periods* - the GCC legislation typically provides for one month notice upon employment termination or three days within the first six months probationary period in some states. The project director may also be entitled to an additional month notice in some GCC states (if they are engaged with one employer continuously for five years or more).

- *Kefala system*[106] - many GCC states strictly impose a regime where the project director must leave the GCC State and not return within a two-year embargo following their employment termination (Amnesty International, 2018).
- *Timely departure* - the GCC states impose penalties if the project director does not leave its state within 30 days from ending employment (including any family dependents). Penalties include fines and potential imprisonment.[107]
- *Children's education* - the project director "sponsors" their dependents and if they are terminated, they and their accompanying dependents must leave the GCC state within their notice period (mostly 30 days), which often creates problems for children who may have to leave school midterm.
- *Loss of reputation* - the executive is often asked for previous employer references, which may reflect the nature of the project's termination and damage their prospects. Project directors identify a loss of self-confidence, esteem and reputation.[108]
- *Housing deposits* - the house rental agreements in the GCC varies with some states, such as the UAE, demanding that rent is paid in one annual instalment and there are frequently lengthy processes associated with partial refunds.
- *Debt repayment* - the executive is obliged to repay any outstanding bank debt in full, sell any vehicles or boats and pay any unpaid utility bills or traffic fines before leaving the State. If the project director cannot repay their debts within the 30-day departure period, they are likely to be banned from travel (and often imprisoned), until their debts are fully discharged. The employer frequently withholds any final dues until they receive a bank statement that no debts are outstanding, following local banking restrictions.

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[106] The employment rules and regulations for temporary workers, such as a requirement to get written approval from the Sponsor to leave the Country.
[107] Current fines in Saudi Arabia (July 2020) for being in the State illegally are Sar 50,000 (approx. $14.000), six months jail term, deportation on completion and refusal of future visit visas.
[108] Identified in Chapter Ten.

- *Repatriation costs* - when a project director is removed earlier than planned, they frequently bear their repatriation costs, including furniture removals and flights.

Impacts for the megaproject execution on the Arab project Sponsor. The Arab project Sponsor mostly engages its professional consultants through a competitive tender process. The tender stipulates the number of positions, their proposed duration and sets minimum qualifications. The consultant who wins the bidding process is reimbursed monthly, by multiplying the agreed rates by the number of approved staff by the duration (in addition to any agreed overheads). The Arab project Sponsor bears the financial risks associated with extending any consultancy services through consultancy fees' remeasurement.

Many project directors believe the megaproject's execution is delayed due to their Programme Management services' interruption by the unplanned replacement of project directors. Of course, these perceptions may not align with Flyvberg's (2017) "iron rule" that megaprojects are always late, or be at odds with Siemiatycki's (2018) view that poor planning of megaprojects (by megaproject consultants) may contribute to programme overruns. There are many documented reasons why megaprojects may be delivered late (and over budget). Western consultants can take small solace in Locatelli's (2018, p. 631) analysis of construction delays in megaprojects (nuclear power plants in this instance), suggesting that the consultants are not responsible for megaproject delays.

In this research, the project directors mostly believe that churn related disruption caused by their departure contributes to the delays in a megaproject's execution. They identified specific time delays to such churn, including:

- *Replacement delays* - the project directors' team are often disrupted while a replacement is approved. The research findings found that project directors usually take at least

six months[109] to acculturate professionally. Many Western consultants reported difficulty finding suitable replacements, particularly during boom periods of construction, risking the programme's timely completion.

- *Approval of substitutions* - the project suffers a lack of expert advice (and sometimes leadership) while the project director is replaced. Internal approvals often require candidates' vetting, authentication of qualifications, reviewing visa procedures, and several screening interviews with management committees. Project directors also reported that sometimes project directors are reluctant to accept positions, particularly if the megaproject gains a reputation for high churn rates.

- *HR formalities* - despite the approval of candidates, there are other visa formalities, attested educational certification, police clearance certificates, extensive medical check-ups and other authority screenings required before engagement. In some states, countries are allocated "quotas", which are frequently reviewed and adjusted. For example, in January 2020, it was impossible to hire a new Egyptian passport holder on a Qatar megaproject.

- *Knowledge leakage* - the project directors report that the project suffers as the knowledge gained from years working on a project is lost, and prior knowledge needs to be is "rediscovered". Durst, Aggestam and Ferenhof (2015) find that knowledge leakage is a significant risk that needs managing, as such knowledge leakage slows the progress of decision making and audit reporting and eventually delays the programme.

- *Costs* - the estimated costs associated with extending Western consultancy fees for the project has been estimated at US $5,380,994 per month.[110]

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[109] The professional integration periods differ for professionals, with some consultants taking longer to adjust as described in Chapter Ten.

[110] It is difficult to prove a direct relationship between an executive's departure and delays in completion. However, the respondents indicated project delays of 2-3 months in many instances. Costs were independently assessed by commissioning a cost consultant as detailed in Appendix Five.

- *Team morale* - the project team reported a frequent decrease in morale upon key project directors' churn.[111]

In the project directors' perspectives, it is evident that cultural dissonance impacts cultural issues a significant risk factor for all parties in GCC megaprojects.

Counting the Costs

There are significant variances in the assessment of the costs with churn. Leiß (2013) suggests costs of US $150,000 per early repatriation, while Black and Gregersen (1999) suggest higher costs of US $1,000,000 per manager.[112]

Nowak and Linder (2016) provide a framework (Figure 7.4) to assess the expatriate's investment return. It includes charges such as replacement costs, temporarily reduced productivity of the replacement and management costs. The cost centres they identified demonstrate the range of costs that need to be considered when assessing the total costs for churn.

The cost centres and charges identified in Nowak and Linder's research (2016) (Table 7.4) were used as a benchmark to estimate likely GCC costs. These financial computations support Black and Gregersen's (1999) findings that the cost for churn of project directors is in the region of US $1,000,000, per project director in GCC megaprojects. These calculations are essential to understand the exposure and risk associated with a Western project director's churn.

[111] Part of the findings for "Culture Shock" exposed in Chapter Ten.
[112] This research considers senior project directors at the equivalent manager grade.

Table 7.4.

Loss per Senior Executive

Costs Position	Amount	Sum per Phase
Costs before expatriation (12 months)		€59,800.00
Selection costs	€9,500.00	
Training/workshops	€3,300.00	
Look and see	€5,000.00	
Individual support	€5,200.00	
Replacement	€17,000.00	
Administration	€19,800.00	
Cost for leaving the country		€19,600.00
Moving, transportation, renting, etc	€19,600.00	
Costs during expatriation (24 months)		€758,800.00
Expatriate's allowances	€709,080.00	
HC disruption	€13,000.00	
Administration	€36,000.00	
Cost for returning home		€19,600.00
Moving, transportation, renting, etc	€19,600.00	
Costs after expatriation		€9,000.00
Ongoing costs	€2,000.00	
Loss in productivity	€7,000.00	
	Sum	€866,800.00

Table 10.1 * Loss per senior executive from churn Nowak & Linder's 2016 Table updated by the researcher[75] $930, 000

Megaproject costs.

Flyvbjerg (2018), Garemo, Matzinger, Palter and McKinsey (2015) and Locatelli (2018), amongst others, identify that costs increase when megaprojects are delivered behind schedule. Sponsors incur development losses, such as the loss of venue revenue, or as a government, the lack of benefit from roads and infrastructure, if projects are delivered late. Chapter Three has identified that megaprojects are almost always unique, so assessing delay costs is not only subjective but to be accurate would require the extensive local knowledge of the individual megaprojects' daily expenses (and projected income). GCC megaprojects are generally state-funded and may not be expected to provide a financial return on investment. The absence of income projections makes the quantification of delay damages challenging to assess.

The establishment of a direct link (or cause and effect relationship in planning terms) between the churn of project directors and project delays for the megaproject will vary

depending on several circumstances, such as the nature of the megaproject, the availability of suitably qualified replacements, the effectiveness and governance of the current project director and a wide range of variables. Notwithstanding such variables, this study explicitly addresses current project directors' perceptions, and they firmly believe that the churn of project directors causes megaproject delays of between one and three months.

It is possible to provide a rough guide for megaproject costs using expert cost consultancy services. The researcher commissioned a UK-based Cost Consultant, with branches throughout the GCC, to provide a financial estimate or rough order of magnitude (ROM) assessment of costs for a megaproject's Western consultancy support services. The Cost Consultant was supplied with the GCC megaproject report in Appendix One, which details GCC megaprojects' costs and duration (contemporary at the research time).

The Cost Consultant analysed the data and assessed that the monthly consultancy costs for these GCC megaprojects are between US $3,885,773 and US $6,361,875 per month, depending on the costs in each GCC State (Appendix Five). Based on the project director's assessment of project delays of one to three months, allowing an average of two months, then this would suggest that the megaproject and its owner the Arab project Sponsor (de facto the GCC State) would incur average increased project costs of up to US $10,761,988.[113]

Summary of Acculturation Experiences

Project directors face both social and professional challenges during their acculturalisation, which increases incrementally according to the culture gap between their home and the GCC, their professional role and their prior experiences. This study has identified that cultural dissonances in GCC megaprojects result in abnormal levels of project director churn. This research has detailed the impacts on the individual and the consultancy practice,

[113] Allowing two months * US $5,380,994 benchmarked as per the Cost Consultant report in Appendix Five (Section 3).

and if the director's perspectives that the megaprojects get delayed following their replacement is accurate, then the costs may accumulate rapidly. The potential losses associated with each project director infers that cultural dissonance creates a substantial and expensive risk for all parties.

This chapter contributes to new knowledge by identifying Western consultants' acculturalisation process and their time to proficiency in GCC megaprojects. The study is the first of its kind to identify the significant impacts and costs for cultural dissonance in GCC megaprojects.

The theory emerging from these findings is that cultural dissonance is a significant risk for the project director, the consultancy practice and potentially the Arab project Sponsor, during the execution of GCC megaprojects.

Findings – Cultural Awareness Training

Training Experiences

GLOBE (2004), Hofstede, Hofstede and Michael (2010), Inglehart (1997), Waisfisz (2015) and others believe that it is possible to identify a country's national characteristics. These national characteristics then act as a cultural "blueprint" which enables the researcher to anticipate a culturally-based response. Being aware of the likely response reduces levels of uncertainty and lowers the risk of cultural misunderstanding. This chapter considers whether training can help understand or accept national cultural differences and how such training may become a risk management tool. In this section, project directors were asked to describe the cultural training they received or requested to assist with their acculturalisation through the following questions:

Question 20 - Do they feel that their consultancy adequately prepared them for working in the GCC?

Question 27 - Were they provided with any specific training before the commencement of overseas employment?

Question 28 - If so, please outline and explain the strengths/weaknesses of such training.

Question 29 - Based on their experiences to date, do they feel that training on intercultural awareness training would have been appropriate to assist with their integration?

Question 30 - If so, who would they like to deliver this training? In–house trainers/external specialists?

Question 31 - Do they feel that additional leadership skills are required to manage multicultural teams? If yes - which skills?

Question 32 - Do they feel that additional training is required for the GCC?

Question 35 - Kindly confirm if they are willing to participate in a short online survey by the Hofstede Institute (demo report provided).

The Benefits of National Culture Training

Promoters of cultural training. Black and Gregersen (1991), Deshpande and Viswesvaran (1992) and Waxin and Panaccio (2005) have found that cultural training has a positive effect on acculturation, finding that expatriates who receive cross-cultural training have "higher levels of adjustment than those who have not".

Black and Gregerson (1999) suggest that successful expatriates develop a range of skills in inter-cultural awareness. These skillsets include treating parties with cultural flexibility, being clear communicators, being sociable or participating in collaborative negotiation. Waxin, Kumra and Zhao (2020) find that diversity awareness training facilitates the successful integration of diverse group members, as it builds a "common understanding of the value of diversity" and helps "build social cohesion". GCC research by Baumann (2013) also promotes "uncomplicated and straightforward" training for project directors to achieve cross-cultural teamwork.

De Vries (2019) finds that successful expatriates need to develop a keen awareness or acceptance of their cultural surroundings and develop a sense of "cultural adaptability" and "emotional intelligence" through "cross-cultural coaching" to accelerate the project directors professional acculturation.

GCC related research. Baumann (2013) promotes cultural training to address differences in project management. Using Hofstede's power distance and long-term orientation dimensions, he identifies fundamental differences with the criticality of time for Arab and Western nations, finding that Western professionals are more concerned with project overruns than their Arab counterparts.

Rees-Caldwell and Pinnington (2013) reviewed Arab cultural attitudes to planning construction activities and supported Baumann's findings. Obeidat et al. (2012) find that

“change occurs slowly”. Jaeger and Adair's (2013a) review of Arab-European cross-cultural integration for project management, highlights that the project manager needs to accept cultural diversity in professional interactions in the GCC. Galloway, Nielsen and Dignum (2012, p. 269) find that “face to face communications” is the preferred form of contact, that decisions are made by a “few powerful men” and that “change occurs slowly”. Obeidat et al. (2012) find that the Arabian business culture differs significantly from Western communities. Their study found that different managerial theories and practices should be adopted when dealing with Arabic organisations. Loosemore and Muslmani (1999) explored factors associated with communication conflicts between the UK and Arab nationals, revealing that considerable adaption is required for UK project management companies. Elena (2010, p. 662) has found that intercultural awareness can help project managers understand the differences between “their culture and the project stakeholders’ cultures”.

While some training enthusiasts such as Moran et al. (2011) believe that intercultural preparation can perhaps offer exceptional value, such as “less turnover of staff “, resulting in reduced “return costs”[114], “better performances and profitability”, others, such as Marquardt and Hovarth (2001) suggest potential additional benefits through greater team cohesion and find that established multicultural teams will “outperform mono-cultural teams” in problem identification and resolution, and these skillsets are enhanced through understanding culture and being willing to integrate with other cultures.

This thesis finds minimal cultural training delivery for Western consultancy practices, resulting in insufficient cultural preparation for the project directors. Project directors have identified cultural differences (and dissonances) with social, professional and acculturalisation issues they face while executing GCC megaprojects. This Chapter has outlined their perceptions of the more significant cultural risks (mostly professional cultural dissonances),

[114] Return costs are concerned with repatriation costs and overall losses for the individual director.

principally in cultural interfaces with Arab project Sponsors, differences with contractors' actions and inconsistencies in applying procedures, politics, different communication styles and bureaucracy levels.

However, they are not trained to deal with these quite significant cultural differences. This lack of training may be a source of low cultural empathy, contributing to conflict with the Arab project Sponsor, frequently leading to dismissal. Alternatively, the lack of cultural understanding or appreciation could mean that the project director finds it challenging to adjust to cultural differences and leaves.

It could be perceived that training is either too time-consuming, too costly or perceived unteachable. Black and Gregerson (1999) found that expatriate managers had "a turnover rate double that of managers who did not go abroad". Their study revealed how "expatriates cost two to three times what they would in an equivalent position back home (US $300,000- US $1,000,000 in their findings), which is similar to the US $1,000,000 loss per project director in many GCC megaprojects.[115] These costs may help put the potential cost of training into perspective. Some of the more common reasons why critics suggest that cultural training has little benefit are discussed next.

The critics of cultural training. Ertek and Tahir (2017) performed a meta-analysis for research which identifies why cultural awareness training appears to be poorly supported by employers and identified the more significant reasons as:

1. Cultural training is not considered financially viable.
2. There is insufficient time before an overseas engagement.
3. There is a reluctance due to the temporary nature of overseas postings.
4. There is a lack of ability to conduct cultural training.

[115] Chapter Seven details the losses for GCC megaproject directors.

5. Training specialisms and expertise are absent.

6. There is a belief that superior technical abilities are the fundamental pre-requisite for success in the overseas posting.

There are, of course, frequent instances where the employer partially (or wholly) blames churn on the individual. American human resources specialists Mercer has reviewed 'Why international assignments fail?'. Their study identifies contributing factors, such as 44 % of the blame on poor candidate selection[116] , and 41% is related to an individual failing to acculturate. The study also finds that 41% of those engaged overseas have poor job performance and 41% have issues with their spouse (Mercer, 2015c).

KMPG's 2017 survey *Global Assignment Policies* indicates that 89% of project directors interviewed do not have a formal selection process for international assignees and consider assignments on a case by case basis (KPMG International, 2017, p. 27). Their study found that cross-cultural training is provided for 54% of the participants[117] , including the assignee and their accompanying spouse/children.

Some project directors questioned the viability of providing cultural training, commenting that cultural training has limited value as they perceive that a successful acculturalisation is linked more towards the project directors "personality and adaptability" (project director 23). However, these opinions were infrequent, perhaps indicating that those project directors may have strongly internalised prejudices, either against training or the directors' ethnocentric beliefs in their abilities. Interestingly, further investigation revealed that two of the three project directors expressing such views were close to retirement and had acknowledged that they had little formal training.

Some project directors referenced the potential lack of return on investment from

[116] Mercer allowed participants from 800 international companies to select multiple reasons so the figures will not equate to 100%.

[117]The participants came from a range of industries including automotive, manufacturing, engineering and 2% from the construction industry (KPMG International, 2017, p. 10).

cultural training; however, no attempt was made to quantify either the costs or the benefits, by those interviewed, as the focus of the interview included assessing the current and required level of training, as opposed to reviewing a potential cost-benefit analysis.

Current Levels of Training

Limited training. Project directors were asked to describe and evaluate the benefit of any formal training they received pre-engagement to the GCC (question 27 and 28). Two project directors had benefited from a company-provided exploratory visit[118] which was provided to preview the social and professional environment. However, they maintain that this visit did not assist with their acculturation, suggesting that the "Four-Season"[119] site visit provided too short an exposure to the GCC which was insufficient to acculturate.

Four project directors (out of 34) had received cultural awareness preparation; however, they also found the training too generic to benefit. Three of the four project directors had received this training as part of a company induction procedure as "induction (lunch and learn 3/4 sessions)" (project director 07) or by an "induction handbook to read which was basically a list of what not to do. I also was given an induction presentation which was not very helpful" (project director 13). The third executive described their preparation as "more of some lessons learned, including do and don'ts in the GCC" (project director 16). The fourth respondent described their training as a "booklet containing the notes related to the typical cultural behaviour and communication ethos the prevail in this region" (project director 22). The project directors expressed dissatisfaction with the delivery of their training identifying "weaknesses were that the person giving the presentation had poor English, so it was difficult to understand. The presentation was delivered in an off-hand manner" (project director 13).

[118] An exploratory visit is when the potential candidate is brought to the GCC State to visit the country and familiarise themselves with social and professional norms.
[119] Four Seasons is a five-star hotel chain and considered of a high standard when compared to daily living.

From the project directors' feedback, it is evident that they had not received meaningful formal or informal cultural training, before or at the start of their contract, which suggests that Western consultancy practices place little emphasis on cultural training, to date.

Desired training. The project directors were asked to reflect upon their GCC megaproject experiences[120] and provide their perspectives on potential benefits for intercultural training in delivering GCC megaprojects (question 29) and any additional training recommendations. Most recommended culture-related training, such as inclusion and diversity training. Others suggested supplemental managerial based training, such as leadership, management or people skills. Some felt that formal training was not required, describing an informal "apprenticeship".

Informal training. A small number of project directors (three), believed that formal training is not required, suggesting that it is better to learn cultural differences informally from other project directors. One said:

"If you come with an open mind and the understanding that things will be different and you have to accept them, then these types of adjustments are relatively easy, provided there are other ex-pats available in the workplace to assist new arrivals to be aware of local requirements and restrictions and to provide information on navigating the unfamiliar and overly-complicated processes of getting established in a new country' (project director 13).

Another said, "it was easy to adjust as there were several colleagues there who warned me what to expect" (project director 34).

However, fellow directors' potential to provide such support or assistance would be questionable, as Arab project Sponsors require a high degree of expertise and experience from the outset of the project director's engagement. The majority of project directors were in favour

[120] Chapter Seven finds that respondents were in the GCC executing megaprojects for an average of seven years.

of training, suggesting it is most valuable “to assist new arrivals in being aware of local requirements and restrictions and providing information on navigating the unfamiliar and overly complicated processes of getting established in a new country” (project director 22). The project directors viewed cultural awareness and diversity training as critical training needs.

Formal training. Project directors described the GCC “as a different environment from Europe, so it is always going to be a different challenging environment. It would be wise for people to visit the country first before accepting positions therein, but that does not always happen for a number of reasons” (project director 10).

In general, project directors suggest a greater level of respect and professional courtesies is expected by Arab project Sponsors, than in their home country. The project director needs to be adept in “communication, conflict resolution, and team-building” (project director 23). The project directors suggested that ideally, training should inform about **“**the local religion, culture, and in some way, the local language would be a good start” (project director 16) and specifically provide **“**Informative training about cultural norms prevailing in GCC region” (project director 22).

Over 90% of project directors believed that cultural training would have benefited them, particularly when they entered the GCC. At this later stage of their career and despite not receiving any training themselves, most project directors recommend cultural training (focused on professional and social differences) for all Western consultants. They perceive that such training can reduce cultural dissonance and its effects (for example the premature ending of their planned tenure). This overwhelming recommendation for cultural training is somewhat surprising as mostly they had not benefited from such training.

Inclusion and diversity training. Almost half the project directors (15) recommended inclusion and diversity training, which may be influenced by the GCC's multicultural

environment, together with a growing number of international consultants[121] taking a greater interest in promoting “Inclusion and Diversity” policies. One respondent said:

All cultures (and people) react differently to situations, and every person in a management capacity should understand this. There is no one set way to get people of various nationalities to achieve the same output. So, in short, diversity training is most beneficial (project director 02).

Project directors referred to fundamental cultural differences between nationalities and awareness of inter-cultural clashes between some ethnicities. Interestingly in answering the questions on inclusion and diversity, some project directors provided answers that draw on stereotyping and ideas of an accepted social order, in which they considered professional qualification to be a measure of social status. These beliefs were evident in some project directors' responses, such as an American director who praised India's team members as being almost “Westernised” in their thinking or a British project director who suggested that clashes can be “anticipated” between Sri-Lankan and Indian nationals as follows:

Different cultures have a different way of being spoken to/managed, e.g. Indian[s] may not understand and just nod their head (get them to repeat). Sri Lankan does not like being managed by Indian. People think qualifications make you better than others (project director 03).

Ochieng and Price (2009) suggest that most nations have fundamentally differing values, concepts, assumptions, and project directors in a multicultural environment to understand and identify these cultural characteristics. The potential bias and ethnocentric views amongst some of the project directors are, to an extent put into perspective, by acknowledging and reporting the uniqueness of their views, yet considering the overall perspectives, when saturated views emerge (Glaser & Strauss, 1967).

[121] Such as Parsons, Jacobs or AECOM.

Additional training recommendations for GCC megaprojects. The project directors suggested a variety of potential training, to broaden cultural perspectives, including languages and communication training (six recommendations), emotional intelligence (three), leadership (two), people management training (three), to increase their cultural understandings and reduce the risk of cultural misunderstandings (question 31).

Languages and communication training. Project directors recommended training in languages or other communication skills. The project directors highlighted the importance of the style of communication such as body language and gesture, with project directors citing that "someone with good management skills can adapt to manage a multicultural team and apply the same skills in a different way to suit the environment. It is not what you say, but how you say it" (project director 24).

Communication styles were considered relevant in intercultural "negotiations" such as advising the Arab project Sponsor of unrealistic expectations, "e.g. communication between client/project management and other parties. How to deal with difficult clients/unrealistic expectations. Training to know what is acceptable in the West but could be taken up wrong here" (project director 07).

People management training. Three project directors recommended that additional human resource management skills benefit the project director (without detailed elaboration). Kardes et al. (2013) and Struggles and Heidrick (2015) suggest HRM training for the GCC region requirements should include cultural alignment, cultural collaboration, acknowledgement of personnel's soft skills and open cross-cultural communications.

Emotional intelligence training. Three project directors supported emotional intelligence training, which involves a mixture of five skillsets, including self-awareness, self-regulation, motivation, empathy and social skills (Goleman, 2013). They discussed a perceived

requirement for “cultural intelligence”, such as considering one’s audience and the extensive social network between the Arab communities. One said it is “More about political ability/do not speak in front of unknown persons. Know your client’s expectations because many people are interconnected” (project director 07).

Koveshnikov, Wechtler and Dejoux (2014) find that high levels of emotional intelligence positively impact expatriates’ cross-cultural adjustment to a new environment that that this positivity improves their performance.

Leadership training. Two project directors promoted additional leadership training for GCC directors. Rees-Caldwell and Pinnington (2013) studied leadership styles from the Arab project Sponsor's perspectives to manage GCC construction projects. Their study finds that Arab project Sponsor favours that leaders adopt a consensus-driven, consultative team approach, as shown in Table 7.5.

Table 7.5.

Preferred Leadership Styles

Table VIII. Top three leadership styles preferred by employees in each type of organisation

Overall	Client Organisation	Consultant Organisation	Contractor Organisation
Democratic	Team Management	Consultative	Democratic
Consensus	Democratic	Consensus	Transformational
Team Management	Consultative	Team Management	Consensus

Source: Rees-Caldwell & Pinnington, (2013, p. 58).

Significant HRM studies specialise in global leadership, such as Porter, Drucker or Waterman's frequently cited works. As very few project directors proposed supplemental leadership training,[122] the researcher considered that while leadership may encompass the need

[122] The GLOBE study focuses on using cultural knowledge as a tool for successful global leadership (GLOBE, 2019).

for acute cultural awareness in a multicultural environment, a detailed examination of leadership training would warrant more significant research than provided for in this research.

Bridging the Training Gap

Training delivery. Project directors were asked to provide their perspectives on the most appropriate delivery mechanisms for cultural training (in-house trainers or external specialists (question 30)). The project directors were almost equally divided in their responses, describing the merits of using an internal trainer, such as “better if in house so continual liaison. For a GCC specific megaproject recruitment, it should be part of the team” (project director 05). Most were content with either in-house or external trainers, noting that “either of the choices are fine provided that the trainer has experienced the culture and is not reading/quoting from a book” (project director 02). They advocate using the most qualified trainer, suggesting that delivering the training is of greater importance than where the trainer is based.

The majority recommend cultural training, although the depth of proposed training ranged from a half-day workshop discussing essential cultural awareness, to more comprehensive workshops running over several days**.**

Tailoring training. Project directors recommended that training be provided and tailored to the project directors’ background to highlight any critical cultural differences. Wang and Varma (2019) suggest that a country’s cultural distance directly relates to the churn rate. Their study found that the more similarities between the two countries' culture, the less likely the assignment will fail, while a study by Waxin and Panaccio (2005) finds that the greater the cultural distance, the more the cultural distance the parties can gain from cultural training.

Al Mazrouei and Pech (2014) also recommend that cultural training is tailored to the recipient, by matching the content, intensity, and levels of training to the gap between the

specific cultural differences. While the concept of individualised training schemes is understood and potentially beneficial, the researcher suggests that training should be tailored towards professional roles (such as project managers) using a blend of both social and role-specific cultural differences initial step. Project directors confirmed that virtually no cultural training is provided, making the prospect of an individualised training programme a significant development at this juncture. The potential tailoring of training is discussed further in Chapter Nine as a risk mitigation consideration.

Expert training. Hofstede (2010), Smits (2019), Zein (2016) and many others provide professional advice (for a fee) and "semi-tailored"[123] training for those wishing to engage in a new country. They employ cultural tools to inform and explore cultural differences between the home and host countries in advance, to reduce the participants' exposure to culture shock and make the acculturalisation process more comfortable.

In addition, there are several software applications such as "cultureme" or "culture compass", which offer online support to the prospective expatriate. After attending specialist training, dedicated to the Hofstede's cultural framework, the researcher trialled "cultural compass" to review a computerised applications' potential to predict the practical impacts of cultural differences.

Two-thirds of the project directors participated in this trial and received a tailor-made report which informed them of the potential for cultural dissonances. The individual culture-related reports identify cultural differences between the project directors' home country and the GCC (and compare the project directors' similarity with most respondents in their home country).

[123] They consider professions such as marketing and manufacturing (their clients include Unilever, Samsung and Ikea) but not construction professional consultancies (to date).

Appendix Six provides a sample of the results of such an online survey, which took between 25 and 40 minutes to complete, which asked the participants to responded 42 questions The report demonstrates how their cultural bias may be interpreted in GCC interactions. The software analyses the project directors' cultural aptitude towards preferred working conditions, preferred authoritarian styles, punctuality, change management and customer orientation.

The findings are considered further in Chapter Nine, and while the relatively small sample size prevents definitive testing of such online platforms, the project directors' reactions to their reports are promising. They found that the cultural challenges described in their "culture compass report" generally reflected their experiences, and the platform has the potential to be of greater use. Potential applications include identifying cultural characteristics more tempered to GCC professional challenges or the potential to identify the characteristics necessary for particular roles in the GCC.

Risk prioritisation of cultural training. Risk analysts commonly prioritise risks based on their severity of the impact and the likelihood of occurrence (Hillson, 2008; Newell, 2003; Walker & Greenwood, 2002). The pilot study and GCC field research[124] confirm a high churn for Western consultant project directors, arising from cultural dissonance and Chapter Ten has exposed the potential scale of financial and personal impacts.

A relatively small number of researchers[125] have identified that cultural dissonance potentially disrupts megaprojects, but these studies did not expose the extent or impact of GCC megaprojects' cultural risks. This study is the first to allocate costs for assignment failure due to cultural dissonance.

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[124] Chapter Five, Nine and Ten.

[125] Principally through case studies by Pollack, Biesenthal, Sankaran, & Clegg, 2018; Smits & Brownlow, 2017; Van Marrewijk, Veenswijk, & Clegg, 2014; van Marrewijk, Ybema, Smits, Clegg, & Pitsis, 2016).

The researcher suspects that this relative underexposure of both the likelihood and severity of cultural risks may result in risk managers under evaluating the risks or classifying them as low impact, low likelihood risks (such as the risk heat maps in Figure 3.12). This thesis has identified that not only are cultural risks a reality for GCC megaprojects, but they are significant risks with a high likelihood and high impact and recommends that such risks should be prioritised and actively managed (PMI, 2019).

Most project directors believe that cultural training can reduce cultural dissonances and help reduce the risk to churn. While research by Ertek and Tahir (2017) has highlighted that cultural training is often rejected due to financial costs or a lack of time, such risks need to be considered against the possible losses of up to US $1 million per executive, damages to the Western consultants' reputation and delayed megaproject execution, as detailed in Chapter Ten. This study finds that cultural training warrants detailed consideration as part of a risk mitigation strategy.

Summary of Training Experiences

Project directors receive little, if any, cross-cultural training before their GCC engagement. Baumann, (2013), Meyer (2014) and Moran et al. (2011) are amongst those who continually identify the intrinsic link between cross-cultural training and successful performances. What stands out from this study is that all project directors recommended such training, to no avail.

A lack of awareness of both cultural risks and their impacts has potentially deprioritised this risk to the risk owner, the Western consultant. Risks should be allocated to the parties best positioned to manage their practice risk (PMI, 2019) and it is perhaps time for Western consultants to heed their project directors advice, that intercultural and associated training would reduce their cultural exposures and lessen the risks of churn.

This section contributes to new knowledge by identifying the current lack of cultural training provided by Western consultancy practices and outlining the perceived (and yet unproven) benefits that cultural training is likely to reduce cultural risk and provide faster acculturalisation its project directors.

The theory emerging from these findings is that while project directors are currently not receiving the desired cultural training, this is perceived to potentially provide “armour” against the significant cultural challenges they face with professional dissonances or help their acculturation by reducing their time to proficiency and that such training has the potential to significantly extend their tenure, during the execution of GCC megaprojects.

Chapter Eight - Analysing the Research Findings

Introduction

The previous Chapter has explored Western project directors' acculturation and discussed their most challenging cultural interfaces, during the execution of GCC megaprojects. Chapter Five outlined the churn of the senior executives managing a US $40 billion GCC megaproject, and later chapters have identified how project directors perceive the cultural risks with social and professional integration, acculturation and their perspectives on cultural training. These collective findings help identify the overall influences of culture, in GCC megaprojects.

Research Participants.

The project directors in this study group are senior managers (project directors) in professional consultancy organisations who, with relatively minor variation, share the following characteristics:

- They are directly interfacing with the Arab project Sponsor, mostly daily and therefore are positioned to provide front line advice to support this research. They have at least seven years' experience in managing their respective consultancy roles. They guide their own often extensive teams.
- Socially, they are unique individuals from a broad range of nationalities, many with different languages, religious beliefs, cultural and emotional norms, from each other and the GCC.
- Professionally, they have diverse expertise, such as design management, programme delivery or financial controls, and they provide their expert advice based on their specialised training. Typically, this includes formal post-graduate education, and they have risen within their organisation, although their status and influence is located in, and derived

from, their project role rather than their position within the firm. They are members of a professional institution and have passed or been exempt from their entrance examinations.

- They are part of a temporary project coalition with similar statuses but different design and construction disciplines and functions. Their association with other consultancy practices working for the megaproject is frequently through a collaborative approach, as often, no direct contractual relationship exists between these Western consultants. Contractual authority and control over contractors and processes lie mostly with the Arab project Sponsor.
- Within their consultancy practice, the respondent's functional focus is on delivery instead of strategy; their place of influence and operation is the project, not the firm.
- They are project directors within their consultancy practices and generally have a high level of professional autonomy. They consult their partners or head offices on an as needs basis but generally manage their consultancy scope and daily delivery requirements.

In total, 34 project directors, actively engaged in GCC megaprojects throughout all of the GCC states, were interviewed as part of a series of semi-structured interviews between 2018-2020. The questions were derived from an extensive literature review; the professional experience in the GCC (and elsewhere) of the researcher; a research focus group and advice received during cultural training programmes. The interviews were designed and structured to capture the project directors' perspectives related to their daily interactions with social and professional challenges, cultural adjustment and training related issues. The responses to the questions are sequentially organised into four thematic groupings social integration, professional integration, cultural adjustment and cultural training.

Social Integration	Professional Integration	Cultural Adjustment	Cultural Training
• Cultural challenges • Cultural adjustment • Lessons learned • Cultural integration • Training benefits	• Cultural differences • Differences to home culture • Stakeholder culture • Professional integration • Length of cultural acclimatising • Contractor's culture • Global differences	• Culture shock • Consultant Removal • Removal impacts	• Pre-training • Cross-cultural training • Training delivery • Additional training required

Figure 8 .1. Cultural Investigations. Author, (2020)

When these findings are collectively considered, they illuminate the causes and impacts of cultural dissonance in practice, for Western consultants executing megaprojects in the GCC.

Synthesising Findings and Comparing to Prior Studies.

Pilot case study. The pilot case study examined the churn of senior executives of Western consultants, executing a GCC megaproject. The study involved reviewing personnel records and interviewing the project directors. This data provided an understanding of senior executive churn in Western consultancy practices in Programme Management, Site Supervision and Cost management. The study found that the Arab project Sponsor had approved 28 senior executive positions,[126] but through an analysis of churn rates for each Consultant, it was found that 75 staff had filled the 28 positions.

[126] Senior executives are not all categorised as directors, some may be deputy programme director, but the positions are the equivalent of directors in the subsequent field research.

The churn review found that 72 senior executives[127] left the GCC megaproject, for a variety of reasons, including personal issues, retirement and reductions due to the availability of project finance (related to oil commodity fluctuations), but the majority of churn arose from culture-related dissonances. After studying each executives' tenure, it was established that 40 project directors were removed from the project, by the Arab project Sponsor, for matters related to cultural dissonance. The project directors displaced included senior executive posts, such as the overall project directors, the most senior on-site representative for the Western consultant. Project directors were replaced on seven occasions, and a reporting manager[128] position for the Cost Consultant was replaced nine times.

The pilot case study suggested a link between cultural dissonance and churn of Western consultants in GCC megaprojects. What is striking is that despite the executives' seniority and high levels of experience and prior GCC assignments[129], they were frequently terminated before completing their intended tenure. The Arab project Sponsor referenced a range of reasons for the project directors' dismissal, including their perceptions of the Western consultant's ethnocentric behaviours, a perceived lack of respect and a failure to respect cultural norms. The pilot study highlighted a need for further investigations. It prompted an investigation to examine the full GCC market, clarify if cultural risk represents a risk factor for the execution of GCC megaprojects, and if so, to consider the sources for such risks and potential risk mitigation measures.

Social acculturation. Project directors described their social acculturation describing common social differences between their home country and the GCC, how (or if) they made social adjustments, how they socialise and what motivated them to enter the GCC. While some

[127] Three remain as of June 2020.
[128] The Reporting Manager is responsible for advising the Arab project Sponsor of the construction budget.
[129] These criteria were stipulated in the Consultancy Contract.

project directors had only worked in one GCC State (Qatar), many project directors had worked in more than one GCC State.

There were two distinct groups' to be considered: people on single status and those accompanied by family. The project directors identified social differences between the GCC states, finding that acculturation can be more challenging in Saudi Arabia and Kuwait. Those with families express preferences for differing states, with the UAE, the most popular and Saudi Arabia the least popular. In general, both project directors on a single status and those on a family status were satisfied with their social acculturalisation, despite significant social culture differences regarding social tolerance, religion and attire. Those with accompanying families often praised the GCC in terms of safety and the child-friendliness.

The research sought to understand if a lack of social acculturation created significant challenges for the project directors (or their families), potentially influencing their decision to depart the GCC. The study finds that project directors are most motivated by career opportunities in the GCC, although family considerations may impact their choice of GCC states, social issues are not to a significant concern (or risk). The project directors describe the GCC community as a very multicultural environment and generally socialise within their closely connected communities, rarely socialising with the indigenous populations. The picture that emerges is one of priorities and focus, with career development or financial issues a priority to social issues.

Professional integration. The findings suggest that Western consultants attempt to provide consistent services globally, making mostly administrative changes. The construction professional industry procedures and legal framework in the GCC are often based on UK systems with many UK procedures adapted to suit GCC requirements. All project directors are

members of professional bodies, and these bodies strove to apply consistent professional standards globally.

The project directors identified differences in professional practise related to contract formation, politics, the authority delegated to the Western consultant and contractors' performance. The area most susceptible to cultural dissonance is linked with the human element of delivery, rather than delivery mechanisms, as the parties push their ways through additional layers of bureaucracy and politics.

In general, the project directors expressed concern at the apparent lack of experience of the Arab project Sponsors. While some were mindful that they were engaged to support the “inexperienced” Arab project Sponsor, some suggested that they are held as scapegoats for the Arab project Sponsor's errors. They accepted that Arab project Sponsors appeared less experienced, noted communication issues and, to a lesser degree, some frustrating bureaucratic procedures and policies. Critical cultural differences filtered down to a higher degree of trust, project politics and bureaucracy. The language used by some project directors was interesting. Some were quite vocal in their interviews about bureaucracy levels, while some compared the procedures and volume of administration to a “conveyor belt mentality”.

As many of the construction industry procedures and legal framework in the GCC are similar to Western procedures, the project directors anticipate little regional disparity for work standards, established processes, and ethics. The project directors' critical cultural risks stem from accepting different approaches, such as their authority levels, organisational politics, “demanding” Arab project Sponsors and frustration at perceived inconsistent contractual interpretations by the Arab project Sponsor. The most troublesome findings relate to two key constraints: firstly for how their advice which is trusted and acted upon and secondly through the restriction of their liberty to operate with a similar level of freedom or the autonomy they enjoy in their home country (as frustrated by levels of authority or bureaucracy).

A crucial concern is how the Arab project Sponsor takes the project director's professional advice, and the project director's delivery of professional advice is noted as a crucial factor, subject to both misinterpretation and offence. The project directors recommended that advice should be delivered in a manner that shows no trace of ethnocentric belief or aggressive delivery, as it may lead to the risk of rejection, despite its potential legitimacy. Project directors also referenced the apparent ease at which the Arab project Sponsor enforces provisions for their removal from the megaproject.

Acculturation. Project directors face both social and professional challenges during their acculturalisation, which is influenced by the culture gap between their home and the GCC, their professional roles and their prior experiences. They detailed their experiences with professional acculturalisation, noting how ethnocentricity may contribute to churn in GCC megaprojects. This study has captured the project directors' perceptions of how cultural dissonances contribute to abnormal churn levels compared to their home or previous experiences. The research found that social risks were less severe than professional risks, as most project directors accepted social culture differences, which perhaps they may not have accepted if they were not prioritising professional development.

Critical sources of professional dissonance are linked to professional differences with more significant bureaucracy levels, authority delegated to the Western consultant, contractors' performance, excessive working hours and occupational fatigue in GCC megaprojects, in comparison with the project directors home experiences. These give rise to professional frustrations, which influences (or induces) cultural dissonances, frequently contributing to high churn levels throughout the GCC. Most often, there is a contractual requirement for GCC megaproject project directors to have prior GCC engagement.[130] Despite such prior experience,

[130] The typical minimum levels of experience are described in Chapter Seven.

the high levels of churn infer that the project director may have become too confident in their ability to relate to the Arab project Sponsor or exceed their contracted authority, due to a lack of understanding of GCC professional culture. The project directors reported how the Arab project Sponsors might perceive a failure to consider their views as ethnocentric behaviour.

This research has shown significant financial (and other) impacts for the project director and the Western Consultancy firm. The Consultancy firm can lose one million dollars per project director (or equivalent executive), and it is estimated that the ensuing disruption can also result in delay[131] and other intangible costs for the Arab project Sponsor.[132] The financial losses associated with churn makes cultural dissonance a substantial and expensive risk for all parties.

Training and preparation. Project directors receive little, if any, cultural training before GCC engagement and project directors perceive the absence of such training or any form of preparation to contribute to high churn levels. The low level of cultural training delivery could allow or give rise to low cultural empathy, leading to conflict with the Arab project Sponsor, leading to project directors' dismissal. Alternatively, a lack of cultural understanding or appreciation could mean that the project director finds it challenging to acculturate and leaves. What stands out from this study is that all project directors recommended such training, to no avail.

There are several potential reasons why cultural training is not provided, such as the availability of training, a perceived low return on investment cost and a lack of awareness of the risks associated with cultural dissonance. The project directors made some reference to the cost and value of cultural training, although no attempt was made to quantify either the costs

[131] The project directors suggest that one of the more common impacts is that the overall completion of the megaproject gets delayed when a key director is removed.
[132] As calculated in Chapter Seven .

or the benefits, by those interviewed. Costs need to be put into perspective compared with other impacts, including the potential loss of other consultancy commissions and losses of up to US $1 million per executive. The project directors felt that cultural training would have reduced cultural misunderstandings and proposed introducing specialist training to reduce assignment failure exposure.

The project directors also perceive a potential benefit for additional culture-related training, such as inclusion and diversity training, leadership, management and people skills, and felt potential benefits and merit in using a cultural awareness platform ‘Cultural Compass’.

The Emergence of a Theory

This research confirms the pilot case study's findings that culture is a substantial risk factor during a GCC megaprojects' execution.

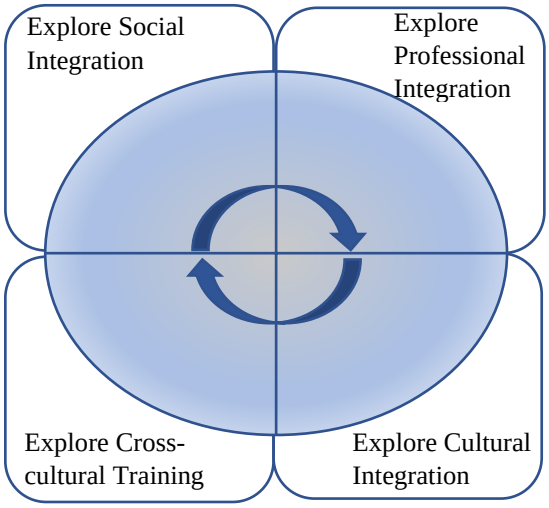

Figure 8.2 Integration of Research Findings. (Author, 2020)

The theory emerging from these findings is that while social dissonances may arise, the project director appears to have accepted the temporary nature of their GCC assignment, prioritising their professional development and deprioritising social risks. The study finds that professional differences are more likely to impact the project director’s tenure and conflicts

frequently arise, not due to the nature of the work per se, but with cultural interactions during the delivery and acceptance of professional advice.

There appears to be a far greater power distance between the Western consultant's project directors and the Arab project Sponsors, which takes the project directors out of their comfort zones. GCC megaproject's formality and bureaucratic nature, lower levels of authority, procedures and project politics, also give rise to trust and respect issues. These differences challenge the project directors, especially when the Arab project Sponsors appear reticent to follow the proffered advice. Volatile interactions between the project director and sponsors are frequent and often result in the megaproject's project directors' removal.

The study finds that project directors slowly acculturate (which varies widely between different specialist fields) and that professional dissonances contribute to a high rate of costly churn for project directors in GCC megaprojects. Few project directors had received any form of cultural training, yet desired cultural training which may provide "armour" against the significant cultural challenges they face.

The theory that emerged from this research (Figure 8.3) is that cultural dissonance is a significant (but treatable) risk for Western consultants during GCC megaprojects' execution.

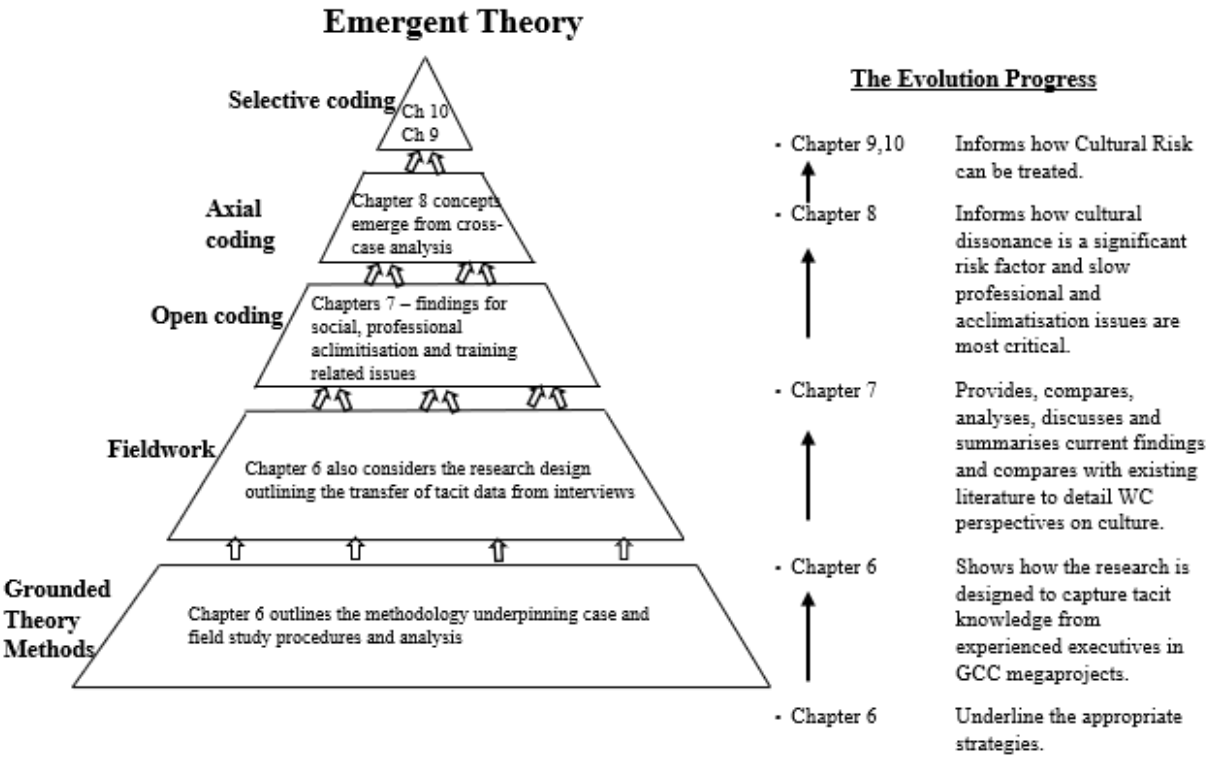

Figure 8.3 Grounded Theory Development

Chapter Nine - Mitigating Cultural Risk in GCC Megaproject

Introduction

Project directors currently working on GCC megaprojects have illuminated the cultural risks they face during GCC megaprojects' execution. These risks are mostly related to their daily professional interactions with the Arab project Sponsors, where cultural differences contribute to the risk of cultural dissonance. Risk mitigation considers “a risk response that involves decreasing the probability or impact of a threat” (PMI, 2019, p. 167).

Denicol Davies and Krystallis (2020) performed a meta-analysis of over 6,000 articles related explicitly to megaprojects' risk management and highlight risk mitigation strategies for mostly European megaprojects. This chapter considers this research's appropriateness to cultural mitigation measures for GCC megaprojects, principally mitigating cultural dissonances between the Arab project Sponsors and the Western consultants that execute megaprojects. Initially, the chapter reviews the Western consultants' perspectives (through their project directors) about social, professional, acclimatisation and training cultural challenges they face, before considering the impacts cultural dissonance exerts over the consultancy practice, the project directors’ livelihood and the megaprojects delivery.

It uses the project director’s perspectives and the pilot case study's findings to expose the most challenging cultural differences for Western consultants before suggesting appropriate risk mitigation measures.

Exposed Cultural Risks in GCC Megaprojects

The director’s perspectives were provided in Chapter Seven through Twelve, and the more critical cultural issues are included in Table 13.1. These included:

Table 8.1.

Exposure of Cultural Risk.

Social differences	• Single/accompanied directors prefer different states due to perceived similarities with their home countries. • A perception that on-call services may lead to a low work-life balance. • Awareness that residency in the GCC is temporary. • Religious and social restrictions.
Professional differences	• Sponsors appear to have less experience than their home country. • Western consultants hold a lesser delegation of contract authority. • Contractors behave differently. • There are perceived higher levels of bureaucracy. • There appears to be an inconsistent application of procedures. • There is a perception of greater levels of “politics”.
Acculturation	• There are frequent occurrences of assignment failure. • There are greater chances of project removal by the Arab project Sponsor. • There are significant impacts for assignment failure. • Professional acculturation takes time.
Training	• Very little training is provided for cultural acculturation. • Intercultural training is highly recommended and sought.

In general, the project directors find that social issues are a lower risk than professional challenges, as their engagement is most often career-focused (and occasionally purely financially driven). Despite similarities in work practices and procedures, the project directors often reported significant cultural challenges in their daily routines. Such issues included higher levels of formality, less authority, less experienced stakeholders, bureaucracy and politics. Project directors considered the actions of contractors less ethical than in their home countries.

These cultural differences gave rise to cultural dissonances, and frequently the project directors were forced to leave the project. The Project Management Institute recognise the everyday presence of multiple levels of risk in the construction of megaprojects. One of the risk mitigation strategies is not to focus on all potential risks but to prioritise them and consider the most impactful risks, beyond the organisations' risk threshold (PMI, 2019, p. 2).

The researcher considered the case study findings (Chapter Five) and the project directors tacit experiences through Chapter Eight through to Ten. The risks exposed were qualitatively ranked, based on the project directors' perceptions of risk, summarised in Table 9.1 and 5.4 and prioritised in Figure 9.1. Theses qualitative assessments and risk heat mapping are based on the researchers' professional experiences as a professional risk and commercial manager, through the interpretation of the field research findings.

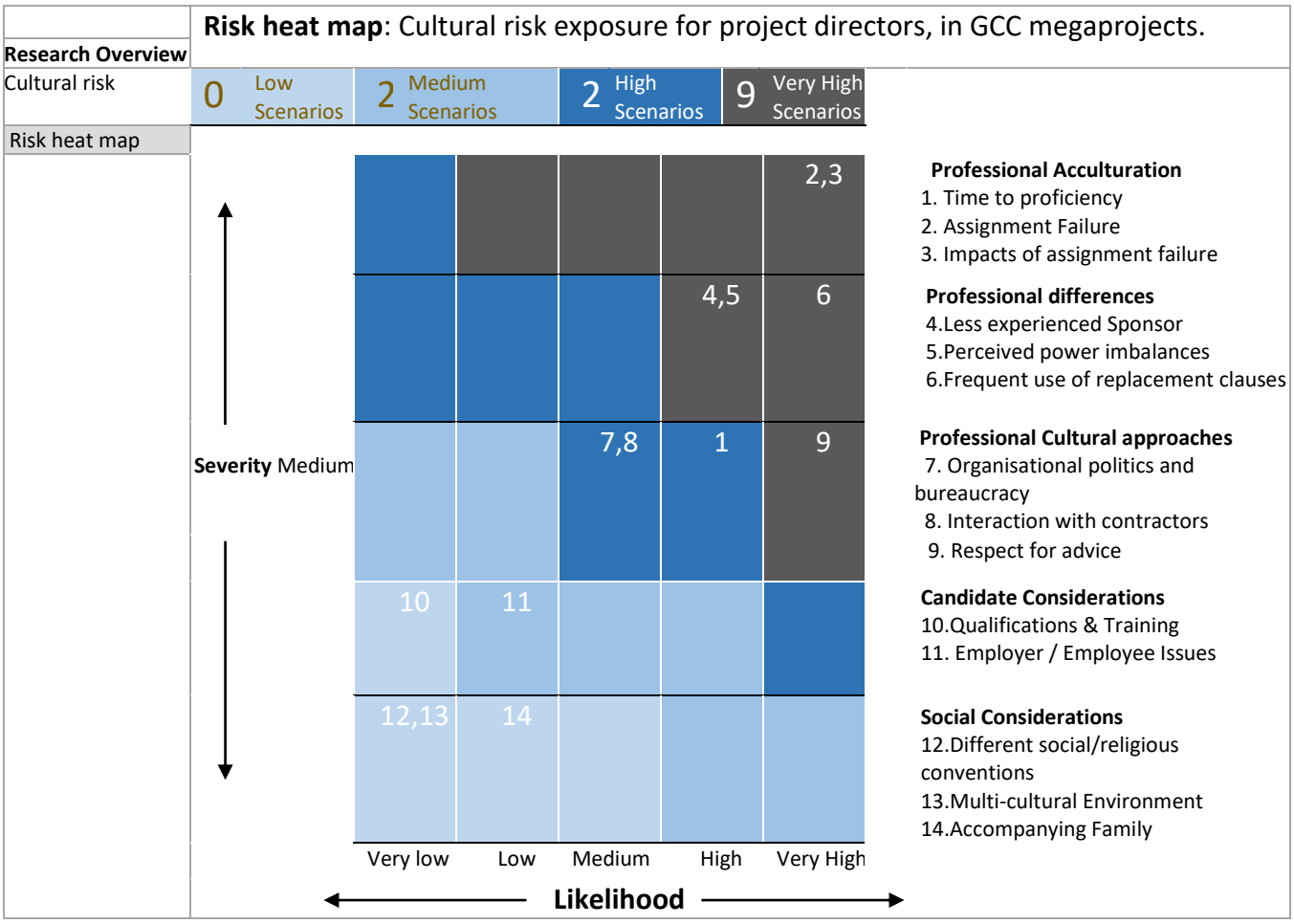

Figure 9.1.. Prioritisation of Cultural Risk (Author and Focus Group , 2021).

Risk Management

Existing risk management strategies. Risk management commences with the identification and sharing of the risk (Walker & Greenwood, 2002). The project directors

identified high levels of consultant churn through cultural misunderstanding and dissonance, impacting the consultancy practice in terms of lost revenue, reputation or penalties, for the project director in terms of career, income and family disruption, and the Arab project Sponsor in terms of perceived delays to the megaprojects execution resulting in additional cost and knowledge loss.

The Western consultant needs to actively manage these cultural challenges and their associated risk levels to minimise potential cultural impacts. The project directors identified areas giving rise to cultural dissonance at several interfaces, principally with professional differences between their culture and the Arab Project Sponsor's culture.

Despite a noted absence of GCC megaprojects in their meta-analysis by Denicol, Davies and Krystallis (2020), their research suggested "proven cures" related to some culture-related risks in megaprojects. This research is partially relevant, particularly strategies that indirectly deal with cultural risks, such as dealing with stakeholders, process-driven bureaucracy, or leadership issues, as noted in Fig 9.2.

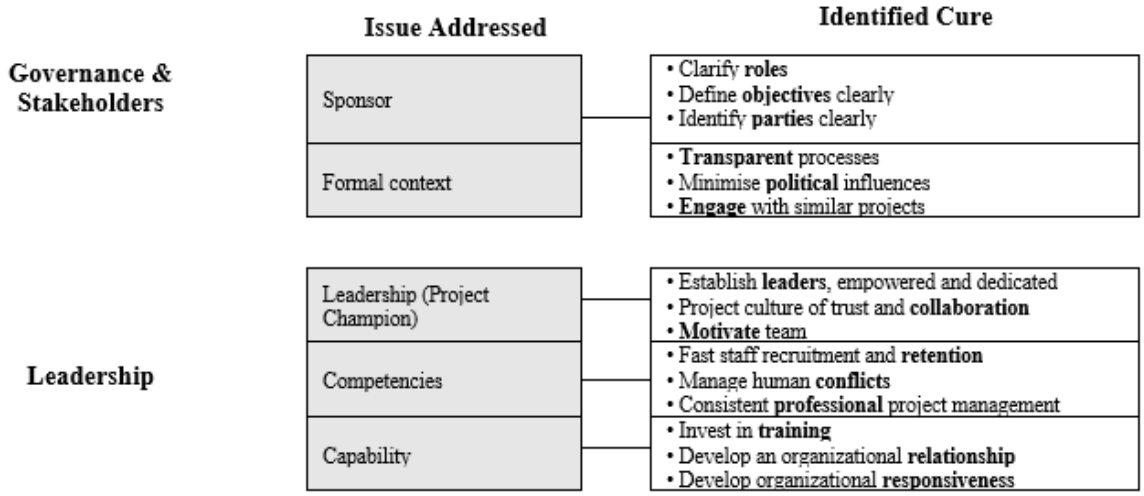

Figure 9.2. . Risk Mitigations for Megaprojects in Leadership and Governance (Denicol et al., 2020).

Barnes and Wearne (1993, p.139) have identified that megaproject risk is reduced by

examining previous megaproject successes and failures.[133] Eweje et al. (2012) also find that the sharing of accurate contemporary information amongst relevant parties is essential. They identify the requirement to simultaneously exploit or reuse existing knowledge while exploring and developing new knowledge (Figure 9.3), in conjunction with adopting a "learning by doing" approach to megaproject risk management (Gibbons et al., 1994). A study in megaproject management by Nachbagauer and Schirl-Boeck (2019) finds that "intense and fast communication" is necessary to manage the "particularly high levels of risk in megaprojects".

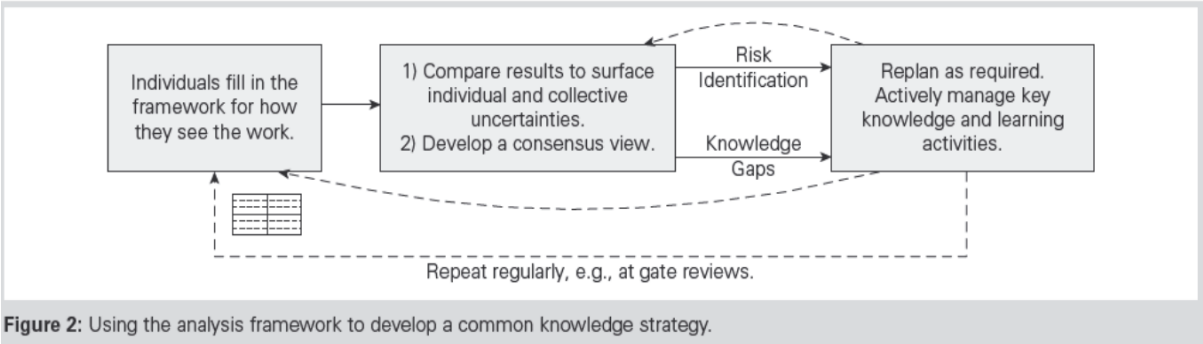

Figure 9.3. Exploiting Tacit Risk Knowledge.

Risk mitigation is mostly needed to address the specific cultural dissonance elements exposed through this research, contributing to a high churn level amongst project directors executing GCC megaprojects. There are significant differences between Western and GCC cultural approaches as evident in interactions between stakeholders concerning authority, bureaucracy and politics. Project directors illuminated such sources of cultural dissonance, which are present in their routine professional interactions. These specific sources of cultural dissonance are first tabled, before considering specific risk mitigation measures, through combining the findings of European megaproject studies (Denicol et al., 2020), with the

[133] Whether a megaprojects execution is considered as a "success" or a "failure" is a highly debated issue, see for example (Flyvberg, 2017; Locatelli et al., 2014; Shenhar & Holzmann, 2017).

feedback from GCC project directors and the pilot case study findings, to outline proposals to help address or mitigate both the probability and potential impacts of cultural risk.

Describing Cultural Challenges in GCC Megaprojects

Differences with stakeholders. Hillson (2016) recommends ranking stakeholders by their position to exercise power as typically megaprojects involve multiple shareholders, which Klakegg, Williams and Shiferaw (2016, p. 282) suggest act as "conflicting" stakeholders or "trolls, challenging to tame and control" which require "firm management". They suggest examining the stakeholder's development history, political and judicial systems and the participants' national culture before deciding how best to intervene and manage differences between the owners, investors, users, beneficiaries and all executing parties. Xin, Zhai and Cheng (2008) find that attempting to manage the multiple value demands of stakeholders can be challenging since these demands are dynamic, while Patanakul, Kwak, Zwikael and Liu, (2016, p. 456) find that inter-organisational co-operation is crucial as part of and to reduce stakeholder risk.

However, in GCC megaprojects, there is usually one stakeholder - ultimately the GCC State ruler.

Differences between authority levels. Frequently, Western consultants are engaged to act as the sponsors' representative or agent (Denicol et al.,2020). Szentes and Eriksson (2016) describe this relationship between the project owner and their hired representatives as a principal-agent theory (Eisenhardt, 1989a). This concept is frequently applied to the construction industry (Jensen, Johansson, & Löfström, 2006; Müller & Turner, 2005) and through such agency, the sponsor delegates a degree of contractual control and authority to his agent, the Western consultant.

In the GCC, Arab project Sponsors rarely delegate authority or power to their Western consultants and the project directors revealed that they mostly "recommend" as opposed to direct or instruct, yet they also perceive that the Arab project Sponsor, on many occasions, ignores their advice.[134] The GCC State's ruler provides effective governance by empowering individuals to represent the stakeholders' interests (Patanakul et al., 2016, p. 461). To a predefined limit, this power is provided to the "Engineer" who acts as the Western consultant's primary point of contact (Figure 13.2).

While many project directors in this research consider their lack of delegated authority as a fundamental lack of trust, a study by Rose and Manley (2010, p.17) investigated the principal-agent relationship between the sponsor and their consultants (for mostly Australian megaprojects). Their study highlights a motivational misalignment between sponsors and their consultants suggesting (amongst other findings), that Programme Managers were mostly motivated by competing interests to maximise their income while minimising their risk exposure.

Differences with bureaucracy. A significant volume of global megaprojects receives support (to some degree), from their State government, due to their scale and national importance. Szentes and Eriksson (2016) find that tensions between control and flexibility are government-based projects' paradox. They find that efforts to protect the taxpayer's finances limit the ability to be flexible in response to changes. Genus (1997, p. 170) finds a need for "strategic flexibility" to guide a megaproject through change by using adaptable, reversible decisions and hedging in response to emerging risks. GCC state rulers typically endorse their megaprojects.

[134] Discussed in Chapter Ten.

In GCC megaprojects, one of the project directors most vocal criticisms is the "bureaucracy" imposed on their daily routines. However, many regions consider bureaucracy a "necessity" for government-based megaprojects, suggesting that "effective procedures should be established and enforced with rigour" (Patanakul et al., 2016, pp. 456–458). Kumar, Kumar, Dutta and Fantazy (2007, p. 643) suggest that all large scale projects need government involvement, to address their complexity and the resources required. Love, Irani, Smith, Regan and Liu, (2017, p. 3) find that megaproject risks were higher if comprehensive contract documents are not adequately prepared to capture all eventualities. These findings infer that a high bureaucracy level is unavoidable, although project directors participating in this research maintain that higher than necessary bureaucracy levels are present in GCC megaprojects.[135]

Different project politics. Political motivation and megaprojects are reportedly intertwined, with Flyvberg (2017) labelling megaprojects as "political sublimes", where the promotor gains something underhand from the scheme and that such political risks can be mitigated by accountability, by challenging political motivations and through audits. Patanakul et al. (2016) also find that politics strongly influence government projects with Genus (1997, p.173), highlighting that a lack of political support often prevents megaprojects commencing in a study of early attempts to build English France- UK Channel Tunnel. Tam (1999) found that megaprojects in Asia performed best when there was no "hidden hand" of politics involved in their execution. However, political motivations rarely influence GCC megaprojects, considering they are usually state-funded and can only commence if endorsed by the head of state.

Overall, the project directors perceive more administrative procedures for managing GCC megaprojects, fewer but more powerful stakeholders, where they have less authority or

[135] See the research findings for professional integration as discussed in Chapter Ten.

autonomy to make decisions or manage contractors**.** Their feedback suggests that these differences set the scene for cultural dissonance, contributing to a high level of project director churn in GCC megaprojects.

Risk Management of Cultural Risk for Western Consultants in GCC Megaprojects

Consultancy contracts between the Arab project Sponsor and the Western consultant direct that Western consultant staff must meet stringent criteria[136] to be engaged under the Consultancy Agreement's terms. These mandatory requirements, which are verified during the recruitment process, mostly include the achievement of relevant qualifications, a set period of field experience, membership of professional bodies, experience with specific construction areas, and experience in the GCC.

After entering into a Consultancy Agreement, the risk of cultural dissonance can no longer be avoided or transferred but may only be reduced or mitigated. This research finds that selecting appropriate[137] staff is one of the most beneficial risk reduction or mitigation strategies available to the consultancy practice. This research shows that GCC project directors must also act as a “project champion”, act “dynamically”, be “open-minded”, a multicultural team leader and be “culturally sensitive”.

The project director as the “project champion”. Barnes and Wearne (1993) identify that the project director should be a “project champion”, describing them as entirely dedicated to the megaproject's successful execution and flexible in responding to emerging risks. Megaproject researchers have suggested that megaproject director maybe, what Struggles and Heidrick, (2015, p. 3) describe as a “special breed of individual”. Flyberg (2014), highlights how managers of megaprojects need exceptional “jumbo jet” piloting skills compared to average aviation requirements.

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[136] As detailed in Chapter Five.
[137] Assuming they also meet the predefined academic and other stipulated criteria.

Overall, the megaproject project director is required to demonstrate strong business acumen, be well versed in the construction industry, and usually have the specific knowledge necessary for the appropriate type of megaproject.

Taking this into consideration, recruitment specialists advise that megaproject project directors look for the same “high standard of values, ethics, and cultural fit” as other project directors, in similar roles (Struggles & Heidrick, 2015) as all directors need to acquire “the soft skills necessary to manage cultural differences”. Kardes, Ozturk, Cavusgil and Cavusgil (2013, p. 914) identify how megaproject leaders need to provide a co-operative environment, a healthy spirit of collaboration, demonstrate people management skills.

The project directors for this research perceive a strong need to act diplomatically and recognise and work with multiple divergent cultures and personalities to ensure their tenure.[138] The project director must also help address bureaucratic risk, by respecting a certain degree of formality, making procedures transparent and limiting (where possible) the influences of politics.

A “dynamic” project director. Grabher and Thiel (2015) suggest that all megaproject leaders need to display "dynamic capabilities" (through rapid responses to events) to deliver megaprojects due to the inherent complexities and risks dealing with multiple parties. Their research finds that dynamic leadership is both fragile and fluid. Brady and Davies, (2014) studied leadership dynamics for two UK megaprojects (Heathrow’s Airport Terminal 5 and the 2012 Olympics), finding that a megaproject leader must manage the emerging risks through innovative solutions to emergent problems (p. 33). Additionally, Ng, Peña-Mora and Tamaki (2007) promote dynamic conflict management to offset any disputes during the megaprojects execution.

[138] Findings as part of case study interviews in Chapter Five.

As part of the findings of the GCC pilot case study,[139] it was found that several project directors were removed, as they were not considered as "dynamic" in their dealings with "multi-linear" (Lewis, 2016), (multi-tasking) Arab project Sponsors, where some Western consultants were labelled as slow-moving (one comment compared their movement to a tortoise). The pilot case study found that it is not just a matter of being dynamic and responsive, but that this characteristic must be publicised to the Arab project Sponsor and be highly visible, as suggested by Cox (1993, p. 231).

The project director as a team leader. The project directors acknowledged the need to lead and motivate their teams, and most teams contained up to 20 people. Although team relationships are complicated by the temporariness and their short term nature of the megaproject, megaproject risk mitigation research has highlighted that project directors still need to create a sense of community and collaboration. Grabher and Thiel (2015) study of temporary mega sporting events (the UK 2012 Olympics) found that megaevents' leadership requirements are similar to megaprojects. They find that the leader must promote a "culture for success", "real collaboration" and a "reduction in formal hierarchies" enhanced through strong internal communication. Pauget and Wald (2013, p. 200) find that a leaders ability to create and develop collaborative relationships is "essential" if the megaproject is to be successful. Mišić and Radujković, (2015b) also, assert that the delivery team's cohesive group performance is essential to its success.

Western consultants' cultural risk exposure can potentially be reduced if its project directors adopt such team approaches. Eweje et al. (2012) identify how multicultural management is critical to a megaproject, which is highly relevant to Western consultants in the GCC, who bring diverse experts from multiple nations (there are 23 different nationalities in

[139] See Chapter Five, staff turnover for a GCC megaproject.

the GCC pilot case study). During the pilot study, several project directors were removed by the Arab project Sponsor, as they were not considered capable of leading their multi-national teams.

The project director as open-minded and culturally sensitive. Waxin, (2004) highlights how those entering a new culture must be willing to communicate, be socially orientated, stress-resistant and open to change, as part of the cultural adjustment process.

Elena (2010) suggests reviewing the countries' cultural mindset and means of achieving progress before engagement, through following a framework including "understanding the type of culture and the differences with your own, respecting the differences and enriching yourself through the new". Cultural sensitivities include accepting religious practices, (Lewis, 2016; Myer, 2018; Trompenaars & Woolliams, 2001) and respect for punctuality, language and dress conventions (Al Mahrouqi, 2018; Archibald, 1991; Jaeger & Adair, 2013b).

Kapuscinski (2006) and Naeem, Nadeem and Khan (2015) suggest that an individual's ability to integrate into a new culture is shaped by their attitude and "openness to cultural diversity". Oberg (1960), Ryszard (2006) and Kultur, Chalhoun and Justice (2005) describe difficulties in accepting new cultures, the "Other" or ethnocentricity. Berry, (2005, p.704) defines ethnocentricity as "the relative preference for maintaining one's heritage culture and identity, excluding contact with other ethnocultural groups". Mahalingam and Levitt, (2007, p. 517) found that workplace differences and cultural values contribute to additional costs, including costs arising from friction between the actors. They propose a review of high-level or "institutional differences" between the national cultures to appreciate drivers behind cross-national conflicts. Their study finds that understanding such cultural differences could reduce misinterpretations (they explicitly considered a cultural gap between America and Europe).

In the GCC pilot case study,[140] the Arab project Sponsor removed some project directors, as they were not considered open-minded, insisting that their (ethnocentric) Western viewpoint represented the "only" means of addressing particular situations.

The criticality of time. Cross-cultural experts also warn of bureaucratic, professional procedures as "nothing happens quickly" and "trust is paramount" (Moran et al., 2011). Project directors continually find that period to perform a "seemingly straightforward processes" results in professional frustration.[141] Different cultures appear to have different perspectives as to an understanding of the criticality of time. The project directors also need to be mindful of the consultative nature of Arab project Sponsors (Erin, 2014; Lewis, 2016; Moran et al., 2011). This tendency to continually consult each other prompts them to seek advice and consensus before making decisions, contributing to higher bureaucracy levels. In Arab cultures, it is found that the time taken to reach the decision is of lesser importance than the achievement of consensus on the decision.

Exploring culture profiling. There are specialists such as Hofstede (2010), Smits (2019), Zein (2016) and many others, who are commissioned to provide acculturation advice for those wishing to engage in a new culture. They identify critical cultural differences between the home and new country, to reduce the participants' exposure to culture shock and make the acculturation process more comfortable. The processes of identifying potential cultural differences have also been automated, to an extent, using software applications such as culturewizzard, cultureme and culture compass.

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[140] Chapter Five, staff turnover for a GCC megaproject.
[141] Chapter Nine.

More than two-thirds of the project directors participating in this research completed the Hofstede cultural compass survey. Their reports help understand cultural differences in the GCC.

The project directors participated in a pre-paid online survey, which took between 30 and 40 minutes to complete, responding to 42 questions. The programme then analyses the responses which inform them of some of their cultural preferences, including preferred working relationships, such as authoritarian styles, attitude towards punctuality, attitude towards change and customer focus. Once the survey is completed, a unique cultural analysis is provided to the project director, informing them of common cultural differences between their home and the GCC. It also identifies how their responses relate to their home country (a sample analysis is provided in Appendix Six). The report advises the project directors on the professional cultural differences that may be expected and categorises them as high and low cultural risk levels. The example provided compared culture differences for Ireland with the UAE, suggesting a "high cultural risk" that the project director:

> "may underestimate the importance of getting to know their counterparts' network; they may play down their status by which their counterpart may not take them seriously, and they may not pay sufficient respect to their counterpart or be either confronted with superficial compliance or strong opposition".

The same report suggests lower levels of cultural risks that they may give their counterparts the feeling that they have a lot to hide by not showing their emotions; may demotivate their counterparts by not giving them pre-information so that they can prepare themselves properly or that they may underestimate the time and energy required to create trust among their counterparts.[142]

[142] Table 11.4 Cultural differences UAE vs Ireland (Hofstede Insights, 2020).

These computer-generated reports are founded on Hofstede's culture framework[143] and mostly seek to prepare the project director for potential cultural challenges. The project directors were mostly satisfied that the cultural analysis provided, suggesting that the report reflected their GCC experiences.

However, three project directors contested the data's value, and another felt the differences between his host country scores, and his culture scores were inaccurate. The research was only intended to a trial of such a tool and considering the relatively small (yet highly focused) sample, has limited reliability. Notwithstanding the limited reliability of the findings, the researcher believes that further investigations are warranted, and these are on-going. The researcher examines whether such cultural assessments, together with personality profiling (Good & Co, 2020), could help recruit a project director, potentially selecting a more culturally appropriate candidate for GCC megaprojects.

Exploring Cultural Training as a Risk Mitigation Measure

Barnes and Wearne (1993) describe training as an "obvious" means to manage megaprojects risks. Xin et al. (2008, p. 105) claim that Chinese megaprojects are delivered "most" efficiently, due to their annual investment in training and through their promotion of membership of professional associations. This research has found that Western consultants do not provide such cultural training for their project directors to deal with cultural differences (or dissonances), despite strongly recommending that such training is provided.[144]

Furthermore, many project directors recommend additional training to heighten cultural issues such as inclusion and diversity awareness.[145] The current level of cultural training

[143] Detailed in Chapter Four.
[144] Detailed in Chapter Seven.
[145] Training requirements are detailed in Chapter Seven, GCC Training.

delivery appears to give rise to low cultural empathy, leading to conflict with the Arab project Sponsor representatives leading to the project directors' churn.

Cultural Awareness Training through Professional Associations

The researcher engaged with the RICS' global education and qualifications standards department, based in the UK, to explore professionalism in the built environment. The inquiries related to how RICS members are prepared to engage with multicultural societies. The standards and research committee advice is summarised as follows.

In 2019, the RICS reviewed its entire "pathways and competencies framework", which sets the minimum standards of expertise required to practice as a professional member, after consulting with 400 practising members, between 2016 and 2018. They assessed a clear desire, both from RICS and external stakeholder groups, to emphasise "cross-cultural awareness in a global business" and "diversity, inclusion and teamworking" competencies. Stakeholder groups studied and helped develop the competency standards they expect from RICS members, including "diversity, inclusion and team working" and optional competencies in "cross-cultural awareness in a global business". Cross-cultural awareness is designed to recognise and appreciate global cultural differences. The RICS aims to provide global consistency and recognise differences in national culture and differing global business mindsets. The focus included: "gaining an understanding and applying effective techniques in conducting business relationships on a global basis" and "understanding the key national cultural differentiators and use this understanding to achieve effective global project performance".

The RICS now sets compulsory minimum levels of competency for its members, to integrate with a more global work base, through a competency requirement for "Diversity, Inclusion and Teamworking". Diversity, inclusion, and teamwork skillsets replaced an existing competency, "teamwork" and is designed to acknowledge differences associated with national

culture. These competencies were reviewed by a steering committee, which included a wide range of external industry experts from major international firms.[146] Acquiring the level of prescribed membership is seen as an indicator that the member of that profession is technically competent and, in a position, to provide the necessary advice for the megaprojects execution, under the sponsors' expectations.

Most mitigation measures suggest that focused cultural training reduces cultural risks. Ertek and Tahir (2017) analysed why employers fail to support inter-cultural training, including high cost, reduced returns, short timeframes or the absence of adequate trainers. Al Mazrouei and Pech (2014), Kardes, Ozturk, Cavusgil and Cavusgil (2013) and Baumann (2013) found that by cross-cultural training is highly necessary to ensure tenure in the GCC. However, despite the potential costs of churn (forecast at US $1 million per project director), the absence of cultural training is one of the most significant risks identified by this research, and the findings require urgent dissemination. A conference paper highlighting the impacts of the lack of cultural preparation for Western project directors working in the Middle East has been accepted and will be presented at a conference in the USA, in March 2021.[147]

Chapter Summary

This research finds that cultural dissonance strongly impacts the relationships between Western consultants and Arab project Sponsors, during the execution of GCC megaprojects, which often leads to a high churn rate. Hillson (2015, p. 59), finds that "successful risk management is positively correlated with project success". This research has made explicit the project directors' perceptions of significant cultural risks, such as different cultural approaches, organisational politics, demanding timescales and dealing with inexperienced Arab project Sponsors, through a pilot case study and fieldwork. It proposes a mitigation strategy by

[146] Representative members included CBRE, Gardiner & Theobald LLP, Highways England, KPMG, Network Rail, Transport for London and the Transforming Construction Alliance.
[147] ARES Annual Conference USA March 17-21, Nevada, USA.

focusing on selecting culturally sensitive project directors and looking beyond the Consultancy Agreements stipulated criteria for academic qualifications, field experiences and professional memberships, to consider cultural-based competencies. The research identified potential benefits for culture profiling and culture-focused training to mitigate cultural risks.

This review contributes to new knowledge by identifying the extensive and costly impacts of cultural dissonance in GCC megaprojects and proposing a strategy to reduce the high levels of project director churn, illuminated by this research.

The theory emerging from the thesis to date is that cultural dissonance frequently occurs during the implementation of Western consultants' professional standards during GCC megaprojects. These cultural differences have now been exposed, so that mitigation measures may be implemented, to help reduce Western consultant churn.

Chapter Ten - Conclusions and Implications for Western Consultants

Introduction

This thesis examines cultural dissonance as a risk factor for Western consultants during the execution of GCC megaprojects**.** The research findings have been discussed, consolidated and generalised to address the main and support research questions, as a theory emerged. The research has identified critical findings, including:

- Differences in national culture create a significant risk for Western consultants during GCC megaprojects' execution, and this is generally proportionate with the cultural distance between the project director's home country and their prior experiences.
- According to their likelihood and impact, the ranking of specific cultural risks for Western consultants in GCC megaprojects. It proposes a heat map to help prioritise their management.
- Project directors time to professional acculturation varies according to their role, and despite similarities in many organisational, professional and educational requirements, the professional acculturation can be quite challenging.
- The research shows that cultural dissonances contribute to high churn rates for GCC megaprojects, and there are substantial impacts for all parties.
- Besides exposing the more critical cultural risks, the research proposes risk mitigation strategies, including selection strategies and cultural training for Western consultants.

The research provides new cultural research which may benefit both Western

consultants (and others) and explains the impact of cultural dissonance as a risk for megaprojects both within and outside the GCC. All research has limitations, and these limitations are discussed, together with considering how future research opportunities, may extend and augment the new knowledge offered by this study.

Addressing the Research Questions

The GCC remains one of the most active megaproject markets with US $1.5 trillion worth of megaprojects were in progress across the GCC states. In 2019, the GCC continued to invest up to 19% of GDP,[148] in megaprojects. The research explores Western consultants' experiences and perspectives through empirical findings to suggest ways to improve Western–Arab cultural interactions that may influence their work and illuminate the role that culture plays during megaprojects' execution. While megaprojects are unique, this study exposes that cultural issues can significantly impact a megaproject's governance, and cultural risk should be considered a significant risk for those engaged in megaproject delivery. All megaproject risks require mitigation, so the next logical step was to seek a greater understanding of potential risk reduction measures in Chapter Nine and reduce the high rates of senior executive churn if implemented.

The main research question evaluates Western consultants and Arab project Sponsors' cultural risks during a GCC Megaprojects' execution. Table 10.4 reproduces the main research questions and support research questions.

[148]Expenditure Details from Chapter One, Table 1.1.

Table 10.0.

Overview of the Research Objectives.

Main Research Question	Is cultural dissonance present during the execution of GCC megaprojects to a significant degree, and if so, what form does this dissonance take, how and why does it arise, and to what degree is it a mitigable risk factor?	**Response Strategy**	**Related Chapters**
SRQ 1 and 2	What research is available to investigate the impacts of national culture during the construction of megaprojects? What existing theories of national culture address the challenges that Western consultants face while executing GCC megaprojects?	Review appropriate literature on the influences and risks associated with national culture dissonances, consider its usefulness for the research parameters and gather empirical data to meet any research deficit.	Chapters 1, 2, 3 and 4
SRQ 3	What is an appropriate methodological strategy to investigate the extent of national culture's influence in GCC megaprojects' execution?	Constructivist Grounded Theory is adapted, using Situational Analysis to interpret field-based research.	Chapter 5,6
SRQ 4 and 5	What do Western consultants identify as cultural challenges during the execution of GCC megaprojects? Can cultural training benefit Western consultants transitioning to GCC megaprojects?	The review combines existing research with the findings of a pilot case study examining specific churn in a GCC megaproject with 34 semi-structured interviews to reveal the cultural challenges faced by Western consultants executing GCC megaprojects.	Chapters 7, 8
SRQ 6	If cultural dissonance creates a risk to GCC megaprojects, how can such risks be managed?	The review of the literature and empirical data collected during field research indicates suitable risk mitigation measures.	Chapters 9,10

SRQ one - what research is available to investigate the impacts of national culture during the construction of megaprojects?

A 2018 literature review, repeated in January 2020, found that few prior studies specifically interrogate culture dissonance's influences or impact during megaprojects' execution. This search uncovered a relatively small volume of megaproject studies discuss but did not necessarily address cultural dissonance and subsequent megaprojects delivery delays. Karen Smits, Alfons van Marrewijk (2014) and van den Ende and van Marrewijk (2015) identified instances where culture clashes postponed a megaprojects delivery. Their case studies revealed that when there was cultural dissonance in the megaproject’s management

teams, this caused delays and disruption, for example, in the Panama Canal or Nabucco megaprojects. There is also a scarcity of pertinent literature related to GCC megaprojects.

SRQ two - what existing national culture theories address the challenges Western Consultants face while executing GCC megaprojects?

Western culture, norms and conventions can differ substantially from Arab culture, often creating a challenging social and professional environment. GCC studies focus on differences related to general business or marketing related themes, identifying how cultural differences frequently become a business risk. These studies inform the potential entrant of the differences in styles, business dealings and cultural approaches which may impact their attitude towards forming business relationships, as they approach the GCC market (Hammerich & Lewis, 2013; Lewis, 2016; Meyer, 2015). The research frequently focuses on high-level advice to respect GCC culture and norms during professional and social engagements.

The fundamental differences between Arab and Western cultures are outlined in the introduction chapter. The complexity of attempting to measure culture, a concept intangible and unmeasurable according to some, yet scientifically verifiable to others[149] is explored in Chapter Four and Five. This thesis analyses cultural differences that may impact megaprojects' execution, first seeking to understand similarities and differences in practice before focusing on the specific professional culture challenges. The research uses grounded theory techniques to obtain Western consultants' perspectives for cultural points of difference.

Overall, there is limited research which addresses cultural risk or cultural dissonance in megaprojects, and a scarcity of research for megaprojects in the GCC, but there is a broad range of research discussing cultural differences between the West and Arab culture. Some studies related to cultural differences between Western and Arab nations, for the construction industry, but none specifically related to cultural differences in megaprojects. More relevant research is

[149] See Chapter Four, McSweeny (2013) and Tsui et al. (2007) vs Hofstede.

found by broadening the research parameters, to consider three core areas: culture, megaproject characteristics and megaproject risk management, and applying this in a GCC context.

What the results mean and how this information can be used. The lack of research has exposed a research gap, both with how culture influences a megaproject's execution and how cultural dissonance can impact GCC megaprojects' performance.

There are challenges in researching GCC megaprojects. These include the time it takes to carry out such research, as most foreigners are temporary residents in the GCC. A more significant factor is that Arabs tend not to publish findings that may be unpalatable[150] or seen as critical of Arab culture. Previous researchers such as Flyvberg are also unable to obtain financial or programme data for GCC megaprojects, as such information is kept confidential in each of the GCC states. Chapter Seven highlighted some of the confidentiality concerns of research participants, who felt their tenure might be challenged if they were found to appear critical of the cultural practices by Arab project sponsors, while engaged with GCC megaprojects.

The benefit of exposing these high-impact, costly cultural risks,[151] is that risk identification permits risk mitigation (Hillson, 2012; PMI, 2019). After identifying the Western consultants' perspectives of critical cultural challenges and identifying the impacts of cultural dissonance, the thesis proposes risk mitigation strategies to address the newly exposed risks.

SRQ three - what is an appropriate methodological strategy to investigate the extent of national culture's influence in the execution of GCC megaprojects?

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[150] Freedom House is a global organisation which rates the political rights and civil liberties annually for 210 countries. It finds that the GCC states restrict information to the public, in comparison to Western Societies, for example rating the UK as 94 in terms of "freedom of information" and Qatar 25, Saudi Arabia 7 (Freedom House, 2020).

[151] Losses of US $1 million to the Western consultant and multi-millions to the Megaproject are shown in Chapter Ten.

The researcher considered appropriate methodologies to measure and address the culture's intangible phenomenon, from the Western consultants' perspectives. The study considered the potential merits of phenomenal logic, content analysis, ethnographic and case study approaches, and found these less suited to the study. Constructivist Grounded Theory (Charmaz, 2006a; Glaser & Strauss, 1967) has a reputation for illuminating areas about which little is known (Barrett & Sutrisna, 2009). The principles of Constructivist Grounded Theory were pragmatically applied, enhanced by applying Situational Analysis (Clarke, 2009) to address the complexity of cultural influences, in a GCC context.

What the results mean. The application of a Constructivist Grounded Theory methodology explored the concept of cultural dissonance in GCC megaprojects. The researcher used his industry engagement to overcome significant challenges associated with gaining access to data, finding suitable project directors to provide perspective and context to cultural issues. Four interwoven exploratory themes were considered to understand cultural influences, social culture, professional culture, acculturation, and intercultural training (Figure 10.1). The findings were analysed applying Grounded Theory research principles, continually comparing, coding, sampling, scrutinising the data and engaging theoretical sensitivity in the findings (O'Reilly et al., 2012, p. 248). When the findings of the four exploratory themes were combined, they expose the substantial level of cultural risks for Western consultants.

The use of Grounded theory was the most appropriate methodological strategy for this study for several reasons. It helped capture the "perceived realities of project directors from diverse nations and 'multiple realities" (Charmaz, 2006b). It applied the principles of generating purposeful, systematic data using social research (Glaser & Strauss, 1967), set in the natural setting of live GCC megaprojects and working project directors (Leedy & Ormrod, 2015). When the theory emerged, it provides greater conceptual clarity to an intangible field of cultural research (Timonen et al., 2018).

SRQ four - what do Western consultants identify as cultural challenges during the execution of GCC megaprojects?

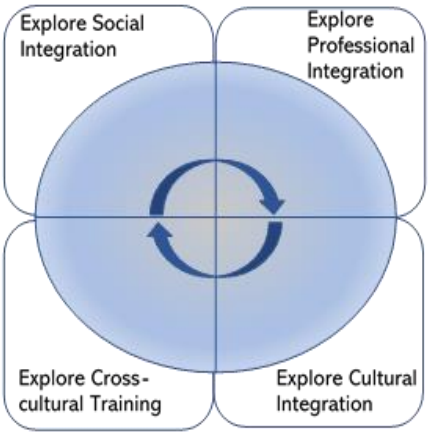

Figure 10.1. Interpretation of the Research Findings (Author, 2020)

Western consultant practices were most likely to suffer project director churn[152] when the project directors' professional acculturation challenges become too unpalatable. The study first considers the social acculturation challenges facing the project director (and accompanying family where applicable). The study finds that most project directors acknowledge (to a certain degree or tolerate) social or religious differences, as they engage in the GCC primarily to enhance their career, or for perceived benefits (such as a tax-free income). The study found that while many of the professional work standards, processes and ethics are similar (in part due to a post-colonial "heritage") that there are critical differences in professional practice, between the Arab and Western cultures and mannerisms, such as their acceptance of formality, recognition of hierarchy, and bureaucracy. The project directors also hold varying degrees of tolerance for other differences, including substantial differences in their authority to act on behalf of the employer, as they lack the authority typically granted on megaprojects to manage contractors' performance. The project directors' expressed frustrations at perceived additional non-purposeful layers of bureaucracy and project politics.

[152] Assignment Failure is discussed in Chapter Eight .

One of the most difficult cultural adjustments centres around the Arab project Sponsors acceptance of the project director's advice, which (at face-value) the Arab project Sponsor often appears reticent to take or follow. This study finds that how this advice is delivered is crucial, as the Western consultants must take care not to cause unintended offence by appearing (or "being") ethnocentric or unwilling to consider the Arabs views.

This research finds that because of these cultural differences, Western consultants may take a significant period to acculturate (dependent on their profession), to become proficient in their professional environment (Waxin et al., 2019) and that during this acculturalisation process, they witness (and are often involved in) culture clashes on GCC megaprojects. These findings also expose a high churn rate for senior project directors, resulting in financial and economic losses,[153] for the Western consultant (and its project directors) and the megaproject's timely delivery.

What the results mean and how this information can be used. If Western consultancy practices wish to reduce the high levels of executive churn,[154] identified through this research, they must make changes to acknowledge cultural differences between Western and Arabic cultures. This thesis highlights a link between cultural distance and cultural dissonance, and more cultural preparation is required depending on the project directors' heritage. The researcher believes that GCC megaprojects will continue to rely on constant and frequent interaction and collaboration between the Arab project Sponsor and the Western consultancy practice (through its project directors) for the foreseeable future, as construction requires high levels of human involvement and interaction. The thesis has exposed the critical areas of professional and social differences which contribute to cultural dissonance between

[153] Losses of up to US $1 million per executive and drop in team morale, see Chapter Eight.
[154] The levels of churn are described in Chapter Seven and Ten.

the parties, and this can be used to underpin a risk management strategy and attempt to minimise its impact.

SRQ five - can cultural training benefit Western consultants transitioning to GCC megaprojects?

This study finds that typically little (or no) cultural training is provided for Western consultants before entering the GCC and that training is not prioritised. This lack of due consideration for training is surprising, given the many international studies (Erin, 2014; Lewis, 2016; Moran et al., 2011), including research focused on construction activities in the GCC (such as Al Mazrouei & Pech (2014), Baumann (2013) and Loosemore & Muslmani, (1999)) identifies an intrinsic link between cultural training and an expatriates' successful performance.

What stands out in these studies for Western Consultants is that all participants recommended cultural training, (and frequently additional culture-related competencies such as inclusion and diversity training) but none is provided. While costs may appear as an issue (Ertek & Tahir, 2017), they pale into insignificance, when considered against the assessed expenses of US $1 million replacement cost for each project director whose contract is prematurely terminated (see Chapter Ten).

What the results mean and how this information can be used. The study exposes continually missed opportunities as the benefits of intercultural awareness training are consistently ignored. Western consultant project directors rarely receive training to prepare for the significant cultural differences. Based on their exposure to cultural dissonances, it appears critical for the project directors to become culturally competent. There is a reasonable belief amongst the project directors that cultural training would, if implemented, reduce cultural churn. Without suitable training on cultural challenges, GCC megaprojects' execution is destined to remain a frustrating task, with a frequent and costly turnover of project directors.

SRQ six Is cultural dissonance a risk in the execution of GCC megaprojects, and if so, can such risks be managed?

There are multiple risks associated with delivering megaprojects. This thesis highlights cultural risks and exposes the significant potential impacts for the Western consultancy. This study's cultural risks vary in severity and impact, as demonstrated by the cultural risk heat mapping in Figure 10.2.

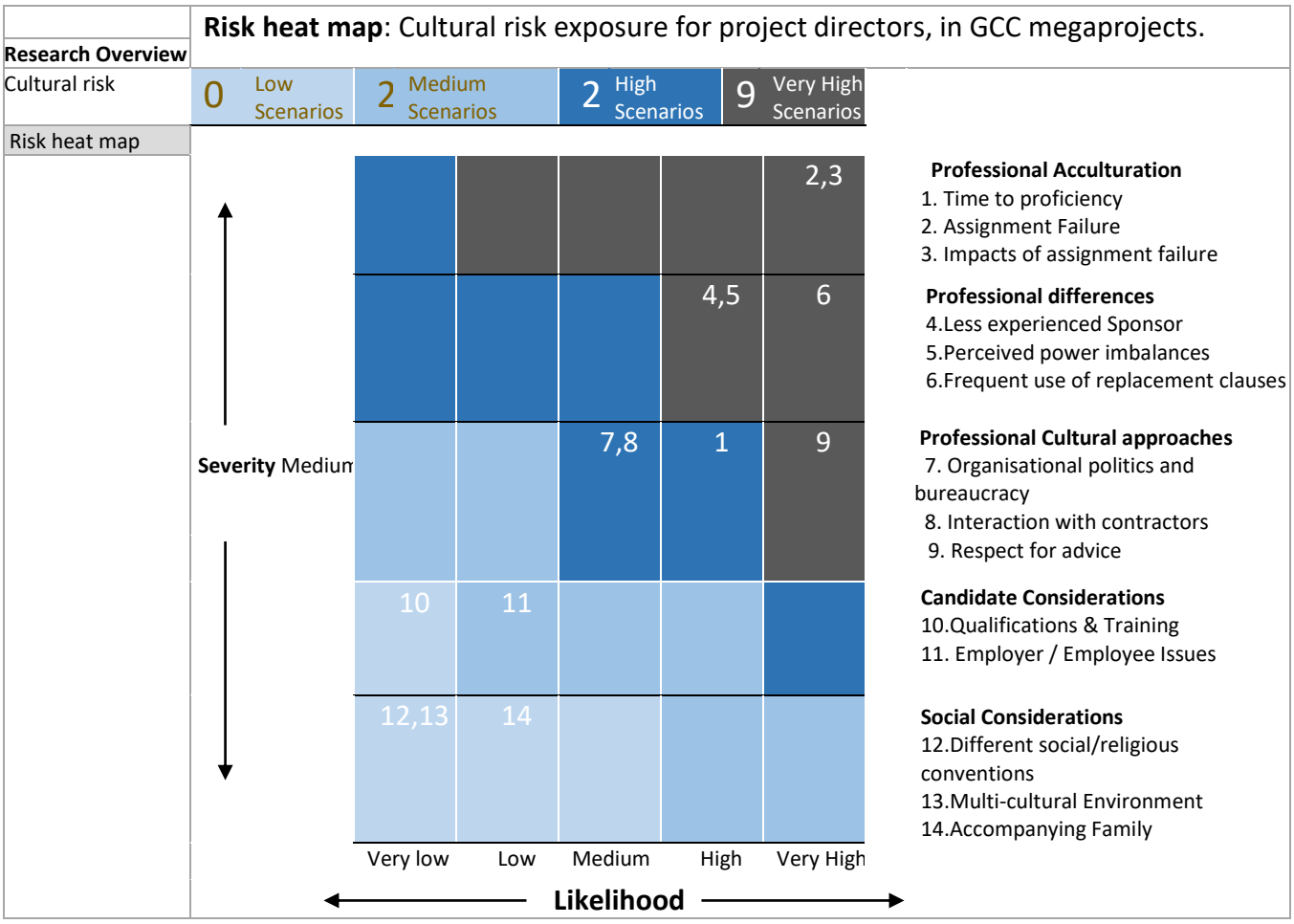

Figure 10.2.. Cultural Risk Heat Map for Western Consultants (Authur, 2021).

Earlier researchers have provided some indication that cultural differences create a risk for megaprojects governance. Denicol, Davies and Krystallis (2020) highlighted existing megaproject risk management strategies, including culture-related issues such as the initial identification of the key actors, clear demarcation of the roles and responsibilities and a

collaborative approach. Their study suggests that cultural risks can be reduced through strong, culturally sensitive leadership, managerial competency, and teamwork. This thesis also proposes additional risk management strategies needed for GCC megaprojects.

The thesis finds that cultural dissonances regularly occur on GCC megaprojects and leads to costly churn levels. There appear to be many cultural dissonance sources, ranging from the project directors' difficulties in accepting professional differences (such as authority levels or the ability to control contractors) through to the Arab project Sponsor's perceived inexperience their lack of acceptance of the project director's advice.

These risks may be managed (or mitigated to an extent) through a range of considerations. The first is through the careful selection of project directors, including selecting candidates with skillsets, including being a "project champion", "dynamic" and "culturally sensitive leadership"[155] (Denicol et al., 2020). Another potential risk mitigation is applying cultural profiling after a trial study using Hofstede's cultural compass. The research highlights project directors perceived requirements for cultural training (sometimes requesting tailor-made individual training) and proposed various training delivery mechanisms.

What the results mean and how this information can be used. Overall this study finds that cultural dissonance is a real risk and megaproject risks (including cultural risk) can be lessened by sharing this knowledge (Hillson, 2013; PMI, 2019). The project directors appear to require cultural sensitivity, consider the Arab point of view, act responsively and focusing on developing and strengthening key relationships (Lewis, 2016). This thesis finds that cultural norms and conventions need to be respected as part of cultural risk management. It has been established that Western business dealings and attitudes are different from the "rest of the World" (Hammerich & Lewis, 2013, p. 220). However, the more practical impacts need to be

[155] Full considerations are provided in Chapter Ten.

exposed, especially the high churn of project directors in GCC megaprojects, evidenced through Chapter Five, Nine and Ten, due to cultural dissonances.

An essential finding from this study, is the recommendation from most active project directors, to implement a cultural training programme to teach project directors the extent of cultural risks in GCC megaprojects, and how best to mitigate them.

Generalisation, Replication and Transferability of Findings

While megaprojects are unique, they share specific characteristics, and this study confirms that cultural risks are significant risks throughout GCC megaprojects, perhaps to a greater extent than other regions, where there is a lesser cultural distance between the megaproject sponsors and their consultants. The study finds that the respondents previous experiences, length of exposure to the GCC culture and cultural distance (the gap between the original culture and GCC culture are all factors which impact the respondents integration. The survey considered many contemporary GCC megaprojects from a broad and diverse range of perspectives and roles. There is potential to analyse the findings based on the experiences of each particular nationality (for example the paper highlighted how American and British nationalities were most impacted by churn) The constant analysis and review of the overall groups perspectives help identify the true nature of cultural dissonance, which frequently surfaces in public clashes, impacting the venture's performance and success.

Contribution of the Study to Knowledge and Practice

The research makes an original contribution to knowledge by demonstrating that cultural dissonance is present to a significant degree during GCC Megaprojects' execution.

It is one of the first studies to perform an in-depth analysis of cultural dissonance in GCC megaprojects, highlighting the risks as a significant contributory factor in high churn rates on GCC megaprojects. The research collates data from multiple GCC megaprojects,

understanding different managerial approaches and means of execution and reveals the extent of Arab project Sponsors' participation in GCC megaprojects. This research contributes to knowledge by sharing the Western consultants' intercultural learning processes, providing insight into their qualitatively different cultural learning processes considering "the challenging situations of cross-cultural collaborations" (Wilczewski, Søderberg, & Gut, 2019).

The study identifies the impacts of cultural dissonance such as the high level of churn, the exceptional costs that arise, the loss of historical project knowledge, and disruption directly resulting from the resulting interregnum.

The research contributes to knowledge by detailing project directors' acculturation in the GCC regions where they face professional differences, as construction consultants continue to expand their services throughout the globe seeking new professional challenges and sources of income. Whilst the length of service of a project directors' tenure is a contributory factor in the churn rate, it is evident that even seasoned project directors need to be constantly aware of the cultural environment.

The research builds on others' work, making a novel contribution by locating this phenomenon within the GCC geographic and economic context. It uniquely identifies the impacts of cultural dissonance in the relationships between the Western consultant and Arab project Sponsor. While this study is centred in the construction environment, the data provided may be relevant to cross-cultural teams in different industries where Arabic and Western actors need to work together harmoniously. The study framework may be appropriate to social studies for many other fields, and promotes the indepth study of key actors perceptions to individual cultural points of differences to study and analyse how these often sublte points of difference may impact on their professional practices and ability to aclimitise and perform their worksproficiently

Specific practice implications are revealed for Western consultants by framing cultural dissonance as an identifiable risk factor in megaproject execution, identifying critical areas of cultural dissonance and suggesting means to manage and mitigate the associated impacts. Moore, (2020, p. 263) suggests that such professional insights are "fundamental to the professions and is the currency of their existence". The study also identifies the process of social and professional acculturation, recording the time to proficiency and the potential contributions of cultural training:

- *Social differences* exist between GCC and Western norms but appear to cause little impact or risk on the project directors' tenure.
- *Professional differences* exist, (some of which are readily accepted and some more challenging) include adapting to reduced levels of professional authority, facing higher degrees of bureaucracy and receiving less ready acceptance of their professional advice. The output of these cultural frustrations is the creation of cultural dissonance during the megaprojects execution, which results in high levels of churn.
- *Time to proficiency* varies substantially depending on the profession. The study identifies significant impacts and costs resulting from cultural dissonance, resulting in high levels of project directors churn on GCC megaprojects. This information has been described as "clearly needed to provide insight into a difficult and costly issue in the field of construction" (RICS Cobra -April 2020).
- *Cultural training* is not provided (for the project directors in this research) by Western consultants, but the directors perceive (as yet unproven) benefits likely to reduce cultural dissonance risks and accelerate the project directors time to acculturalisation proficiency.

This thesis illuminates the high level of cultural risk that Western consultants are

exposed to, during the construction of GCC megaprojects, resulting in high churn levels, potentially mitigated through focused cultural training and careful candidate selection.

Limitations and Research Outlook

Limitations of this study. This research considers the perspectives of Western consultants. It is hoped that future research will examine the perspectives of Arab project Sponsors to provide other perspectives. It is expected that this may discuss mistrust issues such as the views expressed by AlMazrouei and Pech (2014) that a few greedy Western firms have left an “indelible impression” with GCC nationals, allegedly by overcharging them. Further research might expand on the Arab’s top and middle manager views’ captured by Al Ariss (2014). Their study finds that Arabs may also feel disadvantaged because they perceive Western consultants threaten their career progression by occupying roles within their capabilities.

The findings of this research have been used to construct a Grounded Theory to explain the current impacts of cultural dissonance for Western consultants during GCC megaprojects' execution. Bryant, Charmaz and Strübing (2019) and Charmaz (2017a) remind researchers that modern grounded theories are a by-product of continual adoption, and reflection, as the theory is “fluid, interactive and open-ended” (Charmaz, 2006a), as the GCC reacts to new circumstances such as the global pandemic and GDP fluctuations.

Further dissemination of these findings is needed to help address the lack of awareness in the construction industry, and particularly the more global impacts of cultural differences causing dissonance during the execution of megaprojects.

Outlook for future areas of research. The research highlights a scarcity of training programmes for Western consultants. A conference paper is submitted for review promoting

"Intercultural education as an empowerment tool to reduce risks to construction consultants executing megaprojects in the Middle East", in the *American Real Estate Society*, in 2021.

The researcher is also investigating how psychometric profiling can select more culturally sensitive project directors and different uses of Hofstede's cultural compass in identifying suitable project directors.

It could be argued that cultural awareness training should part of mandatory training for project directors of Western consultants or part of broader postgraduate research (such as in architecture, construction and civil engineering programmes[156]). There may also be similar considerations towards adopting these findings to other global venues, such as identifying the professional cultural differences for Western construction consultants operating in Asia and other markets.

The specific focus group considered practicing Western Consultants, most having seven or more years' experience in GCC megaprojects. The results could be filtered to consider those with half this experience, or those with less than three years to suit the profile of the organisation attempting to enter the GCC market. While every effort was made to ensure that the GCC representation was balanced, it would be interesting to repeat some surveys with the recent lifting of the Qatar blockade.

In the future, as new GCC based megaproject research becomes available, the research community will benefit from a broader range of empirical data and research results, useful to compare megaprojects on a more global basis.

[156] A brief examination of the academic prospectus of RICS approved training partners indicated that only the prospectus of the MSc in Construction Management with international development in the University of Reading (www.reading.ac.uk) currently considers the impacts of different cultures and acculturation in their syllabus.

Chapter Summary

This chapter concludes this research element after reviewing how the thesis satisfied the main and support research questions, identifying cultural dissonances as a risk factor in GCC megaprojects' execution. The findings support Grounded Theory's appropriateness to illuminate and provide greater clarity (Timonen et al., 2018) as to how cultural dissonances create varying levels of risks, for the Western consultants engaged in GCC megaproject delivery. The findings illuminate specific cultural risks associated with social and professional acculturation, proposes risk mitigation measures, and contributes to new knowledge and practice by identifying these high impact risks and the importance of cultural training to lower Western consultants' churn levels.

This research establishes that cultural dissonance frequently results in Western consultants project directors having their assignment brought to a premature end on GCC megaprojects. Substantial losses are incurred for all parties. What is striking is that the lack of understanding of cultural risks appears to have limited cultural training investment, which most project directors believe would make the intercultural relationships more efficient. The practical impacts of cultural dissonance in megaprojects have now been exposed, and we must become culturally aware and competent to offset these cultural risks.

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Appendices one – Report on the status of GCC Megaprojects

GCC Megaprojects Report

By Alan Walsh June 2018 – Sept 2019

Doctoral Support Appendix 1

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1. Introduction
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1.0 Introduction

To review the GCC Megaproject market, and the workload for western consultants engaged in managing the process, a market investigation was undertaken, commencing in April 2018 concluding in November 2018.

Details of megaprojects and projects awards are published online by the various GCC state bodies, usually in compliance with 'open tendering' processes. 'ConstructionWeekOnline' is part of the ITP Media Group, and presents market outlook and construction updates weekly. They also produce specialist reports such as the Top 50 GCC Developers, or Top 25 MEP Contractors' (www.constructiononline.com). They provide an online database for projects provided in the GCC. The database includes a filter of all projects and megaprojects by category, size and sponsor, and this information was available free of charge, until August 2019. Then the editor Nadia Betia left the publication and was replaced by Andrew Price. This information service was then transferred to a commercial advisory service 'ProTender', who issue the same information for on a commercial basis. 'ConstructionWeekOnline' continues to announce megaprojects but on an occurrence basis, and no longer maintains a database. The information assembled to indicate GCC megaprojects (Report no.5) is announced since December 2018 result of combining individual announcements and contacting the Consultants directly, to verify this data.

2.0 Report Objectives

The purpose of this report is to review the scale of the GCC megaproject market and the approximate values associated with their construction costs. The report classifies the megaproject activities as 'Building', 'Industrial', 'Marine', 'Infrastructure' and 'Power and Water' categories. It looks at the overall and individual volume of works within each of the six GCC states, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

Report No.1 indicates that between 2003 and 2019, 118 Megaprojects (considering a definition of a project cost of over $1 Billion – Flyvberg) were procured and in a construction phase, over this period. Report No.5 indicates a total of 10 additional

megaprojects were activated between December 2018 and December 2019, when this report was published.

3.0 Report Structure

The data collection date considered in this report is November 2018; the date that data collection was ethically approved.

The reported award value for these Megaprojects is $1,750 Billion (Report No.1), which does not account works in planning. The overall outlook for megaproject spending in the GCC is estimated at $ 3 Trillion (Deloitte, 2016) and is boosted by high profile announcements, such as NEOM (in Saudi Arabia) and other Giga projects. The data was verified through examining the websites associated with the megaprojects, meeting the Consultants undertaking the works and local knowledge, as detailed in Report No.1.

Individual reports provide specific data relevant to this study, such as the overall number of consultancy commissions in the GCC, over this period. This data is also filtered to reflect megaprojects under construction in Qatar (Report No.6), which found eight live megaprojects as of November 2018. Access to GCC states become a factor in addressing a survey on the experiences of Western Consultants, due to a 2017 blockade. Report No.4 shows a total of 26 live megaprojects throughout the GCC states, as of November 2018. Many of these megaprojects remain on-going to date, principally due to their significant scale and complex nature.

The report analyses the distribution of Consultancy practices throughout the GCC, identifying both local and international consultancies. This research focuses on Western Consultants (International), and the report concludes that 300 commissions for Western Consultants were awarded between 2003 and 2019 and 97 were awarded to local consultants. These figures suggest that Western Consultants are commissions three times as often as local expertise.

On completion of the report, the data was issued to the publishing magazine for verification, and the websites reverified. Whilst the data remains valid, details of

new and merging Megaprojects show that the market remains buoyant. Schematics of some of the megaprojects are included on pages 26, 27, 29, 32 & 33 of this report.

4.0 Market Analysis

By Sector & Value – The total value of Megaprojects is approximately $1,750 Billion, with the majority of spending on mixed-use building developments ($ 1.5 Billion), on infrastructure projects ($ 120 Billion) and the balance almost equally split between Industrial / Marine and power projects.

By Number of Projects – The total projects during this period that were physically on-site (as opposed to planned) between 2003 - 2019 is 118 Megaprojects. Slightly over half relate to building projects (61) followed by 22 related to infrastructure, and the balance distributed almost equally between Industrial/Marine (16) and power or water projects (19).

As at November 2018, the number of on-going projects was 26 as indicated in Report No. 4.

By Consultancy Commission

As detailed in Reports Nos. 8 – 10, there are a total of 397 individual Consultancy Commission consisting of 125 Design Consultant, 54 Supervision Commissions, 124 Project Management Positions and 26 Cost Control Positions. Several Consultants were multidisciplinary, and some consultants only held one commission. These are detailed in Report No. 8. A total of 40 single Consultancies were in place (as demonstrated in Report 9), 95 Western Consultants were also only engaged in one Megaproject, often with the Contractor electing to take on a bespoke element as a “Consultant” on a design and build basis (see Report 8).

This leaves a total of 205 Western Consultancy Commissions for consultancy fields (see Report No.8). It is evident multidisciplinary Western Consultants operated throughout the GCC, with the least presence in Bahrain, Kuwait and Oman. This

reflects the volume of work distributed amongst the GCC as demonstrated through Report No.1 and 8.

Qatar Focus

Specific reports were prepared for the GCC state of Qatar to examine their replicability with the GCC. These reports are titled Report 6 and 7. Report No. 1 indicate that of the Western Consultants have been commissioned both in Qatar and the GCC as detailed in Report No. 6 to live Megaprojects through the GCC in November 2018 for detailed research purposes, are also provided in Report No.4 for considering market penetration.

As at the time of the survey, the number of live projects was 8 no. as detailed in Report No. 7.

5.0 Conclusion

This report provides a measured indicator of the market conditions experienced by western consultants executing GCC megaprojects and a measured indicator for the value of work in the GCC.

The project records indicate that there were 26 live projects throughout the GCC, as at the data collection date. It finds that 24 of the 117 megaprojects were undertaken in Qatar, and 8 no. were on-going in November 2018. An additional megaproject has been awarded since November 2018, as provided in Report 5 and the market remains buoyant.

GCC Reports - Total GCC Projects - 2003 – 2019

- A1- Report 1 - Summary Details of Mega Project in the GCC between 2003 - 2018 as published by “Construction Week Online” on 21 November 2018

- A2- Report 2 - Distribution of Mega Projects in the GCC Countries

- A3- Report 3 - Value of Mega Projects in the GCC Countries

- A4- Report 4 - Ongoing GCC Mega Projects as of November 2018

- A5- Report 5 - Significant GCC Projects announced since December 2018

- B1- Report 6 - Qatar Mega Projects, Consultants & Values

- B2- Report 7 - Live Qatar Mega Projects, Consultants & Values as of November 2018

- C1- Report 8 - Summary of Western & Local Consultant Commissions between 2003-2018- as published in Report No 1 and verified by Sources at Report No. 1

- C2- Report 9 - Calculation sheet for the distribution of Consultancy Services

- C3- Report 10 - Calculation sheet for Western & GCC Consultants with more than one Commission – Supporting Calculations for Report C1

A1 - Report No 1

A1-Report No 1-Summary Details of Mega Project in the GCC												
#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
1	Marsa Al Seef Development	Bahrain	Building	Mixed-Use	2010	2020	2.50	SSH Kuwait	SSH Kuwait	Global Real Estate Dev. Company	Global Real Estate Dev. Company	Global Real Estate Dev. Company
2	Water Garden City	Bahrain	Building	Mixed-Use	2010	2020	7.00	HOK International	HOK	HOK	HOK	HOK
3	Durrat Al Bahrain Development - Durrat Marina	Bahrain	Building	Mixed-Use	2008	2014	1.50	WS Atkins and Partners	WS Atkins & Partners	WS Atkins & Partners	WS Atkins & Partners	WS Atkins & Partners
4	Al Dur IWPP	Bahrain	Power & Water	Power & Desalination Plant	2008	2011	2.00	GDF SUEZ and Gulf Investment Corporation (GIC)	Mott Macdonald	Mott Macdonald	Mott Macdonald	Mott Macdonald
5	Durrat Al Bahrain Development	Bahrain	Building	Mixed-Use	2009	2015	6.00	WS Atkins and Partners	WS Atkins & Partners	WS Atkins & Partners	WS Atkins & Partners	WS Atkins & Partners
6	Jaber Ahmed Al-Jaber Al-Sabah Bridge (Al Subiya Connection)	Kuwait	Infrastructure	Roads Construction	2011	2014	2.65	Kuwait's Ministry of Electricity and Water (MEW)	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Hyundai	Dar Al Handasah Consultants
7	2,000MW Power Plant at Subiya	Kuwait	Power & Water	Power Plant	2009	2011	2.65	Kuwait's Ministry of Electricity and Water	Parsons Brinckerhoff	Parsons Brinckerhoff	Parsons Brinckerhoff	Parsons Brinckerhoff
8	Shuaiba North Power & Desalination Plant	Kuwait	Power & Water	Power & Desalination Plant	2007	2010	1.27	-	-	-	-	-
9	Failaka Island Development	Kuwait	Building	Mixed-Use	2010	2015	3.30	Gulf Consults	Al Dabbous Engineering	Al Dabbous Engineering	Al Dabbous Engineering	Al Dabbous Engineering
10	Jaber Ahmed Al-Jaber Al-Sabah Hospital	Kuwait	Building	Healthcare Facilities	2009	2012	1.06	Langdon Wilson International (U.S.)	Gulf Consults	Gulf Consults	Gulf Consults	Gulf Consults
11	Salalah IWPP	Oman	Power & Water	Power & Desalination Plant	2010	2012	1.00	-	-	-	-	-
12	Al Duqm Port - Marine Works	Oman	Marine	Ports & Canal	2007	2012	1.25	Khatib & Alami	Khatib & Alami	Khatib & Alami	Khatib & Alami	Khatib & Alami
13	Sohar Iron Pallet Plant	Oman	Industrial	Mixed-use	2008	2011	1.50	CVRD	-	-	Essar Group	-
14	Expansion of Muscat International Airport - Phase 1	Oman	Infrastructure	Airports	2009	2012	1.20	Larsen Architects	Cowi & Partners	Aeroports de Paris	Pakistan's National Engineering	-
15	Al-Madina Azarqa (Blue City)	Oman	Building	Mixed-Use	2005	2020	20.00	Foster and Partners	WS Atkins & Partners	Hyder Consulting	Hyder Consulting	Hyder Consulting
16	Dukhan Highway	Qatar	Infrastructure	Roads Construction	2011	2014	1.00	Atkins	WS Atkins & Partners	WS Atkins	KBR	KBR
17	Doha Festival City	Qatar	Building	Recreational facilities	2011	2014	1.65	DP Architect	Arab Engineering Bureau	Mace International	Mace International	EC Harris

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
18	Musheireb Development	Qatar	Building	mixed-use	2010	2022	5.00	Mossessian & partners	Gensler	Gensler	Turner Construction Company	Rider Levett Bucknall
19	Barwa Financial District	Qatar	Building	mixed-use	2009	2013	1.30	KEO International Consultants	AECOM	AECOM	AECOM	AECOM
20	Ras Laffan C IWPP	Qatar	Power & Water	Power & Desalination Plant	2007	2011	3.90	WSP	WSP	WSP	WSP	WSP
21	Ras Laffan Port Expansion	Qatar	Marine	Ports & Canal	2007	2010	1.70	Qatar Petroleum (Q.P.)	Ramboll	Halcrow	Halcrow	Halcrow
22	Education city	Qatar	Building	Educational facilities	2003	2023	8.25	Arata Isozaki	WSP	KEO International Consultants	KEO International Consultants	KEO International Consultants
23	Sidra Medical and Research Centre in Qatar	Qatar	Building	Commercial building	2008	2018	2.35	Qatar Foundation	Pelli Clarke PElli	KEO International Consultants	KEO International Consultants	KEO International Consultants
24	Ras Girtas Power & Water Plant in Qatar	Qatar	Power & Water	Power Plant	2009	2011	2.00	Qatar Petroleum (QP)	WSP	WSP	WSP	WSP
25	Qatar Power Transmission System Expansion - Phase 9	Qatar	Power & Water	Power Transmission	2010	2013	1.50	Qatar Petroleum (Q.P.)	-	-	Energoprojekt Entel Consulting Engineers	-
26	Qatar Entertainment City	Qatar	Building	Recreational facilities	2009	2015	3.00	RTKL (Master Plan)	Forrec	KEO International Consultants	KEO International Consultants	KEO International Consultants
27	Ras Girtas Power & Water Plant Expansion	Qatar	Power & Water	Power Plant	2009	2011	1.90	Qatar Petroleum (QP)	WSP	WSP	WSP	WSP
28	Barwa City Development	Qatar	Building	Residential Development	2007	2015	1.50	-	-	AECOM	Consult Maunsell	-
29	Mesaieed Independent Power Plant (IPP)	Qatar	Power & Water	Power & Desalination Plant	2006	2010	2.30	JERA, Qatar Electricity & Water Company, Qatar Petroleum, Marubeni	Fichtner Consulting Engineers	-	-	-
30	Doha metro	Qatar	Infrastructure	Metro	2013	2022	46.80	UN Studio	UN studio	Egis	DB International Gmbh (Deutsche Bahn)	Louis Berger
31	Doha Convention Centre and Tower	Qatar	Building	mixed-use	2008	2011	1.50	Murphy Jahn	Hyder Consulting Middle East Limited	Turner Construction Company	Turner Construction Company	Turner Construction Company
32	Lusail Development	Qatar	Building	mixed-use	2006	2022	38.70	Halcrow	Halcrow& Cowi partners	Dorsch	Parsons International	Turner & Townsand
33	New Doha International Airport	Qatar	Infrastructure	Airports	2004	2025	11.00	HOK International	-	Bechtel Corporation	Bechtel Corporation	Bechtel Corporation

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
34	Qatar - Bahrain Causeway	Qatar	Infrastructure	Roads Construction	2011	2014	3.00	COWI Consult	KBR	-	KBR	-
35	The Pearl Qatar	Qatar	Building	mixed-use	2006	2022	5.00	Callison	Dar A-Handasah (DAR)	Hill International Parsons International	Hill International	Hill International
36	Al Waab City Development	Qatar	Building	mixed-use	2007	2010	3.20	Cansult Maunsell	-	Hill International	Hill International	Hill International
37	New Doha Port	Qatar	Marine	Port & Canal	2010	2023	7.40	Worley Parsons Scott Wilson Group (Conceptual Design) Royal Haskoning (Master Plan) Cowi & Partners PLP Architecture	AECOM	Consult Maunsell AECOM	AECOM	AECOM
38	The 7 Stadium for the FIFA World Cup 2022	Qatar	Building	mixed-use	2011	2022	10.00	AECOM Zaha Hadid Architects Dar Al Handasah Fenwick Iribarren Architects Ramboll and Pattern Foster + Partners with MANICA Architecture	AECOM	KEO International Projacs ASTAD AECOM CH2M HILL	KEO International	KEO International
39	Qatar Water Reservoirs	Qatar	Infrastructure	Pipelines	2015	2021	4.60	Hyder Consulting Middle East	Hyder Consulting Middle East	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult
40	The Jazan IGCC - Utilities & Common Area Project	Saudi Arabia	Infrastructure	Others	2014	2017	1.70	Saudi Armco	Técnicas Reunidas (TR)	Técnicas Reunidas (TR)	Técnicas Reunidas (TR)	Técnicas Reunidas (TR)
41	Abraj Kudai Towers in Makkah	Saudi Arabia	Building	mixed-use	2013	2015	3.50	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants
42	Shaybah Natural Gas Liquids Project	Saudi Arabia	Industrial	Oil & Gas	2011	2014	3.00	KBR	Samsung Engineering Co. Ltd	KBR	KBR	KBR
43	Construction of Wasit Gas Plant	Saudi Arabia	Industrial	Oil & Gas	2011	2014	1.90	Saudi Armco	SNC-Lavalin	SNC-Lavalin	SNC-Lavalin	SNC-Lavalin

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
44	Construction of 5,000 Villas in Eastern Province	Saudi Arabia	Building	Residential Development	2010	2014	1.35	-	-	-	-	-
45	Yanbu Refinery Project	Saudi Arabia	Industrial	Oil & Gas	2010	2015	10.00	Saudi Armco	Jacobs Engineering Group	Jacobs Engineering Group	Jacobs Engineering Group	Jacobs Engineering Group
46	Expansion of Grand Mosque	Saudi Arabia	Building	Others	2008	2019	11.00	Dar Al Handasah	Dar Al Handasah	Dar Al Handasah	Dar Al Handasah	Dar Al Handasah
47	Ras Al Zour IWPP	Saudi Arabia	Power & Water	Power & Desalination Plant	2010	2013	5.50	SWCC	-	Fichtner GMBH & Co. KG	Fichtner GMBH & Co. KG	-
48	Shuqaiq-2 IWPP	Saudi Arabia	Power & Water	Power & Desalination Plant	2006	2010	1.87	Water & Electricity Company (WEC)	Mitsubishi Heavy Industries (MHI)	-	-	-
49	Jamaraat Bridge in Makkah	Saudi Arabia	Infrastructure	Roads Construction	2006	2007	1.20	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants
50	King Abdulaziz International Airport (KAIA) Development - Phase 1	Saudi Arabia	Infrastructure	Airports	2006	2011	1.50	Naco & Saudi Bin ladin Group	Aeroports De Paris Ingenierie	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasa Consultants
51	Al Qurayyah Combined-Cycle Power Plant	Saudi Arabia	Power & Water	Power Transmission	2009	2012	1.85	Saudi Electrical Company	L&T	Lahmeyer International	Lahmeyer International	-
52	Makkah Metro	Saudi Arabia	Infrastructure	Metro	2012	2019	1.80	Hyder Consulting	W. S. Atkins Global	W. S. Atkins Global	W. S. Atkins Global	W. S. Atkins Global
53	Ras Al Zour Aluminum complex	Saudi Arabia	Industrial	Mixed-use	2010	2014	1.00	Saudi Arabian Mining Co.	Aluminum Pechiney S.A.S.	Fluor Arabia	Fluor Arabia	Fluor Arabia
54	Riyadh PP10	Saudi Arabia	Power & Water	power plant	2008	2011	3.00	Ballison; Khatib & Alami	El Seif Engineering Contracting Company; Omrania & Associates	Dar al Riyadh engineering & architecture; Hill International	Dar al Riyadh engineering & architecture; Hill International	Dar al Riyadh engineering & architecture; Hill International
55	New petrochemical facilities in Jubail industrial city	Saudi Arabia	Industrial	Oil & Gas	2009	2013	1.10	Saudi Armco	Exxon Mobil Corporation	Fluor Arabia	Fluor Arabia	Fluor Arabia
56	Information Technology and Communication Complex (ITCC) in Riyadh	Saudi Arabia	Building	mixed-use	2008	2013	1.00	Saudi Public Pensions Agency (PPA)	Fayez Zuhair Architectural & Engineering	Fayez Zuhair Architectural & Engineering	Atkins	Atkins
57	Riyadh - Al Zour Water Pipeline	Saudi Arabia	Infrastructure	Pipelines	2009	2012	2.50	SWCC	Austro-German engineering and consulting firm	Fluor Arabia	Fluor Arabia	Fluor Arabia

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
58	1200-MW Power Plant Next to Shuaiba Power Plant	Saudi Arabia	Power & Water	power plant	2008	2012	3.00	Saudi Electric Company (SEC)	Alstom	Poyry	-	-
59	Jeddah Gate Development	Saudi Arabia	Building	mixed-use	2007	2019	1.60	Omnium International Limited	Fayez Zuhair Architectural & Engineering	IMS Engineering Management	IMS Engineering Management	IMS Engineering Management
60	North-South Railway	Saudi Arabia	Infrastructure	Rail Transport	2010	2015	3.50	Ministry of Finance, SA	Louis Berger, Systra, Canarail and Saudi Consolidated Engineering	Louis Berger, Systra, Canarail and Saudi Consolidated Engineering	Louis Berger, Systra, Canarail and Saudi Consolidated Engineering	Louis Berger, Systra, Canarail and Saudi Consolidated Engineering
61	Haramain High-Speed Rail Project - Phase 1	Saudi Arabia	Infrastructure	Rail Transport	2009	2012	1.90	Ministry of Finance, SA	Foster + Partners	Dar Al Handasah Consultants	Scott Wilson Co Ltd	Scott Wilson Co Ltd
62	Jizan Economic City (JEC)	Saudi Arabia	Building	mixed-use	2009	2020	3.00	DP Architect	AECOM	AECOM	AECOM	AECOM
63	Princess Nora Bint Abdulrahman University in Riyadh	Saudi Arabia	Building	Educational facilities	2008	2011	11.50	Perkins+Will	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants
64	Shams Al-Riyadh Development	Saudi Arabia	Building	Residential Development	2010	2013	1.60	Dar Al Arkan Real Estate and Development Company.	Dar Al Arkan Real Estate and Development Company.	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants
65	Kingdom Tower in Jeddah	Saudi Arabia	Building	mixed-use	2011	2017	15.00	Omrania & Associates	Adrian Smith	EC Harris & Mace	EC Harris & Mace	EC Harris & Mace
66	Abraj Al-Bait in Makkah	Saudi Arabia	Building	mixed-use	2009	2012	1.60	SL Rasch GmbH and Dar Al-Handasah Architects	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants	Dar Al Handasah Consultants
67	Yanbu IWPP	Saudi Arabia	Power & Water	Power & Desalination Plant	2009	2013	4.00	Saudi Arabia's Water & Electricity Company (WEC)	Lahmeyer International	-	-	-
68	Jubail IWPP	Saudi Arabia	Power & Water	Power & Desalination Plant	2006	2009	3.40	Saudi Arabia's Water & Electricity Company (WEC)	-	-	Mohamed Turki	-
69	Jabal Omar Development in Makkah (extension)	Saudi Arabia	Building	mixed-use	2018	2022	2.70	Foster and Partners	-	DEWI International & Hill International	DEWI International & Hill International	Hill International

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
70	Neom	Saudi Arabia	Buildings	Mixed-Use	2017	2030	500.00	Norman Foster McKinsey & Company, Boston	Killa Design AECOM	AECOM	AECOM	AECOM
71	King Abdullah University of Science & Technology (KAUST)	Saudi Arabia	Building	Educational facilities	2006	2012	3.50	Fayez Zuhair Architectural & Engineering	HOK BUROHAPPOLD Engineering	-	-	-
72	Construction of 37 Towers in Abu Dhabi and Dubai	UAE	Building	mixed use	2014	2018	6.00	-	-	-	-	-
73	Jewel of the Creek Development	UAE	Building	mixed-use	2012	2017	1.36	Kieferle & Partner	Kieferle & Partner	Kieferle & Partner	Kieferle & Partner	Kieferle & Partner
74	Al Habtoor City	UAE	Building	Commercial Building	2012	2016	1.33	Kohn Pedersen Fox Associates (KPF)	John R. Harris & Partners	WS Atkins & Partners	WS Atkins & Partners	WS Atkins & Partners
75	Abu Dhabi Airport - Midfield Terminal Building (MTB)	UAE	Infrastructure	Airports	2011	2019	2.90	Kohn Pedersen Fox Associates (KPF)	ECG	AECOM	Arup	Turner & Townsand
76	Borouge 3 - Four Borstar Units	UAE	Industrial	Mixed use	2010	2013	1.26	-	Technimont	-	Bechtel Corporation & Foster Wheeler International	Bechtel Corporation & Foster Wheeler International
77	Dubai pearl	UAE	Building	mixed-use	2008	2013	4.00	ARUP	Tamdeen Dewan Architects + Engineers Schweger Associated Architects	WSP	WSP	D.G. Jones & Partners
78	Al-Ain Convention Centre district	UAE	Building	mixed-use	2010	2015	1.00	Edge architects	Shankland Cox architects	-	Shankland Cox architects	-
79	Expansion of Abu Dhabi Airport - Midfield Terminal Complex	UAE	Infrastructure	Airports	2012	2019	6.80	Kohn Pedersen Fox Associates (KPF)	ECG	AECOM	Arup	Turner & Townsand
80	Fertilizer Plant in Ruwais	UAE	Industrial	Mixed-use	2009	2013	1.20	UHDE Arabia Ltd	UHDE Arabia Ltd	Dia Behbehani Group	Dia Behbehani Group	Dia Behbehani Group
81	Nurai Island Resort	UAE	Building	mixed-use	2008	2018	1.00	-	Dror	-	Hoare Lea Consulting Engineer	-
82	Etihad Railway	UAE	Infrastructure	Rail Transport	2012	2015	8.00	-	Atkins	Jacobs Engineering Group	Jacobs Engineering Group	Jacobs Engineering Group

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
83	Burj Al Alam	UAE	Building	mixed use	2008	2012	1.00	Nikken Sekkei Ltd.	Arup	**Parsons Brinckerhoff**	Parsons Brinckerhoff	D.G. Jones & Partners
84	Al Falah Development in Abu Dhabi	UAE	Building	mixed-use	2009	2015	2.00	Aldar	Hyder Consulting Middle East Limited	**Fluor Consulting Engineers**	Fluor Consulting Engineers	Rider Levett Bucknall
85	Khalifa Port and Industrial Zone (KPIZ) in Taweelah	UAE	Marine	Ports & Canal	2008	2023	5.00	KPIZ Authority	International Bechtel Company Limited	**International Bechtel Company Limited**	International Bechtel Company Limited	International Bechtel Company Limited
86	Al Maktoum International Airport	UAE	Infrastructure	Airports	2014	2039	8.00	Dubai Aviation Engineering Projects (DAEP)	Leslie Jones Architecture.	**ADP Ingénierie**	Dar Al Handasah Consultants	Turner & Townsand
87	City of Arabia	UAE	Building	mixed-use	2006	2012	5.00	P&T Architects	-	**P & T Architects and Engineers Ltd.**	Hill International	-
88	Al Raha Beach Development	UAE	Building	mixed-use	2005	2015	18.00	RMJM	ESQUISSE DESIGN STUDIO	-	Consult Maunsell	-
89	Village Centre Development on Palm Jumeirah	UAE	Building	mixed-use	2009	2012	1.10	RSP Middle East	RSP Middle East	**Dar Al Handasah Consultants**	Dar Al Handasah Consultants	Dar Al Handasah Consultants
90	Dubai International Airport - Concourse 3	UAE	Building	Commercial Building	2008	2012	1.17	Dubai's Department of Civil Aviation (DCA)	Aéroport de Paris (ADPi), France	**Bechtel Corporation**	CIL Management Consultants	Turner & Townsand
91	Aluminium Smelter at Taweelah	UAE	Industrial	Mixed-use	2006	2010	10.00	Mubadala Development Co. and Dubai Aluminum	-	-	-	-
92	Sowwah Square Development in Abu Dhabi	UAE	Building	mixed-use	2008	2015	1.00	Mubadala Real Estate & Hospitality (MREH)	Goettsch Partners (GP)	-	-	-
93	Dubai Sports City	UAE	Building	mixed-use	2006	2011	4.00	Parsons International	Mott Macdonald	-	ACE	ACE
94	Hydra Village Abu Dhabi	UAE	Building	Residential Development	2006	2010	1.50	Hydra Properties,	CRTC Consultancy	-	W. S. Atkins Global	W. S. Atkins Global
95	Emirates Industrial City (EIC) in Sharjah	UAE	Industrial	Mixed-use	2008	2012	2.00	Emirates company for Industrial Cities (ECIC)	Khatib & Alami	**Cansult Maunsell**	Cansult Maunsell	Cansult Maunsell

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
96	Petrochemical Factory Expansion in Ruwais	UAE	Industrial	Oil & Gas	2008	2010	1.39	Amec Foster Wheeler	Mott Macdonald	Mott Macdonald	Mott Macdonald	Mott Macdonald
97	Ajman coal-fired power plant	UAE	Power & Water	power plant	2009	2012	2.00	MMC Utilities	Booz Allen Hamilton Company and ICTS International N.V	-	-	-
98	Ajman international airport	UAE	Infrastructure	Airports	2009	2015	1.50	Cyrus	Booz Allen Hamilton Company	-	Kingston Corporation	Kingston Corporation
99	Arzanah Development	UAE	Building	mixed use	2008	2014	7.00	Mubadala Development Company	Ellisdon (Engineering Consultant)	-	Atkins	Atkins
100	Dubai metro	UAE	Infrastructure	Metro	2005	2020	9.00	Aedas	kins (DURL's Design Consultant)	Systra	Systra Consulting Co	Bexel
101	Tiger woods Dubai development	UAE	Building	mixed-use	2007	2010	1.50	Dubai Holding Group	Consulting Engineering Services	Consulting Engineering Services	APP International	APP International
102	Salam Street & Mina Road Development - Phase 1	UAE	Infrastructure	Roads Construction	2008	2012	1.40	Abu Dhabi Municipality	Parsons International	Parsons International	Louis Berger Group	Louis Berger Group
103	Burj Khalifa (Burj Dubai)	UAE	Building	mixed-use	2004	2009	1.50	Skidmore Owings Hyder	Adrian Smith	GHD Omnium	Turner Construction Company	Omnium
104	Dubai Maritime City (DMC)	UAE	Building	mixed-use	2005	2011	5.00	KEO	-	-	Mouchel Parkman	-
105	ADNEC Capital Centre development	UAE	Building	mixed-use	2007	2025	8.00	ADNEC Capital Centre development	Robert Matthew, Johnson-Marshall & Partners (RMJM	-	Halcrow	-
106	Pearl Dubai	UAE	Building	mixed-use	2007	2012	3.90	Schweger Assoziierte	CK Design	Al Habtoor Engineering Enterprises, and Leighton Contractors	PMDC	D.G. Jones & Partners
107	Ajman Marina	UAE	Building	mixed-use	2008	2015	3.00	HOK International	DAR	-	Mouchel Parkman	-
108	Tameer Towers Development	UAE	Building	mixed-use	2008	2011	1.60	Sorouh Real Estate and Tameer	Sorouh Real Estate and Tameer & Gensler	Gensler	Hill International	Hill International

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
109	Shams Abu Dhabi Development	UAE	Building	mixed-use	2006	2012	25.00	CRJA-IBI Group	W.M. Group Engineers	R.W. Armstrong and Associates	R.W. Armstrong and Associates	R.W. Armstrong and Associates.
110	Al Zorah Development	UAE	Building	mixed use	2009	2014	600.00	Al Zorah Development Limited P.S.C	-	-	-	-
111	Saadiyat Island Development	UAE	Building	mixed-use	2006	2017	27.00	DBI DESIGN Architects	DESIMONE	Khatib & Alami (K&A)	Parsons International	Khatib & Alami (K&A)
112	Yas Island Development	UAE	Building	mixed-use	2007	2017	40.00	Benoy	Asymptote Architectur e HOK & Pascall +Watson WSP	WSP	EllisDon	KBR
113	Nakheel Harbour& tower	UAE	Building	mixed-use	2010	2020	40.00	Woods Bagot	WSP	WSP	WSP	Faithful+Gould
114	The Arabian canal development	UAE	Marine	Ports & Canal	2008	2011	11.00	Calthorpe Associates	SWA Group Moffatt & Nichol,	Parsons International, and Mott MacDonald.	Parsons International, and Mott MacDonald.	Faithful+Gould
115	Waterfront Development	UAE	Building	mixed-use	2010	2020	3.50	Cope Linder Architects	Arup African Verdaus	High Construction	Faithful & Gould	Faithful & Gould
116	Al Furjan Development	UAE	Building	mixed-use	2009	2011	1.50	Wilbur Smith Associate	Al-Khatib	Turner Construction Company	Turner Construction Company	Davis Langdon
117	Palm Deira	UAE	Building	mixed-use	2010	2015	12.50	Hyder Consulting	Hyder Consulting	Parsons	Parsons	Parsons
118	Palm Jebel Ali	UAE	Building	mixed-use	2012	2016	6.50	Royal Kaskoning	Royal Kaskoning Serendipity By Design LLC	-	Hill International Parsons International	Hill International
							1,742.91					

A2 - Report No 2

Distribution of Mega Projects in the GCC Countries

Source: Abstract of details from Report A1

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A2 - Report No 2 – Distribution of Mega Projects in the GCC Countries

Category	Classification of Project	Number of Projects						
		Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	United Arab Emirates	Total
Building	Mixed Use	4	1	1	6	5	29	46
	Commercial Building				1		2	3
	Educational facilities				1	2		3
	Healthcare Facilities		1					1
	Mixed-Use					1		1
	Others					1		1
	Recreational facilities				2	2		4
	Residential Development				1		1	2
Industrial	Mixed-Use			1		1	4	6
	Oil &Gas					5	1	6
Marine	Ports & Canal			1	1		2	4
Infrastructure	Airports			1	1	1	4	7
	Metro				1	1	1	3
	Others					2		2
	Pipelines				1	1		2
	Rails					2	1	3
	Roads		1		2	1	1	5
Power & Water	Power & Desalination	1	1	1	4	4		11
	Power Plant		1		2	2	1	6
	Power Transmission				1	1		2
Total		5	5	5	24	32	47	118

A3 - Report No 3

Value of Mega Projects in the GCC Countries

Source: Abstract of details from Report A1

A3 - Report No 3 - Value of Mega Projects in the GCC Countries

Category	Classification of Project	Value of the Project (Billion USD)						
		Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	United Arab Emirates	Total Value
Building	Mixed-Use	17.00	3.30	20.00	64.70	528.40	832.96	1,466.36
	Commercial Building				2.35		2.50	4.85
	Educational facilities				8.25	15.00		23.25
	Healthcare Facilities		1.06					1.06
	Others					11.00		11.00
	Recreational facilities				4.65			4.65
	Residential Development				1.50	2.95	1.50	5.95
Industrial	Mixed-Use			1.50		1.00	14.46	16.96
	Oil &Gas					16.00	1.39	17.39
Marine	Ports & Canal			1.25	9.10		16.00	26.35
Infrastructure	Airports			1.20	11.00	1.50	19.20	32.90
	Metro				46.80	1.80	9.00	57.60
	Others					1.70		1.70
	Pipelines				4.60	2.50		7.10
	Rails					5.40	8.00	13.40
	Mixed-use							0.00
	Roads		2.65		4.00	1.20	1.40	9.25
Power & Water	Power & Desalination	2.00	1.27	1.00	6.20	14.70		25.17
	Power Plant		2.65		3.90	6.07	2.00	14.62
	Power Transmission				1.50	1.85		3.35
		19.00	10.93	24.95	168.55	611.07	908.41	1,742.91

A4 - Report No 4

On-going GCC Mega Projects as at November 2018

Source: Filters of data from Report 1

A4-Report No 4-Ongoing GCC Mega Projects as at November 2018

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consutant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
1	Marsa Al Seef Development	Bahrain	Building	Mixed-Use	2010	2020	2.50	SSH Kuwait	SSH Kuwait	Global Real Estate Development	Global Real Estate Development	Global Real Estate Development
2	Water Garden City	Bahrain	Building	Mixed-Use	2010	2020	7.00	HOK International	HOK	HOK	HOK	HOK
3	Al-Madina Azarqa (Blue City)	Oman	Building	Mixed-Use	2005	2020	20.00	Foster and Partners	WS Atkins & Partners	Hyder Consulting	Hyder Consulting	Hyder Consulting
4	Musheireb Development	Qatar	Building	mixed-use	2010	2022	5.00	Mossessian & partners	Gensler	Gensler	Turner Construction Company	Rider Levett Bucknall
5	New Doha International Airport	Qatar	Infrastructure	Airports	2004	2025	11.00	HOK International	-	Bechtel Corporation	Bechtel Corporation	Bechtel Corporation
6	Doha metro	Qatar	Infrastructure	Metro	2013	2022	46.80	UN Studio	UN studio	Egis	DB International Gmbh	Louis Berger
7	Lusail Development	Qatar	Building	mixed-use	2006	2022	38.70	Halcrow	Halcrow& Cowi partners	Dorsch	Parsons International	Turner & Townsand
8	New Doha Port	Qatar	Marine	Port & Canal	2010	2023	7.40	Worley Parsons Scott Wilson Group (Conceptual Design) Royal Haskoning (Master Plan) Cowi & Partners PLP Architecture	AECOM	Consult Maunsell AECOM	AECOM	AECOM
9	The 7 Stadium for the FIFA World Cup 2022	Qatar	Building	mixed-use	2011	2022	10.00	AECOM Zaha Hadid Architects Dar Al Handasah Fenwick Iribarren Architects Ramboll and Pattern Foster + Partners with MANICA Architecture	AECOM	KEO International Projacs ASTAD AECOM CH2M HILL	KEO International	KEO International
10	Qatar Water Reservoirs	Qatar	Infrastructure	Pipelines	2015	2021	4.60	Hyder Consulting Middle East	Hyder Consulting Middle East	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
11	The Pearl Qatar	Qatar	Building	mixed-use	2006	2022	5.00	Callison	Dar A-Handasah (DAR)	Hill International Parsons International	Hill International	Hill International
12	Expansion of Grand Mosque	Saudi Arabia	Building	Others	2008	2019	11.00	Dar Al Handasah	Dar Al Handasah	Dar Al Handasah	Dar Al Handasah	Dar Al Handasah
13	Makkah Metro	Saudi Arabia	Infrastructure	Metro	2012	2019	1.80	Hyder Consulting	W. S. Atkins Global	W. S. Atkins Global	W. S. Atkins Global	W. S. Atkins Global
14	Jeddah Gate Development	Saudi Arabia	Building	mixed-use	2007	2019	1.60	Omnium International Limited	Fayez Zuhair Architectural & Engineering	IMS Engineering Management	IMS Engineering Management	IMS Engineering Management
15	Jizan Economic City (JEC)	Saudi Arabia	Building	mixed-use	2009	2020	3.00	DP Architect	AECOM	AECOM	AECOM	AECOM
16	Jabal Omar Development in Makkah (extension)	Saudi Arabia	Building	mixed-use	2018	2022	2.70	Foster and Partners	-	DEWI International & Hill International	DEWI International & Hill International	Hill International
17	Construction of 37 Towers in Abu Dhabi and Dubai	UAE	Building	mixed use	2014	2018	6.00	-	-	-	-	-
18	Abu Dhabi Airport - Midfield Terminal Building (MTB)	UAE	Infrastructure	Airports	2011	2019	2.90	Kohn Pedersen Fox Associates (KPF)	ECG	AECOM	Arup	Turner & Townsand
19	Expansion of Abu Dhabi Airport - Midfield Terminal Complex	UAE	Infrastructure	Airports	2012	2019	6.80	Kohn Pedersen Fox Associates (KPF)	ECG	AECOM	Arup	Turner & Townsand
20	Nurai Island Resort	UAE	Building	mixed-use	2008	2018	1.00	-	Dror	-	Hoare Lea Consulting Engineer	-
21	Khalifa Port and Industrial Zone (KPIZ) in Taweelah	UAE	Marine	Ports & Canal	2008	2023	5.00	KPIZ Authority	International Bechtel Company Limited	International Bechtel Company Limited	International Bechtel Company Limited	International Bechtel Company Limited
22	Al Maktoum International Airport	UAE	Infrastructure	Airports	2014	2039	8.00	Dubai Aviation Engineering Projects (DAEP)	Leslie Jones Architecture.	ADP Ingénierie	Dar Al Handasah Consultants	Turner & Townsand
23	Dubai metro	UAE	Infrastructure	Metro	2005	2020	9.00	Aedas	kins (DURL's Design Consultant)	Systra	Systra Consulting Co	Bexel
24	ADNEC Capital Centre development	UAE	Building	mixed-use	2007	2025	8.00	ADNEC Capital Centre development	Robert Matthew, Johnson-Marshall & Partners (RMJM	-	Halcrow	-
25	Nakheel Harbour& tower	UAE	Building	mixed-use	2010	2020	40.00	Woods Bagot	WSP	WSP	WSP	Faithful+Gould
26	Waterfront Development	UAE	Building	mixed-use	2010	2020	3.50	Cope Linder Architects	Arup African Verdaus	High Construction	Faithful & Gould	Faithful & Gould

A5 - Report No 5

Significant GCC Projects announced since December 2018

Source: Construction Week Online - online search on 10 January 2020 from 7.30 pm to 11.30 pm

Filters: Projects awarded since December 2018

Validation: Refer Report No 11

A5-Report No 5- Significant GCC Projects announced since December 2018

#	Name of the project	Location	Category	Classification of project	From	To	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
1	Development of the Berri and Marjan offshore oilfields.	Saudi Arabia	Oil & Gas	Oil & Gas	2018	2025	1.3	Saudi Aramco	Saipem & WorleyParsons	Wood Group	Wood Group	Wood Group
2	Crude Flexibility Project at Ruwais oil refinery	UAE	Oil & Gas	Oil & Gas	2018	2022	3.1	ADNOC	Worley Parsons	Worley Parsons	Worley Parsons	Worley Parsons
3	Saudi Arabia National Guard.	Saudi Arabia	Buildings	Mixed-Use	2018	2023	1.3	-	Dar Al Riyadh	Dar Al Riyadh	Dar Al Riyadh	Dar Al Riyadh
4	Marjan Increment Development- Marjan GOSP-4	Saudi	Oil & Gas	Oil & Gas	2018	2024	18	Saudi Aramco	McDermott China Offshore Oil Engineering Company (COOEC) Saipem	Wood Group	Wood Group	Wood Group
5	Jizan – Grassroots Export Refinery	Saudi	Oil & Gas	Oil & Gas	2018	2023	9	Saudi Aramco	KBR	KBR Saudi	KBR	KBR
6	Salalah Refinery Project	Oman	Oil & Gas	Oil & Gas	2018	2026	2.5	Oman Gas Company (OGC)	Chicago Bridge & Iron Company (CB&I) and Petrofac	Tecna Oman Gas Company (OGC)	Tecna	Tecna
7	Khalifa City	UAE	Buildings	Mixed-Use	2019	2030	40	Rafik El Khoury &	Rafik El Khoury &	Dorsch	KEO International	Dorsch
8	Etihad Rail Stage 2 contracts	UAE	Transport	Rail	2019	2024	1.2	Jacobs Engineering	Jacobs Engineering	Egis	Egis	Egis
9	Petro Rabigh Integrated Refinery & Petrochemical Complex- Phase II	Saudi	Oil & Gas	Oil & Gas	2019	2024	9.4	Saudi Aramco JGC Gulf International (JGC Gulf)	Saipem	JGC Gulf International (JGC Gulf)	JGC Gulf International (JGC Gulf)	JGC Gulf Int'l. (JGC Gulf)
10	Al Fadhili Gas Plant	Saudi	Oil & Gas	Onshore Production Facilities	2019	2025	6.5	Tecnicas Reunida Saudi Aramco	Tecnicas Reunida Petrofac	Foster Wheeler	Foster Wheeler	Foster Wheeler

B1- Report No 6 – Qatar Mega Projects, Consultants & Values

	Name of the project	Category	Classification of project	Value (USD Billion)	Status @Dec 2018	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
1	Dukhan Highway	Qatar	Infrastructure	1.00	Completed	WS Atkins & Partners	WS Atkins	KBR	KBR
2	Doha Festival City	Qatar	Building	1.65	Completed	Arab Engineering Bureau	Mace International	Mace International	EC Harris
3	Musheireb Development	Qatar	Building	5.00	On-going	Gensler	Gensler	Turner Construction Company	Rider Levett Bucknall
4	Barwa Financial District	Qatar	Building	1.30	Completed	AECOM	AECOM	AECOM	AECOM
5	Ras Laffan C IWPP	Qatar	Power & Water	3.90	Completed	WSP	WSP	WSP	WSP
6	Ras Laffan Port Expansion	Qatar	Marine	1.70	Completed	Ramboll	Halcrow	Halcrow	Halcrow
7	Education city	Qatar	Building	8.25	Completed	WSP	KEO International Consultants	KEO International Consultants	KEO International Consultants
8	Sidra Medical and Research Centre in Qatar	Qatar	Building	2.35	Completed	Pelli Clarke PElli	KEO International Consultants	KEO International Consultants	KEO International Consultants
9	Ras Girtas Power & Water Plant in Qatar	Qatar	Power & Water	2.00	Completed	WSP	WSP	WSP	WSP
10	Qatar Power Transmission System Expansion - Phase 9	Qatar	Power & Water	1.50	Completed	-	-	Energoprojekt Entel Consulting Engineers	-
11	Qatar Entertainment City	Qatar	Building	3.00	Completed	Forrec	KEO International Consultants	KEO International Consultants	KEO International Consultants
12	Ras Girtas Power & Water Plant Expansion	Qatar	Power & Water	1.90	Completed	WSP	WSP	WSP	WSP
13	Barwa City Development	Qatar	Building	1.50	Completed	-	AECOM	Consult Maunsell	-
14	Mesaieed Independent Power Plant (IPP)	Qatar	Power & Water	2.30	Completed	Fichtner Consulting Engineers	-	-	-
15	Doha metro	Qatar	Infrastructure	46.80	Phase 2 & 3 On-going	UN studio	Egis	DB International Gmbh (Deutsche Bahn)	Louis Berger
16	Doha Convention Centre and Tower	Qatar	Building	1.50	On Hold	Hyder Consulting Middle East Limited	Turner Construction Company	Turner Construction Company	Turner Construction Company

B1- Report No 6 – Qatar Mega Projects, Consultants & Values

	Name of the project	Category	Classification of project	Value (USD Billion)	Status @Dec 2018	Design Consultant	Supervision consutant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
17	Lusail Development	Qatar	Building	38.70	On-going	Halcrow& Cowi partners	Dorsch	Parsons International	Turner & Townsand
18	New Doha International Airport	Qatar	Infrastructure	11.00	On-going	-	Bechtel Corporation	Bechtel Corporation	Bechtel Corporation
19	Qatar - Bahrain Causeway	Qatar	Infrastructure	3.00	On Hold	KBR	-	KBR	-
20	The Pearl Qatar	Qatar	Building	5.00	On-going	Dar A-Handasah (DAR)	Hill International Parsons International	Hill International	Hill International
21	Al Waab City Development	Qatar	Building	3.20	Completed	-	Hill International	Hill International	Hill International
22	New Doha Port	Qatar	Marine	7.40	On-going	AECOM	Consult Maunsell AECOM	AECOM	AECOM
23	The 7 Stadium for the FIFA World Cup 2022	Qatar	Building	10.00	On-going	AECOM	KEO International Projacs ASTAD AECOM CH2M HILL	KEO International	KEO International
24	Qatar Water Reservoirs	Qatar	Infrastructure	4.60	On-going	Hyder Consulting Middle East	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult

B2 - Report No 7 – Live Qatar Mega Projects, Consultants & Values as at November 2018

	Name of the project	Category	Value (USD Billion)	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Q.S. Services
1	Musheireb Development	Building	5.00	Mossessian & partners	Gensler	Gensler	Turner Construction Company	Rider Levett Bucknall
2	Doha metro	Infrastructure	46.80	Murphy Jahn	UN studio Impregilo S K Engineering & Construction Qatar's Galfar Engineering & Contracting Atkins	Egis	D.B. International Gmbh (Deutsche Bahn) Jacobs Engineering Louis Berger and Egis Rail Hill International SYSTRA-Parsons Hitachi	Louis Berger
3	Lusail Development	Building	38.70	Halcrow	Halcrow Cowi partners WSP AS Parsons Foster&Partner Cracknel Worley Parsons	Dorsch Halcrow	Parsons International QPM	Turner & Townsand Atkins
4	New Doha International Airport	Infrastructure	11.00	HOK International	Scott Wilson	Bechtel Corporation	Bechtel Corporation	DS Jones
5	The Pearl Qatar	Building	5.00	Callison	Callison	Dar A-Handasah (DAR)	Hill International Parsons International	Hill International
6	New Doha Port		7.40	Worley Parsons	Worley Parsons Scott Wilson Group (Conceptual Design) Royal Haskoning (Master Plan) Cowi & Partners PLP Architecture	AECOM	Consult Maunsell AECOM	AECOM

B2 - Report No 7 – Live Qatar Mega Projects, Consultants & Values as at November 2018								
	Name of the project	**Category**	**Value (USD Billion)**	**Architect /Mater Plan developer**	**Design Consultant**	**Supervision consultant**	**PMCM/ Development Manager/ Main Consultant**	**Q.S. Services**
7	The 7 Stadium for the FIFA World Cup 2022	Building	10.00	Individual Consultant. No Mater Plan Developers	AECOM Zaha Hadid Architects Dar Al Handasah Fenwick Iribarren Architects Ramboll and Pattern Foster + Partners with MANICA Architecture	AECOM	KEO International Projacs ASTAD AECOM CH2M HILL	KEO International
8	Qatar Water Reservoirs	Water Transmission	4.60	Hyder	Hyder Consulting Middle East	Hyder Consulting Middle East	ENERGOPROJEKT-ENTEL LTD. GKW Consult	ENERGOPROJEKT-ENTEL LTD. GKW Consult

C1 - Report No 8 – Summary of Western & Local Consultant Commissions between 2006-2020

Western Consultants				
#	Consultants	No of consultants	No of Roles for each consultant	Total Commissions (No of Consultant * No Roles)
1	Parsons International	1	16	16
2	W. S. Atkins	1	14	14
3	ARUP	1	10	10
4	AECOM	1	9	9
5	Halcrow & WSP	2	8	16
6	Egis, Hill International, Jacobs Engineering Group, Mott MacDonald and Scott Wilson	5	7	35
7	Bechtel Corporation, HOK International, KBR	3	6	18
8	Hyder Consulting Middle East Limited, Kleferle & Partner, Parsons Brinckerhoff, Systra Consulting Co, Turner & Townsand, Turner Construction Company	6	5	30
9	Cansult Maunsell, D.G. Jones & Partners, Foster + Partners, Kohn Pedersen Fox Associates (KPF), Louis Berger Group, Murphy Jahn, Skidmore Owings, SNC-Lavalin,	9	4	36
10	Consolidate Engineering Co, EC Harris, Fluor Consulting Engineers, Gensler, Kirkpatrick & Co. Ltd, Lahmeyer International, Merrill, Mouchel Parkman,	7	3	21
11	ACE, Acer Freeman-Fox, ACLA Landscaping, Alstom, Aluminum Pechiney S.A.S., Amec Foster Wheeler, Arata Isozaki, Art Consultants, Asymptote Architecture, Austro-German engineering and consulting firm, Benoy, Bernardon Architects, Besix and Sixco, Bexel, Booz Allen Hamilton Company, Boskalis, Buro Happold, Burt Hill, Calthorpe Associates, CIL Management Consultants, C.K. Design, Cope Linder Architects, D.B. International Gmbh (Deutsche Bahn), De Leuw Cather International, Deutsche Bahn AG (DBI), DEWI International, Dorsch, DP Architect, Energoprojekt Entel Consulting Engineers, ESQUISSE DESIGN STUDIO, Essar Group, Faithful & Gould, Fichtner Consulting Engineers, Fichtner GMBH & Co. K.G., Garden Design, Geddes Architects, Gesamtplanung GmbH, Global Real Estate Development Company, Goettsch Partners (GP), Hansk International Company, High Construction, Hongkong Electric's Associated Technical Services, Hyundai, ICTS International N.V, John R. Harris & Partners, Kinkisharyo Industrial Design Office, kins (DURL's Design Consultant), Laing O'Rourke, Langdon Wilson International, Larsen Architects, Leslie Jones Architecture, Mace International, Magnusson Klemencic Associates; Merz and McLellan, Mitsubishi Heavy Industries (MHI), Mitsui Corporation of Japan, Moffatt & Nichol, Nikken Sekkei Ltd., Omrania & Associates, Owings and Merrill (SOM), Perkins+Will, Pickard Chilton, R.W. Armstrong and Associates Inc., Ramboll, Rio Tinto Alcan, Royal Kaskoning, Samsung Engineering Co. Ltd, Schwager Assoziierte, Shankland Cox architects, SWA Group, Tricon Design, U.N. studio, Urbis, Werner Sobek Group, Werner Sobek Group, Wes International Gmbh, Whiting-Turner Co., Wilbur Smith Associate, W.M. Group Engineers, Woods Bagot	95	1	95
	Total number of projects handling by the Western Consultants	131		300

GCC Consultants				
#	Consultants	No of consultants	No of Roles for each consultant	Total Roles (No of Consultant * No Roles)
1	Dar Al Handasa Consultants	1	24	24
2	KEO International Consultants	1	7	7
3	Fayez Zuhair Architectural & Engineering and Kling Consultants	2	6	12
4	Khatib & Alami and Tamdeen	2	4	8
5	ASTAD and Cracknell	2	3	6
6	Aedas, Al Dabbous Engineering, Al-Khatib, APP International, Arab Engineering Bureau, CCC, Combined Group Contracting, Consultants International, Consulting Engineering Services, Delta Marine Consultants, Dewan Architects & Engineers, Dr Ahmed Abdel-Warith, Dror, Edge architects, Exxon Mobil Corporation, GHD, Gulf Consults, Herman Tilke, Hisham Abdul Rehman Jafer, IMS Engineering Management, IMS Engineering Management, L&T, Marafeq, Mavers, MERCON, Middle East Engineering Consultants, MMC Utilities, Mohamed Turki, Mossessian & Partners, Naco & Saudi Bin ladin Group, NORR Group, Pakistan's National Engineering Services, PMDC, Qatar Petroleum, QPM, RTKL, Saudi Bin ladin Group	40	1	40
Total		48	45	97

C2- Report No 9 – Calculation sheet for the distribution of consultancy Services							
Western Consultants							
#	Consultants	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Cost Consultant/ Quantity Surveyor	Total
1	ACE	-	-	-	1	-	1
2	Acer Freeman Fox	-	1	-	-	-	1
3	ACLA Landscaping	-	-	1	-	-	1
4	Alstom	-	1	-	-	-	1
5	Aluminum Pechiney S.A.S.	-	1	-	-	-	1
6	Amec Foster Wheeler	1	-	-	-	-	1
7	Arata Isozaki	1	-	-	-	-	1
8	Art Consultants	-	1	-	-	-	1
9	Asymptote Architecture	-	1	-	-	-	1
10	Austro-German engineering and consulting firm	-	1	-	-	-	1
11	Benoy	-	-	-	-	-	0
12	Bernardon Architects	1	-	-	-	-	1
13	Besix and Sixco	-	1	-	-	-	1
14	Bexel	-	-	-	-	1	1
15	Booz Allen Hamilton Company	-	1	-	-	-	1
16	Boskalis	-	1	-	-	-	1
17	Buro Happold	-	1	-	-	-	1
18	Burt Hill	1	-	-	-	-	1
19	Calthorpe Associates	1	-	-	-	-	1
20	CIL Management Consultants	-	-	-	1	-	1
21	CK Design	-	1	-	-	-	1
22	Cope Linder Architects	1	-	-	-	-	1
23	Cowi & Partners	-	1	-	-	-	1
24	COWI Consult	1	-	-	-	-	1
25	CVRD	1	-	-	-	-	1
26	Cyrrus	1	-	-	-	-	1
27	David Adamson and Partners	-	-	-	1	-	1
28	Davis Langdon	-	-	-	-	1	1
29	DB International Gmbh (Deutsche Bahn)	-	-	-	1	-	1
30	De Leuw Cather International	-	1	-	-	-	1
31	Deutsche Bahn AG (DBI)	-	-	-	1	-	1
32	DEWI International	-	-	-	1	-	1
33	Dorsch	-	-	1	-	-	1

C2- Report No 9 – Calculation sheet for the distribution of consultancy Services

Western Consultants							
#	Consultants	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Cost Consultant/ Quantity Surveyor	Total
34	DP Architect	1	-	-	-	-	1
35	Energoprojekt Entel Consulting Engineers	-	-	-	1	-	1
36	ESQUISSE DESIGN STUDIO	-	1	-	-	-	1
37	Essar Group	-	-	-	1	-	1
38	Faithful & Gould	-	-	-	1	-	1
39	Fichtner Consulting Engineers	-	1	-	-	-	1
40	Fichtner GMBH & Co. KG	-	-	-	1	-	1
41	Garden Design	-	1	-	-	-	1
42	Geddes Architects	-	1	-	-	-	1
43	Gesamtplanung GmbH	1	-	-	-	-	1
44	Global Real Estate Development Company	-	-	-	1	-	1
45	Goettsch Partners (GP)	-	1	-	-	-	1
46	Hansk International Company	-	-	-	1	-	1
47	High Construction	-	-	1	-	-	1
48	Hongkong Electric's Associated Technical Services	-	-	-	1	-	1
49	Hoare Lea Consulting Engineer	-	-	-	1	-	1
50	Hyundai	-	-	-	1	-	1
51	ICTS International N.V	-	1	-	-	-	1
52	International Bechtel Company Limited	-	-	-	1	-	1
53	John R. Harris & Partners	-	1	-	-	-	1
54	Kinkisharyo Industrial Design Office	-	1	-	-	-	1
55	kins (DURL's Design Consultant)	-	1	-	-	-	1
56	Kieferle & Partner	-	-	-	1	-	1
57	Kingston Corporation	-	-	-	1	-	1
58	Kohn Pedersen Fox,	-	1	-	-	-	1
59	Laing O'Rourke	-	-	-	1	-	1
60	Langdon Wilson International	-	-	-	1	-	1
61	Larsen Architects	1	-	-	-	-	1
62	Leslie Jones Architecture.	-	1	-	-	-	1
63	Mace International	-	-	-	1	-	1
64	Magnusson Klemencic Associates;	-	1	-	-	-	1
65	Merz and McLellan	-	-	-	1	-	1

C2- Report No 9 – Calculation sheet for the distribution of consultancy Services

Western Consultants							
#	Consultants	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Cost Consultant/ Quantity Surveyor	Total
66	Mitsubishi Heavy Industries (MHI)	-	1	-	-	-	1
67	Mitsui Corporation of Japan	-	1	-	-	-	1
68	Moffatt & Nichol	1	-	-	-	-	1
69	Murphy Jahn	-	1	-	-	-	1
70	Nikken Sekkei Ltd.	1	-	-	-	-	1
71	Omrania & Associates	1	-	-	-	-	1
72	Owings and Merrill (SOM)	1	-	-	-	-	1
73	Perkins+Will	1	-	-	-	-	1
74	Pickard Chilton	-	1	-	-	-	1
75	R.W. Armstrong and Associates, Inc.	-	-	-	1	-	1
76	Ramboll	-	1	-	-	-	1
77	Rio Tinto Alcan	-	1	-	-	-	1
78	Royal Kaskoning	-	1	-	-	-	1
79	Samsung Engineering Co. Ltd	-	1	-	-	-	1
80	Schweger Assoziierte	1	-	-	-	-	1
81	Shankland Cox architects	-	-	-	1	-	1
82	SNC-Lavalin	-	-	-	1	-	1
83	SWA Group	1	-	-	-	-	1
84	Tamdeen	-	1	-	-	-	1
85	Technimont	-	1	-	-	-	1
86	Tricon Design	-	1	-	-	-	1
87	TYLIN International	-	1	-	-	-	1
88	UN studio	-	1	-	-	-	1
89	Urbis	-	1	-	-	-	1
90	Werner Sobek Group	-	1	-	-	-	1
91	Wes International Gmbh	-	1	-	-	-	1
92	Whiting-Turner Co.	-	-	1	-	-	1
93	Wilbur Smith Associate	1	-	-	-	-	1
94	WM Group Engineers	-	1	-	-	-	1
95	Woods Bagot	1	-	-	-	-	1
Total		21	42	4	25	2	94

C2- Report No 9 – Calculation sheet for the distribution of consultancy Services

Western Consultants							
#	Consultants	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Cost Consultant/ Quantity Surveyor	Total
GCC Consultants							
1	Aedas	1	-	-	-	-	1
2	Al Dabbous Engineering	-	-	-	1	-	1
3	Al Khatib	-	1	-	-	-	1
4	APP International	-	-	-	1	-	1
5	Arab Engineering Bureau	-	1	-	-	-	1
6	CCC	-	1	-	-	-	1
7	Combined Group Contracting	-	-	-	1	-	1
8	Consultants International	-	-	1	-	-	1
9	Consulting Engineering Services	-	-	-	1	-	1
10	Delta Marine Consultants	-	1	-	-	-	1
11	Dewan Architects & Engineers	-	1	-	-	-	1
12	Dr Ahmed Abdel-Warith	-	1	-	-	-	1
13	Dror	-	1	-	-	-	1
14	Edge architects	1	-	-	-	-	1
15	Exxon Mobil Corporation	-	1	-	-	-	1
16	GHD	-	-	1	-	-	1
17	Gulf Consults	-	-	-	1	-	1
18	Herman Tilke	1	-	-	-	-	1
19	Hisham Abdul Rehman Jafer	-	-	-	1	-	1
20	IMS Engineering Management	-	-	-	1	-	1
21	L&T	-	1	-	-	-	1
22	Marafeq	-	-	-	1	-	1
23	Mavers	-	-	-	1	-	1
24	MEECON	-	-	-	1	-	1
25	Middle East Engineering Consultants	-	-	-	1	-	1
26	MMC Utilities	1	-	-	-	-	1
27	Mohamed Turki	-	-	-	1	-	1
28	Mossessian & partners	1	-	-	-	-	1
29	Naco & Saudi Binladin Group	1	-	-	-	-	1
30	NORR Group	-	-	1	-	-	1
31	Pakistan's National Engineering Services	-	-	-	1	-	1

C2- Report No 9 – Calculation sheet for the distribution of consultancy Services							
Western Consultants							
#	Consultants	Architect /Mater Plan developer	Design Consultant	Supervision consultant	PMCM/ Development Manager/ Main Consultant	Cost Consultant/ Quantity Surveyor	Total
32	P & T Architects and Engineers Ltd.	-	-	1	-	-	1
33	PMDC	-	-	-	1	-	1
34	Qatar Petroleum	-	-	-	1	-	1
35	QPM	-	-	-	-	1	1
36	RSP Middle East	-	1	-	-	-	1
37	RTKL (Master Plan)	1	-	-	-	-	1
38	Saudi Consolidated Engineering	-	1	-	-	-	1
39	Saudi Bin ladin Group	1	-	-	-	-	1
40	UHDE Arabia Ltd	-	1	-	-	-	1
Total		8	12	4	15	1	40

C3-Report No 10 – Calculation sheet for Western & GCC Consultants with more than one Commission – Supporting Calculations for Report C1

Architect/Master Plan developer	No of Projects	Design Consultant	No of Projects	Supervision consultant	No of Projects	PMCM/Development Manager/ Main Consultant	No of Projects	Cost Consultant/Quantity Surveyor	No of Projects
AECOM	1	Acer Freeman Fox	1	ACLA Landscaping	1	ACE	1	Bexel	1
Aedas	1	Adrian Smith	2	AECOM	4	AECOM	3	D.G. Jones & Partners	4
Amec Foster Wheeler	1	AECOM	1	Aeroports de Paris	1	Al Dabbous Engineering	1	Dar Al Handasa Consultants	2
Arata Isozaki	1	Aeroports De Paris Ingenierie	1	Consultants International	1	APP International	1	Davis Langdon	1
ARUP	3	Al Khatib	1	Cracknell	1	Arup	3	EC Harris	1
ASTAD	1	Alstom	1	Dar Al Handasah Consultants	7	ASTAD	2	Faithful+Gould	2
Benoy	1	Aluminum Pechiney S.A.S.	1	Dorsch	1	Atkins	1	Jacobs Engineering Group	1
Bernardon Architects		Arab Engineering Bureau	1	Egis	5	Bechtel Corporation	4	KBR	1
Burt Hill	1	Art Consultants	1	Fayez Zuhair Architectural & Engineering	1	Cansult Maunsell	3	KEO International Consultants	1
Associates	1	Arup	4	Fluor Consulting Engineers	1	CIL Management Consultants	1	Kieferle & Partner	1
Cansult Maunsell	1	Asymptote Architecture	1	Gensler	1	Combined Group Contracting	1	Kling Consultants	1
Consolidate Engineering Co	1	Atkins	4	GHD	1	Consolidate Engineering Co.	2	Louis Berger	1
Cope Linder Architects	1	Austro-German engineering and consulting firm	1	High Construction	1	Consulting Engineering Services	1	QPM	1
COWI Consult	1	Besix and Sixco	1	Hill International	2	Dar Al Handasah Consultants	7	Rider Levett Bucknall	2
CVRD	1	Booz Allen Hamilton Company	1	Hyder Consulting	2	David Adamson and Partners	1	SNC-Lavalin	1
Cyrus	1	Boskalis	1	International Bechtel Company Limited	1	DB International Gmbh (Deutsche Bahn)	1	Turner & Townsand	5
Dar Al Handasah Consultants	2	Buro Happold	1	Jacobs Engineering Group	2	Deutsche Bahn AG (DBI)	1	-	-
DP Architect	1	CCC	1	KEO International Consultants	1	DEWI International	1	-	-
EC Harris	1	CK Design	1	Kieferle & Partner	1	EC Harris	1	-	-
Edge architects	1	Cowi & Partners	1	Kling Consultants	1	Egis	2	-	-
Fayez Zuhair Architectural & Engineering	1	Cracknell	2	Lahmeyer International	1	EllisDon	1	-	-
Foster and Partners	1	Dar Al Handasah Consultants	6	Louis Berger	1	Energoprojekt Entel Consulting Engineers	1	-	-
Gesamtplanung GmbH	1	De Leuw Cather International	1	Mott Macdonald	1	Essar Group	1	-	-
Herman Tilke	1	Delta Marine Consultants	1	NORR Group	1	Faithful & Gould	1	-	-

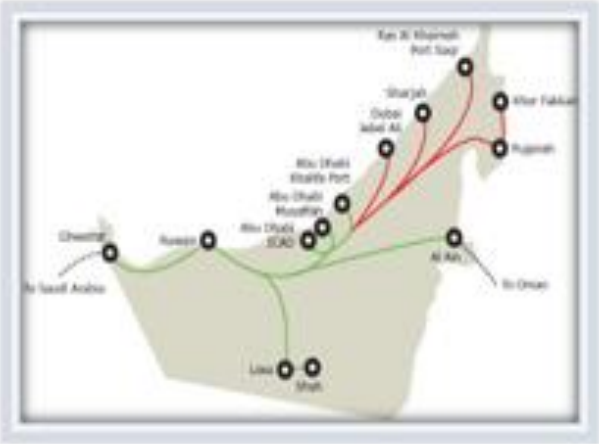
Architect /Mater Plan developer	No of Projects	Design Consultant	No of Projects	Supervision consultant	No of Projects	PMCM/ Development Manager/ Main Consultant	No of Projects	Cost Consultant/Quantity Surveyor	No of Projects
HOK International	3	Dewan Architects & Engineers	1	? & T Architects and Engineers Ltd.	1	Fichtner GMBH & Co. KG	1	-	-
KBR	1	Dr Ahmed Abdel-Warith	1	'arsons Brinckerhoff	1	Fluor Arabia	2	-	-
KEO	1	Dror	1	Parsons International	2	Gensler	1	-	-
Khatib & Alami	1	ECG	2	Saudi Consolidated Engineering	1	Global Real Estate Development Company	1	-	-
Kieferle & Partner	1	Ellisdon (Engineering Consultant)	1	SNC-Lavalin	1	Gulf Consults	1	-	-
Kirkpatrick & Co. Ltd	2	ESQUISSE DESIGN STUDIO	1	SSH design	1	Halcrow	7	-	-
Kling Consultants	1	Exxon Mobil Corporation	1	Systra	2	Hansk International Company	1	-	-
Kohn Pedersen Fox Associates (KPF)	3	Fayez Zuhair Architectural & Engineering	2	TYLIN International	1	Hill International	5	-	-
Larsen Architects	1	Fichtner Consulting Engineers	1	Whiting-Turner Co.	1	Hisham Abdul Rehman Jafer	1	-	-
Merrill	3	Foster + Partners	3	WS Atkins	1	Hoare Lea Consulting Engineer	1	-	-
MMC Utilities	1	Garden Design	1	WSP	2	Hongkong Electric's Associated Technical Services	1	-	-
Moffatt & Nichol	1	Geddes Architects	1	-	-	Hyundai	1	-	-
Mossessian & partners	1	Gensler	1	-	-	IMS Engineering Management	1	-	-
Mott MacDonald.	1	Goettsch Partners (GP)	1	-	-	Jacobs Engineering Group	1	-	-
Murphy Jahn	4	Halcrow& Cowi partners	1	-	-	KBR	3	-	-
Naco & Saudi Bin ladin Group	1	HOK	2	-	-	KEO International Consultants	3	-	-
Nikken Sekkei Ltd.	1	Hyder Consulting Middle East Limited	3	-	-		2	-	-
Omrania & Associates	1	ICTS International N.V	1	-	-	Kieferle & Partner	1	-	-
Owings and Merrill (SOM)	1	International Bechtel Company Limited	1	-	-	Kingston Corporation	1	-	-
Parsons International	3	Jacobs Engineering Group	3	-	-	Kling Consultants	1	-	-
Perkins+Will	1	John R. Harris & Partners	1	-	-	Lahmeyer International	1	-	-
RMJM	1	KBR	1	-	-	Laing O'Rourke	1	-	-
RSP Middle East	1	KEO	1	-	-	Langdon Wilson International	1	-	-
RTKL (Master Plan)	1	Khatib & Alami	1	-	-	Louis Berger Group	1	-	-
Saudi Bin Ladin Group	1	Kieferle & Partner	1	-	-	Mace International	1	-	-
Schweger Assozierte	1	Kingston Corporation	1	-	-	Marafeq	1	-	-

C3-Report No 10 – Calculation sheet Western & GCC Consultants with more than one Commission – Supporting Calculations for Report C1

Architect /Maber Plan developer	No of Projects	Design Consultant	No of Projects	Supervision consultant	No of Projects	PMCM/ Development Manager/ Main Consultant	No of Projects	Cost Consultant / Quantity Surveyor	No of Projects
Scott Wilson	2	Kinkisharyo Industrial Design Office	1	-	-	Mavers	1	-	-
Skidmore Owings	4	kins (DURL's Design Consultant)	1	-	-	MEECON	1	-	-
SWA Group,	1	Kirkpatrick & Co. Ltd	1	-	-	Merz and McLellan	1	-	-
UHDE Arabia Ltd	1	Kling Consultants	2	-	-	Middle East Engineering Consultants	1	-	-
Wilbur Smith Associate	1	Kohn Pedersen Fox,	1	-	-	Mohamed Turki	1	-	-
Woods Bagot	1	L&T	1	-	-	Mott Macdonald	2	-	-
WS Atkins and Partners	2	Lahmeyer International	1	-	-	Mouchel Parkman	3	-	-
-	-	Leslie Jones Architecture.	1	-	-	Pakistan's National Engineering Services	1	-	-
-	-	Louis Berger	1	-	-	Parsons Brinckerhoff	3	-	-
-	-	Magnusson Klemencic Associates;	1	-	-	Parsons International	8	-	-
-	-	Mitsubishi Heavy Industries (MHI)	1	-	-	PMDC	1	-	-
-	-	Mitsui Corporation of Japan	1	-	-	Qatar Petroleum	1	-	-
-	-	Mott Macdonald	3	-	-	R.W. Armstrong and Associates Inc.	1	-	-
-	-	Parsons Brinckerhoff	1	-	-	RMJM	1	-	-
-	-	Parsons International	3	-	-	Scott Wilson Co Ltd	1	-	-
-	-	Pelli Clarke Pelli	2	-	-	Shankland Cox architects	1	-	-
-	-	Pickard Chilton,	1	-	-	SNC-Lavalin	1	-	-
-	-	Ramboll	1	-	-	Systra Consulting Co	3	-	-
-	-	Rio Tinto Alcan	1	-	-	Turner Construction Company	5	-	-
-	-	Royal Kaskoning	1	-	-		2	-	-
-	-	RSP Middle East	1	-	-	WSP	1	-	-
-	-	Samsung Engineering Co. Ltd	1	-	-	-	-	-	-
-	-	Saudi Consolidated Engineering	1	-	-	-	-	-	-
-	-	Scott Wilson	1	-	-	-	-	-	-
-	-	SNC-Lavalin	1	-	-	-	-	-	-
-	-	SSH Kuwait	2	-	-	-	-	-	-

C3-Report No 10 – Calculation sheet for Western & GCC Consultants with more than one Commission – Supporting Calculations for Report C1									
Architect /Maber Plan developer	No of Projects	Design Consultant	No of Projects	Supervision consultant	No of Projects	PMCM/ Development Manager/ Main Consultant	No of Projects	Cost Consultant/ Quantity Surveyor	No of Projects
-	-	Systra	1	-	-	-	-	-	-
-	-	Tamdeen	2	-	-	-	-	-	-
-	-	Tricon Design	1	-	-	-	-	-	-
-	-	TYLIN International	1	-	-	-	-	-	-
-	-	UHDE Arabia Ltd	1	-	-	-	-	-	-
-	-	UN studio	1	-	-	-	-	-	-
-	-	Urbis	1	-	-	-	-	-	-
-	-	Werner Sobek Group	1	-	-	-	-	-	-
-	-	Wes International Gmbh	1	-	-	-	-	-	-
-	-	WM Group Engineers	1	-	-	-	-	-	-
-	-	WS Atkins & Partners	4	-	-	-	-	-	-
-	-	WSP	5	-	-	-	-	-	-
-	-	-	125		54		124		26

Appendix A – Pictures of GCC mega projects used in Thesis Research


Sharjah
Dubai
Jebel Ali
Abu Dhabi
Khalifa Port
Abu Dhabi
Musaffah
Abu Dhabi
ICAD
Al Ain
Liwa
Shah

Report Sources

Source	:	Construction Week Online – online search between April 2018 to November 2018
Filters	:	Mega Projects, GCC

Main Sources:

- www.constructionweekonline.com
- www.airbncnetwrok.net
- www.meedprojects.com
- www.protenders.com
- www.buildingradar.com
- www.gulfconstructononline.com

Other Sources: below the list of sources reviewed from April 2018 to November 2018

- www.protenders.com
- www.buildingradar.com
- www.gulfconstructononline.com
- www.dentoncorkermarshall.com
- www.bahrain.bh
- www.zawya.com
- www.meconstructionnews.com
- www.projectsandleads.com
- www.en.wikipedia.org
- www.systra.com
- www.meed.com
- www.gbcorponline.com
- www.albiladbh.com
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- www.landrum-brown.com
- www.gulfbase.com
- ww.turnerandtownsend.com
- www.designbuild-network.com
- www.internaxx.com
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- www.borouge.com
- www.edgedesign.ae
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- www.ccc.net
- www.ogj.com
- www.gulfbusiness.com
- www.dargroup.com
- www.riyadh-cables.com
- www.kbramcde.com
- www.designbuild-network.com
- www.arabtecholding.com
- www.skyscrapercenter.com
- www.thenational.ae
- www.arabtecuae.com
- www.kieferle-partner.com
- www.klingconsult.com
- www.hlgcontracting.com
- www.habtoor.com
- www.atkinsglobal.com
- www.arup.com
- www.adac.ae
- www.daep.gov.ae
- www.kpf.com
- www.airport-technology.com
- www.salini-impregilo.com
- www.fgould.com

- www.dezeen.com
- www.railwaygazette.com
- www.railjournal.com
- www.atkinsglobal.com
- www.etihadrail.ae
- www.railway-technology.com
- www.egis-group.com
- www.skyscrapercenter.com
- www.gsengint.com
- www.ecgsa.com
- ae.kompass.com
- www.rlb.com
- www.alemco.ae
- www.bechtel.com
- www.watersealuae.com
- www.dubaimetro.eu
- www.bexelconsulting.com
- www.architypereview.com
- www.dgjonesworld.com
- www.burjkhalifa.ae
- www.meed.com
- www.hilsonmoran.com
- www.venturesonsite.com
- www.arcadis.com
- www.sovisqs.com
- www.rmjm.com
- www.nsccme.com
- www.laingorourke.com
- www.robertbird.com
- www.etamneho.ae
- www.bechtel.com
- www.dubaiairports.ae
- www.alemco.ae
- www.mottmac.com
- www.hydraproperties.com
- www.trojanholding.ae
- www.wmgroupeng.com
- www.kpf.com
- www.thewaterfront.com
- www.parsonsglobal.com
- www.mainlink.sheikhjabercauseway.com
- www.dar.com
- www.power-technology.com
- www.alstom.com
- www.kentech.ie

Appendices two – University Ethical approvals

Research, Innovation and Academic Engagement Ethical Approval Panel

Doctoral & Research Support
Research and Knowledge Exchange,
Room 827, Maxwell Building
University of Salford
Manchester
M5 4WT

T +44(0)161 295 5278

www.salford.ac.uk/

30 October 2018

Alan Walsh

Dear Alan,

RE: ETHICS APPLICATION STR1718-63: An investigation of cultural factors which may impact the execution of mega-projects in the Gulf Cooperation Council (GCC) (namely Qatar, Saudi Arabia, Oman, United Arab Emirates, Bahrain and Kuwait)

Based on the information you provided, I am pleased to inform you that your application STR1718-63 has been approved.

If there are any changes to the project and/ or its methodology, please inform the Panel as soon as possible by contacting S&T-ResearchEthics@salford.ac.uk

Yours sincerely,

Dr Anthony Higham
Chair of the Science & Technology Research Ethics Panel

Research, Innovation and Academic Engagement Ethical Approval Panel

Doctoral & Research Support
Research and Knowledge Exchange,
Room 827, Maxwell Building
University of Salford
Manchester
M5 4WT

T +44(0)161 295 5278

www.salford.ac.uk/

14 January 2019

Alan Walsh

Dear Alan,

RE: AMENDED ETHICS APPLICATION STR1718-63 – An investigation of cultural factors which may impact the execution of mega-projects in the Gulf Cooperation Council (GCC) (namely Qatar, Saudi Arabia, Oman, United Arab Emirates, Bahrain and Kuwait)

Based on the information you provided, I am pleased to inform you that your amended application STR1718-63 has been approved.

If there are any changes to the project and/ or its methodology, please inform the Panel as soon as possible by contacting S&T-ResearchEthics@salford.ac.uk

Yours sincerely,

Dr Anthony Higham
Chair of the Science & Technology Research Ethics Panel

Appendices three Approved Consent forms for the Study

Organizational Invitation Letter / E-mail

Dear xxxxxx,

I am part time doctoral student at the University of Salford. For my research study I am investigating cultural factors which may influence the execution of megaprojects in the Gulf Cooperation Council (GCC). This study aims to develop a framework that improves cultural awareness in GCC megaprojects to appreciate the impact of culture and promote an integrated team approach to their delivery.

I have identified your organization from publicly available websites and business directories as being involved in the construction of megaprojects in the GCC.

Prior to undertaking the study, I need your agreement and consent to approach professional employees within your organization to take part in the study. A copy of the project information sheet is attached, and a copy of the agenda and topics to be examined in the interview is enclosed.

I hope to recruit 30+ participants for the survey including, subject to your consent, members of your organization. I can assure you that I will make every effort to ensure the study does not disrupt the working environment of participants and any data collected will remain confidential. This notification is in accordance with ethical approval for the study from the School of the Built environment, University of Salford.

I have attached a consent form for you to confirm that you agree to me contacting your employees. If you agree, please complete, sign and return the consent form and either:

a) provide me with the e-mail details of your employees to allow me to contact them directly, or
b) forward to your employees the project information sheet.

If you have any queries about the research, please contact me in the first instance.

I thank you in advance for your consideration of assisting me with my research.

If you have any further concerns about my research, please contact my supervisor Professor Peter Walker, University of Salford, Maxwell Building, University of Salford, Salford, and M5 4WT. Email p.a.walker@salford.ac.uk Tel: +44 161 2958190

Yours sincerely,

Alan Walsh

Tel: + 974 55827265

Email: A.Walsh10@edu.salford.ac.uk

Organizational Consent Form

Title of Project: An Investigation of cultural factors which may impact the execution of megaprojects in the GCC

Name of Researcher: Alan Walsh

- I confirm that I have read and understood the information sheet for the above study and what my contribution will b — Yes | No
- I have been given the opportunity to ask questions (face face, via telephone and e-mail). — Yes | No
- I agree to employees of my organization being invited to participate in an interview. — Yes | No | NA
- I agree to forward information to my employees by e-mai regarding the interview. — Yes | No | NA
- I understand that my organization's participation is voluntarily and that I can withdraw from the research at any time without giving any reason. — Yes | No
- I agree to my organization taking part in the above study — Yes | No

Name of organization's representative:

Signature:

Date:

Name of researcher: Alan Walsh

Researcher's e-mail address: A.Walsh10@edu.salford.ac.uk

If you have any concerns about this research that have not been addressed by the researcher, please contact the researcher's supervisor via the contact details below:

Supervisor's name: Professor Peter Walker

Supervisor's e-mail address: p.a.walker@salford.ac.uk

Appendix 3: Individual Invitation Letter / E-mail

Dear ,

I am part time doctoral student at the University of Salford. For my research study I am investigating of cultural factors which may impact the execution of megaprojects in the Gulf Cooperation Council (GCC). This study aims to develop a framework that improves cultural awareness in GCC megaprojects to appreciate the impact of culture and promote an integrated team approach to the delivery of GCC megaprojects.

I have identified your organization from publicly available websites and business directories as being involved in the construction of Megaprojects in the GCC. XXXXXXXXX, a senior manager in your organization, has consented to me contacting you to invite you to participate in my research, as a professional employee with experience of working on Megaprojects in the GCC. I hope to recruit about 20 participants to take part in these interviews. Any data collected will remain confidential.

A copy of the information sheet is attached, with further information regarding the research.

I have received ethical approval for the study from University of Salford, School of the Built environment [to be confirmed].

If you have any queries about the research, please contact me in the first instance.

I thank you in advance for your consideration of assisting me with my research.

If you have any further concerns about my research, please contact my supervisor Professor Peter Walker, University of Salford, Maxwell Building, University of Salford, Salford, and M5 4WT. Email p.a.walker@salford.ac.uk Tel: +44161 2958190

Yours sincerely,

Alan Walsh

Tel: + 974 55827265
Email: A.Walsh10@edu.salford.ac.uk

Appendix 4: Project Information Sheet

Research Title:

An Investigation of cultural factors which may impact the execution of megaprojects in the GCC

Invitation to participate

I would like to invite you take part in a research study. I am conducting interviews as part of my doctoral degree research in the School of the Built Environment at the University of Salford (United Kingdom) under the supervision of Professor Peter Walker. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

What is the purpose of the study?

This study focusses on developing a framework to promote cultural awareness and an integrated team approach to the delivery of GCC megaprojects. The research aims to contribute to a better delivery of projects by ensuring that the team is aware of the expected culture, and an integrated team approach is adopted by all participants, considering the different cultures of the team.

Why have I been invited?

Your employing organization has consented to its employees being approached to participate in the research. I am inviting individuals with professional experience working such as yourself, as a Consultant involved in the delivery of such megaprojects. Due to your experiences, you are best suited to provide your opinions on the various issues relating to Megaproject delivery within the GCC.

Do I have to take part?

It is up to you to decide. This information sheet provides you with information about the study. Your contact details have been provided by your employing organization. You are free to withdraw at any time, without giving a reason. Participation in an interview will be taken as your consent to participate in the research. You shall be given an opportunity to examine a transcript of the interview(s) and any concerns you raise shall be noted.

What will happen to me if I take part?

Participation in this study is entirely voluntary. It will involve completing an interview taking approximately 60 minutes. You may decline to answer any of the questions if you wish so. Furthermore, you may decide to not to participate in this study at any time without any negative consequences.

Your name or organization will not appear in any thesis or published report resulting from this study, without your express consent.

Data collected during this study will be retained for three years stored in locked, password protected, computer storage devices. There are no known or anticipated risks to you as a participant in this study.

Expenses and payments?

Participation in this study is voluntary, and there are no rewards or payments for participants.

What will I have to do?

Your participation in this study will be by participating in an interview to elicit your experiences and opinions of issues relating to cultural factors which may impact / or have impacted the execution of Megaprojects you have been involved within the GCC.

What are the possible disadvantages and risks of taking part?

There is no risk that can be expected to your participation in this study. All the names of the participants, and the names of their organizations, that will be involved in the study will be anonymized using codes.

What are the possible benefits of taking part?

The information that we will gain from the participants will help to develop a framework which will promote better cultural integration and contribute (once implemented) to improving the consultants' relationship with the employer whilst delivering GCC megaprojects. The information that we obtain from participants will help to understand the current situation better and provide recommendations for future megaprojects.

What if there is a problem?

If you have any questions regarding this study or would like additional information to assist you in reaching a decision about participation, please contact me at (+974 55827265) or by e-mail at A.Walsh10@edu.salford.ac.uk. You can also contact my supervisor, Professor Peter Walker at +44 161 2958190 or e-mail p.a.walker@salford.ac.uk.

I would like to assure you that this study has been reviewed has received ethics clearance from the School's Research Ethics Committee at the University of Salford. If you remain unhappy and wish to complain formally you can do this through School Research Ethics Committee at University of Salford: S&T-ResearchEthics@salford.ac.uk

Will my taking part in the study be kept confidential?

The data will be treated as confidential and protected through the following:

- Participants in research will be coded, and that code will only be known to the researcher

- Details of the participants will be saved on a password protected computer.
- The data of the questionnaire will be stored in locked filing cabinets within a locked office.
- Any data transferred to a hard drive or USB will be coded.

What will happen if I don't carry on with the study?

You may decide to withdraw from this study at any time without any negative consequences by advising the researcher, or in the first instance, by not participating in the interview. If you withdraw from the study, we will destroy all your identifiable information and the data collected up to your withdrawal.

What will happen to the results of the research study?

The research will not be published until three years after the graduation of the researcher and it will be available on the University of Salford website.

Who is organizing or sponsoring the research study?

School of the Built Environment, University of Salford, United Kingdom.

Contact details:

Researcher	**Supervisor**	**School Research Committee**	**Ethics**
Alan Walsh A.Walsh10@edu.salford.ac.uk +974 55827265	Professor Peter Walker p.a.walker@salford.ac.uk +44 161 2958190	S&T	ResearchEthics@salford.ac.uk

Appendix 5: Individual Consent Form

Title of Project: An Investigation of cultural factors which may impact the execution of megaprojects in the GCC

Name of Researcher: Alan Walsh

- I confirm that I have read and understood the information sheet for the above study and what my contribution will be. Yes | No
- I have been given the opportunity to ask questions (face to face, via telephone and e-mail). Yes | No
- I agree to forward information to my employees by e-mail regarding completing the interview. Yes | No | NA
- I understand that my personal participation is voluntarily and that I can withdraw from the research at any time without giving any reason. Yes | No
- I agree participate part in the above study. Yes | No

Name of organization's representative:

Signature:

Date:

Name of researcher: Alan Walsh

Researcher's e-mail address: A.Walsh10@edu.salford.ac.uk

If you have any concerns about this research that have not been addressed by the researcher, please contact the researcher's supervisor via the contact details below:

Supervisor's name: Professor Peter Walker

Supervisor's e-mail address: p.a.walker@salford.ac.uk

Appendix 6: Semi-structured interview

Title of Project: An Investigation of cultural factors which may impact the execution of megaprojects in the GCC

This semi-structured interview is designed to serve the research objectives as follows:

1. **Research Objective No 3:** To collect and analyze data by means of semi structured interviews from field based senior professional experts with specific GCC experience in the management of megaprojects.

   Data collection shall include key information with respect to the participants:

(a) personal integration to the GCC	**Section 2**
(b) professional integration to the GCC	**Section 3**
(c) exposures to GCC Culture Shock	**Section 4**
(d) GCC cultural preparation / training provisions	**Section 5**

2. **Research Objective No 5**: To prepare a framework for developing a working model to address cultural issues in G.C.C. mega projects, to improve the cultural unification of teams associated with future megaprojects in the GCC. **Section 6**

Outline of Semi – Structured Interview

Note: Before questioning the researcher shall provide a general outline of the research and Ethical Approval for Interview Participant. The Researcher asks interviewee to sign the consent form.

Interviewee Details

(a) Name and title of Interviewee

(b) Name of Consultant, date of interview

Section 1 General Background

1) How long have you been involved in the construction of megaprojects in the GCC?

2) What is your specific role in the delivery of GCC megaprojects?

3) Typically, how frequently are you directly engaged with GCC stakeholders?

4) Please provide details of the megaproject which you are currently assisting.

5) Kindly confirm your most appropriate geographical background from one the following: Americas / Europe / Asia / Africa & Middle East / Australia

Section 2 (personal GCC Integration)

6) Can you describe the most challenging aspects of adjusting to the social culture of the GCC?

7) Please outline how you / if have adjusted to this culture?

8) Can you outline the most beneficial aspects to working in the GCC?

9) Would you recommend living in the GCC to colleagues in your home country?
Kindly provide the rationale behind this answer

10) What would you say are the most important considerations whilst living in the GCC?

11) Can you advise if you have encountered examples of personnel leaving the GCC voluntarily, due to their reluctance to accept the GCC social culture for reasons which are not related to the work environment?

12) Do you feel that you have integrated to the social culture of the GCC? If so, please provide examples of the social changes you have made.

Section 3 (professional GCC Integration)

13) Can you describe the key professional differences you encounter whilst working in the construction industry in the GCC in comparison to your home country?

14) Can you describe the most challenging aspects of adjusting to professional life within the GCC?

15) Can you provide your opinion as to the key differences in the interaction with stakeholders in the GCC and in particular with the Employers Representatives, when compared to your professional experiences in your home country?

16) Overall, how would you generally describe any professional differences between practice in your home country and the GCC?

17) Would you recommend working in the GCC to colleagues in your home country? Kindly provide the rationale behind this answer

18) How quickly did you acclimatize yourself to the professional working environment within the GCC?

19) Are you aware of any contractual or other obligations to respect the culture of the GCC? e.g. Religious timings

20) Do you feel that you were adequately prepared for working in the GCC by your company?

21) Do you feel that the Employer values your opinion with the same level of respect, in a similar manner as your home country?

Section 4 (culture shock)

Explanatory comment to participant: Culture shock has been defined as *"a state of anxiety and frustration resulting from the immersion in a culture distinctly different from one's own"* (Naeem et al., 2015)

22) Are there any observations or specific examples of failure to adopt to the culture impacts of the GCC that you would like to share concerning culture shock and its impacts?

23) Have senior members of staff been removed from your megaproject because of cultural clashes with GCC stakeholders and if so, which position(s)?

24) Can you advise the impacts of the megaproject because of such loss of key personnel?

25) Based on your experiences working in your home country, do the contractors engaged in GCC megaprojects, behave in a similar way to your experiences at home?

26) If there are noticeable differences, kindly elaborate on these impacts.
27)

Section 5 **(GCC cultural training)**

28) Were you provided with any specific training prior to commencement of overseas employment.

29) If so, please outline this and explain the strengths / weaknesses of same.

30) Based on your experiences to date, do you feel that training on intercultural awareness training would have been appropriate to assist with your integration with megaprojects in the GCC?

31) If so, who would you like to deliver this training? In – house trainers / External specialists

32) Do you feel that additional leadership skills are required to manage multicultural teams?

33) Can you identify any related GCC training requirements?

34) Have policies from you Head Office been adopted to suit from local policies in the GCC?

35) If so which policies and are you in agreement with the changes?

Section 6 **(Cultural Framework)**

36) Thank you for your participation in this interview. Kindly advise if you would be prepared to make a further contribution by reviewing a potential framework for Integration of these findings in to a proposed Framework for future megaprojects.

Note: The questions above form the basis of the semi structured interview from which supplementary questions may be asked in response to answers given by interviewees

Culture Shock Reference:

Appendices four – Typical Interviews

Example 1 – Cost Consultant

		Cost Consultant
		2
CULTURAL RESEARCH SURVEY – INTERVIEW		002FDQASAY
Section 1 General Background		
Q1	**How long have you been involved in the construction of megaprojects in the GCC?**	12 years
Q2	**What is your specific role in the delivery of GCC megaprojects?**	Generally, that of Team Leader or Cost Management Lead
Q3	**Typically, how frequently are you directly engaged with GCC stakeholders?**	On a daily basis.
Q4	**Please provide details of the megaproject which you are currently assisting?.**	The Red Sea Development - Hospitality Project North of Jeddah in remote location. Approx. SAR 50 billion
Q5	**Kindly confirm your most appropriate geographical background from the following:**	
	Americas / Europe / Asia / Africa & Middle East / Australia	Africa and Middle East
Section 2 (personal GCC Integration)		

Q6	**Can you describe the most challenging aspects of adjusting to the social culture of the GCC?**	The Middle East nations all are slightly different. In Qatar I found that the management team wanted answers that are in accordance with their views. Challenging them directly, especially in front of their peers was unacceptable and would lead to a negative outcome. Emirates are less involved in the day to day issues than the Qatari's. Saudi nationals are mixed in that there are high level locals as well as junior locals working within the business. Overall, the Qatar and Saudi nationals seem to be more approachable on a day to day basis and are willing to learn provided that the learning pace is on their terms.
Q7	**Please outline how you / if have adjusted to this culture?**	Always treat the locals with respect and be patient when introducing a new concept. Understand that mind set changes is a slow and arduous process.
Q8	**Can you please outline any beneficial aspects to working in the GCC?**	It would seem that the UK and USA are focus more on a management consulting methodology (from my experience) whereas the Middle east seems to focus more on older style deliverables. The general construction market is also not as mature and the mix between local companies and international companies is clearly visible in their approach to dealing with issues.
Q9	**Would you recommend living in the GCC to colleagues in your home country?**	Yes, it is an enjoyable experience. For a family unit with younger children I would recommend KSA, and Qatar as the community spirit is more noticeable and expat tend to group together making the transition easier. UAE seems to be overpriced and more unattached young adult environment.

Q10	**What would you suggest are the most important cultural considerations whilst living in the GCC?**	Try to understand their culture and respect it. This does not mean you have to agree with it, but it is their culture and their country.
Q11	**Can you please advise if you have encountered examples of personnel leaving the GCC voluntarily, due to a reluctance to accept the GCC social culture, for reasons which are not related to the work environment?**	Yes. Previously I worked with staff members (2 in particular) that did not last in the Middle East. They did not agree with the local way of doing business and was to forthright in stating that this should be changed. Insistence to the point of being overbearing and rude. Both individuals did not last. The middle east is more a discussion and verbal agreement culture around a family importance and "wasta" methodology as opposed to a contractual negotiation.
Q12	**Do you feel that you have integrated to the social culture of the GCC?**	The cultures between western and middle eastern will never fully integrate. It is more about understanding each other and respecting the other person.
Section 3 - (professional GCC Integration)		
Q13	**Can you please describe any professional differences you have encountered whilst working in the GCC compared to your home country?**	The most prominent was the client using his own construction experience as a guide when this experience is limited to minor schemes undertaken in totally different situations and with a completely different remit.
Q14	**Can you please describe any challenging aspects of professional life within the GCC?**	Delivering a outcome of a study or cost plan in a manner that the client can understand and interpret.

Q15	**Can you please provide your opinion as to any differences in interaction with stakeholders in the GCC (in particular with the Employers Representatives), when compared to your professional experiences in your home country?**	In the ME the employer's representative in the norm believes he is in a position of strength and more often than not, will disregard the discussion until it is forced to a conclusion via the threat of arbitration or litigation. In the home country the Employer's representative is more focused on finding a suitable outcome that is in the best interest of the project.
Q16	**Overall, could you describe any professional differences between practice in your home country and the GCC?**	I find that individuals that has worked globally are more adaptable than those in the home country that has never travelled or worked with other nationalities.
Q17	**Would you recommend working in the GCC to colleagues in your home country?**	Yes, I believe it is a good experience to understand all the different methodologies that various countries adopt, and it increases our own understanding of how to present finding suitable to the client.
	Kindly provide the rationale behind this answer?	
Q18	**How quickly did you acclimatize to the professional working environment within the GCC?**	Yes, it took me approximately 6 months.
Q19	**Are you aware of any contractual or other obligations to respect to culture in the GCC? e.g. Religious timings (Please elaborate if appropriate)**	Religious timings are applicable in all areas of the middle east but to various extent. In Kuwait prayer times are adhered to and if in a meeting, the meeting will be halted to allow for the locals to pray. In KSA the working day is rarely interrupted as local people will step out to pray and re-join the meeting afterward/ In the UAE this does not seem to be observed. Ramadan is also a particularly slow time of the year as the locals are fasting and productivity is reduced.

Q20	**Do you feel that you were adequately prepared for working in the GCC by your company?**	My current company did not prepare me for working in the Middle East. My first role in the middle east was working with a local contractor. I was lucky in that a number of the management team was western expatriates which assisted in us settling in. We also had an initial familiarisation visit before we signed the contract to move here and this helped as we knew nothing of Kuwait prior to this.
Q21	**Do you feel that the Employer values your opinion with the same level of respect, as your home country?**	Probably more than in my home country. Finding people to work within a team is not easy and in this environment where multiple nationalities work together, I found that all of the management team had a part to play as we relied on each other's experience to learn and understand how to progress our business.
	Section 4 (culture shock) - Culture Shock	
Q22	**Are there any observations or specific examples of failure to adopt to GCC culture that you would like to share concerning culture shock and its impacts?**	I have seen stand up arguments between locals and internationals and it generally does not end in a constructive outcome.
Q23	**Have senior members of staff been removed from your megaproject as a result of cultural clashes with GCC stakeholders?** **If so, which position(s)?**	Yes
		Team leader and a reporting manager (second to team leader)
Q24	**If so, can you advise of impacts to the megaproject, as a result of such adjustments to key personnel?(B) Do you consider such a turnover normal on a project?**	Luckily, we were in the process of rebuilding the initial team and the change was expected. It did cause short term disruption as we had to few staff to undertake to workload but apart from this the team and client relationship improved.

Q25	**Based on your own experiences of working in your home country, do you feel that contractors engaged in GCC megaprojects, behave in a similar way to your experiences at home?**	No, Middle East contractors are a mix between local and international and as I stated before, there is a visible difference.
Q26	**If there are noticeable differences, kindly elaborate on these impacts.**	Locals believe that they can negotiate in a "Majalis" using their most important members (highest ranking family) in the company whilst international companies tend to be more by the book.
Section 5 (GCC cultural training)		
Q27	**Were you provided with any specific training prior to commencement of overseas employment?**	No
Q28	**If so, please outline this and explain the strengths / weaknesses of same.**	N/A
Q29	**Based on your experiences to date, do you feel that training on intercultural awareness training would have been appropriate to assist with your integration with megaprojects in the GCC?**	Difficult to answer as I have not been on any intercultural awareness training and therefore, I could not comment on the course material or how beneficial it would have been. From a perspective of employing people into the Middle East for the first time and having to take time to discuss with them the cultural issues I could certainly see a benefit.
Q30	**If so, who would you like to deliver this training? In – house trainers / External specialists**	Either of the choices are fine provided that the trainer has experienced the culture and is not reading / quoting from a book.
Q31	**Do you feel that additional leadership skills are required to manage multicultural teams?**	Yes

	If yes - which skills?	All cultures (and in fact people) react differently to situations and every person in a management capacity should understand this. There is not one set way to get a people or various nationalities to achieve the same output. So, in short EQ is most beneficial.
Q32	**Do you feel that additional leadership skills are required to manage multicultural teams?**	I had coaching prescribed by my company to deal with a specific issue and this worked for me.
Q33	**Have policies from you Head Office been adopted to suit from local policies in the GCC?**	Only to comply with legal rules in specific countries.
Q34	**If so which policies and are you in agreement with the changes?**	Generally, these are relating to labour law and conditions of employment. We have to apply these as a business working within the region but as a global company, we also need to be consistent with our approach globally. Local policies do not always take account of the fact that a company's internal policies might differ from local requirements.
Q35	**Kindly confirm if you are willing to participate in a short online survey by the Hofstede Institute (demo report provided)**	I confirm that I am willing to participate.

Example 2 - Architect

		Architect
		13
CULTURAL RESEARCH SURVEY – INTERVIEW		
Section 1 General Background		
Q1	**How long have you been involved in the construction of megaprojects in the GCC?**	Since August 2017 2 years
Q2	**What is your specific role in the delivery of GCC megaprojects?**	Design Manager - Hamad Port Project Phase 2 - Design of Container Terminals
Q3	**Typically, how frequently are you directly engaged with GCC stakeholders?**	Twice weekly
Q4	**Please provide details of the megaproject which you are currently assisting?**	Hamad Port Project Phase 2 - Design of Container Terminals CT2 and CT3
Q5	**Kindly confirm your most appropriate geographical background from the following:**	
	Americas / Europe / Asia / Africa & Middle East / Australia	Europe
Section 2 (personal GCC Integration)		

Q6	**Can you describe the most challenging aspects of adjusting to the social culture of the GCC?**	There are a lot of restrictions placed on the individual by the government which are different from home and take getting used to.
Q7	**Please outline how you / if have adjusted to this culture?**	Despite the intention of the Islamic religion the treatment of expats by some locals is different from what I am used to. Some of the manual workers endure extreme conditions and are treated very poorly.
Q8	**Can you please outline any beneficial aspects to working in the GCC?**	Working here is extremely interesting and challenging. On a personal level being in GCC has increased my knowledge of this region and given me greater knowledge and tolerance.
Q9	**Would you recommend living in the GCC to colleagues in your home country?**	Yes - depending on the person. I think that some people are not suited to working away from home and this region has its own particular challenges that require a certain personality.
Q10	**What would you suggest are the most important cultural considerations whilst living in the GCC?**	Respect for the Islam region and respect for the cultural practices of the local population.
Q11	**Can you please advise if you have encountered examples of personnel leaving the GCC voluntarily, due to a reluctance to accept the GCC social culture, for reasons which are not related to the work environment?**	This situation has not been encountered - my understanding is that people who come to GCC understand the cultural differences and accept them.
Q12	**Do you feel that you have integrated to the social culture of the GCC?**	Yes - with expats - I have very limited contact with Qataris.
Section 3 - (professional GCC Integration)		

Q13	**Can you please describe any professional differences you have encountered whilst working in the GCC compared to your home country?**	There is a different approach to the contract between Client and Consultant/Contractor. At home the Contract is regarded as a rule book to be followed and fairly enforced, whereas here there is a distinct lack of fairness applied in contractual matters by Clients and the Consultant /Contractor is expected to do whatever the Client wants regardless of the provisions of the Contract. In addition there are a lot of cumbersome procedural requirements that are time consuming and expensive that do not add to the benefit of the project in terms of quality, cost or time.
Q14	**Can you please describe any challenging aspects of professional life within the GCC?**	The projects here are very demanding and there are time and contractual pressures which are more onerous than at home. The design team that I managed come from all over the world which adds a layer of communication and understanding issues. There are very few professional networks or bodies and the opportunities for professional learning and development are extremely limit.
Q15	**Can you please provide your opinion as to any differences in interaction with stakeholders in the GCC (in particular with the Employers Representatives), when compared to your professional experiences in your home country?**	There is a culture of blame in GCC which results in a variation to a contract being seen as someone having made a mistake. Hence Client Representatives are extremely reluctant to agree to or approve variations to avoid blame that they mismanaged the contract. This is not typically the case at home. In addition, Client Representatives are extremely reluctant to make decisions and want every aspect of the project to come as a recommendation from the Consultant so that the Employer Representative can rubber stamp it.

Q16	**Overall, could you describe any professional differences between practice in your home country and the GCC?**	In my experience at home everyone involved in a project has the best interests of the project at heart. Here, I believe some people do not act in the best interests of the project and sometimes obstruct the project.
Q17	**Would you recommend working in the GCC to colleagues in your home country?**	Please refer to the answer to Q9.
	Kindly provide the rationale behind this answer?	
Q18	**How quickly did you acclimatize to the professional working environment within the GCC?**	I believe I have adapted to the working environment here.
Q19	**Are you aware of any contractual or other obligations to respect to culture in the GCC? e.g. Religious timings (Please elaborate if appropriate)**	Cultural practices and requirements are not necessarily prescribed in Contracts, but labour laws require respect for such things as prayer times with requirements for prayer rooms and ablution facilities; reduced working hours during Ramadan; limited working hours of Government Offices, etc.
Q20	**Do you feel that you were adequately prepared for working in the GCC by your company?**	Not really - but if you come with an open mind and the understanding that things will be different and you have to accept them, then these types of adjustments are relatively easy, provided there are other expats available in the workplace to assist new arrivals to be aware of local requirements and restrictions and to provide information on navigating the unfamiliar and overly-complicated processes of getting established in a new country.

Q21	**Do you feel that the Employer values your opinion with the same level of respect, as your home country?**	I work for the same employer here in GCC as I worked for at home. The Country Manager is a colleague I worked with at home so the management style in GCC is familiar and there are no differences in this regard. There are differences in the approach to HR where practices and treatment of individuals here would not be tolerated at home.
	Section 4 (culture shock) - Culture Shock	
Q22	**Are there any observations or specific examples of failure to adopt to GCC culture that you would like to share concerning culture shock and its impacts?**	I saw a girl in a supermarket at the start of Ramadan who was inappropriately dressed who was arrested as she left the supermarket.
Q23	**Have senior members of staff been removed from your megaproject as a result of cultural clashes with GCC stakeholders?** **If so, which position(s)?**	Yes Two people were removed due to alleged non-performance - one was the Master Planning Manager and the other was the Stakeholder and Risk Manager. In my opinion both of these cases were more personality clashes rather than cultural clashes.
Q24	**If so, can you advise of impacts to the megaproject, as a result of such adjustments to key personnel?** **(B) Do you consider such a turnover normal on a project?**	The Master Planning Manager position was very difficult to backfill and has caused a lot of additional cost as the role had to be filled by a person from our Dubai Office. (B) There is a lack of tolerance on the part of the Client here that is not experienced at home.

Q25	**Based on your own experiences of working in your home country, do you feel that contractors engaged in GCC megaprojects, behave in a similar way to your experiences at home?**	At home I think there is a more mature approach by Contractors based on less focus on cost and more on quality. The approach here is very much the traditional one where the Contractor looks to cut as many corners as possible leading to far lower outcomes in terms of quality than at home. This results from selection processes where minimum cost will always win, and Sponsor-influence during the tender process. The difficulty in getting variations agreed, approved and paid also adds pressure for Contractors to cut corners.
Q26	**If there are noticeable differences, kindly elaborate on these impacts.**	Refer to Q25.
Section 5 (GCC cultural training)		
Q27	**Were you provided with any specific training prior to commencement of overseas employment?**	I was provided with an induction handbook to read which was basically a list of what not to do. I also was given an induction powerpoint presentation which was not very helpful.
Q28	**If so, please outline this and explain the strengths / weaknesses of same.**	The strengths were that at least something was given and there was some useful information provided. The weaknesses were that the person giving the presentation had poor English, so it was difficult to understand and the presentation was delivered in an off-hand manner.
Q29	**Based on your experiences to date, do you feel that training on intercultural awareness training would have been appropriate to assist with your integration with megaprojects in the GCC?**	The best information I obtained was talking with expat colleagues who were involved in the same project. If this is available, I believe this is the most effective form of communication.

Q30	**If so, who would you like to deliver this training? In – house trainers / External specialists**	Structured training needs to be delivered by appropriately trained people, When I joined our office in Jakarta the training was delivered by an in-house HR person who was excellent. My experience in Qatar was that the in-house HR person was very poor. Hence external specialists would be a more reliable solution provided they are knowledgeable, good communicators and in tune with the sort of information new arrivals require.
Q31	**Do you feel that additional leadership skills are required to manage multicultural teams?**	I think if you are a good leader in your home country you should be a good leader in an expat situation involving a multi-cultural team, provided you have tolerance towards other cultures and are a good communicator.
	If yes - which skills?	Tolerance and communication.
Q32	**Do you feel that additional leadership skills are required to manage multicultural teams?**	No.
Q33	**Have policies from you Head Office been adopted to suit from local policies in the GCC?**	Mainly drug and alcohol policies.
Q34	**If so which policies and are you in agreement with the changes?**	Refer to Q33.
Q35	**Kindly confirm if you are willing to participate in a short online survey by the Hofstede Institute (demo report provided)**	No.

Appendices five – Megaproject Costs for Extending Consultancy Services

Turner & Townsend

Benchmarking Report

Middle East Professional Fees on Mega Projects

Middle East Professional Fees on Mega Projects

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Professional Fee Benchmarking

making the difference

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Stage:	Benchmarking
Revision:	1
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3	Benchmarking

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A	Report on Bahrain
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C	Report on Oman
D	Report on Qatar
E	Report on Saudi Arabia
F	Report on United Arab Emirates

Quality Check

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1 Executive Summary

This report has been compiled in order to establish benchmark costs for professional fees on Mega Projects in the Middle East. Turner & Townsend have an extensive cost database for several countries in the Middle East region. The database was used as a basis for this report, which covers the following countries:

- Bahrain
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- United Arab Emirates

The Mega Projects in each of the aforementioned countries are all at different stages. For example, for a major city in Qatar, the project is in the closing stages, as such, some of the consultants have been on the project for in excess of 10 years. Conversely, a lot of the projects in Saudi Arabia are still at a relatively early stage and as such, fee percentages are based upon a percentage of the "estimated" construction costs, rather than tendered or completed construction costs.

All of the fee data collated has been analysed and adjusted in accordance with Tender Price Indices and Location Indices, in order to allow a meaningful like-for-like comparison.

This report has been commissioned on the basis of providing an assessment of the consultancy costs for managing a GCC Mega Project monthly. The advice is based on adapting benchmarking fee assessments towards data received through 'GCC Mega Projects Report' dated 30 March 2020, concerning GCC Mega Projects and consultancy analysis for the GCC. No liability is taken for any errors or inconsistencies in this report.

2 Basis of Costs and Methodology

2.1 Exclusions

This benchmarking report excludes the following:

- Construction costs
- Land
- Direct/owners costs
- Taxes/state fees
- Project finance costs
- Building permit fees

2.2 Assumptions

- The consultancy appointments were based upon a competitive tendering scenario
- The date for pricing 4Q20
- Fixed USD conversion rate set at 3.65 by Qatar Central Bank

2.3 Methodology

This benchmarking report has been based on a mass of data that has been collected during the last 10 years, from Turner & Townsend's involvement with multiple Mega Projects in the Middle East Region, as analysed in Appendices A-F.

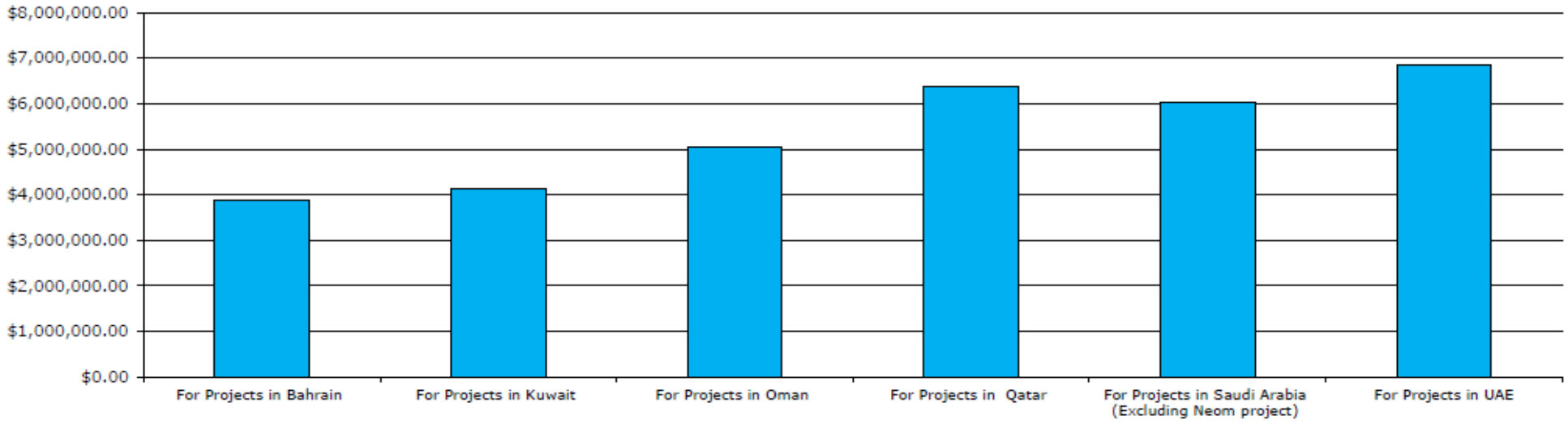
The data has been analysed in order to ensure a reasonable like-for-like comparison. Adjustments were made for variances such as "time" and "location", using Turner & Townsend's cost indices, in order to normalize the data, as the projects were tendered at different points in time.

Middle East Professional Fees on Mega Projects

Professional Fee Benchmarking

Section 3 - Benchmarking

Project Title	Cost/Month	
For Projects in Bahrain	$3,885,753	Based on Report A
For Projects in Kuwait	$4,140,575	Based on Report B
For Projects in Oman	$5,040,561	Based on Report C
For Projects in Qatar	$6,361,875	Based on Report D
For Projects in Saudi Arabia (Excluding Neom project)	$6,014,990	Based on Report E
For Projects in UAE	$6,842,210	Based on Report F
Average	$5,380,994	



Cost per day/Month for Consutancy Fees			
#	**Name of the project**	**Average Consultant fees per day (USD) All megaprojects per day**	**Average Consultantfees per day (USD) All megaprojects per month**
Appendix A	For Projects in Bahrain	129,525	3,885,753
Appendix B	For Projects in Kuwait	138,019	4,140,575
Appendix C	For Projects in Oman	168,019	5,040,561
Appendix D	For Projects in Qatar	212,062	6,361,875
Appendix E	For Projects in Saudi Arabia (Excluding Neom project)	200,500	6,014,990
Appendix F	For Projects in UAE	228,074	6,842,210
Overall	**Average**	**179,366**	**5,380,994**

Appendix A - Assessed Value of Consultancy Fees - Bahrain Report

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
1	Marsa Al Seef Development	Bahrain	2010	2020	3650	2,500,000,000.00	50,000,000.00	37,500,000.00	37,500,000.00	5,000,000.00	130,000,000.00	35,616
2	Water Garden City	Bahrain	2010	2020	3650	7,000,000,000.00	350,000,000.00	140,000,000.00	175,000,000.00	28,000,000.00	693,000,000.00	189,863
3	Durrat Al Bahrain Development - Durrat Marina	Bahrain	2008	2014	2190	1,500,000,000.00	52,500,000.00	30,000,000.00	30,000,000.00	6,000,000.00	118,500,000.00	54,110
4	Al Dur IWPP	Bahrain	2008	2011	1095	2,000,000,000.00	80,000,000.00	40,000,000.00	40,000,000.00	6,000,000.00	166,000,000.00	151,598
5	Durrat Al Bahrain Development	Bahrain	2009	2015	2190	6,000,000,000.00	210,000,000.00	120,000,000.00	120,000,000.00	24,000,000.00	474,000,000.00	216,438
											Average Cost of Consultant per day	**129,525**
											Average Cost of Consultant per month	**3,885,753**

Appendix B - Assessed Value of Consultancy Fees - Kuwait Report

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
1	Jaber Ahmed Al-Jaber Al-Sabah Bridge (Al Subiya Connection)	Kuwait	2011	2014	1095	2,650,000,000.00	92,750,000.00	53,000,000.00	53,000,000.00	5,300,000.00	204,050,000.00	186,347
2	2,000MW Power Plant at Subiya	Kuwait	2009	2011	730	2,650,000,000.00	132,500,000.00	53,000,000.00	66,250,000.00	10,600,000.00	262,350,000.00	359,384
3	Shuaiba North Power & Desalination Plant	Kuwait	2007	2010	1095	1,270,000,000.00	-	-	-	-	-	-
4	Failaka Island Development	Kuwait	2010	2015	1825	3,300,000,000.00	66,000,000.00	49,500,000.00	49,500,000.00	6,600,000.00	171,600,000.00	94,027
5	Jaber Ahmed Al-Jaber Al-Sabah Hospital	Kuwait	2009	2012	1095	1,060,000,000.00	21,200,000.00	15,900,000.00	15,900,000.00	2,120,000.00	55,120,000.00	50,338
											Average Cost of Consultant per day	**138,019**
											Average Cost of Consultant per month	**4,140,575**

Appendix C - Assessed Value of Consultancy Fees - Oman Report

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
1	Salalah IWPP	Oman	2010	2012	730	1,500,000,000.00	45,000,000.00	25,000,000.00	25,000,000.00	3,000,000.00	98,000,000.00	134,247
2	Al Duqm Port - Marine Works	Oman	2007	2012	1735	1,250,000,000.00	56,250,000.00	31,250,000.00	31,250,000.00	3,750,000.00	122,500,000.00	70,605
3	Sohar Iron Pallet Plant	Oman	2008	2011	791	1,500,000,000.00	60,000,000.00	37,500,000.00	37,500,000.00	6,000,000.00	141,000,000.00	178,255
4	Expansion of Muscat International Airport - Phase 1	Oman	2009	2012	1095	1,200,000,000.00	42,000,000.00	30,000,000.00	30,000,000.00	2,400,000.00	104,400,000.00	95,342
5	Al-Madina Azarqa (Blue City)	Oman	2005	2020	5475	20,000,000,000.00	1,000,000,000.00	400,000,000.00	500,000,000.00	80,000,000.00	1,980,000,000.00	361,644
											Average Cost of Consultant per day	**168,019**
											Average Cost of Consultant per month	**5,040,561**

Appendix D - Assessed Value of Consultancy Fees - Qatar Report

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
1	Dukhan Highway	Qatar	2011	2014	1095	1,000,000,000.00	50,000,000.00	20,000,000.00	25,000,000.00	4,000,000.00	99,000,000.00	90,411
2	Doha Festival City	Qatar	2011	2014	1095	1,650,000,000.00	33,000,000.00	33,000,000.00	33,000,000.00	6,600,000.00	105,600,000.00	96,438
3	Musheireb Development	Qatar	2010	2022	4380	5,000,000,000.00	250,000,000.00	100,000,000.00	100,000,000.00	20,000,000.00	470,000,000.00	107,306
4	Barwa Financial District	Qatar	2009	2013	1460	1,300,000,000.00	65,000,000.00	26,000,000.00	32,500,000.00	5,200,000.00	128,700,000.00	88,151
5	Ras Laffan C IWPP	Qatar	2007	2011	1460	3,900,000,000.00	195,000,000.00	78,000,000.00	97,500,000.00	15,600,000.00	386,100,000.00	264,452
6	Ras Laffan Port Expansion	Qatar	2007	2010	1095	1,700,000,000.00	85,000,000.00	34,000,000.00	42,500,000.00	6,800,000.00	168,300,000.00	153,699
7	Education city	Qatar	2003	2023	7300	8,250,000,000.00	412,500,000.00	165,000,000.00	206,250,000.00	33,000,000.00	816,750,000.00	111,884
8	Sidra Medical and Research Centre in Qatar	Qatar	2008	2018	3650	2,350,000,000.00	117,500,000.00	47,000,000.00	58,750,000.00	9,400,000.00	232,650,000.00	63,740
9	Ras Girtas Power & Water Plant in Qatar	Qatar	2009	2011	730	2,000,000,000.00	100,000,000.00	40,000,000.00	50,000,000.00	8,000,000.00	198,000,000.00	271,233
10	Qatar Power Transmission System Expansion - Phase 9	Qatar	2010	2013	1095	1,500,000,000.00	-	-	30,000,000.00	-	30,000,000.00	27,397
11	Qatar Entertainment City	Qatar	2009	2015	2190	3,000,000,000.00	150,000,000.00	60,000,000.00	75,000,000.00	12,000,000.00	297,000,000.00	135,616
12	Ras Girtas Power & Water Plant Expansion	Qatar	2009	2011	730	1,900,000,000.00	95,000,000.00	38,000,000.00	47,500,000.00	7,600,000.00	188,100,000.00	257,671
13	Barwa City Development	Qatar	2007	2015	2920	1,500,000,000.00	-	30,000,000.00	30,000,000.00	-	60,000,000.00	20,548
14	Mesaieed Independent Power Plant (IPP)	Qatar	2006	2010	1460	2,300,000,000.00	80,500,000.00	-	-	-	80,500,000.00	55,137
15	Doha metro	Qatar	2013	2022	3285	46,800,000,000.00	2,340,000,000.00	936,000,000.00	1,170,000,000.00	187,200,000.00	4,633,200,000.00	1,410,411
16	Doha Convention Centre and Tower	Qatar	2008	2011	1095	1,500,000,000.00	52,500,000.00	30,000,000.00	30,000,000.00	30,000,000.00	142,500,000.00	130,137
17	Lusail Development	Qatar	2006	2018	4380	38,700,000,000.00	1,354,500,000.00	774,000,000.00	967,500,000.00	154,800,000.00	3,250,800,000.00	742,192
18	New Doha International Airport	Qatar	2004	2025	7665	11,000,000,000.00	-	220,000,000.00	220,000,000.00	22,000,000.00	462,000,000.00	60,274
19	Qatar - Bahrain Causeway	Qatar	2011	2014	1095	3,000,000,000.00	150,000,000.00	-	60,000,000.00	-	210,000,000.00	191,781
20	The Pearl Qatar	Qatar	2006	2022	5840	5,000,000,000.00	75,000,000.00	100,000,000.00	125,000,000.00	20,000,000.00	320,000,000.00	54,795
21	Al Waab City Development	Qatar	2007	2010	1095	3,200,000,000.00	-	64,000,000.00	80,000,000.00	12,800,000.00	156,800,000.00	143,196
22	New Doha Port	Qatar	2010	2023	4745	7,400,000,000.00	370,000,000.00	148,000,000.00	185,000,000.00	29,600,000.00	732,600,000.00	154,394

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
23	The 7 Stadium for the FIFA World Cup 2022	Qatar	2011	2022	4015	10,000,000,000.00	500,000,000.00	200,000,000.00	250,000,000.00	40,000,000.00	990,000,000.00	246,575
24	Qatar Water Reservoirs	Qatar	2015	2021							-	
											Average Cost of Consultant per day	212,062
											Average Cost of Consultant per month	6,361,875

Appendix E - Assessed Value of Consultancy Fees - Saudi Arabia

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
1	The Jazan IGCC - Utilities & Common Area Project	Saudi Arabia	2014	2017							-	
2	Abraj Kudai Towers in Makkah	Saudi Arabia	2013	2019	2190	3,500,000,000.00	70,000,000.00	52,500,000.00	52,500,000.00	7,000,000.00	182,000,000.00	83,105
3	Shaybah Natural Gas Liquids Project	Saudi Arabia	2011	2014	1095	3,000,000,000.00	150,000,000.00	60,000,000.00	75,000,000.00	12,000,000.00	297,000,000.00	271,233
4	Construction of Wasit Gas Plant	Saudi Arabia	2011	2014	1095	1,900,000,000.00	95,000,000.00	38,000,000.00	47,500,000.00	7,600,000.00	188,100,000.00	171,781
5	Construction of 5,000 Villas in Eastern Province	Saudi Arabia	2010	2014	1460	1,350,000,000.00	-	-	-	-	-	-
6	Yanbu Refinery Project	Saudi Arabia	2010	2015	1825	10,000,000,000.00	500,000,000.00	200,000,000.00	250,000,000.00	40,000,000.00	990,000,000.00	542,466
7	Expansion of Grand Mosque	Saudi Arabia	2008	2019	4015	11,000,000,000.00	220,000,000.00	165,000,000.00	165,000,000.00	22,000,000.00	572,000,000.00	142,466
8	Ras Al Zour IWPP	Saudi Arabia	2010	2013	1095	5,500,000,000.00	-	110,000,000.00	137,500,000.00	-	247,500,000.00	226,027
9	Shuqaiq-2 IWPP	Saudi Arabia	2006	2010	1460	1,870,000,000.00	93,500,000.00	-	-	-	93,500,000.00	64,041
10	Jamaraat Bridge in Makkah	Saudi Arabia	2006	2007	365	1,200,000,000.00	24,000,000.00	18,000,000.00	18,000,000.00	2,400,000.00	62,400,000.00	170,959
11	King Abdulaziz International Airport (KAIA) Development - Phase 1	Saudi Arabia	2006	2011	1825	1,500,000,000.00	75,000,000.00	22,500,000.00	22,500,000.00	3,000,000.00	123,000,000.00	67,397
12	Al Qurayyah Combined-Cycle Power Plant	Saudi Arabia	2009	2012	1095	1,850,000,000.00	64,750,000.00	37,000,000.00	46,250,000.00	-	148,000,000.00	135,160
13	Makkah Metro	Saudi Arabia	2012	2019	2555	1,800,000,000.00	90,000,000.00	36,000,000.00	45,000,000.00	7,200,000.00	178,200,000.00	69,746
14	Ras Al Zour Aluminum complex	Saudi Arabia	2010	2014	1460	1,000,000,000.00	20,000,000.00	20,000,000.00	20,000,000.00	2,000,000.00	62,000,000.00	42,466
15	Riyadh PP10	Saudi Arabia	2008	2011	1095	3,000,000,000.00	60,000,000.00	45,000,000.00	45,000,000.00	6,000,000.00	156,000,000.00	142,466
16	New petrochemical facilities in Jubail industrail city	Saudi Arabia	2009	2013	1460	1,100,000,000.00	55,000,000.00	22,000,000.00	22,000,000.00	2,200,000.00	101,200,000.00	69,315
17	Information Technology and Communication Complex (ITCC) in Riyadh	Saudi Arabia	2008	2013	1825	1,000,000,000.00	50,000,000.00	20,000,000.00	25,000,000.00	4,000,000.00	99,000,000.00	54,247
18	Riyadh - Al Zour Water Pipeline	Saudi Arabia	2009	2012	1095	2,500,000,000.00	125,000,000.00	50,000,000.00	50,000,000.00	5,000,000.00	230,000,000.00	210,046
19	1200-MW Power Plant Next to Shuaiba Power Plant	Saudi Arabia	2008	2012	1460	3,000,000,000.00	1,740,000,000.00	60,000,000.00	-	-	1,800,000,000.00	1,232,877
20	Jeddah Gate Development	Saudi Arabia	2007	2019	4380	1,600,000,000.00	80,000,000.00	32,000,000.00	32,000,000.00	3,200,000.00	147,200,000.00	33,607
21	North - South Railway	Saudi Arabia	2010	2015	1825	3,500,000,000.00	175,000,000.00	70,000,000.00	87,500,000.00	14,000,000.00	346,500,000.00	189,863
22	Haramain High Speed Rail Project - Phase 1	Saudi Arabia	2009	2012	1095	1,900,000,000.00	95,000,000.00	28,500,000.00	47,500,000.00	7,600,000.00	178,600,000.00	163,105

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
23	Jizan Economic City (JEC)	Saudi Arabia	2009	2020	4015	3,000,000,000.00	150,000,000.00	150,000,000.00	75,000,000.00	12,000,000.00	387,000,000.00	96,389
24	Princess Nora Bint Abdulrahman University in Riyadh	Saudi Arabia	2008	2011	1095	11,500,000,000.00	230,000,000.00	172,500,000.00	172,500,000.00	23,000,000.00	598,000,000.00	546,119
25	Shams Al-Riyadh Development	Saudi Arabia	2010	2013	1095	1,600,000,000.00	32,000,000.00	24,000,000.00	24,000,000.00	3,200,000.00	83,200,000.00	75,982
26	Kingdom Tower in Jeddah	Saudi Arabia	2011	2017	2190	15,000,000,000.00	750,000,000.00	300,000,000.00	300,000,000.00	30,000,000.00	1,380,000,000.00	630,137
27	Abraj Al-Bait in Makkah	Saudi Arabia	2009	2012	1095	1,600,000,000.00	32,000,000.00	24,000,000.00	24,000,000.00	3,200,000.00	83,200,000.00	75,982
28	Yanbu IWPP	Saudi Arabia	2009	2013	1460	4,000,000,000.00	200,000,000.00	-	-	-	200,000,000.00	136,986
29	Jubail IWPP	Saudi Arabia	2006	2009							-	
30	Jabal Omar Development in Makkah (extension)	Saudi Arabia	2018	2022	1460	2,700,000,000.00	-	54,000,000.00	67,500,000.00	10,800,000.00	132,300,000.00	90,616
1	King Abdullah University of Science & Technology (KAUST)	Saudi Arabia	2006	2012	2190	3,500,000,000.00	175,000,000.00	-	-	-	175,000,000.00	79,909
											Average Cost of Consultant per day	**200,500**
											Average Cost of Consultant per month	**6,014,990**

Appendix F - Assessed Value of Consultancy Fees - UAE Report

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
1	Construction of 37 Towers in Abu Dhabi and Dubai	UAE	2014	2018	1460	6,000,000,000.00	-	-	-	-	-	-
2	Jewel of the Creek Development	UAE	2012	2017	1825	1,360,000,000.00	68,000,000.00	34,000,000.00	27,200,000.00	5,440,000.00	134,640,000.00	73,775
3	Al Habtoor City	UAE	2012	2016	1460	1,330,000,000.00	66,500,000.00	33,250,000.00	33,250,000.00	5,320,000.00	138,320,000.00	94,740
4	Abu Dhabi Airport - Midfield Terminal Building (MTB)	UAE	2011	2019	2920	2,900,000,000.00	101,500,000.00	58,000,000.00	72,500,000.00	-	232,000,000.00	79,452
5	Borouge 3 - Four Borstar Units	UAE	2010	2013	1095	1,255,000,000.00	62,750,000.00	-	31,375,000.00	5,020,000.00	99,145,000.00	90,543
6	Dubai peral	UAE	2008	2013	1825	4,000,000,000.00	200,000,000.00	80,000,000.00	100,000,000.00	16,000,000.00	396,000,000.00	216,986
7	Al Ain Convention Centre district	UAE	2010	2015	1825	1,000,000,000.00	50,000,000.00	-	25,000,000.00	-	75,000,000.00	41,096
8	Expansion of Abu Dhabi Airport - Midfield Terminal Complex	UAE	2012	2019	2555	6,800,000,000.00	136,000,000.00	136,000,000.00	170,000,000.00	27,200,000.00	469,200,000.00	183,640
9	Fertilizer Plant in Ruwais	UAE	2009	2013	1460	1,200,000,000.00	24,000,000.00	24,000,000.00	30,000,000.00	4,800,000.00	82,800,000.00	56,712
10	Nurai Island Resort	UAE	2008	2018	3650	1,000,000,000.00	20,000,000.00	-	25,000,000.00	-	45,000,000.00	12,329
11	Etihad Railway	UAE	2012	2015	1095	8,000,000,000.00	400,000,000.00	160,000,000.00	200,000,000.00	32,000,000.00	792,000,000.00	723,288
12	Burj Al Alam	UAE	2008	2012	1460	1,000,000,000.00	50,000,000.00	20,000,000.00	25,000,000.00	4,000,000.00	99,000,000.00	67,808
13	Al Falah Development in Abu Dhabi	UAE	2009	2015	2190	2,000,000,000.00	40,000,000.00	40,000,000.00	40,000,000.00	8,000,000.00	128,000,000.00	58,447
14	Khalifa Port and Industrial Zone (KPIZ) in Taweelah	UAE	2008	2023	5475	5,000,000,000.00	250,000,000.00	100,000,000.00	125,000,000.00	20,000,000.00	495,000,000.00	90,411
15	Al Maktoum International Airport	UAE	2014	2039	9125	8,000,000,000.00	400,000,000.00	160,000,000.00	160,000,000.00	32,000,000.00	752,000,000.00	82,411
16	City of Arabia	UAE	2006	2012	2190	5,000,000,000.00	-	100,000,000.00	125,000,000.00	-	225,000,000.00	102,740
17	Al Raha Beach Development	UAE	2005	2015	3650	18,000,000,000.00	900,000,000.00	-	450,000,000.00	-	1,350,000,000.00	369,863
18	Village Centre Development on Palm Jumeirah	UAE	2009	2012	1095	1,100,000,000.00	22,000,000.00	22,000,000.00	22,000,000.00	2,200,000.00	68,200,000.00	62,283
19	Dubai International Airport - Concourse 3	UAE	2008	2012	1460	1,170,000,000.00	58,500,000.00	23,400,000.00	23,400,000.00	4,680,000.00	109,980,000.00	75,329
20	Aluminum Smelter at Taweelah	UAE	2006	2010	1460	10,000,000,000.00	-	-	-	-	-	-
21	Sowwah Square Development in Abu Dhabi	UAE	2008	2015	2555	1,000,000,000.00	50,000,000.00	-	-	-	50,000,000.00	19,569
22	Dubai Sports City	UAE	2006	2011	1825	4,000,000,000.00	200,000,000.00	-	80,000,000.00	8,000,000.00	288,000,000.00	157,808

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
23	Hydra Village Abu Dhabi	UAE	2006	2010	1460	1,500,000,000.00	75,000,000.00	-	37,500,000.00	6,000,000.00	118,500,000.00	81,164
24	Emirates Industrial City (EIC) in Sharja	UAE	2008	2012	1460	2,000,000,000.00	50,000,000.00	40,000,000.00	40,000,000.00	4,000,000.00	134,000,000.00	91,781
25	Petrochemical Factory Expansion in Rowais	UAE	2008	2010	730	1,390,000,000.00	69,500,000.00	27,800,000.00	34,750,000.00	5,560,000.00	137,610,000.00	188,507
26	Ajman coal-fired power plant	UAE	2009	2012	1095	2,000,000,000.00	100,000,000.00	-	-	-	100,000,000.00	91,324
27	Ajman international airport	UAE	2009	2015	2190	1,500,000,000.00	75,000,000.00	-	30,000,000.00	3,000,000.00	108,000,000.00	49,315
28	Arzanah Development	UAE	2008	2014	2190	7,000,000,000.00	350,000,000.00	-	175,000,000.00	28,000,000.00	553,000,000.00	252,511
29	Dubai metro	UAE	2005	2020	5475	9,000,000,000.00	450,000,000.00	180,000,000.00	225,000,000.00	36,000,000.00	891,000,000.00	162,740
30	Tiger woods Dubai development	UAE	2007	2010	1095	1,500,000,000.00	52,500,000.00	30,000,000.00	37,500,000.00	6,000,000.00	126,000,000.00	115,068
31	Salam Street & Mina Road Development - Phase 1	UAE	2008	2012	1460	1,400,000,000.00	70,000,000.00	28,000,000.00	35,000,000.00	5,600,000.00	138,600,000.00	94,932
32	Burj Khalifa (Burj Dubai)	UAE	2004	2009	1825	1,500,000,000.00	75,000,000.00	30,000,000.00	37,500,000.00	6,000,000.00	148,500,000.00	81,370
33	Dubai Maritime City (DMC)	UAE	2005	2011	2190	5,000,000,000.00	-	-	125,000,000.00	-	125,000,000.00	57,078
34	ADNEC Capital Centre development	UAE	2007	2025	6570	8,000,000,000.00	400,000,000.00	-	160,000,000.00	-	560,000,000.00	85,236
35	Pearl Dubai	UAE	2007	2012	1825	3,900,000,000.00	195,000,000.00	78,000,000.00	97,500,000.00	15,600,000.00	386,100,000.00	211,562
36	Ajman Marina	UAE	2008	2015							-	
37	Tameer Towers Development	UAE	2008	2011	1095	1,600,000,000.00	80,000,000.00	32,000,000.00	40,000,000.00	6,400,000.00	158,400,000.00	144,658
38	Shams Abu Dhabi Development	UAE	2006	2012	2190	25,000,000,000.00	1,250,000,000.00	500,000,000.00	625,000,000.00	100,000,000.00	2,475,000,000.00	1,130,137
39	Al Zorah Development	UAE	2009	2014	1825	600,000,000,000.00	-	-	-	-	-	-
40	Saadiyat Island Development	UAE	2006	2017	4015	27,000,000,000.00	1,350,000,000.00	540,000,000.00	540,000,000.00	54,000,000.00	2,484,000,000.00	618,680
41	Yas Island Development	UAE	2007	2017	3650	40,000,000,000.00	2,000,000,000.00	800,000,000.00	800,000,000.00	160,000,000.00	3,760,000,000.00	1,030,137
42	Nakheel Harbour& tower	UAE	2010	2020	3650	40,000,000,000.00	2,000,000,000.00	800,000,000.00	1,000,000,000.00	160,000,000.00	3,960,000,000.00	1,084,932
43	The arabian canal development	UAE	2008	2011	1095	11,000,000,000.00	550,000,000.00	220,000,000.00	275,000,000.00	44,000,000.00	1,089,000,000.00	994,521
44	Waterfront Development	UAE	2010	2020	3650	3,500,000,000.00	175,000,000.00	70,000,000.00	87,500,000.00	14,000,000.00	346,500,000.00	94,932
45	Al Furjan Development	UAE	2009	2011	730	1,500,000,000.00	30,000,000.00	30,000,000.00	37,500,000.00	6,000,000.00	103,500,000.00	141,781

#	Name of the project	Project Status	From	To	Total Days	Value (USD Billion)	Design Consultant	Supervison consutant	PMCM/ Development Manager/ Main Consultant	QS Services	Total Cost for Consultants	Cost per Day for Consutlants
46	Palm Deira	UAE	2010	2015	1825	12,500,000,000.00	625,000,000.00	250,000,000.00	312,500,000.00	50,000,000.00	1,237,500,000.00	678,082
47	Palm Jebel Ali	UAE	2012	2016	1460	6,500,000,000.00	325,000,000.00	-	162,500,000.00	26,000,000.00	513,500,000.00	351,712
											Average Cost of Consultant per day	228,074
											Average Cost of Consultant per month	6,842,210

Appendices six – Culture compass report UAE vs Ireland

Hofstede Insights

Participant Name

Country of interest: United Arab Emirates
Home country: Ireland

Your role: Negotiator

Report date: 12.09.2018

Culture Compass™
Find your way across cultures

Disclaimer
This report has been generated using answer pattern analysis and reporting software from Hofstede Insights. Hofstede Insights shall not, under any circumstances, be liable for any damages; direct, indirect or consequential; arising from or related to the use of the content in the present document and regarding advice given by third parties based on the results presented in this report. The use of the present material is at your own discretion only.

Reading instructions

When reading your report, please keep in mind that a person is a very complex system. A national or regional culture is a reflection of an even more complex system. The information provided in this report may be useful if you take the statements above into consideration. Therefore, please reflect about the results and don't take them for granted. You may want to check and discuss the information presented to you with somebody you trust and who knows you well, or you may want to involve a trainer or consultant who has been certified by Hofstede Insights.

This report contains feedback to help you avoid potential intercultural pitfalls.

It will help you to prepare yourself when dealing with people from different cultures by giving you insight about

- Your "own culture" in comparison to other cultures.
- How your culture, as well as the culture of the person(s) you are dealing with, may influence the way you and your counterparts understand the world around you.
- The implication it has on your understanding of your target culture taking into consideration your role and your preferences.

Your personal feedback

Feedback is generated if your answers to the questions are significantly different from the average preferences in your country of interest.

You may run into the following pitfalls when dealing with people being born and raised in the **country of your interest (United Arab Emirates)** if you don't take this information into consideration:

There is a big chance that:

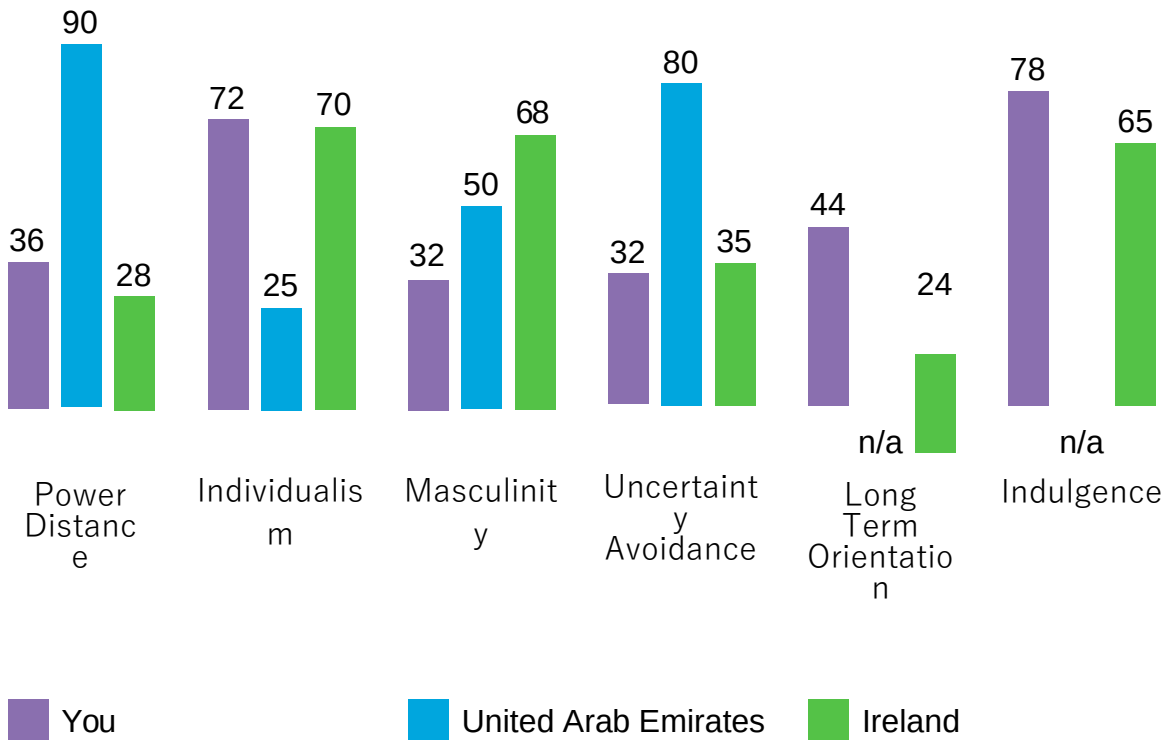
- you may underestimate the importance of getting to know the network of your counterparts
- you may play down your status by which your counterpart may not take you seriously and/ or you may not pay sufficient respect to your counterpart
- you may be either confronted with superficial compliance or strong opposition
- you may wrongly assume that your counterpart is a decision maker by underestimating the importance in getting to know his/her network

There is a fair chance that:

- you may give your counterparts the feeling that you have a lot to hide by not showing your emotions
- you may demotivate your counterparts by not trying to structure negotiations adequately
- you may demotivate your counterparts by not giving them pre-information so that they can prepare themselves properly
- you may demotivate your counterparts by showing up not well prepared
- you may get demotivated by the tenacity to which your counterparts cling to ideas and information which are, according to you, outdated or incorrect
- you may underestimate the time and energy required to create trust among your counterparts.

Scores

Your scores are only an approximation on Hofstede's dimensions, especially because models describing differences among cultures should not be used to describe differences among personalities; group reality doesn't equal individual reality. The textual feedback on the previous page(s) contains the most valuable information.



In addition to your country of interest and your home country, the table below lists the 5 countries scoring most similar to you and the 3 countries scoring most different to you. But also here, treat these scores with caution.

	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long Term Orientation	Indulgence
Your score	**36**	**72**	**32**	**32**	**44**	**78**
United Arab Emirates	90	25	50	80	—	—
Ireland	28	70	68	35	24	65
Most similar						
Sweden	31	71	5	29	53	78
Denmark	18	74	16	23	35	70
Canada	39	80	52	48	36	68
Finland	33	63	26	59	38	57
United Kingdom	35	89	66	35	51	69
Most different						
Kazakhstan	88	20	50	88	85	22
Panama	95	11	44	86	—	—
Guatemala	95	6	37	99	—	—

The Dimensions of National Culture

The scores and Dimensions of National Culture you see in the table (apart from yours) are based on the research outcomes of Professor Geert Hofstede's studies on how values in the workplace are influenced by culture. To learn more about the research please go to https://hofstede-insights.com

The Dimensions of National Culture are the relative values that distinguish country cultures from each other.

The 6 Dimensions of National Culture are:

Power Distance (high versus low)
The extent to which the less powerful members of society accept that power is distributed unequally.

Uncertainty Avoidance (high versus low)
The extent to which people feel threatened by uncertainty and ambiguity and try to avoid such situations.

Individualism (Individualist versus Collectivist)
Collectivism: people belong to in-groups (families, organisations, etc.) who look after them in exchange for loyalty.
Individualism: people only look after themselves and their immediate family.

Long Term Orientation (long term versus short term orientation)
The extent to which people show a pragmatic or future-oriented perspective rather than a normative or short-term point of view.

Masculinity (high versus low)
Masculinity: the dominant values in society are achievement and success.
Femininity: the dominant values in society are caring for others and quality of life.

Indulgence (Indulgence versus Restraint)
The extent to which people try to control their desires and impulses. Relatively weak control is called "Indulgence" and relatively strong control is called "Restraint".

The culture scores on the dimensions are relative — the cultures of societies are compared to other societies. A country score is meaningless unless compared to another country.
More information on the Dimensions of National Culture https://www.hofstede-insights.com/models/national-culture/

Culture: a strategic asset

Culture has a tremendous impact on people and organisations, and it is up to you to make sure that such an impact is beneficial to all those concerned.
You simply cannot escape culture; it is a part of each and everyone of us. Every nation and organisation has its own individual culture.

With our unique approach, based on decades of research and experience, we will enable you to optimise the performances of your organisation to better meet your goals.

Professional certified consultants

Hofstede Insights consultants are accomplished professionals in their respective fields, including, but not limited to, cooperation and teamwork, marketing, HR, communications, sales and management in an intercultural context.

Hofstede Insights consultants help companies to meet such challenges as negotiating successfully, facilitating mergers and acquisitions and dealing successfully with intercultural management situations from diverse perspectives.

Find out more about our network of consultants.

Sophisticated tools

With our unique tools, the result of over 30 years of ongoing research and experience, Hofstede Insights will increase the efficacy of your organisation by giving its members the ability to adapt and effectively deal with challenging intercultural situations.

6-D Model©: Charts national cultures.
Hofstede Multi-Focus Model©: Assesses organisational cultures in order to align your culture with your strategy and the context in which your organisation operates.
Levers for Change©: Provides concrete suggestions for indirect organisational change to help you move from your current culture to your optimal culture so as to increase global effectiveness.
Executive Match 360©: Assesses the management team of your organisation to make sure the culture of the management team supports your strategy, utlises direct change.

Culture Compass™: Gives individual feedback regarding a country of interest.

Culture Compass™ for universities is brought to you by Careernomics.

Careernomics
FOR MASTERS STUDENTS

Appendices seven - The average length of time required to process a UK variation

Appendix Variation Approval process - LREDC

CR Related Works VO New Process

01. Related Works VO Process - Can be initiated via RFI, IFC Drawings, Authorities or Client

Step	1	2	3	4	5	6	7	8	9	10	11	12
Duration	1	2	7	2	3	2	42	14	7	7	7	7
					Contracts to evaluate NOV and notify PM/CM					Contracts (*)	2nd step QSC to sign VO form	PM reviews GTC submission
	Requesting department initiate request for change	PM/CM to provide scope / level of effort	QSC ROM Cost Estimate for Potential VO	PM/CM prepare NOV	PM to Evaluate NOV and notify PM/CM	Lusail Technical to issue RFP to Contractor	PM/CM to obtain Proposal and Forward to QSC	QSC review, negotiate & submits recommendation to Lusail	PM/CM make comprehensive recommendation to Lusail	Controls (*)	PM inform PM/CM to prepare VO form and GTC submission	Contracts reviews GTC submission
					Controls to evaluate NOV and notify PM/CM			PM/CM to be CC		PM review recommendation	1st step Contractor to sign VO form	Controls reviews GTC submission

Contractor Notification VO New Process

Step	13	14	15	16	17	18	19	20	21	22	23	24
Duration	2	7	7	3	2	42	14	7	7	7	7	2
				Contracts to evaluate NOV and notify PM/CM					Contracts (*)	2nd step QSC to sign VO form	PM reviews GTC submission	
	PM/CM evaluate and identify Potential VO	QSC estimate cost of potential VO	PM/CM QSC submission & prepare NOV justification	PM to Evaluate NOV and notify PM/CM	Lusail Technical to issue RFP to Contractor	PM/CM to obtain Proposal and Forward to QSC	QSC review & submits recommendation to Lusail	PM/CM make comprehensive recommendation to Lusail	Controls (*)	PM inform PM/CM to prepare VO form and GTC submission	Contracts reviews GTC submission	CM to finalize the submission with PM/CM
	On rejection terminate workflow			Controls to evaluate NOV and notify PM/CM			PM/CM to be CC		PM review recommendation	1st step Contractor to sign VO form	PM reviews GTC submission	

Exceptional Case

Step	1	2	3	4	5	6	7	8	9	10	11	12
Duration	1	2	7	5	3	2	3	7	4	1	42	14
					PM reviews GTC/LI submission							
	Requesting department initiate request for change	PM/CM to provide scope / level of effort	QSC ROM Cost Estimate for Potential VO	PM/CM prepare NOV/LI/GTC submission to issue LREDC's Instruction	Contracts review GTC/LI submission	CM to finalize the submission with PM/CM	Contracts Assistant for printing / siganture & submit to GTC	Assistant to forward the GTC response to Lusail PM	Lusail PM to obtain signature of the LI & to notify PM CM about GTC approval	PM to issue the instruction to the Contractor	PM/CM to receive Contractor proposal & check entitlement	QSC evaluate & prepare recommendation (price agreed)
					Controls reviews GTC/LI submission			cc: All Internal Stakeholders				

Non related Works VO New Process

Step	1	2	3	4	5	6	7	8	9	10	11	12
Duration	1	7	14	2	3	2	3	7	1	14	2	42
					PM reviews GTC submission							
	Requesting department initiate request for change	PM/CM to prepare Strategy submission to GTC & forward scope to QSC	QSC to prepare the ROM cost estimate	PM/CM to finalize and forward the GTC submission to PM	Contracts reviews GTC submission	CM to finalize the submission with PM/CM	Contracts Assistant for printing / siganture & submit to GTC	Assistant to forward the GTC response to Lusail PM	Lusail PM to notify PM CM about GTC approval	CM to finalize the RFP with PM/CM & issue to Contractors	PM/CM to issue RFP to Contractors	PM/CM to receive proposal
					Controls reviews GTC submission			cc: Internal stakeholders		Controls	PM	Finance
										Risk	Legal	

Colour Key	
Regular Step	Aconex